Locke's Confusion About the Confused Idea of Substance

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THESIS

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This thesis is dedicated to my wife, Brittany, and to my parents, Glenn and Teresa.

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LIST OF ABBREVIATIONS

AG	*G.W. Leibniz: Philosophical Essays*
Ak	*Kant's Gesammelte Schriften*
AT	*Oeuvres de Descartes*
AH	*Theoretical Philosophy after 1871*
Corr.	*The Correspondence of John Locke*
CSM(K)	*The Philosophical Writings of Descartes*
E	*An Essay Concerning Human Understanding*
Eth	*The Ethics*
PHK	*A Treatise Concerning the Principles of Human Knowledge*
RB	*New Essays on Human Understanding*
SW	*The Selected Works of Pierre Gassendi*
T	*A Treatise on Human Nature*
W	*The Works of John Locke*

SUMMARY

Four questions were asked about one of the most controversial topics in John Locke's philosophy – his theory of substance. (1) Do Locke's various claims about substance cohere with one another? (2) Do they cohere with his other philosophical commitments? (3) Does Locke have a novel position on substance? (4) Do Locke's claims about substance depend upon a conceptual or philosophical confusion?

In the second chapter, two influential interpretations of Locke on substance are discussed. The core question to which these interpretations are addressed is what is Locke's idea of substance an idea of? One side says it is the idea of a barren substratum to which a thing's properties are attached. The other claims it is the idea of a thing's innermost nature, which is inaccessible to us through experience. These two traditional readings are no longer widely accepted, but they are not always dismissed for the right reasons.

In the third chapter, recent interpretations are analyzed. Scholars have gone in one of three directions. They have either: defended a modified version of one of two traditional interpretations, attempted to reconcile the established readings, or they have argued the interpretative question cannot be answered because Locke was agnostic about what substance is. It is argued that modified versions of the traditional readings are no more plausible than the originals because they are subject to the same objections. Nor can the two traditional readings be reconciled without distorting one of the points of view. Locke does not base the idea of substance in psychology but in reason; and, as a result, he must be thinking of substance in a specific way.

In the fourth chapter, a positive thesis is defended. Locke viewed substance in the traditional Aristotelian sense of a metaphysical subject for various properties and acts. It is argued that Leibniz and Kant accurately diagnosed Locke's pseudo problem concerning the unknowability of substance.

In the fifth chapter, the Leibniz-Kant diagnosis is defended against a more charitable spin on Locke's remarks about substance's unknowability. It is rejected on the grounds that Locke criticized the wrong thing if his point was that our representations of substances present the substance only as it appears to us. The source of Locke's error concerning the idea of substance is then investigated. A preliminary study of Gassendi helps to uncover different senses in which substance might be said to be unknown. The source of Locke's complaints about the confused idea of substance is identified in his failure to distinguish different modes of cognition, namely imagination and understanding. Reasons are given as to why Locke should have made the distinction by his own lights.

In the sixth chapter, the positive reading of the last two chapters is contrasted with the two traditional readings. It noted that while Locke's account of substance is confused in a compounded way, the broader epistemology in which the account is developed is superior to nativism or reductionism. Finally, the four questions posed in the first chapter are answered in light of all that has been argued. (1) The supposition that Locke was conflicted or of two-minds is not required to account for what he said. (2) Locke's claims about the confused idea of substance result from his tendency to mistake definitions for mental images. In this way, his claims about substance are of a piece with what he says (albeit wrongly) about other confused

ideas. (3) Locke did not offer a new theory of substance, but he employed a very old one in the service of making reasonable points against the Cartesians concerning what types of beings deserve to be called substances. (4) Some of Locke's claims about substance result from philosophical confusion. Locke believed that the idea of substance could provide no insight into the nature of substances *because* he found it to be confused. However, the real reason why it cannot do that is because it is a mere idea of reason. Locke found the idea of substance to be confused only because he used the wrong standard by which to judge its clarity and distinctness.

I. FOUR QUESTIONS ABOUT LOCKE ON SUBSTANCE

A. The Origin of Substance as Subject in Western Philosophy

In a thesis otherwise devoted to interpreting a theory of substance offered by an Englishman living in the 17th century, it is nevertheless necessary to begin our study 1,600 miles and two millennia away in ancient Athens. Aristotle (384-322 BC) was not the first philosopher to think deeply about the fundamental materials and forces in the universe; however, he was the first to connect the notion of substance to the logical term of subject. In *Categories* 5, Aristotle examined what different types of predication imply about ontology. Consider one of Aristotle's typical examples: "Socrates is a man". Man is "said of" the subject Socrates, but man does not "exist in" him. Compare that to the sentence, "Socrates is pale". Aristotle says that paleness "exists in" Socrates, but it is not "said of" him. (The expressions "said of" and "exist in" should now be relatively clear, and I will no longer put them in quotes.) Socrates is a man in the sense that he is an example or instance of one. Whereas Socrates is pale in the sense that he exhibits that attribute. Socrates, man, and paleness thus exist in different ways. Socrates is an example of what Aristotle called a primary substance; man is secondary substance; and paleness is a qualification. Primary substances exist in their own right. They occupy the ground floor of Aristotle's ontology: "if the primary substances did not exist it would be impossible for any of the other things to exist" (2b6). Man is a secondary substance, which means it depends on the existence of primary substances like Socrates who are men. Like primary substances, secondary substances do not exist in a subject, but they may be said of primary substances to which they are the species or the genus. Qualifications exist in primary and secondary substances, but not as parts (3a30).

These other ways of being (viz. secondary substance and qualification) are not capable of existing in their own right independently from primary substance. In *Metaphysics* 7.1, Aristotle tells us that substance is primary "in formula, in order of knowledge, [and] in time" (1028a30). Explaining these in reverse order, substance is first in time because none of the other categories can exist prior to substance. Substance is first in order of knowledge as well because we come to know hot and extended things such as fire before we know the qualities of heat and extension. Aristotle's claim that substance is first in formula or definition is misleading because he is using the term 'substance' in a different way. Rather than referring to a primary substance, which is not predicated of anything else, 'substance' here refers to "the cause of their [i.e. the substance's own] being" (1017b14).[1] Aristotle identifies this cause as the "form" or essence of each primary substance. In giving a definition, what we want to know is what each thing is, and the form provides the answer.

The sentence "Socrates is a man" is more informative than "Socrates is an animal", which in turn is more informative than "Socrates is pale". This is due to the fact that the attributes of man are essential to Socrates.[2] If Socrates lost any of these attributes he would cease to exist as a man, which is what he essentially is. Some of these attributes men share in common with all animals (e.g. they are heterotrophs); but men have some unique attributes, and for this reason the predication of man is more informative than the predication of animal. The fact that Socrates is pale is least informative of all since it is an incidental fact that he is pale. In the summer months, for example, we can imagine he gets quite tan. Primary substances like Socrates

[1] Previously, in *Metaphysics* 5.8, Aristotle had stated that 'substance' has these "two senses" (1017b23).

[2] Refer to 1029b14 for the distinction between essential and accidental properties, and how this relates to definitions.

have many attributes. Some of these are essential, while others are accidental. To know a primary substance is just to be aware of its essential traits. If I only know the accidental attributes of a substance, I cannot be said to know it since I do not know what it essentially is.

A distinction can and must be made between Socrates and man, that is between Socrates and his essence. As a primary substance, Socrates is composite of the form of man and a quantity of matter that makes up his body. Although Socrates and Cebes, both being human beings, share the same form, they are distinguished by their numerically distinct bodies. However, it would be a mistake to identify either Socrates or Cebes (or any primary substance) with its matter alone (1031a28). Aristotle reasons that since essence is what a thing is in its own right, it cannot be numerically distinct from the being it is an essence of. If knowledge of a thing involves simply knowing its essence, the substance and its essence cannot be ontologically distinct. If essences were distinct from the things they are essences of, this would lead to an infinite regress (1031b30). Thus, if the essence of a horse is distinct from the horse, then it too will have an essence distinct from itself, and so *ad infinitum*. The individual substance is in some sense a composite of both matter and form. Thus, Socrates is not ontologically distinct from his essence of man, although a logical or conceptual distinction is made between the primary substance and its essence. This distinction is made when we predicate the essence of the primary substance, like we do when we say, “Socrates is a man”.

Aristotle’s theory of substance was influential beyond belief, and it was transmitted through the Medieval Period by Aquinas (1225-1274) and others into the 17th century. In England, the writings of the late Renaissance figures Robert Sanderson (1587-1663) and Franco Burgersdijk (1590-1635) helped to popularize the basic tenets of Aristotle’s logic and related conception of substance (Ashworth 1988, 163-64). On the continent, René Descartes (1596-

1650) developed his own theory of substance. But drawing heavily from his favorite scholastic source, Francisco Suárez (1548-1617), Descartes' views resembled Aristotle's in important ways (Secada 2006). While not a hylomorphic theory in ontological detail, Descartes held that only a rational or conceptual distinction could be drawn between a substance and its principle attribute or essence (AT VIIIA: 30-31/ CSM I: 215).[3] Furthermore, he claimed that knowing a substance involved nothing more than knowing its essence (AT VII: 222/ CSM II: 165). Like Aristotle, Descartes also believed that without substances no attributes or modes would exist (AT VIIIA: 25/ CSM I: 210). Such things have a limited existence and a partial reality in virtue of belonging to, or inhering in, substances (ibid). Modes are simply the way the substance exists at a certain time, a transitory determination of a permanent essence. Substances enjoy complete ontological independence (or "real distinction") from one another. They also enjoy a lesser independence (or "modal distinction") from their non-essential attributes or modes in the sense that a given mode requires a substance to exist in, but a substance can be the subject of many modes at once and of different modes over time (AT VIIIA: 28-30/ CSM I: 213-214). In this way, substance is that which persists through change. Descartes' metaphysics spawned a philosophical movement of its own, but substance remained right where Aristotle had left it (at the ontological ground floor) and with many of the same characteristics.

B. Enter John Locke

Descartes' philosophy found a notable critic in John Locke (1632-1704). With his *An Essay Concerning Human Understanding*, Locke aimed to clear the path for scientific progress

[3] In Chapters Four and Five, I defend the claim that Descartes is nevertheless committed to a hylomorphic epistemology of substance. I shall explain this more fully later, but what I mean is that Descartes' theory of distinctions entails that we can adopt different perspectives of the same thing. In particular, we can view a substance either as matter-in-the-Aristotelian-sense, i.e. the subject to a qualitative essence or form, or as form-in-the-Aristotelian-sense, i.e. the essence or nature itself.

by delimiting the scope of human knowledge. He argued that since knowledge involves an introspective analysis of ideas (the immediate objects of thought), and since all the materials of our ideas arise in the mind on the basis of experience of the world and ourselves, human knowledge cannot transcend experience. Locke's method was to consider the concepts employed in the scientific and metaphysical theories of his day to determine precisely the content – if any – of those ideas. He sought to resolve all objects of human thought into unanalyzable "simple ideas" that could only be comprehended through direct experience of the world and our minds. All this was done, as Locke put it, to discover "the Horizon…which sets the Bounds between the enlightened and dark Parts of Things; between what is, and what is not comprehensible by us" (E 1.1.7; 47). The scientific concepts of space, time, number, and matter are discussed, but so too are the perennial metaphysical topics of God, the soul, and substance. It was Locke's writings on these "touchy subjects" and their theological implications that drew immediate philosophical and theological criticism (Jolley 2015).

In 1697, the Bishop of Worcester, Edward Stillingfleet (1635-1699), publicly accused Locke of "almost discarding substance out of the reasonable part of the world" (1987 1, 234). In particular, Stillingfleet worried that Locke's empiricist philosophy would subvert the Church's teachings about the Trinity and soul's immortality. The concept of substance lies at the heart of both those doctrines. Locke denied the charge, and in a series of letters he attempted to clarify and defend the theory of substance he outlined in the pages of the *Essay*. These efforts to clarify his conception of substance ultimately proved to be insufficient, as Locke's treatment of substance remains today as controversial and opaque as ever. Thirty years ago, Nicholas Jolley declared the topic of substance to be "the single most debated issue in Locke scholarship" (1987, 83). Recently, Peter Millican confirmed that Locke's account of substance "remains one the most

contentious aspects of his thought" (2015, 8). E. J. Lowe pessimistically predicted that "Locke's doctrine of substance [is] a topic upon which consensus seems unlikely ever to be reached, even amongst those best qualified to hold an opinion about it!" (2000, 514 footnote). To see why Locke's views on substance remain so controversial and difficult to understand, we must look to the passages themselves.

i. Locke on substance

The word 'substance' and its cognates appear in the *Essay* almost as frequently as 'idea', an offense for which Locke actually apologizes (E 1.1.8; 47). Each of the four Books of the *Essay* contain important theses about substance. In Book I, Locke explicitly denies that we have an innate idea of substance (E 2.4.18; 95). This rejection is of a piece with his rejection of all innate ideas, a denial that sets the positive agenda for the reminder of the *Essay*'s pages. In particular, Locke seeks to find what knowledge are we capable of, what it consists in, and how we acquire it.

According to Locke, all our knowledge has its foundation in simple ideas. Experience – taken to include both sensation and reflection – first furnishes the mind with these basic ideas. The mind has powers to combine, compare, and abstract these basic materials to construct more complex ideas (E 2.12.1; 163-164). In Book II, Locke explains that complex ideas fall under three heads: modes, substances, and relations (E 2.12.3; 164). Modes are affections of substances and consequently depend on them (E 2.12.4; 165), whereas ideas of substance represent "distinct particular things subsisting by themselves" (E 2.12.5; 165). Locke gives the examples of a hunk of lead and a man. These are ideas of particular substances, "in which the supposed, or confused *Idea* of Substance, such as it is, is always the first and chief" (ibid). Locke means that no matter

what complex idea of a substance one considers; the idea of substance is always a constituent idea.

Locke thus distinguishes between (a) ideas of particular (kinds of) substances and (b) *the* idea of substance – note the definite article. In the course of his *Essay* and letters to Stillingfleet, Locke calls (b): "the idea of substance in general", "the general idea of substance", the "notion of pure substance in general", and sometimes just: "the idea of substance". Despite these variations, Locke signifies by any of these names the idea of "a substratum or support to modes or accidents, wherein they do subsist" (W 4, 13). As Locke explains to Stillingfleet, (b) the idea of substance is an abstract and complex idea "made up of the general idea of something, or being, with the relation of a support to accidents" (W 4, 19). Like any complex idea, the idea of substance is produced by the understanding from materials available in experience: "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*" (E 2.23.1; 295). Substance is the name of this substratum or subject that provides ontological support to accidents. However, from Locke's perspective, we have no clear or distinct idea of that *thing*. As the common subject for various predicates, "the Substance is supposed always *something* besides the Extension, Figure, Solidity, Motion, Thinking, or other observable *Ideas*, though we know not what it is" (E 2.23.5; 297). In this way, Locke thinks our idea of substance is both necessary and flawed: necessary because it is implied by the existence of attributes but flawed because the idea does not reveal what substance is in itself. That is, substance "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 a support or substratum to modes or accidents" (W 4, 21).

ii. Four types of claims

These claims about substance can be usefully grouped under four heads: Epistemological, Ontological, Linguistic, and Normative. Some of the confusion surrounding Locke's views on substance stem from putting things into the wrong box, so to speak. The solution is to categorize his points correctly. The task is to determine how they fit together with one another and to access how they hold up to the rest of his philosophy and to philosophical analysis. The first mention of substance in the *Essay* contains virtually all the major themes to be found elsewhere. I quote that passage in full:

> I confess, there is another Idea [besides the idea of God], 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*, which we neither have, nor can have, by *Sensation* or *Reflection*. If Nature took care to provide us any *Ideas*, we might well expect it should be such, as by our own Faculties we cannot procure to ourselves: But we see, on the contrary, that since by those ways, whereby our *Ideas* are brought into our Minds, this is not, We have no such *clear Idea* at all, and therefore signify nothing by the word *Substance*, but only an uncertain supposition of we know not what; (*i.e.* of something whereof we have no particular distinct positive) *Idea*, which we take to be the *substratum*, or support, of those *Ideas* we do know. (E 1.4.18; 95)

The main points are as follows: We don't have and cannot form a clear and distinct idea of substance. Hence, the word substance signifies – not a determinate idea – but a supposition (i.e. a vague thought) of a thing or being that is the subject and support for qualities we do know about through simple ideas of sensation and reflection.[4] Because people talk about substance when offering philosophical theories, it would be good if they knew exactly what they were talking about.

The correct placement of these initial claims is reflected in the chart below:

[4] In Chapter Three, I defend this interpretation of 'supposition'.

TABLE I

FOUR TYPES OF CLAIMS IN ESSAY 1.4.18

Epistemological	We have no clear and distinct idea of substance itself; we don't know what substance is besides the fact that…
Ontological	**…**it is the thing or being that supports qualities.
Linguistic	The meaning of the term 'substance' is uncertain and imprecise…
Normative	but it would be good and useful to have a clear and distinct idea of substance.

Although the four major themes are all represented here, Locke makes additional claims about substance in other passages. For instance, in the Stillingfleet correspondence Locke affirms an ontological commitment to the indubitable existence of substance (W 4, 21; 236; 241; 345). In the *Essay*, he links the inadequacy of our ideas of particular kinds of substances to the fact that we have no idea of substance in general and know not "what Substance is in it self" (E 2.31.13; 383). This passage should be read alongside *Essay* 4.3.23 as containing both an epistemic and normative dimension (554). Locke also argues that the doctrine of substance and accidents is useless to philosophy because the concepts of substance and accident are inter-defined and so cannot be put to explanatory use (E 2.13.19-20; 175).

An updated chart can be obtained by adding these additions into the appropriate boxes:

TABLE II

FOUR TYPES OF CLAIMS IN ALL OF LOCKE'S WRITINGS

Epistemological	(**a1**) We have no clear and distinct idea of substance itself; (**a2**) we don't know what substance is in itself; *as a result* (**b**) we don't have fully adequate knowledge of particular kinds of substances.[5]
Ontological	(**c**) Substance exists; (**d**) it supports qualities; (**e**) and it doesn't inhere in anything else.
Linguistic	(**e**) The meaning of the term 'substance' is uncertain and imprecise; (**f**) substance is defined in terms of accidents, and accidents are defined in terms of substance.
Normative:	(**g**) It would be good and useful to have a clear and distinct idea of substance, for then people wouldn't abuse language and we might have more adequate ideas of particular sorts of substances.

C. <u>Four Questions about Locke on Substance</u>

The task of putting Locke's claims into the correct box is relatively easy, but it is worth pointing out one error of interpretation and can arise right off the bat by filling out the grid incorrectly. One of the traditional interpretations of Locke on substance has him conceiving of substance as a natureless entity. But as Edwin McCann points out, Locke never says anything like this about the *ontology* of substance (2007, 162). All Locke says is that we know nothing

[5] This point might confuse the reader because Locke offers additional reasons why our ideas of particular kinds of substances (i.e. nominal essences) are inadequate in *Essay* 2.30-31. Nevertheless, Locke appears to believe that our ignorance of substance itself is a contributing cause all to itself. See *Essay* 2.31.14 and 4.3.23 mentioned above. I speak of nominal essences here, not to change topics, but simply because Locke connects our ignorance of substance to his claim that nominal essences are inadequate and do not reflect the real essence of substances.

more of substance than that it is the thing in which qualities exist. This does not imply that there is nothing more to substance in reality: our knowledge of substance is barren, but substance itself might not be. It looks like one of Locke's epistemological claims is being mischaracterized as an ontological one.

The logic of this reply is irreproachable; but, even if it is a mistake to arrive at it by the aforementioned route, the traditional reading still could be right about Locke's conception of substance, albeit for some different reason. One could argue, for example, that Locke's thinking of substances as featureless best explains his view that we don't know "what substance is in itself" (E 2.31.13; 383). For if one were trying to form a contentful idea of a property-less entity one could not do it since it has no properties of its own by which to frame an idea of it. Although if Locke thought substance had no nature of its own, then substance would be unknowable in principle. However, Locke suggests that higher forms of intelligence might possess a clear and distinct idea of substance (E 4.3.23; 554). Assuming Locke had no blind spots, the objection hits its mark; but it leaves unanswered the all-important question of why Locke found substance to be unknowable for humans. Since this is Locke's basic epistemological claim about substance, a reasonable interpretation ought to be able to say how or why he arrived at that conclusion. It is not incorrect to note that when Locke's examined the ideas in his head he didn't find a clear and distinct idea of substance to exist among them; however, there must be more to the story, especially since other rationalist philosophers revered the same bare-boned conception of substance (as a mere subject to qualities and modes) that Locke found so obscure and confused.

It is natural enough to think that Locke's empiricism lies at the root of the matter. His theory of ideas states that all simple ideas arise in the mind through experience, that is sensation and reflection (E 2.1.2; 104). The idea of substance, however, is a complex idea consisting of the

idea of an unknown thing or being that bears the relation of support to known qualities that have been observed frequently together (W 4, 19). These qualities are represented to the mind via simple ideas – each idea corresponding to a quality which is/has the power to produce just that idea in us. Complex ideas are made from simple ideas by various mental operations such as compounding, comparing, and abstracting. But with these commitments, it can look like a clear and distinct idea of the substance itself is destined to be impossible. For if all we immediately perceive via simple ideas are qualities, the substance that supports them lies necessarily beyond experience.[6] We know there must be a substratum to support any quality that we perceive with a simple idea because the mind perceives a necessary connection between any quality and the need for support (W 4, 21). But the best we can do is to form a relative idea of that support: substance is the thing-we-know-not-what that gives ontological support to qualities inhering in it (E 2.23.15; 305).

For this reason, it can look like Locke is arguing, as Immanuel Kant (1724-1804) later would, that we can know things only as they are revealed to us, but we shall forever be in the dark about things as they are in themselves:

> In fact, if we view the objects of the senses as mere appearances, as is fitting, then we thereby admit at the very same time that a thing in itself underlies them, although we are not acquainted with this thing as it may be constituted in itself, but only with its appearance, i.e. with the way in which our senses are affected by this unknown something. (Ak 4:314-315/ AH:107).

Perhaps Kant employed the phrase "*Ding an sich*" because he encountered the English equivalent originally in Locke. Locke uses the expression "things themselves" in contrast to our representations of substances, which are totally inadequate. Locke resigns himself to the fact that all we do know, and can know, of substances are a few of their "superficial" qualities (E 2.23.32;

[6] Margaret Atherton argues closely along these lines (1984, 414-415).

313). We know none of the specifics of their "radical Constitution" from which the former ought to be deducible *a priori*, like the properties of a triangle (E 3.11.23; 520).

However, unlike Kant, Locke provisionally ascribes to a theory about what material substances must be like in themselves apart from our perception of them. Such bodies are extended, solid, masses of various shapes and textures. Some or all of these bodies are in motion in a limitless empty space and interact with one another in predictable ways according to the laws of physics. Colors, sounds, tastes, and smells are not "*real*" but "*imputed*" qualities of objects (E 2.8.22; 140). Through impulse, bodies cause these sensations of sensible qualities in our minds after interacting physically via their primary qualities with our sensory organs (E 2.8.11; 135-136).

These commitments call the Kantian line of interpretation into question. Locke often says we don't know the real essence of any material substance, and perhaps this explains why Locke claimed not to know the "*Substance* of Matter" (E 2.23.5; 298). But such doubts about the adequacy of the corpuscularianism conception of body seem distant from Locke's mind and pen when he is writing about our ignorance of substance in general. Rather than holding substance to be unknown *because* we don't know the ontological essence of matter, one receives the impression that Locke holds roughly the opposite view: that the nature of material substances is unknown, at least in part, because "a Man has no *Idea* of Substance in general, nor knows what Substance is in it self" (E 2.31.13; 383). This crucial question of why Locke found substance to be unknown, and what is at issue in finding it so, will be addressed in Chapters Four and Five. My positive thesis to this overarching question will allow me in Chapter Six to answer four additional questions that can be asked about the set of Locke's views displayed in the previous

chart. It is the goal of this dissertation to provide definitive answers to these questions that have garnered their fair share of conflicting replies in the secondary literature.

i. Do Locke's claims about substance cohere with one another?

In the opinion of Jonathan Bennett, "nothing else in the writings of any other philosopher matches the doubleness of attitude of the passages about substratum in Locke's *Essay* (1987, 197). On one hand, Locke is highly critical of the term substance because he doesn't think it corresponds to any clear and distinct idea. He explains "We have no such *clear Idea* at all, and therefore signify nothing by the word *Substance*, but only an uncertain supposition of we know not what" (E 1.4.18; 95). Locke also describes substance as an "unknown" and "supposed" supporter of qualities (E 2.23.2; 296) and he compares it to an elephant that holds up the world (E 2.13.19; 175). On the other hand, Locke insists the "confused" idea of substance is implicated in our way of thinking and talking about particular substances: "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; a Spirit, a *thing* capable of thinking" (E 2.23.3; 297) In fact, the "supposed, or confused *Idea* of Substance" is "always the first and chief" in our representation of any independently subsisting thing (E 2.12.6; 165).

Based on these passages, several commentators have noted that Locke appears to be of two minds about substance. Edwin McCann writes that "This apparent textual schizophrenia should be regarded as a basic datum that any interpretation of Locke's doctrine must explain, or explain away, and as much as anything else is responsible for the perplexities of interpretation attending Locke's doctrine of substance." (2007, 164) As we shall see, scholars disagree about how to interpret these data points. Perhaps it is not best to sort Locke's claims as either "positive" or "negative" since those labels are highly subjective as well as ambiguous. For example, it is not

clear whether a negative claim about substance is one in which Locke is showing disagreement with an existing view, expressing dissatisfaction with the concept itself, or merely lamenting our ignorance of the nature of substance due to our finite faculties. I do not see any advantage to categorizing such diverse claims under a single head, and it discourages one to make distinctions between claims ranked under either one of the labels. Furthermore, the entire activity of sorting Locke's claims in this way presupposes that he was of two-minds about substance. Perhaps Locke was, but that should be the conclusion of the analysis not the premise behind the organizing interpretive principle. By framing the issue in this artificial way, we limit the scope of interpretations that are available to us.

ii. Do Locke's claims cohere with his philosophical commitments?

A version of this question was posed to Locke during his lifetime by Edward Stillingfleet. The Bishop doubted that Locke could account for the idea of substance on purely empiricist grounds, thus disproving his "radical" theory of ideas. In the account Locke gives, reason appears to play an important role in generating the idea of substance. It is because "'we cannot conceive how modes or accidents can subsist by themselves'" (W 4, 19) that "we accustom our selves, to suppose some *Substratum*, wherein they do subsist, and from which they do result, which therefore we call *Substance*" (E 2.23.1; 295). Therefore, on Locke's account substance looks to be what Stillingfleet calls a "rational idea" (1987 1, 235) or what G. W. Leibniz (1646-1716) would describe as an idea "conceived through pure reason, though the senses provide a basis [for it]" (RB, 124).

To clarify the brief account given in the *Essay* at 2.23.1, Locke informs Stillingfleet that his idea of substance is not a simple idea but "a complex idea, made up of the general idea of something, or being, with the relation of a support to accidents" (W 4, 19). According to Locke's

theory of ideas, "general ideas come not into the mind by sensation or reflection, but are the creatures or inventions of the understanding" (ibid). Locke claims his account of how the mind forms the idea of substance is consistent with his empiricism: "[Although] the general 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 or reflection" (Works 4, 21). Only simple ideas come into the mind from sensation or reflection; the mind makes the rest out of those basic materials. Locke is adamant that our idea of substance is not a simple idea, but a complex idea. In this way, it does not come directly from sensation or reflection.

As stated before, Locke initially claims that "we neither have, nor can have" an idea of substance "by *Sensation* or *Reflection*" (E 1.4.18; 95). At first glance, this appears to contradict what he says to Stillingfleet. But as Lex Newman carefully explains, what Locke means is that a determinate, i.e. clear and distinct, idea of substance is not possible for human beings given our limited access to ideas through only sensation and reflection (2000, 296). This is part and parcel with Locke's claims that the idea of substance we do possess is a relative idea. In order words, we lack a detailed idea of the substance itself. The content of that idea is highly abstract, containing no more content than the idea of thing or being. By saying that we cannot have an idea of substance from sensation or reflection, Locke could also be emphasizing the fact that our idea of substance is a complex idea. Thus, he emphasizes to Stillingfleet, who did not understand him on this point, that even rational ideas owe their qualitative content to ideas initially received through experience with the world. Locke does owe an explanation for how the mind forms this complex idea of substance, and he offers one to Stillingfleet that looks rather different than the

one presented at *Essay* 3.3.9. In Chapter Four, I discuss this issue and how it relates to Locke's finding the idea of substance to be confused.

In light of these considerations, it is not obvious that Locke is in any substantial disagreement with Stillingfleet or even Leibniz concerning the content or status of the idea of substance. In sharp contrast to Locke, who concluded that the doctrine of substance was "*of little use in Philosophy*" (E 2.13.19 section title; 175), Leibniz considered the idea of substance to be of the greatest importance: "I offer a definition [of substance] so fruitful that therein the most fundamental truths can be derived, truths concerning even God and the essence of the mind and body" (1965, 82). Therefore, the difference in their attitudes toward the idea must lie within differences in the broader frameworks of their thought. But what accounts for Locke's critical attitude? It will be helpful in this respect to compare Locke to Pierre Gassendi (1592-1655) who also made a similar complaint about the confused idea of substance. I present Gassendi as a case study for my thesis in Chapter Five.

iii. Does Locke have a philosophically interesting position on substance?

Locke is cited by contemporary metaphysicians (Aune 1985, 46; Carter 1990, 71; Loux 2002, 103) and early modern scholars (Bennett 1987, 202) as the originator of Substratum Theory. According to this theory, a concrete (i.e. spatiotemporally bound) particular (i.e. not a universal thing) is taken to be a "coarse-grained" entity made up of two kinds of "fine-grained" ingredient: (i) the attributes we associate with the thing, plus (ii) a "bare particular" (Loux 2002, 96). A bare particular is a featureless underlying substratum that bears or possess those attributes. The main rival to Substratum Theory is called Bundle Theory. This theory holds that concrete particulars are made up of only those attributes associated with them. Substratum Theory was unpopular for most of the 20th century, taking a back seat to Bundle Theory. As a result, Locke's

association with it was viewed as a discredit to him. It is upon this basis that Matthew Stuart remarks that "Nothing has done more to damage Locke's reputation as a metaphysician than his remarks about the idea of substance" (2013, 200).

The unpopularity of Substratum Theory motivated Locke's scholars in the second half of the 20th century to find new interpretations that portrayed their subject in a more charitable light.[7] One way of doing this manifested itself in Edwin McCann's paradoxically named "No Theory, Theory of Substance" (2001). Matthew Stuart defends a similar interpretation writing, "[Locke's] modest reflections about the ideas of substance and substratum do not amount to a theory…" (2013, 244). On the one hand, McCann and Stuart are right that Locke does not analyze the notion of substance to reach any metaphysical conclusions like Descartes, Spinoza, Leibniz, and even Berkeley did; however, Locke shows no sign of dispensing with the idea of substance, as confused as it may be. Citing many of the same well-known passages from the *Essay* and the Stillingfleet correspondence as McCann and Stuart, Robert Pasnau insists: "There is ample, evidence… for ascribing to Locke a robust metaphysics of substance. For all his assertions of ignorance, he has in fact quite a lot to say about what substance is" (2011, 172). In agreement with Pasnau on this point, Michael Ayers finds in Locke a "deeply rationalist theory of substance" (1981, 219).

There is also the question of whether Locke intended any of his remarks about substance to be critical of a particular theory or conception of it. The key text for this question is *Essay* 2.13.18-20. There Locke accuses certain unnamed "*European* Philosophers" of abusing language in the way they talk about substance (174). He claims that the doctrine of substance and accidents is not of much use "in deciding of Questions in Philosophy" (175). Famously, Locke

[7] News of the recent resurgence of Substratum Theory in contemporary metaphysics has not yet reached early modern historians. See Sider 2006 and Connolly 2015 for an overview.

compares substance to an elephant that supports the earth, and he implies that the need to posit substance in the first place rests upon a mistaken assumption – namely the reification of accidents. This multidimensional attack is puzzling because later in the *Essay* Locke himself employs the term 'substance' to make meaningful assertions, and he justifies the mind's formation of the idea of substance on the grounds that we cannot imagine how accidents should subsist by themselves (E 2.32.1; 295). To resolve this puzzle, it would be helpful to know which European philosophers Locke was talking about in *Essay* 2.13.18-20, as this might allow us to understand Locke's criticisms in a different light than a surface reading would give them. Locke is commonly thought to have only the Cartesians in mind in these passages; but in Chapter Two I argue there is a better interpretive hypothesis available.

iv. Do Locke's claims rest upon a confusion?

Leibniz, who studied Locke's *Essay* and letters to Stillingfleet carefully hoping to engage him in correspondence, was the first to offer a diagnosis of Locke's error:

> 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 that understands and wills, which imagines and reasons – is to demand the impossible; and it also contravenes the assumption which was made in performing the abstraction and separating the subject from all its qualities. (RB, 218)

This passage is well-known, and Jonathan Bennett cites it as evidence that Locke viewed substances along the lines of bare particulars (1987, 202). Whether this constitutes a philosophical mistake is another question. Many early modern historians find Substratum Theory misguided (e.g. Bennett 1971; Lowe 2005; McCann 2007); however, contemporary Substratum Theorists are prepared to accept the counterintuitive result that "in the strict and literal sense, it is

not the concrete particular [but the bare particular] that is the subject for the attributes we associate with it" (Loux 2002, 99). In all fairness, Bundle Theory has at least an equally hard time defining what exactly it is that has the properties of the concrete particular since neither the whole bundle nor a subset of attributes are satisfying answers, and that's all there is to a concrete particular according to Bundle Theory (Loux 2002, 107-111.) For these reasons, it is not obvious that Locke's endorsement of Substratum Theory, if he did endorse it, would indeed constitute a philosophical mistake.

Decades before Locke began drafting the *Essay*, Descartes warned of a mistake one could make while philosophizing about substance. The error consists in mistaking a conceptual distinction for an oncological one and assuming that a thinking substance is anything other than its own consciousness or that a material substance is anything other than its own quantity of extension. In Descartes' view, "the distinction between these notions and the notion of substance itself is merely a conceptual distinction" (AT VIIIA: 31/ CSM I: 215). In one extraordinary passage, Descartes explains how a failure to grasp this point causes one to form "a confused idea of incorporeal substance" that underlies the attributes of a material object, viz. extension (AT VIIIA: 45/ CSM I: 226-227). This supposed "incorporeal" substrate that supports the accident of extension/quantity resembles the bare particulars found in contemporary Substratum Theory. These claims of Descartes and Leibniz deserve a much fuller treatment, which I provide in Chapters Four and Five.

D. Thesis Statement

In this dissertation, I aim to provide complete answers to these four questions and to demonstrate how existing answers to these questions are either wrong or incomplete. It is my thesis that Locke viewed substance in the traditional Aristotelian sense of a metaphysical subject

for various properties and acts. He did not view substance as an unknown atomic or structural basis for observable qualities as a popular interpretation claims. Nor did he view substance as a natureless bare particular. I argue that Locke's doctrine of substance has proven difficult to understand because it defies two ubiquitous interpretive assumptions: (i) Locke is a Humean empiricist; and (ii) Locke's account contains no degree of confusion. I make the case that it is not possible to make sense of what Locke said while holding onto these assumptions. According to my reading, (i) Locke permitted mental representations with intelligible content. These ideas are generated by the understanding. However, (ii) Locke displayed a tendency to treat all ideas as if they were capable of being distinctly imagined. This is problematic because intelligible content is not registered in the imagination. On the basis of this, Locke concluded that certain ideas with intelligible content are confused perceptions. The idea of substance in general is one such idea. Locke believed the idea of substance could provide no insight into the nature of substances *because* it appeared to him to be a confused perception. In fact, it cannot do that because it is a mere idea of reason. Even if we knew the real essences of natural things, the idea of substance in general would remain impervious to distinct imagination.

II. PROBLEMS FACING THE TWO TRADITIONAL READINGS

A. Two Interpretive Frameworks

The four questions raised by Locke's writings on the topic of substance presented in the previous chapter have not gone unnoticed by historians of Locke's philosophy. There are two general views of Locke's conception of substance that serve as frameworks in which to address the specific interpretative questions I have outlined. According to the so-called Bare Particular reading, a substance is a featureless metaphysical subject in which all the properties and modes of a substance inhere. According to the so-called Real Essence interpretation, a substance is identical to its real essence or internal constitution. As such, the substance is epistemically opposed, not to all its attributes, but only to the "accidents" inhering in it; i.e. the properties not connected to its essence.

The difference between the two readings has implications for Locke's famous assertion that substance is "a supposed, I know not what" (E 2.23.15; 305). According to the Bare Particular reading, a substance is necessarily unknown because it is of its own nature devoid of any features through which we can conceive of it. For the Real Essence reading, a substance is unknown contingently only because we lack knowledge of its specific essence (in the case of gold) or general nature (in the case of matter). Both the Bare Particular and Real Essence readings suffer from a lack of specific textual confirmation, and opponents of each cite numerous passages that appear to confute the other. In this chapter, I will present the strongest versions of the Bare Particular and Real Essence interpretations, and I will evaluate them against objections to show why they are widely considered to be unsatisfactory; although in each case, I argue they are more durable than is commonly thought.

B. Textual Basis for the Two Readings

Many recent authors claim the Bare Particular and Real Essence readings are textually unsupported. Yet thoughtful scholars have defended them, in some cases for upwards of thirty years, even in the face of these accusations and personal attacks. Before exploring these criticisms, I want to first see what *prima facie* evidence can be pleaded on their behalf. In both cases, the textual evidence is found in Locke's chapter "*Of our Complex* Ideas *of Substances*" (E 2.23; 295). That chapter is mainly about how the mind constructs ideas of different kinds of substances from "simple" ideas provided by experience. Locke does this as part of a larger project to show how the mind forms complex ideas, of which ideas of substances are one kind (ideas of modes and relations are the others). The aim of the project is not merely descriptive. In showing how the mind forms its ideas of substances and what content those ideas have, Locke can thereby argue that our ideas of substances are inadequate. Hence, we should not pretend to have knowledge concerning the nature of substances we do not and cannot possess.

The chapter begins with a generic account of how and why the mind forms an idea of a particular sort of substance such as gold. First, the mind receives many simple ideas in experience. Then, the mind becomes aware that "a certain number of these simple *Ideas* go constantly together" and so are "presumed to belong to one thing" (E 2.23.1; 295). This collection of various ideas is given a name, and the many ideas are "united in one subject" (ibid). Afterwards, we have a proclivity to speak and think of this complex idea as one simple idea, but it is really a "compilation of many *Ideas* together" (ibid). So far, the topic of substratum has not entered into Locke's account. Ideas of substances consist in a collection of sensible qualities with spatial and temporal unity. But Locke goes on to say: "only we must take notice, that 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" (E 2.23.3; 297). This "*Idea* of *something*" is our idea of a substratum: a "common subject" (E 2.23.4; 297) and "support" (ibid) for the sensible qualities we find united and co-existing in nature.

Why Locke calls the substratum idea "confused" is not immediately clear, although it will prove useful later in adjudicating the debate between the Bare Particular and Real Essence readings. The pressing question at this juncture is why Locke thinks our complex ideas of substances contain this idea of a substratum. Locke answers that in forming such complex ideas we "accustom ourselves, to suppose some *Substratum*" wherein that specific combination of regularly observed qualities "do subsist, and from which they do result" because we cannot imagine "how these simple *Ideas* can subsist by themselves" (E 2.23.1; 295). The supposition of a substratum boils down to the fact that "we cannot conceive how [sensible qualities] should subsist alone, nor in another" (E 2.13.4; 297). To Stillingfleet Locke adds, when the mind thinks of sensible qualities like the red color and tart taste of a cherry "it perceives their connextion with inherence of being supported" (W 4, 21). However, "we have no clear, or distinct *Idea* of that *thing* we suppose a Support" (E 2.23.4; 297). Hence, the substance or substratum of gold, or any other kind of substance, is unknown. As Locke puts it: "the Substance is supposed always *something* besides the Extension, Figure, Solidity, Motion, Thinking, or other observable *Ideas* [by which Locke means qualities], though we know not what it is" (E 2.23.3; 297).

This entire line of argument concerning the supposition of substratum, and the fact that it is unknown, is interpreted differently by the traditional readings. The Bare Particular interpretation focuses on the logical point that any attribute or quality (be it observed, observable, or unobservable) presumably equally requires a subject to inhere in, metaphysically speaking. This gives rise to a conception of substance as a featureless substrate in which the

various qualities of a substance inhere. On the other hand, the Real Essence interpretation places significance upon the process of forming complex ideas of substances on the basis of experience. After all, Locke says we suppose a substratum for just those groupings of sensible qualities we observe to co-exist in nature. These qualities that have been observed to "exist together" in nature are "therefore supposed to flow from the particular internal Constitution, or unknown Essence of that Substance" (E 2.23.3; 296). Hence, a natural thought is that our supposition of a substratum is just a supposition of a "particular internal Constitution, or unknown Essence of that Substance" (ibid). In supposing a substratum, we are marking, as it were, our ignorance of the real and internal constitution of a kind of substance, not positing a distinct and mysterious ontological item beneath all the substance's properties.

The mere fact that Locke says qualities observed to exist together in nature are supposed both (a) to belong to a substratum or common subject and (b) to flow from a particular real essence does not settle the dispute. For each party sees this fact as evidence that it is right and the other is wrong. Critics of the Real Essence interpretation allege that if Locke did identify the two, he surely would have said so explicitly. But given that Locke says (a) and (b) on the same printed page, it might have appeared to him too obvious to say and not worth pointing out on pain of being pedantic. There are, however, more substantial objections to the traditional readings. It will be worthwhile to consider several of them to motivate the more recent interpretations of Lockean substratum. To make this task more manageable, I will handle the traditional readings separately, starting with the Bare Particular interpretation.

C. Bennett's Versions of the Bare Particular Interpretation

The strongest proponent of the Bare Particular interpretation is Jonathan Bennett, who has developed two explanations of a tension he finds concerning Locke's ambivalent attitude

toward the substratum idea. Consistent across both interpretations is his view that when Locke is discussing the "idea of substance in general" or "the notion of pure substance in general" or "substratum" he is talking about the notion of a pure logical subject: the concept of a "thing", which instantiates or bears properties or qualities. This *general* concept, call it as Locke does "substance in general" or "substratum", is a "constituent of any subject-concept" because it is merely "a possible subject of predication" (Bennett 1971, 59-60). This means that for any statement, the concept of substance is part of an analysis of the subject of that statement. According to a certain theory Bennett names Substratum Theory, subject-predicate sentences and sentences with existential quantifiers are made true by the existence of "two sorts of item: substances, and properties and qualities" (ibid). Substances therefore are items that fall under the general concept of a pure logical subject. So, given the sentence "Janet is American" is true, Substratum Theory says there exists a particular substance (Janet) and it supports or instantiates the quality, property, or accident (perhaps only an instance thereof) of being American.

In his first commentary on Locke's theory of substance, Bennett acknowledges that Locke "said a good deal about" this general concept of a pure logical subject and Substratum Theory (1971, 59). Despite this concession, Bennett is not convinced Locke endorsed this line of thought. He cites *Essay* 2.23.3 where Locke seems to contradict himself, saying first we have no idea of gold but a complex idea composed entirely of simple ideas and then adding "only we must take notice" that our idea of gold also contains "the confused *Idea* of *something* to which [qualities represented by the simple ideas] belong" (297). Bennett takes this "wavering" to reflect Locke's "lack of enthusiasm for the 'idea of substance in general'" (1971, 61). He claims that "Locke says little about 'the idea of substance in general' because he regards it as embarrassing and trivial" (1971, 75). In addition, Bennett points to Locke's highly critical discussion of

substance in *Essay* 2.13.18-20 as proof that "Locke's treatment of 'substance in general' was mainly sceptical in content and ironical in form" (1971, 61). In other words, Locke intended any constructive claims about substratum only sarcastically.

Bennett chooses not to formally defend this "minority opinion" about Locke's attitude toward substratum. Though he admits that Locke appears to endorse both the concept and the being of substratum is his correspondence with Stillingfleet. For example, Locke writes:

> … I ground not the being, but the idea of substance, on our accustoming ourselves to suppose some substratum; for it is of the idea alone I speak there, and not of the being of substance. And having every-where affirmed and built upon it, that a man is a substance; I cannot be supposed to question or doubt of the being of substance, till I can question or doubt of my own being. (W 4, 18)

But convinced he is right about the passages from the *Essay*, Bennett argues rhetorically: "is Locke likely to have been less clear and candid in his magnum opus than in his letters to a touchy and not very intelligent bishop" (1971, 35)? I read this as an informal defense of his "minority position": those who think Locke's letters to Stillingfleet reflect his authentic attitude towards substance in general and the existence of a substrata need to explain the passages in the *Essay* where Locke abuses the idea – the very passages that encouraged Stillingfleet to think Locke "took the being of substance to be doubtful" (W 4, 18).[8]

Further study of Locke's texts over the course of nearly two decades caused Bennett (1987; 2001) to prefer a different way of making sense of Locke's "unwavering doubleness of… attitude to the 'idea of substance in general' or 'substratum'" (2001, 111). His second attempt

[8] Bennett (1971) is not alone in questioning Locke's sincerity in the Stillingfleet correspondence. Newman (2000) also thinks Locke was skeptical of the existence of substratum-substance, but he goes beyond Bennett's rhetorical argument and offers a nuanced esoteric reading of several key passages from the Stillingfleet correspondence in which Locke professes a rationally justified belief in the existence of substrata. I will discuss this possibility at length in Chapter Three when I examine Newman (2000).

shares with his first interpretation the analysis of this idea as a pure logical subject. However, Bennett now claims that "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" (1987, 201). In other words, Locke saw that "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" (ibid, 200). Indeed, Locke observed that "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; a spirit a *thing* capable of thinking…" (E 2.23.3; 297). At the same time, "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" (Bennett 1987, 200). For Locke, a general term is meaningful only if it is made to stand for a determinate idea in the mind of the speaker (E 3.2.2; 405). But Locke doesn't think we have a determinate idea of substance. (W 4, 29) To the extent that we do, it is the idea of "something" or "being" that stands in an obscure relation of support to accidents. But the idea of "being" is as vague and indeterminate an idea as the mind can form through abstraction (E 3.3.9; 412). Consequently, the "doubtful" (E 2.13.18; 174) general term 'substance' is practically without meaning; hence: "we… signify nothing by the word *Substance*, but only the supposition of we know not what…which we take to be the *substratum*, or support, of those *Ideas* we do know" (E 1.4.18; 95).

For these reasons, Bennett concludes that Locke is "a semantic theorist in an *impasse*" (1987, 200). Therefore, "It's no wonder that the substratum texts are two-faced: in them we see a genius in a bind" (ibid). Nowhere in his 1987 paper, or his 2001 book, does Bennett say that

Locke endorsed Substratum Theory or explicitly made an ontological claim about the existence of bare particulars. He clarifies the issue writing:

> Nearly always [Locke] treats [substratum substance] as an issue about our concepts: his point is that our thoughts are shot through with the idea of substratum substance, rather than that we believe that such things or stuff exists. Presumably he would say that if there is no substratum substance, then most of our beliefs about the world are false; but his emphasis is on folk semantics, not folk metaphysics." (2001, 122)

In saying that Locke's emphasis is on "folk semantics, not folk metaphysics," Bennett means that Locke is reporting what people say about substance and not what they believe about substance's existence. Therefore, the last sentence does not show that Bennett took Locke to endorse the Substratum Theory. The Substratum Theorist argues that unless there are substrata, then most of our beliefs about the world are false. Our beliefs about the world, by and large, are not false. Therefore, substratum substance exists. But Locke does not argue this way, according to Bennett's interpretation. Granted, Locke does countenance (but not without reservations) the notion of a pure subject, which is at the heart of Substratum Theory; however, he does not employ that concept to explicitly argue for a metaphysical conclusion. Though if pressed, Bennett speculates Locke would "presumably" agree that unless an item corresponding to our concept of substratum actually exists, any statement that contains a subject term is false because it lacks a truth-maker (ibid).

D. Eight Objections to the Bare Particular Reading

Bennett's two interpretations share a common understanding of Locke's idea of substratum. They further agree that Locke makes some negative and some constructive claims about that idea. The two interpretations come apart concerning Locke's attitude toward the idea. Accordingly, some criticisms apply to both of Bennett's interpretations, while others are directed squarely at one or the other. I would like to focus on objections that target both of Bennett's

readings and the common understanding of the idea of substance they share. For if it can be shown that Bennett is wrong in his analysis of Locke's idea of substratum, then Locke's attitude towards that idea need not be debated. If Bennett is right in characterizing Locke's idea of substance as a *thing* opposed to all its properties, then we can consider Locke's attitude towards it.[9]

i. Objection on grounds of sanity

Michael Ayers presents what he calls "a circumstantial argument" against the Bare Particular interpretation:

> …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 describes 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 then its properties, in fact; although it might be said to be so from our point of view, insofar as it is in some sense "other than" the phenomenal properties by which we know it. (1975, 2-3)

As explained in the first chapter, in Aristotelian metaphysics the form or essence of a substance inheres in matter and determines what kind of thing the substance is and what properties it has. By itself, the matter does not have any positive features; it is pure potentiality. In this way, the matter is a substratum to the form or essence. If the Bare Particular reading is correct, then Locke's conception of substance would indeed mirror the hylomorphic model, with the substance qua substratum distinct from the essence. But that's unlikely, Ayers argues, due to what we know about Locke's general philosophical outlook as Anti-Aristotelian in many respects, and his criticism of "*substantial form*[s]" (E 2.31.6; 380) and "*Materia prima*" (E

[9] Ultimately this is a position I will defend. In Chapter Five, I argue that Bennett is right about the idea of substance, but he wrong in his analysis of Locke's negative remarks against it. Incidentally, the passages that pose a problem for Bennett's interpretation are explained by my interpretation of Locke on confused ideas.

3.10.15; 499) as unintelligible and problematic. Ayers concedes that this historical objection will fail to convince anyone who thinks Locke is discussing the idea of a substance only ironically, criticizing and disparaging it (1975, 3). And likewise, it will not undermine Bennett's second interpretation either since it can allow for Locke to be uncomfortable with the concept of substance (Bennett 2001, 111).

Nevertheless, Ayers' "circumstantial" argument gains further support because the fault Locke associates with prime matter (E 3.10.14; 497) is similar to the one he says is involved with substance (E 2.13.18; 174). Both are abuses of language. Words, in Locke's view, stand only for settled ideas in the mind of the speaker (E 3.2.2; 405). The crucial issue is "whether that precise *Idea* agree[s] to anything really existing in Nature, or no" (E 3.10.15; 499). In the case of substance, the trouble seems to be that "we have no Idea what it [substance] is, but only a confused obscure one of what it does", i.e. support accidents (E 2.13.19; 175). When it comes to substantial forms (the complimentary to prime matter), Locke also cites our plain ignorance of substantial forms as grounds to reject them:

> But when I am told, that something besides the Figure, Size, and Posture of the solid Parts of that Body, is its Essence, something called *substantial form*, of that, I confess, I have no *Idea* at all, but only of the sound *Form*; which is far enough from an *Idea* of its real Essence, or Constitution. (E 2.31.6; 380)

This shows that Locke's criticism of prime matter and substantial forms is not that the theory is impossible or intolerable *because* it involves the notion of a thing that has no properties. Rather the problem is that our species terms cannot possibly refer to these forms we do not know. Consequently, our ideas of particular sorts of substances, which are signified by those names, "cannot be supposed to be any representation of them [=substantial forms] at all" (E 2.31.6; 379). Instead, Locke argues that "Things are ranked under Names into sorts or *Species*, only as they agree to certain abstract *Ideas*, to which we have annexed those Names" (E 3.3.15; 417).

Therefore, Locke could sanely maintain this attack against Aristotelian prime matter and substantial forms and still, for independent reasons, have discussed and even believed in a bare particular *conception* of substance.

It is not immediately clear why Locke thinks those who employ the word 'substance' abuse language by mistaking words for things. Typically, this abuse of language is problematic insofar as not all our ideas correspond to features of reality, let alone ontologically independent things (i.e. the standard definition for substance dating back to Aristotle's *Categories*). Consequently, not all meaningful words correspond to things in the world. The idea of prime matter is an abstraction from the idea of body (E 3.10.15; 498-499), but in Locke's view the parts of matter are actually divided one from another such that solidity cannot exist without extension and figure (ibid). Because prime matter is merely an idea, "the taking *Matter* to be the name of something really existing under that Precision, has no doubt produced those obscure and unintelligible Discourses and Disputes, which have filled the Heads and Books of Philosophers concerning *Materia prima*" (ibid).

In one passage, Locke implies that the idea of substance is likewise the result of mental abstraction (E 3.3.9; 412); however, this passage needs to be read in concert with Locke's claim that the mind frames the idea of substance in response to the recognition that qualities cannot "subsist alone, nor in one another" (E 2.23.4; 297). I will explain how these two passages are related in Chapter Five. For now, it will suffice to say that Locke's complaint in *Essay* 2.13.18 about philosophers who commit the fallacy of "taking Words for Things" when theorizing about substance has to do with Locke's general point that words by themselves do not have any magical powers to illuminate "the nature of things" (174). Words can play a role in crafting helpful explanations only insofar as "they are signs of, and stand for, determined *Ideas*" (ibid). In

Locke's view, we do not have a clear and distinct idea of substance. For this reason, Locke objects to the use of the "doubtful" word 'substance' in philosophical arguments (ibid). As I will explain later in this chapter, the target of Locke's complaints about the "promiscuous use" of the term 'substance' is not entirely clear. Descartes and his followers are likely suspects, but so too are the Aristotelians. The difficulty lies in sorting out exactly which parts of Locke's argument pertain to each school of thought.

ii. The properties substratum supports

Martha Bolton (1976) argues that according to Locke's account only certain properties of certain things (i.e. qualities of substances) are supported by substrata. If Locke's idea of a substratum were an idea of a pure subject for predication, then Bolton suggests we should expect Locke to hold that all properties are supported by and require a substratum in which to inhere. But Locke does not say that. Bolton argues that Locke explicitly maintains that a substratum is required to support *only* the qualities of substances. It is true, for example, that Locke never mentions that the substratum idea is involved in our thinking about a triangle, which has the property of three sidedness. Bennett (2001) concedes that Locke did not think his theory of predication all the way through. To Bennett's mind, Locke should have realized that the substratum idea is involved in thinking about things he classified as modes and relations, but Locke didn't because, like Aristotle, he was mainly concerned with "the instantiation of qualities by items that are not themselves qualities" (2001, 109).

Even if this reply is acceptable, the Bare Particular reading is not out of the woods. Bolton's point is further that Lockean substratum supports only qualities, which she understands to be an object's causal powers (1976, 494). But if Bennett is right about the idea of substance, the substratum ought to provide support for any property or attribute of a substance, not just its

causal powers. Consider one of Locke's favorite examples: the substance we call 'gold'. It is both yellow and valuable. Yellow and valuable are equally properties of gold, but Locke seems to treat the two differently. Locke classifies yellow as a secondary quality, and he would probably classify valuable as a mixed mode. As Bolton points out, Locke clearly views substratum as a support for qualities, most of which he says, in *Essay* 2.23.9 for example, are powers to affect our senses (viz. secondary qualities, like the power that causes our perception of yellow in gold) and to affect changes in other substances (300-301).

This is an astute objection against the Bare Particular interpretation of the substratum idea, but there are a couple of ways a defender of that reading could respond. One way is to argue that not all qualities are causal powers and to insist that the substratum supports qualities that are not causal powers. Given how Locke speaks about primary qualities throughout the *Essay*, it could be argued that they are morphological features of bodies that render bodies casually efficacious. It is in virtue of the primary qualities of matter that bodies have the causal powers to produce sensations in minds and alter the primary qualities of other material substances. Since Locke implies that it is the primary qualities of matter that immediately inhere substance (E 2.23.2; 296), he does not accept the thesis that *only* causal powers inhere in the substratum.

My preferred rejoinder focuses instead on the difference between qualities and modes themselves. I agree with Bolton (1976) and Benjamin Hill (2004) about a fundamental distinction between qualities and modes. Hill explains that qualities inhere in substances and are literally present in them; whereas modes are said of substances and are never present in them (2004, 173). However, both qualities and modes depend on substance in a general ontological way. If substances did not exist, qualities like shape and color would not exist, and neither would

qualities like infidelity or pure space. If there is any doubt about the later claim, Locke clearly states that modes are "considered as Dependencies on, or Affections of Substances" (E 2.12.4; 165). Although substance gives ontological support to qualities and modes alike, it is nonetheless true that qualities inhere in the substratum, while, strictly speaking, modes do not. Generosity might be a fundamental attribute of Mother Teresa, but that mixed mode does not inhere in her substratum. It does not inhere because it cannot be reduced to the primary qualities and intrinsically real attributes of her substance. A mixed mode like gratitude is obviously related to human cognition, language, and values. Like relations, modes are "something extraneous, and superinduced" into substances (E 2.25.8; 322). Despite this, modes are related to substances and they are united to the substratum, albeit it in an artificial way. As Hill explains, "they are only united [to a substance] by an act of mind and the establishment of a name under which the mode falls" (2004, 176). In contrast to modes, qualities are united to a substratum in virtue of their direct inherence and literal presence in them. Despite the different ways that modes and qualities are united in a substance, they can still be united in the same subject or substratum. This fact is borne out in Locke's own example of the sun where modes are listed among the simple ideas that comprise our complex idea or nominal essence of that substance:

> 'Tis by such Combinations of simple *Ideas* and nothing else, that we represent articular sorts of *Substances* to our selves; such are the *Ideas* we have of their several species in our Minds; and such only do we, by their specifick Names, signify to others, *v.g. Man*, *Horse*, *Sun*, *Water*, *Iron*, upon hearing which Words, every one who understands the Language, frames in his Mind a Combination of those several simple *Ideas*, which he has usually observed, or fancied to exist together under that denomination; all which he supposes to rest in, and be, as it were, adherent to that unknown common Subject, which inheres not in any thing else… Thus the *Idea* of the *Sun*, What is it, but an aggregate of those several simple ideas, Bright, Hot, Roundish, having a constant regular motion, at a certain distance from us, and, perhaps, some other: as he who thinks and discourses of the *Sun*, has been more or less accurate, in observing those sensible Qualities, *Ideas*, or Properties, which are in that thing, which he calls the *Sun*. (E 2.23.6; 298-299)

The ideas of "having a regular motion" and being "at a certain distance from us" are either ideas of modes (e.g. distance) or are complex ideas that involve ideas of modes (e.g. regular motion). The last sentence, with the phrase "sensible Qualities, *Ideas*, or Properties", suggests that Locke wanted to include more than just ideas of qualities into the discussion as parts of our complex ideas of substance. Furthermore, every indication is that all the "simple" ideas (not just those of sensible qualities) are "suppose[d] to rest in, and be as it were adherent to that unknown common Subject", which Locke calls the substratum. This passage, along with how Locke characterizes modes as dependent on substance, provides strong support indeed for Bennett's interpretation of the idea of substratum as an idea of a logical subject. Modes and sensible qualities contained in the mental representation of an object alike appear in need of a common substratum to exist in, on logical, not causal, grounds.

In one passage, however, Locke does say that the sensible qualities we observe to co-exist "result" from the substratum (E 2.23.1; 295). This language suggests that the substratum is the unobserved causal basis for the observable ideas that "result" from it. Modes certainly do not straightforwardly "result" from the substratum, although substances can be viewed as the efficient cause of a mode being instantiated in a subject (Hill 2004, 179). One word is hardly conclusive evidence upon which to base an entire interpretation of Lockean substratum, but this is not the only time Locke speaks this way. In the fifth edition, a footnote was added to this passage that includes an excerpt of Locke's correspondence with Stillingfleet that reads in part: "the supposed simple *Substratum* or substance… was look'd upon as the thing it self in which inhere, and from which resulted that Complication of *Ideas*, by which it was represented to us" (E 295 footnote). This supports the Real Essence interpretation since substratum is described as a causal basis of the substance's observable qualities. The phrase "by which it was represented to

us" might alternatively lead one to believe that the substratum is the basis, not for the object's causal powers, but for the ideas in our minds produced by those extra-mental powers.

Although Locke speaks of simple ideas resulting from the substratum in these two instances, on separate occasions he makes a slightly different point concerning the causal relationship between a substratum and a collection of sensible qualities. It is not that each individual quality is caused by the substratum; rather the substratum is the "Cause of their Union, as makes the whole subsist of itself" (E 2.23.6; 298).[10] Similarly, in *Draft C* Locke describes substratum as the "unknown cause" of the "subsistence", "union", and co-existence" of qualities. (cited in Aaron 1937, 69). These facts open the door to a non-causal way of reading the language of "resulting". Locke could have meant both that the substratum causes each observable quality individually, and because of that causes their union. Or, he could have simply meant the expression "from which they do result" (E 2.23.1; 295) to mean what explains their being in or belonging to a common subject – i.e. to one *thing* rather than a coreless bundle of attributes. As Matthew Stuart reasonably points out, according to the substratum theory a substance wouldn't have any properties if the bare particular didn't instantiate them. Therefore, the simple ideas of which Locke speaks "result" from the substratum "because they would not exist without it" (2013, 215). For these reasons, Bolton's argument does not amount to a decisive refutation of Bennett's understanding of Locke's conception of substance.

iii. Substance as a placeholder

Michael Ayers has another argument about why Locke's substratum idea is not the concept of a logical subject. In short, his point is that if we knew the real essences of substances, the substratum idea would no longer serve a purpose in our thinking about those substances

[10] Cf. E 2.6.21; 450.

(1975, 18). If we knew the real essence of gold, for example, Ayers alleges that Locke believed we wouldn't have to represent it as a yellow, malleable, heavy *substance*. Instead, we could just think: *parcel of molecules with atomic number 79*. But what evidence is there that Locke held such a view? Ayers offers this passage as proof:

> By all which it is clear, That our *distinguishing Substances into Species* by Names, *is not at all founded on their real essences*; nor can we pretend to range, and determine them exactly into Species, according to internal essential differences.
>
> But since, as has been remarked, we have need of general Words, tho' we know not the real Essences of Things; all we can do, is to collect such a number of simple *Ideas*, as by Examination, we find to be united together in Things existing, and therefore to make one complex *Idea*. Which though it be not the real Essence of any Substance that exists, is yet *the specifick Essence*, to which our Name belongs, and is convertible with it; by which we may at least try the Truth of these nominal Essences. For Example, there be that say, that the Essence of *Body* is Extension: If it be so, we can never mistake in putting the Essence of any thing for the Thing it self. Let us then in Discourse put *Extension* for *Body*; and when we would say, that Body moves, let us say, that Extension moves, and see how it will would look. He that should say, that one Extension, by impulse moves another extension, would, by the bare Expression, sufficiently shew the absurdity of such a Notion. The *Essence* of any thing, in respect of us, is the whole complex *Idea*, comprehended and marked by that Name; 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: And therefore the Essence of Body is not bare Extension, but an extended solid thing; and so to say, an extended solid thing moves, or impels another, is all one, and as intelligible as to say, *Body* moves, or impels. Likewise, to say, that a rational Animal is capable of Conversation, is all one, as to say a *Man*. But no one will say, That Rationality is capable of Conversation, because it makes not the whole Essence, to which we give the Name Man. (E 3.6.20-21; 449-450)

Ayers focuses on Locke's claim that "we can never mistake in putting the Essence of any thing for the Thing it self". He takes this to mean that if we knew the real essence of gold, we would no longer have to say things like: "gold is a yellow, malleable, heavy *thing*". So, the 'thing' concept – in Bennett's view the idea of a substratum – would no longer be needed. And if that were true, then Bennett's interpretation of that idea would be false, and Ayers' view supported.

Bennett argues that Ayers misunderstands the point of the passage. According to Bennett, it actually "confirms" his interpretation because Locke is explaining how linguistic considerations reveal the idea of substance in general to be a fundamental a part of our representations of substances (1996 2, 118-120). Seemingly no matter what essence one purposes for 'body', the idea of substance will still be required to represent that object in the mind. But what exactly is the significance of this? Bennett takes it to show the indispensability of the substratum concept. Someone claiming that the nominal essence of 'body' is extension is wrong about that because we cannot substitute 'extension' for 'body' in a sentence. The result is nonsense. On the other hand, Ayers thinks the passage is about someone claiming to know the real essence of body. 'Extension' is "the nominalization of the wrong adjective. If x-ness were the essence of body, then "to say that one x-ness impelled another would make sense" (1996 2, 52).

The early sentences of the passage favor Bennett's reading. Locke is talking about the truth and falsity of nominal essences, and he devises a way to test them, not real essences. Locke sees this as a vindication of his theory of nominal essences. What we mean by general names is nothing more than an abstract idea we have created by cobbling together properties that we discover through experience and "by Examination, we find to be united together in Things existing" (E 3.6.21; 449). After all, definitions have to do with words, and words presuppose nominal, not real, essences. For this reason, Bennett is within his right to discredit Ayers' objection since he has an equally good way to understand the force of the passage. At best, Ayers' view is only hinted at (and certainly not implied) if the passage is read in certain light.[11]

[11] I will discuss this key passage again in Chapter Four when more cards are on the table.

iv. The Nature of Substance

A few specific passages from *Essay* highlight a difficulty with reading the substratum idea as an idea of a purely logical subject. For example, Locke writes:

> Whatever therefore be the secret and abstract Nature of *Substance* in general, 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." (E 2.23.6; 298)

This passage doesn't fit with Bennett's interpretation because here Locke appears to be talking, not about our idea of substratum, but about the nature of substance itself. However, if there is a metaphysical entity corresponding to our idea of substratum on Bennett's interpretation of it, "Locke should find it obvious that substratum as such cannot have a 'nature'" (2001, 120). Bennett concedes that he cannot explain this passage, writing it off as one of the few times Locke makes metaphysical claims about substance. Much more frequently (Bennett thinks), Locke discusses the concept of substance, emphasizing that our thoughts are "shot through with the idea of substratum" (2001, 122).

Matthew Stuart (2013) offers a direct response to the passage. He denies that Locke is taking about the metaphysical nature of substance in general. The overall structure of the passage is not about ontology, but the content of our ideas. Locke's point is that while our idea of substance in general has no content, the ideas we have of species of substance are "nothing but" complex ideas made up of simple ideas plus the idea of a substratum. Stuart places attention on the modifier 'abstract'. He finds evidence in Locke's letters to Stillingfleet suggesting that "for there to be an "abstract Nature" of substance may just be for us to have an abstract idea we associate with 'substance'" (2013, 215). This is of a piece with Locke's doctrine of nominal essences. In the case of substratum, our abstract idea corresponding to the term is "secret" in the sense – now obsolete but current in Locke's day – that it is "remote from comprehension" and

"obscure" (Stuart 2013, 216). Furthermore, the title of section 4 reads, "*No clear* Idea *of Substance in General*", and that section concludes: "we have no clear, or distinct *Idea* of that *thing* we suppose a support" (E 297). None of this encourages us to think that Locke, in writing just one section removed from this, makes a sudden ontological claim about the nature or essence of substance in general. In fact, Locke denies there is such a being: "I must take the liberty to deny there is any such thing in *rerum natura* as a general substance that exists itself, or makes any thing" (W 4, 27). This denial is grounded in his rejection of "general Natures" existing outside of the mind: "he that thinks general Natures or Notions, are any thing else but such abstract and partial *Ideas* of more complex ones, taken at first from particular Existences, will, I fear, be at a loss where to find them" (E 3.3.9; 412). Far from being an implausible and forced reading, Stuart's analysis is probably right. If it is, then Bennett's interpretation is no worse off as a result of this one phrase.

Locke does write of the "nature of *Substance*" a second time:

> I desire those who lay so much stress on the sound of these two Syllables, *Substance*, to consider, whether applying it, as they do, to the infinite incomprehensible GOD, to finite Spirit, and to Body, it be in the same sense; and whether it stands for the same *Idea*, when each of those three so different Beings are called *Substances*? If so, whether it will thence follow, That God, Spirits, and Body, agreeing in the same common nature of *Substance*, differ not any otherwise than in a bare different modification of that *Substance*; as a Tree and a Pebble, being in the same sense Body, and agreeing in the common nature of Body, differ only in a bare modification of that common matter. (E 2.13.18; 174)

However, the dialectical nature of this passage makes it improbable to infer from the phrase "nature of *Substance*" that Locke believed that substance has a nature apart from the qualities inhering in it. The key line in this passage indeed contains the phrase "nature of *Substance*". But as William Uzgalis admits, "it is difficult to figure out exactly what Locke has in mind here" (2007, 47). Locke is concerned that if God, spirits, and body are substance in the same sense,

then they must agree "in the same common nature of *Substance*" and "differ not any otherwise, than in a bare different modification of that *Substance*." Descartes and his followers are assumed to be the target of Locke's argument here (Downing 2018, 77), but, if this is correct, Locke must be read as making a fairly implausible point. The worry is that if God, mind, and matter are equally substance, then they are all equally modes of a single substance (just as a tree and a pebble are mere modes of extension) and share a fundamental nature. What makes this line of interpretation difficult to accept is that Descartes did think it was possible for really distinct substances to have essences of the same type (e.g. finite minds). To rule this out, and for the expressed worry against the Cartesians to make any sense at all, Locke would need to add the Spinozistic assumption that two substances cannot share an attribute (Eth Ip5), a claim ultimately based in the identity of indiscernibles. There is no evidence that Locke embraced such an assumption. Furthermore, from reading *Principles of Philosophy*, Locke would know that Descartes did not think the word substance applied univocally to God and created beings (cf. AT VIIIA: 24/ CSM I: 210), nor did Descartes explicate 'body' in terms of "solid being" (cf. AT VIIIA: 42/ CSM I: 224). Yet, Locke attributes these claims to the view he is criticizing (E 2.13.16; 173). For all three reasons, Locke's argument concerning the "nature of *Substance*" is more plausible when construed along Newtonian lines.

In his unpublished manuscript, *De Gravitatione*, likely written before 1685, Isaac Newton (1643-1727) criticized what he called the "common idea (or rather lack there of it) of body, according to which there resides in bodies some unintelligible reality that they call substance, in which all the qualities of a body are inherent" (2004, 31-32). He argued that once this conception of matter is granted (a substratum with material properties), it will be difficult to distinguish it adequately from mental substance (likewise a substratum with mental properties) because "bare

substances do not have an essential difference" (2004, 32). The only way to demarcate them is to go by the type of "attributes or substantial forms" inherent in them, but it is conceivable that a single substance could support both material and mental properties simultaneously. That would make them both mind and body. Furthermore, if we extend this way of thinking about matter to God we "confound them in some common apprehension of an unintelligible reality" (ibid). Indistinguishable as "bare substances", God and matter would differ only in terms of their attributes. This is problematic in so far as it "ascribes to corporeal substances that which solely belongs to the divine" – namely "a complete, absolute, and independent reality in themselves" (ibid).

If Locke were making the same point in *Essay* 2.13.18, the phrase "common matter" in the last line of the passage cited above would describe prime matter as it figured in the Aristotelian conception of body. As such, the phrase "nature of *Substance*" carries with it a far different meaning than critics of the Bare Substratum reading have been eager to assume. My interpretive hypothesis gains additional support from the fact that Locke's reference to "some dim and seeming conception how Matter might at first be made, and begin to exist by the power of that eternal first being" (E 4.10.18; 628-629) likely describes the radical theory of matter outlined by Newton in *De Gravitatione*. According to the theory as fleshed out by Newton, bodies are divinely "determined quantities of extension" with certain "conditions" such as mobility, impenetrability, the active power to cause perceptions in minds, and the capacity to be moved by minds (2004, 27). Newton claimed he was the source of Locke's argument in *Essay* 4.10.18 (Bennett and Remnant 1978). Since Newton's discussion of substance in *De Gravitatione* serves to highlight the merits of the immaterialist theory of matter he shared with Locke, it is conceivable that Locke's argument in *Essay* 2.13.18 about substance also derives

from Newton. The undeniable similarities in wording, as well as and Locke's placement of the argument in a broader discussion of space versus body, makes it an appealing hypothesis.

v. Why substance is unknown

Locke repeatedly characterizes substratum as unknown; and, on the face of it, Locke's doing so tells against Bennett's line of interpretation for the very reason that according to it Locke shouldn't be commenting on substratum qua ontological entity. And if he were, he should recognize that substance is not unknown but unknowable. But a closer look at the instances in *Essay* 2.23, where Locke writes of an "unknown support" (section 2; 296), or "unknown, Cause" (section 6; 298), or "unknown common Subject" (ibid), or "unknown *Substratum*" (section 37; 317), reveals nothing of the sort. All these instances are perfectly consistent with the facts that the substratum idea is an idea of a *thing* that supports accidents, and yet we have no specific idea of that *thing*. It is in this sense that Locke refers to substratum as unknown: because we have no specific idea corresponding to the *thing* we suppose is required to support accidents. Locke couldn't be clearer in the passage he wrote to Stillingfleet:

> … strip this supposed general idea of a man or gold of all its modes and properties, and then tell me whether your lordship has as clear and distinct an idea of what remains, as you have of the figure of the one, or the yellow colour of the other. I must confess the remaining something to me affords so vague, confused and obscure an idea, that I cannot say I have any distinct conception of it; for barely by being something, it is not in my mind clearly distinguished from the figure or voice of a man, or the colour or taste of a cherry, for they are something too. If your lordship has a clear and distinct idea of that "something which makes the real being as distinguished from all its modes and properties," your lordship must enjoy the privilege of the sight and clear ideas you have: nor can you be denied them, because I have not the like; the dimness of my conceptions must not pretend to hinder the clearness of your lordship's, any more than the want of them in a blind man can debar your lordship of the clear and distinct ideas of colours. The obscurity I find in my own mind, when I examine what positive, general, simple idea of substance I have, is such as I profess, and further than that I cannot go; but what, and how clear it is in the understanding of a seraphim, or of an elevated mind, that I cannot determine. (W 4, 27-28)

The final full clause might be taken to show that Bennett's interpretation of the substratum idea is wrong. If Bennett is right, Locke shouldn't say that "an elevated mind" might have an idea of "the remaining something" clearer and more distinct than ours since the idea of a logical subject is equally devoid of content no matter how elevated the mind is that considers it. However, the final sentence need not be taken literally, as Locke is most likely being ironic. The whole passage is rich with notes of sarcasm. Locke wields his modesty like a sword, offering not to pass judgement on the clarity and distinctness of Stillingfleet's ideas, and comparing himself to a blind man who cannot judge how well others see colors. Locke does not actually think Stillingfleet has a clear or distinct idea of substratum. Matthew Stuart agrees that Locke is "having a bit of fun at the Bishop's expense" (2013, 240 footnote). The reference to an "elevated mind" in the last clause is a parting jab at Stillingfleet, comparing the Bishop to an angel. Locke says these things about the knowledge had by higher sprits and God in part to accentuate the appearance of his own intellectual modesty, which makes him more likable to the reader. Such references also function to stress the real philosophical point that both the scope and content of human knowledge is relative to human minds and faculties (E 2.2.3; 120-121). However, everything Locke wanted to say about human knowledge could in theory be made without referencing the knowledge of higher spirits. For these reasons, Bennett's interpretation is not refuted by this one colorful remark.

vi. <u>What angels might know of substance</u>

At multiple places the *Essay*, however, Locke does say that God has, and higher spirits might have, knowledge of substances that humans lack:

> The foundation of all those Qualities, which are the Ingredients of our complex *Idea*, is something quite different: And had we such a Knowledge of that Constitution of *Man*, from which his Faculties of Moving, Sensation, and Reasoning, and other Powers flow…, as 'tis possible Angles have, and 'tis certain

> his Maker has, we should have a quite other *Idea* of his *Essence*, than what now is contained in our Definition of that *Species*, be it what it will: And our *Idea* of any individual *Man* would be as far different from what it now is, as is his, who knows all the Springs and Wheels, and other contrivances within, of the famous Clock at *Strasburg*, from that which a gazing Country-man has of it, who barely sees the motion of the Hand, and hears the Clock strike, and observes only some of the outward appearances. (E 3.6.3; 440)

> Though yet it be not to be doubted, that Spirits of a higher rank than those immersed in Flesh, may have as clear *Ideas* of the radical Constitution of Substances, as we have of a Triangle, and so perceive how all their Properties and Operations flow from thence: but the manner how they come by that Knowledge, exceeds our Conceptions. (E 3.11.23; 520)

These passages concern knowledge of real essences or internal constitutions of substances. Humans fall short of this knowledge of substances for several reasons. One of the main problems in the case of material substances is that "though we are not without *Ideas* of these primary qualities of Bodies in general", we are ignorant of "the particular *Bulk*, *Figure*, and *Motion*" of bodies both big and small (E 4.3.24, 555). Another, and Locke thinks "more incurable part of [our] Ignorance" (E 4.3.12; 545) is our inability to conceive how bodies possess powers to produce ideas in our minds (E 4.3.13; 545). Equally baffling is the mind's power to give motion to our bodies (E 4.3.28; 559). These active and passive powers of body (respectively) must have some explanation, some physical basis, but "we can have no distinct knowledge of such Operations beyond our Experience; and can reason no otherwise about them, than as effects produced by the appointment of an infinitely Wise Agent" (ibid). All similar passages are perfectly innocuous with respect to Bennett's interpretation, with one important exception:

> What Faculties therefore other Species of Creatures have to penetrate into the Nature, and inmost Constitutions of Things; what *Ideas* they may receive of them, far different from ours, we know not. This we know, and certainly find, that we want several other views of them, besides those we have, to make Discoveries of them more perfect. And we may be convinced that the *Ideas*, we can attain to by our Faculties, are very disproportionate to Things themselves, when a positive, clear distinct one of Substance it self, which is the Foundation of all the rest, is concealed from us. (E 4.3.23; 554)

Up until the last sentence, this passage is identical in message to the two quoted previously. Our faculties are to blame for our ignorance concerning "the Nature, and inmost Constitutions of Things". But, in the final sentence Locke argues that we should be convinced that our ideas of substances are inadequate by mere fact that "a positive, clear distinct one of Substance it self" is "concealed from us". This is reminiscent of another passage where Locke says, "a Man has no *Idea* of Substance in general, nor knows what Substance is in it self" (E 2.31.13; 383). This alone is alleged to render our ideas of substance inadequate, knowledge of real essences notwithstanding. The problem for Bennett's interpretation is that Locke's shouldn't be saying an idea of substance itself is hidden from us, and this idea should have nothing to do with the inadequacy of our representations of substances because even if real essences were known, we would still need the concept of a 'thing which' for cognitive and linguistic reasons.

To make matters worse for Bennett's reading, Locke states that it "would be of general use for Mankind to have" an idea of substance (E 1.4.18; 95). And it is clear from the context that Locke means it would be useful to have an idea of the unknown substratum "we take to be …the support, of those *Ideas* we do know" (ibid). The same is true of the other problematic passages. It cannot easily be maintained that Locke is referring to anything but the idea of a substratum. The phrase "*Idea* of Substance in general" (E 2.31.13; 383) and the modifier "positive" (E 1.4.18; 95), which in Lockean terms contrasts with "relational", make it all but certain that Locke is speaking about the substratum idea in these passages, and he is implying that a positive, clear, and distinct idea of substratum is possible. It might be possible to explain away one of these passage as a mistake in expression, but in conjunction that seems highly implausible. Incidentally, these passages are claimed by the Real Essence interpretation as providing evidence of its thesis that Locke intended the substratum idea as a mental proxy for an

unknown real essence of the general substance of matter (cf. Ayers 1996 2, 52). However, it should be pointed out that Bennett's first interpretation, according to which Locke speaks of the idea of substance in general only ironically, is one potential way to sidestep the issues presented by these passages. Though I find it difficult to see any possible irony or sarcasm in *Essay* 4.3.23, unlike the other three (i.e. E 3.6.3; 3.11.23; 2.31.13), where such a reading is possible given the proximity in the text to discussions of the Scholastic theory of substantial forms.

vii. A fraudulent argument

According to Bennett, Locke's substratum idea is the concept of a pure logical subject that stands in relation of support to the properties that exist in it. However, passages in *Essay* 2.23 appear to contain epistemic claims about substance itself – the real-world analog of the substratum idea. Notice the subtle shift in the following passage from "our confused *Idea* of *something*" to a claim about what "Substance" is supposed to be:

> … we must take notice, that 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; a Spirit, a *thing* capable of thinking; and so Hardness, Friability, and Power to draw Iron, we say, are Qualities to be found in a Loadstone. 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. (E 2.23.3; 297)

Maybe this is innocent, and all Locke means is that the content of our idea of substratum is unknown (because it is merely the idea of a *thing*) and so is "*something* besides" the other simple ideas in the complex idea. Such a reading is of a piece with what I suggested earlier in Bennett's defense concerning Locke's frequent claim that substratum is unknown. These occurrences do not imply that substratum is a metaphysical entity separate from the qualities, an entity that could

in principle be known. Rather such passages are a way of saying we have no idea of substratum, other than the vague idea of a *thing*.

This thesis is tested by what Locke says about the substance of spirit and body:

> … it is evident, that having nor other *Idea* or Notion, of Matter, but *something* wherein those many sensible Qualities, which affect our Senses, do subsist; by supposing a Substance, wherein *Thinking*, *Knowing*, *Doubting*, and a power of *Moving*, *etc*. do subsist, *We have as clear a Notion of the Substance of Spirit, as we have of Body*; the one being supposed to be (without knowing what it is) the *Substratum* to those simple *Ideas* we have from without; and the other supposed (with a like ignorance of what it is) to be the *Substratum* to those Operations, which we experiment in ourselves within. (E 2.23.5; 297-298)

Nicholas Jolley alleges that if Locke's discussion of the substratum idea was "really addressed to the problem of predication, then this parity in the two cases would be quite uncontroversial" and it would also be "something of a fraud" (1984, 87). The fact that "*We have as clear a Notion of the Substance of Spirit, as we have of Body*" would be uncontroversial because, on Bennett's interpretation, it is the exact same vague idea, viz. the idea of a thing in which accidents inhere. As a result, it would hardly be worth stating because the same point could be made about "dogs, cats, and hippopotamuses" (1984, 87). We have as clear a notion of the substance of any of these animals as we do of spirit or matter. But Locke seems to be making a "more substantive, anti-Cartesian claim about our ignorance of mind and matter" (ibid).

To be clear, the anti-Cartesian point in question is not Malebranche's insistence that the body is *better* known than the mind; rather, it is that essence or nature of either mind and body are equally unknown. In that case, Locke's point would appear to be "something of a fraud" if there was in fact nothing further to know about the substratum we supposed for mind and for body. Noting this, Howard Robinson concludes that Locke "seems to conflate the ignorance we have of minute parts with the logical emptiness of the idea of pure substratum" (2018).

What Locke writes a few sections later, however, shows that he was in fact only making the uncontroversial point consistent with Bennett's interpretation:

> … we have as clear a perception, and notion of immaterial Substances, as we have of material. For putting together the *Ideas* of Thinking and Willing, or the Power of moving or quieting corporeal Motion, joined to Substance, of which we have no distinct *Idea*, we have the *Idea* of an immaterial Spirit; and by putting together the *Ideas* of coherent solid parts, and a power of being moved, joined with Substance, of which likewise we have no positive *Idea*, we have the *Idea* of Matter. The one is as clear and distinct an *Idea*, as the other: The *Idea* of Thinking, and moving a Body, being as clear and distinct *Ideas*, as the *Ideas* of Extension, Solidity, and being moved. For our *Idea* of Substance, is equally obscure, or none at all, in both; it is but a supposed, I know not what, to support those *Ideas*, we call Accidents. (E 2.23.15; 305)

The content of section 15 is remarkably similar to what Locke wrote in section 5. Their respective headings – "Idea *of spiritual Substances, as clear as of bodily Substances*" and "*As clear an* Idea *of spirit, as body*" – also indicate an overlap of material. Besides the fact that section 5 deals with *general* ideas of spirit and body, and not spiritual and bodily *substance*s, the main new argument to support the claim that the idea of spirits and bodies are equally (un)clear is that the two "primary ideas" of mind (i.e. thinking and willing) are as (un)clear as the two "*primary* Ideas" of body (i.e. the cohesion of solid parts and impulse) (E 2.23.16; 306). This new argument is defended in the sections that follow, 16-28. In addition to these new considerations, we are told again we have no distinct idea of the substance we suppose for the operations of spirit, and likewise we have no positive idea of the substance we suppose for the qualities of matter. Only here, in section 15, the point is not made in using the terminology "S*ubstance* of…" but with respect to the idea of substance qua substratum to accidents. In the case of spirit, we

"join with Substance" ideas received from reflection, and in the case of matter we "join with Substance" ideas from sensation.[12]

These passages are best read as accounts of how the mind forms complex ideas of substances, which are nothing more than combinations of simple ideas, plus the idea of a substratum. This fact of how our ideas of substance are made by the mind (by joining simple ideas to the idea of substance) explains (at least partially), not only how we come to have ideas of spirit and matter, but also why ideas of spiritual substances are as (un)clear as ideas of bodily substances. Logically, the point should also explain why our *general* ideas of spirit and body are equally (un)clear. Locke's point in section 5, then, is *not* that they are equally unclear because we lack knowledge of their essence or nature but simply because those general ideas (of mind and body) each contain the idea of substance in general, which is an inherently obscure and confused relative idea that contains the vague idea of *thing* – the only idea we have of the substratum we suppose. If that renders Locke's initial argument in section 5 "something of a fraud" in the eyes of some contemporary Locke scholars, then so be it. It does not, however, undermine Bennett's interpretation.

viii. The early drafts

The Bare Particular interpretation has been objected to on the grounds that in the early drafts of the *Essay* Locke explicitly equates substratum with matter, thus implying our ignorance of substance is nothing but our ignorance of either the fundamental nature of matter and/or its structure in particular substances (e.g. Millican 2013, Forrai 2010, Atherton 1984). In *Draft A* of 1671, Locke speaks of the support for sensible qualities as "substance or mater, though it be

[12] This language of joining simple ideas to (the idea of) substance can also be found in *Essay* 2.12.6 (165).

certain he hath noe other idea of that matter but what he hath barely of those sensible qualitys supposd to be inhærent in it" (§1).[13] In *Draft B* of the same year, Locke retains the language of "substance or matter", confesses ignorance of it, and concludes: "Tis plain then that the Idea of matter is as remote from our understandings & apprehensions as that of Spirit" (§19). Peter Millican takes this to show that Locke's references to substance in the *Essay* were, in the first instance, about our ignorance of the essence of matter: "we have noe Ideas nor notion of the essence of matter, but it lies wholy in the darke" (*Draft A*, §1). It was only after Locke saw that we are equally in the dark about the nature of spirits that he repurposed the term substance to cover the unknown nature of them both. *Draft B*, §60 is evidence of this – the same text that appears in the published *Essay* at 2.23.1. Millican concludes that Locke's term substratum refers, not to a bare particular, but to the basic kind of stuff(s) out of which things are made.

I interpret these data points very differently. As Millican acknowledges, in *Draft A* Locke shows no preference for the corpuscular hypothesis or any physical theory (Walmsley 2004, 34). Hence in that draft, Locke's references to substance could not reasonably be interpreted as references to "the 'catholick or universal' matter of Boyle's corpuscular hypothesis." (Woolhouse 1983, 118). But that is precisely what Millican believes; and he cites the above passage from Roger Woolhouse approvingly. Perhaps Millican should back away from that unlikely claim and insist instead with Margaret Atherton that references to "substance or matter" in the early drafts refer simply to the unknown physical basis of sensible qualities (1984, 423-424).

However, there are problems with Atherton's suggestion too. By the time the *Essay* comes to the presses in 1689, Locke is at least a tentative follower of Boyle's theory of

[13] Citations from Drafts A and B for Locke's *Essay Concerning Human Understanding* are taken from the Nidditch and Rogers edited volume (1990).

corpuscles. Given what Locke says about primary qualities and internal constitutions of material substances, it makes little sense for him to earnestly insist that he has absolutely no idea what the physical basis of colors, tastes, and smells might be. Far from having no idea about the extra-mental cause of sensations, Locke says "we cannot conceive anything else, to be in any sensible Object, whereby it produces different *Ideas* in us, but the different Bulk, Figure, Number, Texture, and Motion of its insensible Parts" (E 2.21.73; 287). What we lack is knowledge concerning how the corpuscles are arranged, and how they manage to produce ideas of secondary qualities in our minds; but that's a far cry from having no idea of matter but barely of the sensible qualities inhering in it. In fact, Locke implicitly appeals to the corpuscular hypothesis in *Essay* 2.23.3 to account for the existence of color and weight (295). But then the question of "what is it, that Solidity and Extension inhere in?" can be asked of those primary qualities, and the resulting answer of "Substance" is highly unsatisfying. This, taken together with a passage from very next section: "Substance is supposed always *something* besides the Extension, Figure, Solidity, Motion…" (297), suggests that we lack an idea of a "common subject" (E 2.23.4; 297) for these primary qualities, not that we are ignorant of the essential general attributes of matter.

I believe these facts are borne out in a change Locke made to the drafts before submitting the *Essay* for publication. In Draft A, Locke wrote: "I … take notice that the Idea of matter is as remote from our understandings & apprehensions as that of spirit & therefor from our not having any notion of the essence of one we can noe more conclude its non existence then we can of the other" (§1). But in the *Essay* this becomes:

> 'Tis plain then, that the *Idea* of corporeal *Substance* in Matter, is as remote from our Conceptions, and Apprehensions, as that of Spiritual *Substance*, or *Spirit*; and therefore from our not having any notion of the *Substance* of Spirit, we can no more conclude its non-Existence, than we can, for the same reason, deny the

> Existence of Body: It being as rational to affirm, there is no Body, because we have no clear and distinct *Idea* of the *Substance* of Matter; as to say, there is no Spirit, because we have no clear and distinct *Idea* of the *Substance* of a Spirit. (2.23.5; 298)

In the new passage, the emphasis is placed upon the "*Substance* of matter" and the "*Substance* of spirit". The mention of essence has vanished for a good reason, as Locke was no longer agnostic about the basic essence of matter. His new point is that our ideas of matter and spirit are equally remote from our understanding because each contain the substratum idea. If Locke's point were that the idea of matter and spirit are hard to comprehend because we have no clear and distinct idea of the stuff or general form which they are both made, the argument would be obviously false. For Locke did have an idea of what, generally, material substances are like, but the same could not be said for an immaterial thinking substance. The nature of material substances can at least be categorized in terms of extended solid parts, whereas an immaterial can only be described negatively as unsolid and perhaps non-extended. Since thought and movitity (the active power to move the body) are mere operations of spiritual substance (E 2.1.10; 108), they tell us nothing about immaterial nature as such since they are not essential powers. Indeed, these spiritual operations and powers might be had by a material substance for all we strictly know (E 4.3.6; 540-543). Locke makes this infamous point while adjudicating a debate between materialists and dualists concerning the nature of the human soul. Materialists say the soul is a cogitative body, whereas dualists claim that the soul is an immaterial thinking substance intimately united with a body. Locke concludes that both hypotheses face issues of intelligibility. It is in this context, in defense of the materialist, that Locke makes his notorious remarks about the epistemic possibility of thinking matter. In truth, Locke is not so much defending the materialist as he is rebuking the dogmatic pretensions of dualism. In *Essay* 2.23, the discussion most relevant to this section, Locke takes the side, this time, of the dualist against the materialist

who denies the existence of immaterial thinking substance because that concept is unclear and contains difficulties of intelligibility. Locke's aim is not to defend the truth of dualism. It is only to show that "*we have as much Reason to be satisfied with our Notion of immaterial Spirit, as with our Notion of Body*; *and the Existence of the one, as well as the other*" (E 2.23.32; 314). As I have already highlighted, one of the main reasons Locke offers is that "our *Idea* of Substance, is equally obscure, or none at all, in both; it is but a supposed, I know not what, to support those *Ideas* we call Accidents" (E 2.23.15; 305). This is a claim about the idea substance in general, not a claim about the unknown nature of material or immaterial beings. At least, it could be read this way by a defender of the Bare Particular interpretation.

Admittedly, I am pessimistic about the possibility of finding Locke's real meaning of substance (or any other concept) in the drafts of the *Essay*. It is interesting to note the development in the presentation of Locke's ideas, but this does not necessarily mean that Locke changed his mind. Even if Locke did enlist in Boyle's army only after composing *Draft A*, he may have put old terminology to a new or expanded use to accommodate this new commitment. There is also the risk of reading the *Essay* – or one's preferred understanding of it – back into the drafts, and it is difficult to avoid doing so. To the eyes of someone generally sympathetic to the Real Essence interpretation, the drafts could not be clearer confirmation: "if *Essay* II xxiii had retained the key phrase 'substance or matter' when introducing the topic, and gone on to refer to 'matter' in the same way as *Draft A*, then the Leibnizian 'bare particular' interpretation would have been far less popular" (Millican 2015, 18). But of course, there are those who see it exactly the other way around: "It is clear [from *Drafts A* and *B*] that the substratum conception of substance which so many of Locke's interpreters have found troublesome was present even in his first attempts to think systematically about the issue" (Milton 2016, 130-1). The debate between

the Bare Particular and Real Essence interpretations will therefore need to be settled by other means.

E. Ayers' Version of the Real Essence Interpretation

Michael Ayers is the foremost champion of the Real Essence interpretation. He has defended it consistently over several decades. To be clear upfront, his view is that Locke does not distinguish ontologically between a substance and its essence. In fact, a substance is not ontologically distinct from any of its attributes. Attributes are simply different ways of conceiving of, or perceiving, the substance or certain aspects of it. In this way, Ayers believes Locke has a "deeply rationalist" conception of substance (1981, 219). Epistemologically speaking, to know a substance one must strip away its accidents and consider it naked in order to identify its essence – as Descartes did in the Second Meditation to the piece of wax.[14]

To understand what this means, we must define accidents. Ayers maintains that for Locke and his contemporaries, accidents are the non-essential features; though this is disputed by Kenneth Winkler who notes that in the modern period accident can sometimes refer to any attribute (1996, 358). Accidents (in Ayers' sense) are attributes that can change without altering the identity of the substance. In addition to various accidents, a substance has certain properties in virtue of an essence it shares with substances of the same kind. These properties flow from or naturally emanate from the essence. In an epistemic way, the substance itself stands opposed to all accidents, but not all attributes whatsoever. Ontologically, the substance is not really distinct from any of its attributes.

The starting point for Ayers' interpretation of Locke on substance is actually Locke's distinction between nominal and real essence. Locke explains that the word 'essence' "may be

[14] I will discuss this passage in great detail in Chapter Four.

taken for the very being of anything, whereby it is, what it is. And thus the real internal, but generally in Substances, unknown Constitution of Things, whereon their discoverable Qualities depend, may be called their *Essence*" (E 3.315; 417). Less cautiously he adds, "'tis past doubt, there must be some real Constitution, on which any Collection of simple *Ideas* [i.e. qualities] coexisting, must depend" (ibid). Locke wishes to distinguish (a) this thought about "internal Constitutions" and "discoverable qualities" from (b) a scholastic theory that supposes "a certain number of these Essences, according to which, all natural things are made, and wherein they do exactly every one of them partake, and so become of this or that *Species*" (E 3.3.17; 418).

He describes (a) the former of these as "the more rational Opinion" and restates the view he finds "past doubt": "all natural Things… have a real, but unknown Constitution of their insensible Parts, from which flow these sensible Qualities, which serve us to distinguish them one from another, according as we have Occasion to rank them into sorts, under common Denominations" (ibid). Locke doubts (b) the scholastic view for empirical reasons (e.g. the existence of monsters), but his fallback argument against it is that the supposition of species determined by real essences is, if not false, at least "*wholly usel*ess" since such essences (if they even exist) are unknown (ibid; see also E 2.31.8 and E 3.6.9). Therefore, they cannot be the basis upon which we rank substances into this species or that: "A blind Man may as soon sort Things by their Colours, and he that has lost his Smell, might as well distinguish a Lily and a Rose by their odors, as by those internal Constitutions which he knows not" (E 3.6.9; 445). Instead, "The measure and boundary of each Sort, or *Species*, whereby it is constituted that particular sort, and distinguished from others, is that we call its *Essence*, which is nothing but that *abstract* Idea to *which the Name is annexed*: So that everything in that Idea, is essential to that Sort" (E 3.6.2; 439). Locke calls this the "nominal essence".

The mind forms these abstract ideas on the basis of noticing that "a certain number "of sensible qualities "go constantly together" (E 2.23.1; 295). Hence, "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; though of this supposed something, we have no clear distinct *Idea* at all" (E 2.23.37; 316). Locke's point is that all we know of substances are but a few of their "superficial *Ideas*" (E 2.23.32; 313), mostly secondary qualities that are "the characteristical Notes and Marks, whereby to frame *Ideas* of them [i.e. substances] in our Minds, and distinguish them from one another" (E 2.23.8; 300). But we must remember that secondary qualities are "nothing but the Powers, those Substances have to produce several *Ideas* in us by our Senses, which *Ideas* are not in the things themselves, otherwise than as any thing is in its cause" (E 2.23.9; 300). How objects appear is not necessarily how they are. In accordance with the mechanical philosophy, Locke argues there is "nothing like" our ideas of colors, sounds, tastes, and smells in material substances (E 2.8.15; 137). Though these sensations are distinct from one another, "the Qualities that affect our Senses, are, in the things themselves so united and blended, that there is no separation, no distance between them" (E 2.2.1; 119). That is to say, that the various qualities we perceive in a substance have a common cause and explanation, namely "that particular constitution, which every Thing has within itself, without any relation to any thing without it" (E 3.6.6; 442), such as perceivers or other substances.

Typically, Locke conceptualizes these "particular constitutions" of material substances in terms of the corpuscularian hypothesis, which states that sensible qualities depend (causally) upon the primary qualities of the "minute and insensible parts" (E 4.3.11; 544). He often defends this hypothesis against the scholastic theory of substantial forms on grounds of basic intelligibility (E 2.31.6; 380). But he is also willing to admit it might be wrong: rather than the

primary qualities of corpuscles, the observable qualities of bodies might depend "upon something yet more remote from our Comprehension" (E 4.3.11; 544). Locke embraces the corpuscular hypothesis pragmatically because it is

> thought to go farthest in an intelligible Explication of the Qualities of Bodies; and I fear the Weakness of humane Understanding is scarce able to substitute another, which will afford us a fuller and clearer discovery of the necessary Connexion, and *Co-existence*, of the Powers, which are to be observed united in several sorts of them. (E 4.3.16; 547-548)

It is Ayers' thesis that because real essences and internal constitutions of substances are unknown, Locke regards substances as unknown. The reason real essences are unknown is because we cannot determine which attributes of the substance are accidents and which are properties in the technical sense explained above. According to Ayers, Locke's expression "idea of substance in general" covers two topics and obfuscates Locke's theory to a degree (1996 2, 40). The phrase substance in general can mean either the idea of an unknown particular real essence; i.e. the internal constitution of a certain kind of substance like gold or horse. Or it can mean the notion of a general kind of stuff out of which gold and horses alike are constituted. In the loose sense, 'substance' means for Locke "an unknown general stuff" out of which particular substances (i.e. minds and bodies) are made (ibid). In the strict sense, 'substance' means "the stuff-as-modified (if not the modification in question itself) rather than the stuff which is modified" (ibid). It is this latter sense to which Locke's term 'substratum' specifically refers. Ayers' view is thus not quite the same as Peter Millican's who argues that "Lockean substratum is best understood as intended to refer to the 'stuff' of which things are made, but without implying any significant commitment regarding the nature of that stuff." (2013, 21) Ayers would say that Millican has described 'substance' in Locke's broad sense, but mistakenly referred it to the substratum idea – 'substance' in Locke's narrow sense.

According to the corpuscular theory, the general substance out of which all material things are made is matter. What distinguishes a horse from a hunk of gold is not its fundamental nature (i.e. a substantial form) since both are made of the same stuff. But that stuff is configured differently in each, giving rise to the different observable qualities found in a horses and gold. This configuration of the general substance, matter, is what Locke calls the internal constitution or real essence. For the sake of this discussion, I shall not distinguish between the internal constitution and the real essence. For a textual reason, some scholars maintain that the real essence is that part of a thing's inner constitution that corresponds to the ideas contained in a nominal essence under which the particular has been ranked (cf. E 3.6.6; 442). By 'real essence' all I mean to signify are those features and attributes that are truly (and not merely apparently) present in it.

As such, the real essence is not ontologically distinct from the general substance, but there is what Descartes would call a "modal" distinction between them (cf. AT VIIIA: 29-30/ CSM I: 213-214). The real essence depends upon the general substance in the way the general substance does not depend upon the real essence. I must conceive of the real essence through the nature of matter in general, but the opposite is not true since that same portion of matter could have been given a different internal constitution by God or nature, thus becoming a different real essence.

There is nothing more than this to the relationship between substance and real essence in Locke's account. However, even Ayers admits, "Locke does not seem to have thought of the unknown substance and the unknown real essence as anything identical" (1996 2, 40). This is only because he tended to think about substance in terms of a general substance. Locke would not deny, however, that a horse, or any other substance, is anything other than its real essence or

particular configuration of that general substance or matter. When Locke says the idea of substance in general is included in any complex idea of a substance, he means that the idea of an unknown real essence is present. This idea is general only in the sense that it is the same for any representation of a substance since the real essences across different species are equally unknown so the idea of each of them turns out to be the same. The idea of a substratum thus operates at the level of observation (1975, 19). We observe certain qualities and powers that co-exist together and infer they must belong to or result from something unseen – an unknown substratum. The concept of real essence pertains to the theoretical level in an attempt to explain, not only what the substance really is apart from how it appears to us, but also why the substance displays those particular observable qualities we find in it. Consequently, the two concepts, substratum and real essence, don't mean the same thing. But just because two concepts are not synonymous, it does not mean they refer to ontologically distinct objects.

F. The Initial Plausibility of the Real Essence Interpretation

At first blush, the Real Essence reading looks quite plausible. A reader of the *Essay* can't help but notice some similarities, epistemological and ontological, between substance and real essence. They are both unknown to us and stand in a relation to something we do know, namely observable properties or qualities. Locke says we suppose or infer the existence of a substratum and a real essence on basis of observed qualities. Furthermore, both substance and real essence are characterized as foundational to qualities and modes in some way. As Locke explains, it is not just any old combinations that the mind puts into a complex idea of a substance. Rather it is "such Combinations of simple *Ideas*, as are by Experience and Observation of Men's Senses taken notice of to exist together, and are therefore supposed to flow from the particular internal Constitution, or unknown Essence of that Substance" (E 2.23.3; 296). For reasons already stated,

our ideas of substances are inadequate, according to Locke's high standard for ideational adequacy. But our ideas of substances can be better or worse: "For he has the perfectest *Idea* of any of the particular sorts of *Substance*, who has gathered, and put together, most of those simple *Ideas*, which do exist in it, among which are to be reckoned its active Powers, and passive Capacities" (E 2.23.7; 299). For instance, a jeweler might have a better idea of silver than a philosopher.

Just as the "simple" ideas are mental proxies for the qualities and powers in the substances of that sort, it might appear that the idea of substance in general is a proxy for the unknown essence and internal constitution of that substance. This is what Ayers believes, calling the idea of substance "a "dummy" concept" (1975, 9). Just as simple ideas are ideas *of* qualities; the idea of a substratum is an idea *of* an unknown real essence.

It is indisputable that Locke characterizes substratum and real essence in a similar way. Qualities are supposed to "rest in" (E 298), "belong to" (E 295), "be supported by" (E 297), "be adherent to" (E 298), "inhere in" (E 175), "subsist and exist in" (E 295, 299), and "result from" (E 295) a substratum or substance. On the other hand, the very same collection of qualities are "supposed to flow from the particular internal Constitution, or unknown Essence of that Substance" (E 2.23.3; 296). Locke later defines real essences as the "real internal, but generally in Substances, unknown Constitution of Things" (E 3.3.15; 417), and he explains that a substance's properties and observable qualities "flow from" (E 393) , "depend on" (E 417), "centre in" (E, 482) are "united in" (E 590), and founded upon (E 442) its unknown real essence or internal constitution.

In light of these facts, Margaret Atherton remarks that "Locke appears to be committed to two agents of the same process" (1984, 415). Both substance and real essence are supposed to be

foundational to qualities in some way; yet we lack knowledge of them both. Of real essences Locke says, "we know them not" (E 3.6.9; 444), and famously refers to substance as an "I know not what" (E 2.23.15; 305). Of course, this does not imply that the substratum and the real essence are two distinct agents or things. As Ayers reassures us, "Nothing could be less mysterious in principle" than the relationship between substance and real essence (1996 2, 42). On his reading, Locke's substance is the underlying stuff (material substance, in the case of material beings) that is modified thus and so in each individual substance. These various modifications of matter comprise the internal construction of a material being and are responsible for its unique observable characteristics. The relationship between substance and real essence is analogous to the relation between a hunk of clay and its determinate shape. The shape is not "really distinct" from the clay – to use Descartes' technical language (cf. AT VIIIA: 28-29/ CSM I: 213). They are only "modally distinct". Just as I can lack knowledge of both a statue's shape and the material basis from which it is made and be ignorant of only one *thing*, on Ayers reading of Locke we are "ignorant both of the general essence of matter and of its determinate modifications in this species or that" (1996 2, 42). But this does not imply that substance and real essence are separate entities. Ayers therefore agrees that Locke taught a "two-fold ignorance" with respect to substance and real essence, but it is wrong to conclude on the basis of this epistemic distinction that Locke's substance is ontologically distinct from the real essence (1975, 2). This is alleged to be the fatal error of the Bare Substratum interpretation.

G. Seven Objections to the Real Essence Interpretation

i. The "besides…" passage

In a key passage for interpreting Locke's theory of substance, he appears to claim that our ideas of substances are inadequate for two reasons: first, because we don't know real essences, and second, because we don't know substance:

> 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 what the Mind intends them to be. Besides, a Man has no *Idea* of substance in general, nor knows what Substance is in it self. (E 2.31.13; 383)

If we can determine why Locke holds each of these claims, we can better determine if he thinks we are ignorant of two distinct things or of the same thing under different descriptions. Locke argues that we do not know the real essence of a particular kind of substance like gold. What we mean by 'gold' is just the abstract idea we associate with that word. We form that abstract idea of gold by combining together the properties we observe to co-exist in nature (E 3.3.12; 414-415). Depending on how thoroughly we investigate and experiment, our complex idea of gold will contain greater or fewer properties. Most of these properties are merely powers (E 2.23.10; 301). In truth, powers are nothing more than causal relations between substances (E 2.21.19; 243). To know gold is yellow is just to know that it possesses a power to produce the sensation of yellow in my mind when I observe it under certain conditions. It tells me nothing about what the gold is like itself, only that it has this active power. I have no idea what exactly it is about gold that enables it to manifest that particular power. Whatever properties gold has, it must have them in virtue of its essence; there must be something about the internal constitution of some parcel of gold that explains all the various powers I observe it to possess.

The Scholastics say this unknown "something" is a substantial form. Locke says if this is true, we have no way of knowing about substantial forms and we cannot imagine what they would be like. On the other hand, seeing that a parcel of gold is a body made of matter, we are inclined to imagine that its internal constitution is a corpuscular structure of minute particles (E 2.31.6; 379). We know the general properties that all bodies possess (viz. the so-called primary qualities), but we don't know the exact determinations of the primary qualities of the minute parts that comprise a parcel of gold. Furthermore, our only way of conceiving how bodies interact is through impulse (E 2.8.11; 135-136). So, the powers we observe in a parcel of gold, such as it being yellow, must be due to its corpuscular structure – at least this is all that we can imagine (E 2.21.73; 287). Perhaps if we had "Microscopical Eyes" (E 2.23.12; 303), we could have some idea of the corpuscular structure of a parcel of gold (ibid, cf. E 2.23.11; 301) This would shed some light on why gold has certain properties (specifically those powers to affect and receive change in other material substances) and how these are related to a common principle of mechanical explanation (E 4.3.25; 556).

However, even if we could observe (and know, as a result) the primary qualities of the corpuscles in a parcel of gold, we still would not be able to explain why it produces the unique sensation of yellow when we look at it because the sensation of yellow does not resemble anything to be found in the parcel of gold (E 4.3.28; 558-559). Therefore, we can discover no necessary connection between the two: no reason why gold appears yellow instead of red. The problem exists equally for all secondary qualities, those relating to color, taste, sound, etc. More fundamentally still, an explanation of "how any Body should produce any Thought in the Mind" surpasses "our weak Understandings to conceive" (ibid).

Returning now to an assessment of the passage under discussion, Locke appears to imply that "a grasp of the real essence is not sufficient to understand a particular kind of thing, because even if one knew that, one would still lack a grasp of substance in general" (Pasnau 2011, 173). If by real essence here Locke means the underlying corpuscular structure (the only thing we can imagine the real essence of a body to be), then it poses no threat to the Real Essence interpretation because Locke's point is simply that besides knowing the corpuscular structure we also don't know the general nature of matter. As such, we are twice removed for knowing the real essence of a parcel of gold. On the other hand, if Locke was referring to the real essence independently of the corpuscular hypothesis – as the determinate but unknown configuration of the unknown stuff out of which things are made, the nature of which is not adequately captured by the concept of matter as it figures in the corpuscular hypothesis – then the passage only shows that substance and real essence are distinct concepts.

However, Bennett observes that the last sentence is odd when Ayers' interpretation is adopted (1987, 204). For in that case, Locke says in effect that we lack knowledge of a specific thing (real essence), *besides* we also lack knowledge (of the general substance) entailed by the former. Typically, we would never make such a point. Unless Locke maintains that knowledge of real essence somehow does not entail knowledge of substance in general – an unlikely possibility since the real essence is just a certain constitution of that general substance and so retains its natural properties – his point in the final sentence contributes nothing to the discussion of why our ideas of particular substances are inadequate. This counts against Ayers' interpretation, but not seriously, and only if Locke was thinking about real essences in a certain way.

ii. The "two step" passage

There is another passage in which Locke speaks of substance and real essence in a way that suggests they are ontologically distinct:

> So that if any one 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; which Qualities are commonly called Accidents. If any one 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 not be in a much better case, than the *Indian* before mentioned; who, saying that the World was supported by a great Elephant, was asked, what the Elephant rested on; to which his answer was, a great Tortoise: But being again pressed to know what gave support to the broad-back'd Tortoise, replied, something, he knew not what… The *Idea* then we have, to which we give the general name Substance, being nothing, but the supposed, but unknown support of those Qualities, we find existing, which we imagine cannot subsist, *sine re substante*, 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*. (E 2.23.2; 295-296)

On the face of it, this passage is not about real essences or internal constitutions, although it does mention two primary qualities of body: solidity and extension. Locke held that the real essence of material substance is simply the primary qualities of its minute parts. In light of this, Bennett takes the passage to show how "the notion of a primary quality real essence serves as a stepping stone to the notion of substratum, implying that the two are distinct" (1987, 205).

Ayers first responded to this problematic passage by adopting John Yolton's distinction between observable and unobservable extension and solidity (1975, 13). Armed with that distinction, Ayers said the passage is about observable primary qualities. Consequently, Locke isn't saying that the primary qualities of the minute parts of body require a substratum. He is saying only that the extension and solidity of the observable parts of body are grounded in or caused by something unknown (i.e. a real essence). Ayers (1996 2) drops this line of interpretation without comment, perhaps due to Bennett's (1987) criticisms. However, in a

different article Ayers has said the passage in Locke highlights a limitation to the corpuscular hypothesis. We can explain (though not deductively) secondary qualities by reducing them to the "solid extended parts", "but that leaves us with the problem of what solid extended substance is" (1994, 64). As Locke explains just a few sections later, we don't know "how the solid parts of Body are united, or cohere together to make Extension." (E 2.23.23; 308), since no corpuscular explanation is sufficient. This ignorance of the fundamental nature of body or material substance could be taken as what Locke is expressing when he says we have "no clear and distinct *Idea* of the *Substance* of Matter" (E 2.23.5; 298). If that's true, and it is by no means obviously true, then Bennett must concede that Locke has changed topics mid-chapter (from an initial discussion of a logical subject to our ignorance of the fundamental nature of matter), but his reading of *Essay* 2.23.2 is, for all that, more natural since Locke speaks there specifically of inherence and not of explanation. Due to the potential drawbacks facing each interpretation, it therefore seems unlikely that this passage is decisive in either direction.

iii. The qualities that are capable of producing ideas in us

Bennett (1987) places importance on the first sentence of *Essay* 2.23.2 and the phrase "such Qualities, which are capable of producing simple *Ideas* in us" (295). This phrasing might suggest that Locke intended to exclude some qualities from the category of "accident", precisely those qualities that are *not* "capable of…". Otherwise, if all qualities are capable of producing simple ideas in us, he would hardly need the qualifier "such…which…". And according to Bennett, only the primary qualities are capable of producing ideas in our minds. Locke says that all simple ideas of sensation are produced "*by the operation of* ***insensible*** *particles on our Senses*" (E 2.8.13; 136, bold added). Therefore, the passage is about how the primary qualities of

the unobserved minute parts, which are the causal basis for the secondary qualities (and the observable primary qualities), inhere in a substratum.

But if we look to Locke's treatment of qualities in Essay 2.8 we find a general statement and not one but two specific accounts. Locke generally characterizes qualities as having reality in bodies, as opposed to our minds. The section title of *Essay* 2.8.7 expresses this thought. More specifically, Locke says that qualities are "modifications of matter in the Bodies that cause… Perceptions in us" (E 2.8.7; 134). However, Locke later defines qualities as *powers* to produce ideas in our minds: "the Power to produce any *Idea* in our Mind, I call *Quality* of the Subject wherein that power is" (E 2.8.8; 134). These accounts agree that qualities have reality in bodies outside the mind, but it not clear whether modifications of matter and powers are extensionally equivalent.

Powers are abilities or capacities belonging to a substance to make change in or receive change from another substance (E 2.21.1-2; 233-234). According to the corpuscular hypothesis, all change in material substances is brought about by the interactions among minute particles of matter. For example, "Fire has a *power* to melt Gold, *i.e.* to destroy the consistency of its insensible parts, and consequently its hardness, and make it fluid" (E 2.21.1; 233). But fire would have the power to melt gold even if the corpuscular hypothesis were incorrect and another causal process was discovered to explain how fire melts gold. The fire's power to melt gold surely has some physical basis (assuming it has reality outside of the mind), but as far as we *know* its power (as Locke sees it anyway) consists in its readily observable ability to change the qualities in gold, to reduce the hardness of gold to fluidity. The reason why Locke says in *Essay* 2.8.8 that qualities *simpliciter* are powers is because bodies do possess *active* powers to cause sensations in us. We in turn possess *passive* powers to receive those sensations. Corresponding to each simple

idea is a causal power, i.e. a quality in the body. Primary qualities are the mechanisms by which powers of bodies operate, according to the corpuscular hypothesis. They are not the *cause* of the power but the *means* for the causing.

If this line of argument is correct, the only qualities that are capable of producing ideas in us are primary qualities, for it is in virtue of these properties that we understand substances to interact. That being said, Ayers is right to wonder why Locke should "postulate an unknown nature lying behind" these primary qualities since these qualities are claimed to be "in the object" (1975, 12). Shape, for example, just is the outer surface of the body itself. There is no mystery here about how shape exists in matter, as there is about color and other sensible qualities. This point goes against both the Real Essence and Bare Particular readings. The shape of the snowball (to use one of Locke's examples) is not causally explained by the real essence, nor does it appear to require a substratum separate from round mass of matter.

For Bennett's view to be supported by this passage two things have to go its way. First, Locke actually must mean to exclude some qualities from being accidents and requiring direct inherence in the substratum. Second, it must be the case that the primary qualities of the minute parts are just those qualities that are capable of producing ideas in our minds. Perhaps these both are true – the second probably is – but I doubt Locke meant to be restrictive in his "such… which…" preamble. It is more likely that he meant to say: *substratum is supposed to provide support for such things as I call qualities, which if the reader recalls from my prior discussion, are the cause of sensible ideas in the mind.*

iv. Substance, real essence, and identity

Most objections to Real Essence interpretation, in one way or another, simply beg the question against the foundation of it, codified in Ayers' claim that Locke harbored a "deeply

rationalist" conception of substance, according to which the substance is not ontologically but merely rationally distinct from the essence (1981, 217). Ayers concedes freely that substance is not synonymous with real essence. He admits that Locke puts those concepts to different explanatory purposes, and yet they are not ontologically distinct.

Edwin McCann attempts to show that a real essence is not the same as a substance because they have different identity conditions. He writes, "Locke would certainly hold that it is possible for a thing to have its internal structure (slightly) rearranged while remaining the same substance. Holding to the traditional terminology, real essences then would be modifications of substances, not substances themselves" (2007, 190). This is at least the right sort of objection to make against the Real Essence interpretation since it does not beg the question. However, it does not have much textual support. Material substance in general (i.e. matter) does not have the same identity conditions as any individual material substance since an animal that is eaten is destroyed. The matter that composed the animal while it was living still exists, but the deceased animal is no more. The question is whether Locke thought a substance could survive a change to its "internal constitution"? At one point, Locke does connect the identity of a substance with its constitution in a way that is unfavorable to McCann's argument:

> All Things, that exist, besides their Author, are all liable to Change; especially those Things we are acquainted with, and have ranked into Bands, under distinct Names or Ensigns. Thus that, which was grass to Day, is to Morrow the Flesh of a Sheep; and within few days after, becomes part of a Man: In all which, and the like Changes, 'tis evident, their real *Essence*, *i.e.* that Constitution, whereon the Properties of these several things depended, is destroy'd, and perishes with them. (E 3.3.19; 419)

It is natural to read Locke as saying finite substances perish because their real essences are destroyed. However, in his discussion of identity, Locke argues that the identity of an oak tree does *not* consist in the exact sameness of material parts but rather "such an Organization of Parts

in one coherent Body, partaking of one Common Life" (E 2.27.4; 331). This passage is favorable to McCann, but decisive against the Real Essence interpretation only if the real essence of the tree is identical to the mass of matter that is coextensive with the tree at an instant. Surely, I can lop a branch off a tree without bringing the tree's existence to an end. But how does one know of one has thereby altered the tree's unknown real essence? Because real essences are unknown, it seems quite necessarily that I cannot know if the tree has perished. This points toward the futility Locke recognized in thinking that the unknown real essences could be of service to knowledge. In the context of species, Locke observes that it will be impossible to say what "alterations" a horse can under go and remain a horse if we suppose it is a horse on the basis of some unknown real essence (E 3.3.13; 416).

Furthermore, Locke says that a "Mass of Matter" and a "living Body" are not the same things, even though they exist at same places during the same times (E 2.27.3-4; 330-331). Therefore, the real essence of a tree, whatever it is, cannot simply be a mass of matter. Perhaps it is the relatively stable organization of a mass of matter whose parts gradually change over a period of time. Maybe the real essence of gold, or any other non-living body, just is a corpuscular structure of minute bodies, but the same cannot be said for a living creature. For these reasons, McCann's claim that substances and real essences do not share identity conditions, and so are ontologically distinct, is unconvincing. Additionally, McCann's objection relies on an identification of real essence with the internal constitution of a particular substance. But if Ayers' intends the real essence of a substance to be just those intrinsic features relative to the nominal essence of a species (cf. E 3.6.4; 442), then McCann's observation that a substance can suffer slight alternations of its inner constitution without becoming a different substance is consistent with Ayers' reading. That possibility is consistent with the substratum being

ontologically identical to the real essence because as long as the changes made to the internal constitution do not affect those aspects of it relative to the nominal essence then the individual will remain the same species of substance despite the changes to is internal structure.

v. Locke's ambivalence toward the idea of substance

Bennett thinks the greatest obstacle for Ayers' Real Essence reading is that "it cannot explain Locke's strained, awkward, two-faced way of writing about 'substratum' or 'substance in general'" (1987, 203). As mentioned before, Bennett is not alone in finding ambivalence in Locke's discussion of substratum. McCann writes of

> the prima facie conflict between the largely positive tone of some of the main passages in the *Essay* concerning the idea of substance (including the very important opening sections of the *Essay's* chapter on our ideas of substances (II.xxiii, especially sections 1–5), and the quite negative tone found in the prominent and extended discussion of the idea of substance in the *Essay's* chapter on space (II.xiii.17–20). The former set of passages emphasize the centrality of the idea of substance in our thought about the world. The latter passages are almost unrelievedly negative, claiming that the idea of substance is confused and obscure, and consequently of no use in philosophy… This apparent textual schizophrenia should be regarded as a basic datum that any interpretation of Locke's doctrine must explain, or explain away, and as much as anything else is responsible for the perplexities of interpretation attending Locke's doctrine of substance. (2007, 164)

The alleged problem for the Real Essence interpretation is that Locke does not show the same ambivalence in his discussion of real essence. Locke consistently describes our idea of substance in general as confused and obscure, but he says nothing like this about the concept of a real essence understood to be an internal constitution. And unlike the idea of substance in general, Locke does not think the concept of real essence is implicated in our most basic ways of thinking and talking about the world. In fact, Locke argues it is by way of a nominal essence – an abstract idea the mind creates – and not a real essence that we represent and classify substances into

kinds. Locke thereby "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" (Bennet 1987, 204).

In response to these criticisms, Ayers addressed Locke's apparent ambivalence toward substance. Specifically, he considered the question of "how could [Locke] both ridicule the words 'substance' and 'accident' and continue to employ them himself" (1996 2, 16)? This is, in effect, to ask how we can reconcile or explain Locke's "negative" and "positive" remarks about substance. Ayers cites an argumentative strategy of Locke's that is equal parts rhetorical and reductive:

> In part his motive was rhetorical. Expressions introduced into philosophy for the fictions of Aristotelian theory are found reference among the realities which actually perform the roles assigned to those fictions. The technique is reductive, identifying all that the ridiculed terminology could possibly stand for, while rejecting what it has been supposed to stand for… [I]ndignation at the empty pretensions of Aristotelian philosophy was, then, joined with a certain respect for its abstract structure, and for the general intuitions and insights which that structure embodied. (ibid, 16-17).

To paraphrase, much like Descartes, who employed certain terms and a framework familiar to Scholastic readers while at the same time rebuking various aspects of Scholasticism (Secada 2008, 75), Locke employed Aristotelian terms like 'substratum', 'accident', and 'essence' to show what little knowledge we have concerning them.

Although Ayers does not mention this, it is worth nothing that Locke shows sensitivity to the fact that his readership has been in some sense indoctrinated into a certain philosophical language and ontology:

> That Men (especially such as have been bred up in the Learning Taught in this part of the World) do suppose certain specifick Essences of Substances, which each Individual in its several kind is made conformable to, and partakes of, is so far from needing proof, that it will be thought strange, if any one should do otherwise. (E 2.31.6; 378)

Locke cannot simply present his theory of nominal essences without first revealing the uselessness of positing unknown substantial forms. Otherwise people will find his philosophy "strange" and might be likely to reject it out of hand (ibid). Locke doesn't dispense with the language of 'essences' and 'species' entirely; he retains them "on purpose to shew the absurdity and inconvenience there is to think of them, as of any other sort of Realities, than barely abstract *Ideas* with Names to them" (E 4.6.4; 581). In a discussion about propositions involving substances, Locke admits his view "might, to People not possessed with scholastick Learning, be perhaps treated of, in a better and clearer way" but he doesn't do that because "those wrong Notions of *Essences* and *Species*, hav[e] got[ten] root in most People's Minds, who have received any tincture from the Learning, which has prevailed in this part of the World" (ibid). These old bad habits need to be "discovered and removed" in order to make use for terms that can lead toward knowledge (ibid). This shows that Locke is thoughtful about how he presents his views.

This also might explain why Locke's discussions of substance and real essence did not overlap more, and why he said things about the one he did not say about the other. Locke's discussions of substratum are a part of an attack against both Aristotle's and Descartes' view that we grasp with our intellect the simple natures of substances; whereas real essences play a role in his repudiation of essentialism and classification on the basis of knowledge of natural kinds. Another reason why Locke "does not seem to have thought of the unknown substance and the unknown real essence of anything as identical" is because "he was understandably drawn towards saying that the unknown substance of [any material thing] is the same, namely matter (whatever exactly that might in essence be)." (Ayers 1996 2, 40). This is just the point that Locke used the world substance to mean both substance-stuff and the substance-substratum, and

it is only the latter concept that is the same as the idea of real essence. In the end, this particular criticism of the Real Essence reading does not hold up since Ayers offers a plausible explanation of why the substratum texts can appear two-faced.

vi. Ambiguity in the phrase 'substance in general'

As discussed above, Locke often implies that a clear and distinct idea of substance would be a very valuable thing to have, and he speculates that angels with better facilities might actually have one. But according to the Real Essence interpretation, the idea of substance in general is owned by Locke to be nothing more than a mental variable that does not stand for or represent any particular thing, any more than *x* stands for a single number across different algebraic equations. What would be useful to know, and what might be ours if we did have better faculties, is not a clear and distinct idea of substance, but knowledge of the specific constitutions of plants and animals and all those things that we have classified under a common nominal essence. Just as in algebra what is useful to know is not some transcendental value of *x* but the value of *x* in particular equations we are looking to solve.

Ayers could respond that in these passages Locke has changed topics from the "dummy concept" of the idea of substance in general to the idea of a general, determinable substance, namely matter. So what Locke is saying is that in addition to being ignorant of the unique configurations of matter in particular substances we are also ignorant of the real essence of the general substance of matter.

Not only does this slip from the idea substance in general to the idea of a general substance seem dubious in its own right, but Locke says a number of other things that to my mind rule it out. For instance, Locke tells Stillingfleet that he denies that a general substance exists anywhere in nature (W 4, 27). In the *Essay*, he also explains that matter is a "partial"

consideration of the idea of body, and is not to be taken for an abstract reality since bodies always have determinate shapes (E 3.10.15; 498). Together, these facts cast doubt upon Ayers' insistence that Locke granted the existence of a general material substance called matter. On the contrary, it looks like Locke recognized that general substances like matter are abstractions of the mind and should not be confused for a representation of "something that really exists" (E 3.10.14; 497). This mistake of taking ideas for things is related to the "fallacy" Locke warns about regarding substance in *Essay* 2.13.18 (174). Moreover, if Ayers' view is right then Locke is deliberately using the same word 'substance' to span more than one distinguishable idea (viz. the idea of an unknown general substance and the idea of the general substance differently configured), which is not only an abuse of language he would detest (E 3.10.5; 492-493), but it is the very mistake he accuses the Cartesians of making with respect to substance (E 2.13.17; 174). What Locke says is that the "doubtful" term 'substance' "has scarce one clear distinct signification" (E 2.13.18; 174). It would be a severe case of irony that Locke would, a few chapters removed from this, employ the term "substance in general" to cover two distinct ideas.

vii. The substance of God and matter

According to the Real Essence interpretation, when Locke says (in E 2.23.5; 297-298 for example) that we don't know the substance of matter he is to be understood as stating our ignorance of the real attributes of matter (Ayers 1996 2, 35). There are historical grounds for asserting this as an interpretative hypothesis. Leibniz explained that "The word substance is taken in two ways – for the subject itself, and for the essence of the subject" (cited in Bennett 2001, 113). The Real Essence interpretation reads Locke as using substance primarily in the second sense, especially in passages where he claims that substance is unknown, or that the idea of substance is obscure and confused.

I have already explained how this requirement poses a difficulty for Locke's argument in *Essay* 2.23 that mind and body are equally well known. One reason for the parity concerns the fact that

> *We have as clear a Notion of the Substance of Spirit, as we have of Body*; the one being supposed to be (without knowing what it is) the *Substratum* to those simple *Ideas* we have from without; and the other supposed (with a like ignorance of what it is) to be the *Substratum* to those Operations, which we experiment in our selves within. 'Tis plain then, that the *Idea* of corporeal *Substance* in Matter is as remote from our Conceptions, and Apprehensions, as that of Spiritual *Substance* or *Spirit*. (E 2.23.5; 297-298)

Howard Robinson points out that if the Real Essence interpretation of substance is adopted, this premise does not go through by Locke's own lights. The reason is that if the "substance of…" is supposed to mean the "essence of…"

> it is true that we do not and, in his view, cannot know in detail what they are, we have a theory, which he endorses, that they are probably minute parts as conceived by the atomists, which means they have primary qualities similar in kind though not in scale to those possessed by macroscopic objects. This gives a coherent, though speculative, conception of material substance. Of spiritual substance, we have no similar hypothesis. (2018)

It therefore is misleading to suggest that the *Idea* of corporeal *Substance* in Matter is as remote from our Conceptions, and Apprehensions, as that of Spiritual *Substance* or *Spirit*" (E 2.23.5; 298) when we do have an idea (in virtue of our idea of a primary quality) of the type of real attributes possessed by material substances.

A defender of the Real Essence interpretation would have to respond that Locke intended to make this argument separately from the Corpuscular hypothesis he tentatively endorsed. While it is true we have some conception of what material substances are like in themselves, this is no more than a "speculative conception" (Robinson, 2018). Indeed, Locke's pessimism about a proper science of bodies comes out very strongly in Book 4 where he predicts that "our Knowledge of corporeal Substances, will be very little advanced" by any speculative hypothesis

(E 4.3.16; 548). However, in the following section Locke can be found arguing that our knowledge of spirits is "*yet narrower*" than our knowledge of bodies (section17 title; 548): "I think it is easy to conclude, *we are much more in the dark in reference to Spirits*; whereof we naturally have no *Ideas*, but what we draw from that of our own, by reflecting on the Operations of our own Souls within us" (E 4.3.17; 548). Locke's point is not that we know the existence of fewer spiritual substances than we do bodies; rather, he must be understood as making that point that we know more about bodies in general than we do of "the Endowments and Perfections" of spirits (ibid). In other words, we know more real attributes of material substance than we know of spiritual substance. We know for example that all bodies are solid; but since thought is the mere action of a thinking substance we must admit that God could create an immaterial substance in a state of "perfect inactivity" since "action is not necessary to the being of any substance (W 4, 464). Solidity is a real attribute of body, whereas thought (at least in human minds) is a non-essential action that could for all we know be possessed by a wholly material substance (E 4.3.6; 540-541). The fact that in Book 4 Locke says it is "easy to conclude" that we know more about the attributes of body than we do of spirits puts pressure on the Real Essence reading that must insist he denies this in Book 2.

A different passage about the "substance of god" applies additional pressure on the Real Essence understanding of Locke's "substance of…" locution.

> I know not what the substance of matter is, doe much less know what the substance of god is. But something I know it is, and must exclude where it is all other substances (could there be any such) of the same kind, if therefor god be immense and omnipresent it is to me evident beyond doubt that there is and can be but one god. (Corr. 6, 791)

Ayers would say this passage is about our ignorance of the fundamental nature of God and matter. In an earlier draft of this letter to van Limborch, Locke explains how the argument

offered there for God's unicity does not presuppose a certain conception of the kind of being God is "let his nature or being or substance be what it will" (Corr. 6, 790). This is a clear use of the term substance in the second of the meanings Leibniz described; however, in the passage above Locke asserts that we are farther from knowing God's substance than we are the substance of matter. The purpose of the first half of this passage is to juxtapose our ignorance of one thing with the certainty we have of another, namely that there is only one God. While the specific argument offered on pages 790-791 for that conclusion does not assume God's nature, in the same letter Locke previously offered a different argument that relies upon divine attributes known to pertain to God in virtue of the fact that he is a "perfectly perfect being" (Corr. 6, 789). These attributes include infinite power and knowledge. Locke assigns these real attributes to God in the *Essay* as well, adding providence and immateriality, and remarking that they are "easily deducible" from the idea of an eternal being (E 4.10.6; 621; cf. W 4, 63). Locke is therefore far from not knowing any of the real attributes of God, just as he is far from not knowing any of the real attributes of matter.

Yet if Locke is to be taken at his word that he does not know the substance of God or the substance of matter, then he must not be equating knowledge of substance with knowledge of real essence in the passages I have been discussing in this section. This casts a serious doubt upon the Real Essence interpretation because it shows that, at least in some contexts, Locke is not using the term substance in the second of the two accepted meanings. If Leibniz is right about the meaning of the word 'substance' in the 17th century (we have no reason to think that he isn't), then Locke must be using the term substance in these passages to refer to the "subject itself". This is consistent with the Bare Substratum interpretation. For if Locke were thinking of substance along the line of bare particulars, it would be the case that the substance of God, and

matter, and spirits would be totally and equally unknown since substrata are the bearer of properties and do not possess a nature themselves. The passage from Locke's letter to van Limborch might be taken as evidence that he thought God's substance is even more unknown than matter's: "much less do we know what the substance of god is." While a possible reading, it is more likely the case that Locke added this wording for dramatic effect to emphasize that this proof for God's unicity (unlike the prior one) does not assume anything about God other than his omnipresence.

H. Tallying the score

Having discussed and scrutinized the evidence for and against the Bare Particular and Real Essence interpretations, it is now time summarize my findings. The biggest problem for the Bare Particular interpretation is the passages in which Locke indicates that God or angels probably have a clear idea of substance and that having such an idea would contribute to our knowledge of particular substances. This implies that Locke thought substance had a positive nature of its own. It is difficult to square these comments with an interpretation of substance as an idea of purely logical and featureless subject.

On the other hand, the Real Essence interpretation is damaged by the fact that it requires a duality of meaning in the expression "substance in general". Furthermore, it struggles to explain passages where Locke insists we have no idea of the substance of God and matter, despite holding that we can know several real attributes of these substances.

III. New Interpretations, Old Problems

A. A Profusion of Views

J. L. Mackie (1976) and Nicholas Jolley (1984) were among the first to argue that neither the Traditional interpretations of Locke on substance were entirely correct. In the decades to follow, many new interpretations have been put forward. Sensitive to the problems highlighted in the previous chapter, modified versions of the traditional interpretations have been defended by Edwin McCann (2007) and Robert Pasnau (2011). Others have tried to reconcile the disagreement between the traditional interpretations in different ways. Lew Newman (2000), for example, argues the debate over the nature of Lockean substratum is unmotivated since Locke was skeptical enough about the being of substance to have developed thoughts about its nature. Rather than being both completely wrong, Gábor Forrai (2010) argues that the Bare Particular and Real Essence readings are both partially right.

This chapter is devoted to discussing and analyzing these new interpretations. I argue that the attempts to modify the traditional readings do not work because the issues with them go to the core of what each reading claims about why Locke says that substance is unknown. Because each of the traditional readings provides a different answer to this fundamental question, they cannot be reconciling without morphing one reading into the other. The suggestion that perhaps Locke himself may have been agnostic between either analysis of the idea of substance is implausible given the fact that Locke was not skeptical of the being of substance and did not ground the idea of substance in an irrational habit of the mind. Because Locke based the idea of substance in reason he must have been thinking about in a particular way. The chapter concludes by examining a provocative interpretation of Locke's theory of substance by C. B. Martin (1980). Although he does not realize it, Martin's interpretation of Locke on substance closely

tracks the rationalist conception of substance found in Descartes and other early modern philosophers. This framework for thinking about what the idea of substance could be in a theory of mental representation serves as the inspiration for the comparative reading of Descartes and Locke below in Chapter Four.

B. Substratum Theory Without Bare Particulars

Edwin McCann develops an interpretation of Lockean substratum that promises to enjoy more textual support than either of the two traditional interpretations discussed in the previous chapter. McCann explains that for Locke the idea of substance in general is a complex idea consisting in "the idea of something or being (which is among the most general or abstract ideas we can form, which in case of this idea helps to make for obscurity), together with the idea of the relation of support (which itself is none too clear, at least in this context)" (2007, 159). For this reason, McCann thinks Locke has a traditional conception of substance. Indeed, Locke claims to Stillingfleet not to be an innovator regarding substance (W 4, 23-4). Locke also says he does not employ the word substance to mean essence as did Cicero and Quintilian, the Roman logician (ibid).

According to McCann, these facts leave no doubt that Locke "meant his account of the idea of substance to capture the traditional logical notion of substance as a substratum to qualities" (2007, 161). McCann explains that traditional substance theory typically involved the following theses:

> 1. Each individual object has a substratum.
>
> 2. This substratum is conceived of as a support for the qualities and powers of that individual substance.
>
> 3. This is glossed or captured or gestured at by saying that (a) the qualities and powers inhere in the substratum and cannot exist otherwise; or that (b) the substratum subsists of itself.

> 4. This relationship between (a) qualities/ powers and (b) substratum is "in some sense a logical, non-causal relation, in that it holds in exactly the same way for each of the powers and qualities, and it is not supposed that the substratum itself undergoes any change if and when the object undergoes a change with respect to any of its powers of qualities."
>
> 5. Related to (4), "the substratum is not supposed to have any nature or internal differentiation of its own, and is thus distinct from the real essence of the object"
>
> 6. Substratum is in principle unknowable since we only have sensory access to the qualities and powers, and also due to the fact that substratum has no intrinsic nature of its own. (2007, 161-62)

The issue with taking Locke to hold a traditional theory of substance is that premises 5 and 6 appear to commit Locke to the existence of bare particulars. McCann defines a bare particular as "an entity that has no qualities, properties, or affections beyond bare subsistence and perhaps a primitive identity" (2007, 162). I explained previously why historians have been reluctant to saddle Locke with what they take to be unpromising metaphysical view. However, McCann thinks it is possible to be a "substratum theorist without taking substances to be bare particulars" (ibid, 162). He insists that Locke "says nothing that would invite reading substrata as bare particulars" since:

> it is, after all, one thing to say that we know of nothing besides subsistence or being, and being a support, that pertains to substratum, or that that's all that is contained in our conception of it; it's quite another thing to attribute to Locke the positive claim that there is nothing more to substance or substratum, so that as a matter of metaphysical fact we must deem them to be bare particulars. (ibid, 162)

Although McCann wishes to defend something like the traditional interpretation of Locke as a "substratum theorist", he evidently denies thesis 5 and as a result the second half of thesis 6. Although he does not say so explicitly, McCann must abandon these theses, otherwise he could not deny Locke's commitment to bare particulars. For if a substratum has "no nature or internal differentiation of its own" it could not fail to be "an entity that has no qualities, properties, or

affections beyond bare subsistence and perhaps a primitive identity", which is McCann's own definition for a bare particular.

If the key theses are abandoned, Locke's theory of substance no longer looks to be a substratum conception. As McCann himself acknowledges, the 5th thesis is "in line with" the 4th, yet McCann has no desire to say that Locke rejects thesis 4. In fact, thesis 4 – the non-causal, but somehow grounding, relationship between a substance and its qualities – is part and parcel of the substratum theory. If thesis 4 were rejected, and the relationship of support between a substance and its qualities were causal, then a strong case could be made for identifying the unknown substratum with the internal constitution or real essence of the substance.

When Locke says 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" (E 2.23.3; 297), McCann reads him as meaning:

> The substance is supposed always something besides the thing's observable properties only. As a result, we don't know what the substance really is because all we have access to are observable properties and as Locke says those are mostly powers.

In contrast, the Bare Particular interpretation reads him as saying:

> The substance is supposed always something besides any property of the thing. As a result, we don't know what substance is by itself because there is nothing to know: it is a bare particular about which nothing can be said or thought only that it supports or instantiates qualities.

This comparison shows that McCann's Locke postulates a substratum to ground only a thing's observable properties. Apparently, the unobservable properties do not require metaphysical grounding by a substratum. However, if they do not, then it is not clear why the observable properties do, unless the substratum is understood to be causal basis for them. It simply does not make sense to view the relationship as logical and non-causal if the relation of support holds only

between a substance and its observable but not its unobservable properties. But if the substratum is taken to be the casual basis of a thing's observable qualities, then Locke is not a substratum theorist since one third of the essential theses no longer apply.

McCann argues that Locke did not employ substance to explain anything (e.g. property instantiation or the nature of predication, as defenders of the Bare Particular reading have suggested) in part because Locke recognized our conception of substance is so impoverished. This "no-theory theory of substance" reading is what allows McCann to restore "a single face to Locke's treatment of substance" (2007, 170 footnote). According to McCann, in supposing a substratum Locke is merely marking our inability to conceive that qualities should exist by themselves or one in another. McCann emphasizes the fact that Locke's substratum is "only supposed because 'we imagine' that the qualities cannot subsist without a support" (2007, 167). He argues that "There is no claim made here [in II.xxiii.2 or anywhere else] about the nature, or lack thereof, of the substratum, but only about the shortcomings of our conception of substance in general" (ibid, 167-68). Far from offering the traditional substratum theory as comprised of the six theses, McCann evidently sees Locke's idea of substance as merely a way of "marking a conviction" (ibid, 168) that qualities or modes are ontologically dependent on substances; i.e. they cannot exist by themselves. We know nothing more of substance than this: substance supports qualities. This minimalist interpretation of Locke's idea of substance is quite appealing because it remains agnostic between the bare particular and real essence conceptions of substance. It promises to offer a third way to understand what Locke meant when he said that substance is unknown. He meant literally that we have no idea what substance is like. Newman (2000) agrees with this minimalist account of Lockean substratum. He argues that Locke was agnostic about the nature of substance only because he was skeptical of its existence.

There are indications that this is McCann's view as well. In a footnote, McCann says that Locke would "do well to retreat" from the claim he makes to Stillingfleet that the existence of substance is certain on the grounds that the mind perceives it necessary for modes to be supported by a substratum (2007, 173 footnote). The reason is that such an argument succeeds only if the notion of support has some fixed meaning, which, according to McCann, is what Locke denies in *Essay* 2.13.18-20. There Locke does say that "in ordinary use [the word substance] has scarce one clear distinct signification" (174) since "of *Substance*, we have no *Idea* of what it is, but only a confused obscure one of what it does" (175). If the idea of substance is as impoverished as McCann makes it out to be, and the relation of support it provides to accidents is at best confusedly and obscurely known, then the supposition of a substratum for a collection of qualities looks to be nothing more than a psychological impulse. Unfortunately, McCann does not identify the circumstances surrounding the mind's inability to imagine a bundle of qualities existing without a substratum. If the idea of substance is a way of "marking a conviction," why exactly is it that "we are completely at a loss when we try to conceive how qualities might exist without existing in some sort of support" (2007, 173 footnote)?

C. Newman's Custom-Based Account

Newman (2000) offers an interpretation of Locke on substance which identifies an answer to the previous question. His reading focuses on the idea of substance. Newman contends that Locke has very little to say about the being or nature of substance because his primary aim is merely to account for our idea of substance within his empiricist framework. According to Newman, in *Essay* 2.23.1 Locke offers a custom-grounded explanation of that idea, which is permitted by his empiricism. First, we receive a great variety of simple ideas in experience and over time we notice patterns – that some ideas "go constantly together" (295). On the basis of

these observed patterns, we presume some of the "ideas" to belong to one thing, another combination to belong to something else, and so on. But we don't know what makes these "ideas" the ideas of one and the same thing. In supposing a substratum, we are supposing that these "ideas" are related in some way to something that unifies them. But we don't know how the "ideas" are unified or what does the unifying. Although we struggle to imagine how it is possible, there may not even be anything beyond the "ideas" or sensible qualities *and their relations* that explains the perceived unity. That is just how minimal of a claim Locke is making when he says we suppose a substratum.

Although the stated aim of this custom-grounded account is to render Locke's account of the origin of the idea of substance consistent with his theory of ideas, Newman hints that it may have broader implications. According to the custom-grounded account, Locke is sceptical of the being of substance, "sceptical enough to be agnostic to its nature" (2000, 292). In other words, Locke would remain neutral between the bundle and substratum theories of substance. Each offers a possible explanation of how "ideas" are unified as one thing but experience will never favor one over the other. As a result, Newman believes his interpretation "obviates much of" the interpretive question concerning the nature of Locke's substratum or what it is (ibid). If Newman is right, then there is no right answer to the question. However, any view that commits Locke to a detailed metaphysics of what substance is, be it a bare particular or an essence, is gratuitous.

This outcome is attractive given problems faced by both the Bare Particular and Real Essence readings. Before it is embraced, however, Newman's broader interpretation needs to be scrutinized. Of particular concern is the controversial claim that Locke was skeptical of the existence of substance. Locke explicitly and repeatedly affirms the existence of substance to Stillingfleet. For instance, "the idea of substance is clear and distinct enough to have its

agreement with that of actual existence perceived" (W 4, 241). This and other passages are compiled and discussed by John Yolton (1985, 103). It certainly looks like Locke endorses Stillingfleet's rational basis for forming the idea of substance and for believing in its extra-mental existence: "there must certainly be substance in the world… upon the very same grounds that your lordship takes it to be certain" (W 4, 446).

Newman replies that the Stillingfleet correspondence must be read extremely carefully. Newman suggests that Locke engaged in various strategies to "outwit" the Bishop accusing him of heresy. One of the tactics Locke allegedly employed was to blur the distinction between his custom-based and Stillingfleet's reason-based accounts of (the idea of) substance. Newman points out that Locke is always careful to say we suppose a substratum because we cannot imagine *how* sensible qualities could subsist alone (2000, 311). Had Locke said, as Stillingfleet does say, that we suppose substratum because we cannot imagine *that* sensible qualities could subsist by themselves, then the existence of substance could be rationally inferred from the knowledge of sensible qualities. Yet Locke tries to conceal this subtle but important distinction, and he presents his view as if it were the same as Stillingfleet's.

Another strategy Locke allegedly employed was to give the appearance of endorsing a rational argument for substance while not commenting on the fact that the premise of the argument could never be established (2000, 312). In his first letter to Stillingfleet, Locke explains how the sensible qualities of a cherry are "perceived by the mind to be by themselves inconsistent with existence", such that "the mind perceives their necessary connexion with inherence or being supported" (W 4, 21). Newman claims that Locke is not referring simply to the cherry's sensible qualities when saying this; rather, he is speaking deceptively about the qualities of a cherry conceived of as modes or accidents. When viewed as a mode or accident,

the redness of the cherry logically implies a support. But that is only because a mode or accident is defined as that which inheres in a substratum. In Newman's opinion, Locke views the assertion that modes or accidents necessarily require a substratum to be a trifling proposition, which certain philosophers mistake for a valuable synthetic *a priori* insight of metaphysics. Due to fear of theological backlash having to do with the belief in the Trinity (a theological doctrine that traditionally presupposes the existence substance), Locke is reluctant to come out and say this to Stillingfleet. To protect himself, he pretends to endorse Stillingfleet's reason-grounded explanation. Locke affirms that substance can be rationally inferred from accidents or modes, but then whispers under his breath that we have no reason for assuming the redness of a cherry (for example) is a genuine accident or mode that thereby requires a support. The fact that Locke adopts the traditional signification of mode in his correspondence with Stillingfleet (rather than his idiosyncratic use in the *Essay* (cf. 2.12.4; 165) is also consistent with this strategy, although it should not be taken as evidence of it.

An esoteric reading of Locke's letters should not be ruled out in principle. However, there are several passages that do not fit well with Newman's particular esoteric reading. For example**,** Locke insists that the idea of substance can be inferred from the presence of one single quality: "as long as there is any simple idea or sensible quality left, according to my way of arguing, substance cannot be discarded; because all simple ideas, all sensible qualities, carry with them a supposition of a substratum to exist in, and of a substance wherein they inhere." (W 4, 7). This contradicts Newman's view that substratum is supposed only to explain a presumed unity of certain qualities. Newman might say that each quality does carry with it the supposition of a substratum; however, this is only after we inure ourselves to supposing a substratum for a collection of sensible qualities we presume to belong to one thing. The initial cause of supposing

a substratum is the mind's inability to conceive how a collection of qualities could derive a unity from themselves. But once this becomes habitual, it would no longer play an active role in positing a substratum. Out of habit alone, we would suppose that even a single quality requires a substratum.

If this were Locke's view, his "proof" of a thinking substance in us would rest upon a premise that has no rational justification:

> First, we experiment in ourselves thinking. The idea of this action or mode of thinking is inconsistent with the idea of self-subsistence, and therefore has a necessary connexion with a support or subject of inhesion: the idea of that support is what we call substance; and so from thinking experimented in us, we have a proof of a thinking substance in us, which in my sense is a spirit. (W 4, 33)

If Newman is right, then (in spite of the rationalistic language he employs) Locke's argument rests on the mere custom of supposing a substratum for any mode, a habit grounded ultimately in a psychological principle of association – i.e. the presumption that some qualities are unified and belong to one thing. Consequently, it would be no "proof" at all. And Locke's demonstration of God's existence – which he bases upon the proof of his own existence as a thinking substance – would likewise lack a rational basis (E 4.10.3; 620). In the *Essay*, Locke insists that the thinking thing in us has a nature even though we don't know what it is, "as it is unreasonable in most other cases to be positive against the being of anything, because we cannot comprehend its nature" (E 4.3.6; 543). This tells against Newman's interpretation, unless Locke intended the very opposite of what this passage most naturally suggests about the existence of substance.

On Newman's account, Locke is skeptical of the existence of substance because the idea of substance derives from an inadvertent tendency of the mind. That tendency is to think that a collection of ideas belongs to one thing, an individual substance. But in his letters to Stillingfleet, Locke (a) distinguishes the idea of substance and the being of substance (W 4, 18) and (b) he

affirms the existence of substance (W 4, 446). Locke shows no sign of doubting the being of substance *because* the idea of it is a result of custom. When Locke says that "the being of things depend[s] not on our ideas" (ibid, 9), Newman take him as implying that though our *idea* of substance depends on custom, the *being* of substance (if it exists) does not likewise depend on custom. Therefore, Locke could honestly insist to Stillingfleet that the being of substance is "safe and secure, notwithstanding anything I have said" (ibid, 18).

This is a clever maneuver on Newman's part, but there is a problem with the argument it attributes to Locke. As construed by Neman, Locke sidesteps the issue of whether we actually have a good reason to believe in the existence of substance. Locke's "defense" of the being of substance is thus nothing more than a slight of hand. Analogously, the notion of a tooth fairy is clearly based in "fancies of men". Therefore, we have no reason to believe in a real tooth fairy. But if by coincidence a tooth fairy were real, its being would not at all be lessened by the fact that our concept of it is completely made-up and not based on solid evidence. While it is possible to read Locke's distinction between the idea and being of substance as working in service of Locke's agnosticism about existence of substance, Locke also says things that contradict that subtle strategy: "I cannot be supposed to question or doubt of the being of substance, till I can question or doubt of my own being" (ibid.). Such assertions imply that Locke did endorse the positive reason for believing in substance. As modes, our very own thoughts (the being of which cannot be doubted) require a substratum to exist in.

As the last several paragraphs have shown, Newman's reading requires an esoteric reading of many passages. This requirement is underwritten by the interpretive hypothesis that Locke is engaging in tactics to "outwit" Stillingfleet. According to Newman, Locke purposely conceals the difference between his custom-grounded account of substance and Stillingfleet's

rational justification. Locke even goes so far as to give the appearance of endorsing Stillingfleet's argument that the existence of substance could be necessarily inferred from the existence of accidents. However, according to Newman, Locke secretly believes that we have no way of knowing if the qualities we observe are true accidents or not: that is, we do not know whether they do in fact require a substratum distinct from them for support. For all we know, Bundle Theory might be true. This fact renders the rational proof of substance practically useless.

These esoteric strategies are intriguing, but as I have been pointing out over the last several paragraphs, Newman's interpretation further requires that some of Locke's statements be read as falsehoods. Given the other subtle dialectical strategies Locke allegedly employed to conceal his skepticism about substance, lying would contravene on the rhetorical strategy Locke allegedly used. Newman contends Locke was able to "outwit" Stillingfleet (2000, 312), and this implies that Locke was able to resist an admission of guilt, i.e. skepticism about the being of substance, without straightforwardly contradicting his true position. Locke's repeated claims that he is in perfect agreement with Stillingfleet on these matters might also be viewed as dishonest. However, this is a relatively harmless rhetorical strategy. Newman could respond that Locke prevaricates here only about his judgment as to how his view matches up to Stillingfleet's – not about his philosophical position. That is an important difference.

Charity is the final reason to resist Newman's interpretation. According to Newman's custom-grounded account, the idea of a substratum is the immediate result of reason's attempt to explain the presumed unity of sensible qualities. But Locke knows this presumption of unity rests on an inadvertent tendency of the mind. Therefore, reason's task should not be to explain a unity we have no reason to believe to exists. Instead, reason should seek out the details of the

psychological principle of association that causes us to presume the unity of sensible qualities. It makes little sense to inquire into a state of affairs acknowledged to be nothing more than a belief generated by a psychological tendency. That would be analogous to investigating the reason why vanilla ice cream is better than chocolate instead of investigating why more people prefer vanilla over chocolate. Newman could reply that Locke is not interested in presenting a respectable theory. Instead, he is explaining how philosophers do in fact come to form this idea of substance – a process that happens to involve an explanation of a state of affairs we have no reason to believe is true of the world.

The other issues notwithstanding, this response on Newman's behalf would pass as acceptable only if Locke had not repeatedly passed judgment about the desirability of a clear and distinct idea of substance (e.g. E 1.4.18; 95). The idea of substance, according to Newman's account, is the idea of *"something* that *somehow*" unifies the qualities we presume via habit to belong to one thing (2000, 305). But then a clear and distinct idea of substance would be useful only if qualities are, in fact, unified in nature. If Locke was skeptical on this point as Newman thinks, Locke would have no basis for saying what he does say about the usefulness of a clear and distinct idea of substance. This suggests that Locke really did believe in the existence of substance. Newman correctly characterizes Locke's substance as "something beyond experience" (2000, 306). But for Locke substance is not principally something that unifies a collection of qualities – although a substratum may serve to unify the qualities that it supports. In the first instance Lockean substance is that thing in virtue of which any quality exists. It is a supporter of each and every inherent quality and because several are supported by a single substratum it thereby is the "Cause of their Union" (E 2.23.6; 298). If the substance of the piece

of wax were to go out of existence, the accidents inhering in it would not merely fail to be unified together, they would immediate cease to exist.

D. Supposing a Substratum

If Locke didn't ground the idea of substance in custom, then why does Locke write of "the custom of supposing a substratum?" (W 4, 17), and why does he insist we suppose, rather than demonstrate, the existence of substance? Any rival to Newman's custom-grounded interpretation must answer these questions. In my view, the custom of supposing a substratum refers specifically to the habitual formation of the *idea* of substance by the mind. As Locke explains, "I ground not the being, but the idea of substance, on our accustoming ourselves to suppose some substratum; for it is of the idea alone I speak there, and not of the being of substance" (ibid, 18). Locke grounds the certainty of the being substance in the "necessary connexion" the mind perceives between qualities and their being supported (ibid., 21). Because the relative idea of substance is indirectly established, it is "clear and distinct enough to have its agreement with that of actual existence perceived" (W 4, 241). The existence of substance is implied therefore by the existence of qualities since the relation of support "cannot be founded in nothing, or be the relation of nothing" (W 4, 21).

As for the second question, Locke says we suppose a substratum precisely because we have no clear and distinct idea of it. As he explains to Stillingfleet,

> …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 a support or substratum to modes or accidents. (ibid.)

The fact that we have no clear and distinct idea of substance is directly connected to the language of supposition, as shown by these passages from the *Essay*:

> …we have no such *clear Idea* at all, and therefore signify nothing by the word *Substance*, but only an uncertain supposition of we know not what, (*i.e.* of something whereof we have no particular distinct positive) *Idea*, which we take to be the *substratum*, or support, of those *Ideas* we know. (E 1.4.18; 95)

> So that if any one 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; which Qualities are commonly called Accidents. (E 2.23.2; 295)

At least in these contexts, supposition is contrasted, not with secure knowledge as Newman contends (2000, 310 footnote; 314), but with the determinateness of a proper *idea*. Indeed, the *OED* confirms that 'supposition' can be used to mean vaguely an idea or notion or thought (meaning no. 3). While the mind lacks a definite idea of substance, it possesses a supposition of, or a vague thought about, an unknown support for sensible qualities. This supposition is "uncertain" (E 1.4.18; 95), not because the existence of substance can be doubted, but because nothing specific is known about substance. That is to say, it is not represented to the mind by a clear and distinct idea (W 4, 21; E 1.4.18; 95; 2.23.2; 295). In the Locke's third letter, he clarifies that 'by carrying with them a supposition,' I mean, according to the ordinary import of the phrase, that sensible qualities imply a substratum to exist in" (W 4, 447). By no means then does Locke's language of supposition indicate a probable conjecture based merely in our lack of imagination about how sensible qualities are unified in our experience.

Zoltán Szabó defends a seemingly different view of Lockean supposition that he describes as "an elaborate mental process" (2000, 11). However, all Szabó means is that a supposition is the result of a piece of reasoning whereby one "*extracts an idea from a propositional content which was not among the original constituents of that content*" (ibid, 33). The resulting supposition is merely a relational idea that lacks content of its own. Szabó's discussion of Locke's account of the idea of infinity (also merely a supposition) demonstrates the

active role that Locke grants to reason in forming certain ideas, such as the idea of substance and the idea of infinity. While later empiricists such as Hume would deny any basis (experiential or rational) for forming such ideas, Szabó argues that "Locke was not an empiricist in this stricter sense of the term, and he never claimed to be" (ibid, 42). These are excellent points to keep in mind. I will return to them in the final chapter.

E. <u>The Substance is the Thing Itself</u>

Robert Pasnau (2011) attempts to situate Locke's theory of substance in its proper scholastic and early modern lineage. Claiming that Locke's theory has been "spectacularly misunderstood" by modern commentators (2011, 159), Pasnau rejects both the bare particular and real essence views, although he shows more affinity for the latter. To help us conceive what Locke means by substance, Pasnau encourages us to think of porcupines instead of pincushions (2011, 171). The notion of a pincushion is intended to represent a bare particular, with the pins being the properties of that substance. Instead of bare particulars, Pasnau wants us to think about animals and natural kinds, such as porcupines, horses, and gold. As for Aristotle, these are Locke's true substances. As Pasnau explains, Lockean substance "just is the individual thing (the gold, the wax) apart from its properties" (2011, 159). In Pasnau's opinion, Locke's fateful use of the word 'substratum' has unfortunately confused many people. It has caused them to think that Locke was talking about "a bare substratum, the unknowable sub-substance beneath the substance" (2011, 167). But according to Pasnau, the reason Locke finds the idea of substance to be obscure and confused is because we lack knowledge of "the thing itself – the gold or horse – as distinct from its qualities" (2011, 160). Pasnau is presumably aware that his trademark phrase – "the thing it self" – is used by Locke to refer to the "*Substratum* or *Substance*" in his efforts to clarify the meaning of *Essay* 2.23.1 in a footnote added to the Fifth Edition (295).

Pasnau claims that Locke distinguishes between "the properties of a substance and the substance itself." But one might reasonably wonder then how this is different from Substratum Theory? Pasnau further explains that Locke's substance is "the thing itself apart from its non-essential features" (2011, 162). Such a stipulation rules out the Substratum Theory reading because on that view the substance is the thing apart from *all* its features. Locke says, however, that "the Substance is supposed always *something* besides the Extension, Figure, Solidity, Motion, Thinking, or other observable Ideas" (E 2.23.3; 297). Furthermore, Locke held that solidity was "essential to Body" (E 2.4.1; 123). Presumably Pasnau would reply that solidity is essential only to the nominal essence of body, not the substance itself whose real constitution is utterly unknown to us. Like Ayers (1975, 1981, 1994, 1996), Pasnau astutely situates Locke's remarks on substance in the broadly Aristotelian framework of Descartes, for whom accidents are nothing other than manifestations of substance. This does not mean, however, that substance is identical to any of its non-essential features. For example, the ball of wax is not identical to its circular shape since the wax can change its shape. Rather, the substance is to be identified with its principle attribute or essence (in this case, some quantity of extension). Even still, a conceptual distinction can be drawn between the substance and its essence, corresponding to the division between subject and predicate since the essence can be predicated of the substance, as in "My soul has consciousness."

If Lockean substance is "the thing itself apart from its non-essential features" (Pasnau 2011, 162), it is safe to infer that a substance is not distinct from its essential properties, as these attributes make it the very thing that it is. Oddly, Pasnau rejects the Real Essence interpretation of substratum. He calls Bennett's 1987 refutation of it "decisive" (164 footnote), and Pasnau asserts that "There is no reason to think that essence is identical with the substance, as some

Locke scholars have suggested, but *of course* it is a part of the substance" (ibid). Pasnau thus seems to be committed to the view that Lockean substance contains more than essential features but is nevertheless separate from its non-essential features. If one does the conceptual arithmetic, the difference is something close to a bare particular – a common subject for both the essence and the accidents.

Pasnau discusses the related epistemological question about what is there to know about a substance beyond its real essence. He explains that what is left to know is a "metaphysics of substance" (2011, 173). Because "Locke does not make clear why he thinks this" (ibid) – a troubling fact for the present interpretation – Pasnau speculates on Locke's behalf. First, Pasnau suggests that "the real essence would not tell the whole story about the intrinsic structure of a given substance, since it would leave out, minimally, the stuff that gets structured by the essence" (ibid, 173). This suggestion is problematic on multiple levels. It attributes to Locke the unlikely view that we could know the real essence of gold (for example) but somehow not know that this involves a certain number of protons and nuclei in atom. For Ayers (1996 2), a real essence is understood to be the unknown general substance-stuff modified thus and so. But Pasnau's reading implies that I might know the particular structure or composition of a kind of stuff without having knowledge of the stuff that is so structured. Granted there are some cases where this might obtain. For example, I might know a certain statue is shaped like George Washington without knowing what material the statue is made of. But Locke is clear that if we knew the real essence or "radical Constitution" of a substance we could know *a priori* "how all their Properties and Operations flow from thence" (E 3.11.23; 520). If knowledge of the radical constitution of substances can be separated from knowledge of the stuff that gets structured as Pasnau contends, it does not appear that knowledge of the stuff would be at all useful since

knowledge of the essence is sufficient for deducing "all" of the substance's properties. Yet Locke evidently thinks there is something to be gained through a knowledge of "what Substance is in it self" (E 2.31.13; 383) via a "positive clear distinct one of Substance it self" (E 4.3.23; 554). From Pasnau's point of view, these references can only be taken as applying to the unknown stuff that gets structured in the real essence, at which point the reading collapses in on itself.

Perhaps sensing that this was not Locke's actual reason for thinking that knowledge of substance requires something more than knowledge of real essence, Pasnau offers this instead:

> Even if there is a sense in which we think we understand gold through chemistry alone, the very conclusion that chemistry alone suffices must itself be supported by a background philosophical theory about the metaphysical status of things like gold – this is, of substance in general. (2011,174)

While better than the first hypothesis, it fails to explain why the real essence is only a metaphysical part of the substance and not identical to it. Pasnau's second suggestion does, however, reveal a genuine difference between his and Ayers' interpretations concerning the status of substance in Locke's mind as it relates to the question of whether substance belongs to pre-theoretical/observational science or to metaphysics. Where Ayers sees in Locke the term 'substance' playing a role in our pre-theoretic observational vocabulary, Pasnau sees Locke using it at a deeper metaphysical level. Despite this, Pasnau and Ayers' readings of Locke on substance are more similar than different. Pasnau even admits this, writing: "Ayers' account of Locke on substance comes rather close to my own…" (2011, 167). Moreover, it is subject to the same deficiencies and criticisms. Locke gives no indication that substance is unknown and not represented to the mind by a clear and distinct ideas *because* real essences are unknown. In fact, in several key passages it is more natural to read Locke as making exactly the opposite point

about relation between the idea of substance itself and the inadequacy of our mental representations of substances.

However, because Pasnau stresses the identification of the substratum with the ordinary substance, his interpretation is susceptible to an additional criticism. Locke claims that substance is unknown to the point of having no idea of it, but we do have ideas of ordinary substances, albeit inadequate ones (Lowe 2005, 70). Even non-experts know something about porcupines. We are far from being "perfectly ignorant of it, and in the dark" (E 2.23.2; 296) about what porcupines are.

Daniel Korman 2010 presents a view similar to Pasnau (2011). He defends it against the aforementioned objection by insisting "That the Lockean substratum is properly characterized as unknown, or as 'we know not what', does not obviously entail that it must be unknown in all respects, and nothing Locke says forces the stronger reading upon us" (2010, 67). Korman's claim overlooks the passage referenced above at *Essay*, as well as this one: "So that of *Substance*, we have no *Idea* of what it is, but only a confused obscure one of what it does" (E 2.13.19; 175). Ordinary substances, like cats and dogs, are clearly better known than substrata, despite Korman's plea to the contrary (2010, 69). Locke held that we can know a good many of a substance's powers and secondary qualities. Although this doesn't render our ideas of those substances adequate, we do know non-trivial facts about our beloved house pets.

F. Reconciliation of the Bare Particular and Real Essence Accounts

Gábor Forrai argues that both Bare Particular and Real Essence readings "are partly right, and what is good in them can be reconciled" (2010, 27). According to Forrai, the Bare Particular reading is right about "the purpose and significance of the idea of substance in general, i.e. the reason why Locke says we have the idea" (ibid). On the other hand, the Real Essence reading is

right about "the real world counterpart of the idea, i.e. what sort of entity the idea corresponds to" (ibid). The promise of reconciliation seems too good to be true. Immediately one sees the challenge. The real-world counterpart of an idea of bare substratum for properties would seem to be a bare particular, not a real essence. It seemingly cannot be a real essence because the idea of substance in general is the idea of a pure logical subject. As a result, the real-world counterpart picked out by this idea cannot be something that has features of its own, as surely a real essence does. To meet this challenge, Forrai's strategy is to show that "the part of the traditional [that is, Bare Particular] interpretation which can be sustained cannot stand on its own and needs to be supplemented at one point, and the real essence view can provide what is needed" (ibid).

After some analysis, Forrai concludes that what's objectionable with the Bare Particular reading is the claim that some real entity, namely a bare particular, corresponds exactly to our idea of pure logical subject for properties. This is problematic because it is an instance of taking "Words for Things", one of the abuses of language Locke warns about in the context of substance (E 2.13.18; 174). Forrai asks, "what remains of the traditional interpretation if this assumption is abandoned" (2010, 39)? He concludes, "The metaphysical question of what bears properties is then transformed into a conceptual question: how do our property bearers differ from the ideas of properties" (ibid). I take it he means how do our *ideas* of property bearers differ from our ideas of properties. If that is the question, Forrai wants to find the difference between ideas of substances and ideas of properties or attributes. He finds his answer in the idea of substance in general since that idea "is a constituent of our ideas of substances but is missing from the ideas of properties" (ibid). Forrai observes that "The idea of an apple contains the idea of substance whereas the idea of being an apple does not" (ibid). He then reasons that the difference-maker in representations of substances as opposed to attributes must meet three

criteria. It must (a) "be included in every idea which is an idea of a thing", (b) "not be identical to any idea which is an idea of a property", (c) "be one particular idea which is part of all ideas of things, because things are things in the same way" (ibid). Forrai proceeds to show how the idea of substance in general meets all three conditions and is actually the "only plausible possibility for drawing the distinction in the framework of Locke's theory of ideas" (2010, 40).

As the only suspect with means, motive, and no alibi, the idea of substance in general is guilty as charged says Forrai. Consider me a skeptical juror. There is no material evidence tying the suspect to the crime. The case is purely circumstantial. If another suspect were to be found, there would be grounds to acquit. Granted, Locke does say that the idea of substance is always contained "first and chief" in our complex idea of any particular kind of substance (E 2.12.6; 165).

But is the presence of this idea the actual difference maker? To find out, let us call a witness to the stand: the passages wherein Locke distinguishes between different types of complex ideas (E 2.12.3-6; 164-166). Locke describes ideas of modes as collections of ideas – either of the same idea repeated (simple) or of different kinds (mixed) – that "contain not in them the supposition of subsisting by themselves, but are considered as Dependencies on, or Affections of Substances" (E 2.12.4; 165) On the other hand, ideas of substances are collections of ideas "as are taken to represent distinct beings subsisting by themselves; in which the supposed, or confused *Idea* of Substance, such as it is, is always the first and chief" (E 2.12.6; 165). Forrai asserts that the idea of substance explains our taking substances to be "distinct beings subsisting by themselves" (ibid) And conversely the absence of this idea in the complex idea of a mode explains why they "contain not in them the supposition of subsisting by

themselves, but are considered as Dependencies on, or Affections of Substances" (E 2.12.4; 165).

However, this only goes to show that the idea of substance is involved in the conception of modes as well as substances. To conceive of something as mode is to view it as dependent on a substance. On the flip side, to conceive of a substance is to view it as having a substratum that supports and upholds properties. Logically speaking, modes and substances are linked. They express two things in a relation. To take an analogous case, I cannot think of a brother without considering a male person in a relationship to a sibling of any gender. Likewise, I cannot think of a mode as a mode without considering it in relation to a substance, and *vice versa*.

This shows that Forrai has got it the wrong way around. Of course, an idea of a substance contains the idea of a substance. To consider X as a substance requires that I possess the general concept of substance. But the same is true of mode. To consider Y as a mode, I must possess an idea of what it is to be a mode, i.e. to be dependent on or an affection of a substance. The difference between ideas of modes and ideas of substance actually lies in the supposition of being dependent or independent. The true difference does not lie in just one half of the relation. That is tantamount to saying that the difference between conceiving of a person as a father or son depends upon the sheer fact that in once case the concept of father is involved and in the other it is not. Both the idea of substance and the idea of modes involve a relation and a thought about the other idea. Therefore, Forrai is wrong in thinking that the idea of substance is what distinguishes representations of substances from those of properties. The difference maker is not the idea of substance but a presumption concerning ontological independence.

This mistake does not completely derail Forrai's project. His main point is one he shares with Bennett, which is that Locke's idea of substance in general or substratum is intended to play

a conceptual role: the logical notion of a pure subject, a thing which instantiates properties. As I have stated, Bennett thinks the real-world analog of this idea must be a bare particular, an object about which nothing in principle could ever be known because it lacks a nature of its own. Forrai speculates it is "quite possible" Locke didn't give "much thought" to what the "real world counterpart of this idea could be" (2010, 41). Bennett agrees that metaphysics is not Locke's main focus in discussing substratum (2001, 122). But Forrai thinks Locke's doctrine of real essence could provide that real-world analog to our idea of substance in general and explain the difference between substances and properties. In effect, this is to combine the best of both the Bare Particular and Real Essence interpretation.

In that super-view, substance is both "what explains the observable properties" found to co-exist and what exemplifies what it is to be a thing rather than a property (2010, 43) The crucial idea linking the two is the fact that ideas of substances are taken by us to "represent distinct particular things subsisting by themselves" (E 2.12.6; 165). As such, these "distinct particular things" have both a real essence and a substratum, i.e. "something in them which corresponds to the idea of substance in general" (2010, 43). It is Forrai's thesis that

> these two are identical: substance in general, i.e. the real-world counterpart of the idea of substance in general is the unknown nature. What corresponds in a given substance, like gold, to the idea of substance in general which is included in the idea of gold is the unknown nature of gold." (ibid)

This sounds suspiciously like Ayers' interpretation, and the reason why is that idea of substance in general no longer has the content intended by the Bare Particular reading of a pure logical subject for properties. Forrai has subtly, and perhaps unwittingly, morphed its meaning into whatever is the difference-maker between ideas of substance and ideas of modes. At this point he can say substances but not modes are supposed to be real *things* with unknown real constitutions.

Consequently, the real-world counter part of the idea of substance in general is just an unknown essence that explains the observable features.

This last claim is not obvious, and Forrai has an interesting argument for it. But even if that argument succeeds, Forrai is not successful in reconciling the Bare Particular and Real Essence interpretations because he hasn't retained any distinctive feature of the former interpretation. In any event, Forrai's argument is not very convincing. He presents his argument as follows:

> (1) Something is a substance if and only if there is something in it which corresponds to the idea of substance in general.
> (2) Something is a substance if and only if it has an unknown nature.
> (3) What corresponds in a substance to the idea of substance in general is identical to the unknown nature of the substance.
> (4) What explains the observable properties of a substance is identical to its unknown nature.
> (5) What corresponds in a substance to the idea of substance in general is identical to what explains its observable properties. (2010, 44)

He acknowledges that Locke doesn't present this argument because he simply wasn't interesting at finding out what the real-world counterpart to his idea of substance in general might be. Passing over this without comment, I want to evaluate this argument on its own merit. Forrai tells us where the weak points in the argument lie. The "only if" clause in premise two is dubious: Why should we accept that Locke held that anything with an unknown nature is a substance? And the inference of premise 3 is not deductively valid: "If all and only philosophers had a PhD in philosophy and all and only philosophers had Porsches, that would not imply that a PhD in philosophy is a Porsche" (2010, 45). So just because all and only substances have an unknown nature and all and only things with an unknown nature are substances, it does not follow that substances are unknown natures.

Forrai has his work cut out for him. Addressing the first problem, he argues that an object has an unknown nature just in case the idea of that object does not perfectly represent it and there are features in the object not captured by the idea (2010, 45). It is an odd way to define what it means to have an unknown nature, but it gets him the result he is looking for. Of all the kinds of ideas we might have, only ideas of substances fail to adequately represent their objects. The textual evidence for this claim is strong, so the justification for this premise depends on Forrai's definition of what it means to have an unknown nature. But it does not make sense to define an ontological category in terms of a contingent epistemic limitation. For if the nature of substances become known, perhaps due to an improvement in our vision or the invention of a high-powered microscope, substance wouldn't cease to exist. But if substances are defined as just those things that have an unknown nature, then substances would not exist if those essences became known. What a substance is in its own right does not depend on our ignorance of its innermost nature. (It depends on that inner most nature we do not know!) Premise 2 is at best accidently true, and the conclusion of the argument is weakened proportionately.

As for the second problem, Forrai thinks the inference from premises 1 and 2 to 3 can be made valid if we further suppose that bare particulars don't exist. If "no unpropertied bearer of properties exists", then "there is nothing in a substance apart from its known nature and its unknown nature" (2010, 53). Forrai defends this move by calling it "fairly obvious" (2010, 54). With the tacit assumption that there is nothing in or to a substance except its nature, I suppose it does follow.

The conclusion is now in sight. If all there is to substance is a known and an unknown nature, and whatever corresponds to the idea of substance in general is identical to the unknown nature, then it must be the unknown nature that is the real-world analog of our idea of substance.

The problem is avoided, but at what cost? Forrai ultimately arrives at a reading indistinguishable from the Real Essence interpretation. The rejection of the existence of bare particulars is only made possible by altering the content of the idea of substance in general. The "reconciliation" between the Bare Particular and Real Essence readings is non-existent. The Bare Particular reading makes all the compromises. One might suppose a difference between Forrai's reading and the Real Essence interpretation consists in the fact that, according to Forrai, Locke didn't give much thought to what in a substance corresponds to the idea of substance in general. But it turns out he meant this initially as only as a possibility, and in the final section of his paper Forrai argues that in the early drafts of the *Essay* Locke clearly identified substance and real essence (2010, 55-59). I have already discussed and cast doubt upon this suggestion. To conclude, I simply want to emphasize the point that Forrai does not reconcile the Bare Particular and Real Essence readings as he claims, and his interpretation is not significantly different from Real Essence readings. [15]

G. Substratum as Abstraction

An overlooked and punchy paper by C. B. Martin (1980) promises to provide a true alternative to the traditional readings of Locke's theory of substance. In Martin's account, a "substratum qua substratum is that *about an* object that is the bearer of properties" (1980, 7). This does not mean that substrata are things that bear properties. Rather "the object qua object is *both* the bearer of properties and the properties borne" (ibid). This doesn't imply that an object *is* two things. Rather, it means that the bearer of properties and the properties born are identical to the object. "The relationship between substrata and properties is not like other relations… because it stands between things *about* or ingredients *of* objects and not between objects

[15] Forrai's reading ends up much closer to Bolton's (1976) than he realizes.

themselves" (ibid). This is crucial to understand. For Locke, a substratum is no more a part of an object than squareness is of my chessboard. I cannot imagine the squareness of my chessboard existing in its own right as an object by itself in the way that I *can* imagine the left half of the board. In other words, properties are not "things" that can be put together to form an object. Once this fact about properties is established, Martin's account materializes:

> If properties are not to be thought of as parts of an object, and the object is not to be thought of as a collection of properties, as its parts may be, then there must be something *about* the object that is the bearer of the properties that under any description need to be borne. And *that* about the object is the substratum. (1980, 7-8)

This conception of substratum matches Locke's account of abstraction. The idea of a substratum is an abstraction or partial consideration of the object. Take a passionfruit as an example. "Partially considering a passionfruit, as what bears whatever properties it bears, is thinking of it under a partial, incomplete description – as a bearer of properties" (1980, 9-10). To think of the passionfruit in this abstracted manner is, according to Martin, "to consider the passionfruit as a bearer of properties (without attending to what those properties are) which itself is not borne as a property, or set of properties, by anything else. The passionfruit under this partial consideration, and incomplete description, is indeed the substance or substratum. Where, then, is the harm" (1980, 10)?

Martin's interpretation thus appears to take what Jonathan Bennett (2001) and Walter Ott (2007) find most compelling about the Bare Particular reading, without committing Locke to a metaphysics of bare particulars. But Martin's reading still faces the same textual problem I identified facing the Bare Particular interpretation. If the substratum is only an abstraction of the mind (the object minus the properties inherent in it), then Locke's complaints about the unknown

nature of substance are unwarranted, and he is wrong to think that higher spirits could have a clearer idea of substance.

Martin has no defense against this. He admits the "great stress" Locke placed "upon the supposed obscurity and unknowability of the nature of substrata rests upon a confusion" (1980, 5). In doing so, Locke failed to realize the most important part feature of his theory about substance, namely that the substratum is not a mereological part of the substance but a way of conceiving of it as a common subject for all its properties. Expressed this way, Martian's account is not intended to be a historiographical interpretation of Locke, rather it is a Lockean inspired theory of substratum. Martin doesn't labor to conceal this fact. He praises Locke for achieving "that quality of the greatest teachers – the capacity to make other people have ideas not all of which are his own" (1980, 1).

As contemporary metaphysician and not a historian, Martin does not realize that the theory of substance he finds in Locke closely resembles how rationalist philosophers like Descartes spoke about the idea of substance. In the next chapter, I will explain why I think Locke was working within the framework of a theory of substance similar to the one Martin describes, one Descartes actually held. According to this view, a substance is at once *both* a thing with an essence and a token of that very essence itself. Consequently, when we think about a substance as the bearer of its properties, we thereby conceive of it as a bare particular. However, this is merely a "partial consideration" of what the substance is, as no substance exists without any properties whatsoever. I further agree with Martin that Locke's complaints about "obscurity and unknowability of the nature of substrata rests upon a confusion"; however, I attempt to locate the source of this confusion within the context of Locke's broader philosophy, in particular his

tendency judge that certain ideas with intellectual content are confused because a distinct mental image is not present to the mind.

E. J. Lowe finds Martin's hypothesis about Locke's theory of substance to be untenable because experience does not provide us with ideas of objects from which we can abstract (2000, 512). Rather, experience only provides ideas of properties. But if properties are themselves aspects of an object, how does Locke ever come to know this via the theory of ideas? This was Stillingfleet's question and Locke's answer to it has already been discussed. While all the simple ideas contained in the complex idea of substance are (consistent with Locke's way of ideas) derived from materials provided in experience, Locke does seem to treat as innate the mind's perception that qualities are "inconsistent with existence" (W 4, 22). In this way, I take Locke to be following in the tradition of Aristotle who believed that qualities and actions can only be understood as existing in things. As Thomas Hobbes (1588-1679) would express the familiar point: "We cannot conceive of jumping without a jumper, of knowing without a knower, or of thinking without a thinker" (AT VII: 173/ CSM II: 122).

Locke's somewhat vague insistence that simple ideas "carry with them a supposition of a substance to exist in" (W 4, 7) deeply bothered Stillingfleet. He demanded to know precisely how simple ideas managed to do this:

> Do sensible qualities carry a corporeal substance along with them? Then a corporeal substance must be intromitted by the senses together with them: No, but they carry the supposition with them; and truly that is burden enough for them. But which way do they carry it? It seems it is only because we cannot conceive it otherwise: What is this conceiving? It may be said it is an act of the mind, not built on simple ideas, but lies in the comparing the ideas of accident and substance together; and from thence finding that an accident must carry substance along with it: but this will not clear it; for the ideas of accidents are simple ideas, and carry nothing along with them, but the impression made by sensible objects. (W 4, 447).

Locke does not treat this line of questioning with the respect it deserves. He only manages to

reply that "by carrying with them a supposition," I mean, according to the ordinary import of the phrase, that sensible qualities imply a substratum to exist in" (ibid). Locke refuses to explain how "the idea of these qualities and actions, or powers, are perceived by the mind to be by themselves inconsistent with existence" (W 4, 21). According to Locke's view, a simple idea "contains in it nothing but *one uniform Appearance*, or Conception in the mind, and is not distinguishable into different *Ideas*" (E 2.2.1; 119). Therefore, it is difficult to see how the mind could perceive such an idea to be "inconsistent with existence" (W 4, 21). This issue lends some initial credibility to Newman's view that Locke is not being completely honest with Stillingfleet. However, it should be pointed about that the problem equally applies to Newman's milder claim that we cannot imagine or conceive "how" a simple idea should exist without a support. Being simply a "uniform appearance" in the mind, it does not seem that we would have any basis to make even this judgement about the inconceivability of qualities existing by themselves. Consequently, this is a problem for Newman's (2000) custom-based reading as much as it is for any other.

H. A Path Forward

Despite the recent various attempts to improve upon the traditional readings, Locke's theory of substance looks as intractable as ever. The Bare Particular and Real Essences cannot be reconciled because they give fundamentally different answers to the question of why Locke found substance to be unknown. The Bare Particular reading contends that Locke found substance to be unknown because he conceived of it along the lines of a bare particular about which nothing more than it being the subject for attributes can be known. The Real Essence reading contends instead that Locke's saying substance is unknown is a way of expressing the fact that the real essences are unknown in substances. These conflicting answers each come with

problems that cannot easily be resolved. Locke says that non-human beings with higher forms of intelligence and perception might know substance by having a clear and distinct idea of it, thus implying that substance has a nature of its own and is therefore unlike a bare particular. Locke also seems to say that our confused idea of substance is something that makes our representations of substances inadequate, rather than being an expression of their inadequacy. It therefore looks like neither the Bare Particular nor the Real Essence analysis could be the right way to understand Locke's discussion of substance.

> In such a situation, one is reminded of Locke's warning about
>
> > the insignificant Triumph of such sort of Arguments, which, drawn from our own Views, may satisfy us that we can find no certainty on one side of the Question, but do not at all thereby help us to Truth, by running into the opposite Opinion, which, on Examination, will be found clogg'd with equal difficulties. (E 4.3.6; 543)[16]

In different ways, the authors discussed in this chapter have taken Locke's advice to heart. They realize that merely attacking one of the traditional interpretations does not by default prove "the opposite Opinion." Although I do not believe any of the readings discussed here are entirely right, their shorting comings point in a promising direction. Both McCann (2007) and Martin (1980) propose the idea that Locke somehow has a bare particular *conception* of substance, but they are unsuccessful at explaining why Locke would complain that such a conception is an obscure and confused idea. Pasnau (2011) makes a strong case that the ontological correlate to the idea of substance is none other than Aristotelian secondary substances, i.e. individual plants and animals; rather than a bare substratum or an unknown real essence. However, Pasnau does not explain why Locke would conclude that substance is totally unknown when animals and plants are known, albeit superficially. Newman's (2000) discussion of the origin of the idea of

[16] Locke made this point originally about materialist versus immaterialist conceptions of the soul.

substance in the mind invites one to consider carefully exactly what Locke's account entails. I ended the previous section with a puzzle about how the mind could perceive that simple ideas do not agree with independent existence. It is this question that will spark the new approach to answering these lingering questions that have emerged from recent attempts to make sense of Locke's theory of substance in the wake of the Bare Particular and Real Essence readings.

IV. LOCKE'S CONFUSION ABOUT THE CONFUSED IDEA OF SUBSTANCE

A. Motivating and Criticizing the Idea of Substance

Locke claims that simple ideas "carry with them a supposition of a substratum to exist in" (W 4, 7) such that the mind "perceives their necessary connexion with inherence or being supported" (ibid, 21). But simple ideas are atomic mental representations of qualities or powers. Being "*one uniform Appearance*" in the mind (E 2.2.1; 119), it is unclear what basis the understanding has for perceiving them to be "inconsistent with existence" (W 4, 21). To answer this question, it will prove helpful to look briefly at what Locke says about the various types of agreement/ disagreement the mind is capable of perceiving amongst its ideas. The relevant type of perception concerns the idea of existence and its relation to other ideas. Through such a perception, the mind is capable of knowledge of the existence of things. This is an important feature of Locke's theory of knowledge because it is the only species of knowledge that concerns real existence. Locke explains that we can know the existence of things with varying degrees of certainty corresponding to the manner in which the mind comes to perceive the idea of existence as agreeing with the idea of that thing.

When that perception between our idea of the thing and the idea of existence is direct and immediate, we have intuitive knowledge of the thing's existence (E 4.2.1; 530-531). Locke thinks each of us has this with respect to our own existence (E 4.9.3; 618-619). When the perception of agreement is mediated by other ideas, as in the case of a chain of reasoning while doing a proof, we have demonstrative knowledge (E 4.2.2; 531-532). Locke claims we have demonstrative knowledge of God's existence (E 4.10.3; 620). Finally, Locke says the mind is capable of sensitive knowledge about the existence of external things presently affecting the senses and thereby producing perceptions of them in the mind.

The details of sensitive knowledge are heavily disputed by Locke scholars.[17] Locke seems to admit that sensitive knowledge is importantly different from the other two degrees of knowledge because it does not involve the perception of an agreement between "clear **abstract** Ideas of our own Minds" (E 4.11.3; 631, bold added). Rather, the vivacity of particular sensations naturally grants us "assurance" of the existence of the finite extra-mental causes of those sensations (ibid). Locke does not specify how exactly sensations give us this assurance, but he is right nonetheless in his assessment that they do. After all, people do not believe in material beings for any other reason than that they have sensations "of" them.

Although Descartes provides a rational argument for the existence of the external world, his argument too relies upon the premise that our senses afford us "a great propensity to believe that they [our sensations] are produced by corporeal things" (AT VII: 79/ CSM II: 55). Without this strong propensity induced by the senses, we would have no basis for preferring materialism over idealism at it relates to the extra-mental cause of our sensations. The additional assumption that objects are not merely bundles of their qualities is justified by Descartes with the maxim that nothing has no properties (AT VIIIA: 25/ CSM I: 210). For modern philosophers predating Hume, it is likewise a truism that actions and attributes require subjects of which they are actions and attributes. As Hobbes would put it, "We cannot conceive of jumping without a jumper, of knowing without a knower, or of thinking without a thinker" (AT VII: 173/ CSM II, 122).

Most philosophers would agree that the human mind possesses the notion of a generic subject, what Locke calls the idea of substance in general. The content of this idea is indeed nothing but an unqualified substratum, not unlike the concept of prime matter. Basically, all the early modern philosophers agree that there exists no image corresponding to this notion in mind

[17] For a recent discussion of some of the issues, see Weinberg (2017).

(Broackes 2006). For this reason, empiricist philosophers who identify ideas with images often say there is no proper idea of substance. Hobbes, Gassendi, Berkeley, and Hume are among them:

> **Hobbes**: I will not add that we do not have an idea of substance. For substance, in so far as it is the matter which is the subject of accidental properties and of changes, is something that is established solely by reasoning; it is not something that is conceived, or that presents any idea to us. (AT VII: 185/ CSM II: 130)
>
> **Gassendi**: I claim that we do have a distinct and genuine idea of accidents, but that our idea of the unseen substance beneath them is confused and utterly fictitious. (AT VII: 285-286/ CSM II: 199)
>
> **Berkeley**: …it ought not to be looked on as a defect in a human understanding, that it does not perceive the idea of *spirit*, if it is manifestly impossible there should be any such *idea*… [for] spirit has been shown to be the only substance or support, wherein the unthinking beings or ideas can exist: but that this *substance* which supports or perceives ideas should it self be an *idea* or like an *idea*, is evidently absurd. (PHK 1/135)
>
> **Hume**: We have no perfect idea of anything but of a perception. A substance is entirely different from a perception. We have, therefore, no idea of a substance. (T 1.5.5)

As I shall explain in the next chapter, Locke can be counted in that number, but his theory of ideas has more in common with Descartes' than it does with Hume's Copy Thesis.[18] For this reason, Locke does not dismiss the notion of substance as utterly meaningless, although he does complain unfairly that it is obscure and confused. I will show that Locke's complaints about the idea of substance are part of a larger failure to recognize the merely intelligible aspect of certain ideas, many of which Locke recognized as being indispensable to human cognition (E 2.21.73; 286-287). Although Locke's judgement that these ideas are confused perceptions is unwarranted, he nonetheless anticipates Kant in an important way. While the rationalist philosophers of the 17th century confidently deduced metaphysical truths from the concept of substance (Leibniz is

[18] This is the view that all simple ideas derive from their corresponding impressions of which they are less vivid copies. (Cf. T 1.1.1).

the preeminent example), Locke recognized (albeit imperfectly) that these ideas were merely ideas of the mind. It was a core tenant of his cautious philosophy to guard against abusing language by mistaking words for things. He made a related point about the term 'Substance' in *Essay* 2.13.18 (174). This theme serves as an illuminating backdrop against which to study anew Locke's theory of substance in the remainder of this chapter.

B. Substance and Language

Locke's discussion and criticism of substance cannot be understood apart from his theory of language to which he devotes nearly one fifth of the pages in the *Essay*. His linguistic thesis states that words properly and immediately signify the specific idea in the speaker's mind she wishes to communicate to others (E 3.2.2; 405). Words used without clear and distinct ideas corresponding to them are "insignificant Noise" (E 3.2.7; 408) and bound to result in confused thinking and pointless non-empirical disputes. Like other early members of the Royal Society, the oldest national scientific institution in the world, Locke was concerned that bad philosophy (metaphysics in particular) was getting in the way of good science.[19] Too often Locke found that metaphysical arguments contained abuses of language such as mistaking words for things and using words without clear and determined definitions (E 3.10; 490-508).

Many of Locke's most important arguments in the *Essay* center around this theme. For example, when it is claimed that we know the essence of gold by intuiting its substantial form (E 2.31.6; 378-380), Locke challenges us to examine what idea we have of its essence. After some honest reflection, we find that what we mean is that gold is a yellow, shiny, heavy, malleable thing, with certain other properties depending on how well we are familiar with it. Locke then persuades us that most of these qualities are not in the gold at all but are mere effects of the gold

[19] Cf. E 4.8.9; 615. Locke is not against metaphysics *per se*, but he thinks the only way to gain knowledge about substance is to experiment on them.

on our senses – what Locke calls "*secondary* and *imputed*" or but not "*real*" qualities (E 2.8.22; 140). In the end, we must admit that far from knowing the real essence of gold, we have but a superficial knowledge it (E 3.6.3; 440). Locke calls this the "nominal essence" since it relates to the name 'gold', which in so far as it means anything at all, stands for the complex idea we have in our mind in virtue of those sensible qualities we have found through experience to be frequently united together.

Locke applies this linguistic test to several other metaphysical topics including the notion of substance. As I explained in Chapter One, substance has a distinguished pedigree in Western Philosophy dating back to the ancient cosmologists. As Aristotle put it, substance is that in virtue of which everything else exists (2b6). All other categories of things – properties, attributes, relations, actions, and events – only exist because substances do. The thought that reality is simple relative to the diversity of its appearance – a basic assumption of natural science – is thus baked right into the notion of substance itself.

Locke was not against that basic assumption *per se*, but he found it dogmatic to grant existence, as Descartes did, to only extended, unthinking bodies and unextended thinking minds. As Locke saw it, nothing we know *a priori* blocks the possible existence of extended thinking substance (E 4.3.6; 540-541), and experience has yet to settle the issue. Furthermore, on Descartes' view the distance between two bodies not touching must span a third body (otherwise

there is nothing between the two and so they must touch). [20] By definition, this precludes a vacuum, but Locke thought the question of a vacuum ought to be settled empirically (E 2.13.23; 178). In other words, Locke thought it ought to be a *matter of fact* whether the distance between two non-touching bodies is occupied by matter. If two bodies do not touch, then something must exist between them. And if it is not a body, then what is it? Locke answers, "empty or pure Space", i.e. extension without solidity (E 2.13.26; 180).

Since the time of Aristotle, it was widely accepted that everything that has genuine being is either a substance or an accident of some substance. Then the question naturally arises whether space a substance or an accident? Locke's response is indirect and defensive. He refuses to say whether space is a substance or an accident "till they that ask, shew me a clear distinct *Idea* of *Substance*" (E 2.13.17; 174). It is interesting to note that even if Locke did not endorse the substance/accident ontology itself, he still could have answered the question in the following manner. If he favored a relational theory of space, he could have explained that space is indeed like an accident since it depends ontologically on the existence of bodies. He could have gone even further and said that space has roughly the same degree of reality as secondary qualities or other powers that involve relations between substances. If instead Locke favored a Newtonian

[20] Aristotle and Descartes deny the possibility of empty space (a void or vacuum) on similar grounds. Aristotle offers this conceptual argument to show that space (Aristotle calls it place) is really the same as body: All bodies are extended; they have a volume (bulk) even as they are moved around. "Therefore if this differs in no respect from its place, why need we assume a place for bodies over and above the bulk of each, if their bulk be conceived of as free from attributes" (216b13)? Space is nothing over and above extended bodies; there is no extended invisible container. Aristotle asks defenders of the vacuum: "How then will the body of the cube differ from the void or place that is equal to it" (216b9)? In other words, how can two separate things (an extended body and region of space) occupy the same place? Aristotle answers that they cannot; space and body they must be the same thing. Likewise, Descartes' denial of the possibility of a vacuum follows from his insistence that extension is the whole essence of matter (AT VIIIA: 46/ CSM I: 227). Therefore, it doesn't make sense to say there is extension *without* matter. Hence, the same basic strategy employed by Aristotle is used by Descartes to show that empty space is an incoherent notion.

view of space, he could have likened space to a divine attribute or, as Newton did, “an emanative effect of the first existing being” on the grounds that “God is everywhere” and space is "affection of every kind of being" (2004, 21-25). Finally, if Locke had thought that space enjoyed an existence apart from matter and God, arguably he could have replied that space is substance-like since it doesn’t depend on other substances for its existence.

In light of this, Locke’s cagey response suggests that he was either undecided about which of the non-Cartesian theories of space was correct, or he wanted to conceal his preferred view for theological reasons. All three theories of space threaten negative theological consequences. If space is a relation between bodies, then God is excluded from space, unless he is a body himself. However, given that Locke argues at length for God’s immateriality (E 4.10.13-17; 625-628), it unlikely that he had this relational view of space. On the other hand, if space is a divine attribute, then God is extended. Locke might hint that this is his view in the *Essay* writing that God is incapable of motion “not because he is immaterial, but because he is an Infinite Spirit” (E 2.23.21; 307). Finally, if space is an absolute reality distinct from God and matter, then there threatens to be two infinite beings. As Leibniz pointed out, in that case God would be powerless to destroy or change it (AG, 328). Locke would scarcely approve of this anymore than Leibniz did. In addition to these considerations, an ontology of space falls outside the stated epistemic aims of the *Essay* (Thomas 2016). Keeping that in mind, Locke would only be inviting unnecessary controversy by opining openly about the nature of space. It is enough for his present purposes in *Essay* 2.13 to show that the ideas of space and body are distinct, so that we can at least ask the question about the existence of a vacuum in nature.

From letters written to van Limborch, we know that Locke had developed views about God’s relation to space (Klever 1989, 341). In particular, Locke held that God’s infinite

perfections implied his omnipresence. In one of the letters Locke explains that "it is better to be everywhere in the infinite extent of space than to be shut out from any parts of it. for if [God] be shut out from any place he can neither operate there nor know what is doing there and soe is neither omnipotent nor omniscient" (Corr. 6, 789). For this reason, God's perfections depend upon his omnipresence, which implies his spatial extension. Locke makes clear that although God is extended his nature is completely immaterial (E 4.10.14-17; 625-628). This means that Locke's view of space most closely resembles the second option discussed above. Since God exists everywhere *partes extra partes* (i.e. "parts outside of parts"; cf. E 173), on the assumption that properties belong to some substance the extension of space is indeed like a divine attribute.

Unhappy with the demand to classify space as either a substance or an accident, Locke launches various broadsides against the doctrine of substance. Initially, he charges those philosophers who put an emphasis on substance for abusing language by "taking Words for Things" (E 2.13.18; 174). As you may recall, words according to Locke properly signify only ideas in the speaker's mind and refer to objects in the world only secondarily, and only if the idea signified is a real idea, i.e. if it corresponds to a real thing (E 4.4.3; 563). The mistake of taking words for things can occur in any case, but it is especially prone to happen when the word corresponds to no clear and distinct idea. Locke thought this happened with most metaphysical terminology (E 3.10.14-15; 497-499). Such technical jargon is in many cases literally meaningless, and we would plainly see this if only we attended to the content of our ideas.

The problem of taking words for things is especially problematic in the case of general terms. Such words stand for abstract ideas which necessarily do not represent any real being, all of which are only particular (E 3.3.11; 414). Individual horses and human beings exist, but the abstract nature of horse and mankind do not. What Aristotle called secondary substances are

fictions of the mind for Locke. They are abstract ideas made by the understanding for the purpose of classification and ease of communication about the particular substances that do exist (E 3.6.7-8; 443-444). Locke observes that God, finite spirits, and material bodies are all called substances in the same way that Justify, American Pharaoh, and Secretariat are all called horses; but nobody thinks that they (unlike the horses) share in a common nature (E 2.13.18; 174). Therefore, Locke asks somewhat rhetorically: in what sense is the word 'substance' applied equally to all of them? For whatever it is about God, finite spirits, and body that render them substances and deserving of that name, why should space lack this thing? Locke's opponent must either adopt a "very harsh Doctrine" and insist that God, finite spirits, and body– but not space – do share a common "nature of *Substance*"; or else he must concede that there are multiple kinds of substance, thus opening the door to admitting pure space into the ranks of substance (ibid).

Of course, Locke's opponent could avoid the latter if it could be shown definitively that space is not a substance, but that would require an adequate grasp of what a substance is and that is precisely what Locke thinks nobody has. The standard definition says that a substance is a thing that doesn't depend on another for its existence. But another what? If we say another substance, the definition is self-referential. If we try to define substance by comparing it to an accident, we must then say what an accident is; but all we can say here is that an accident depends upon some substance for its being. Hence, we've failed to provide a non-circular account of what substance is. Locke compares the situation we are in with respect to substance to a person unfamiliar with "the nature of Books, and the things they contained" (E 2.13.20; 175). Being told that substance is that in which the accidents inhere is no better than being told that books contain pages of letters and that letters are the things on the page and the pages are the things on which the letters are put.

Locke goes on to explain that in fact the only idea we have corresponding to the word substance is the complex idea of an unspecified thing that stands in the relation of support or subject to a multitude of qualities or modes (E 2.23.1-6; 295-299). Because we cannot conceive how qualities should "subsist alone, nor one in another, we suppose them existing in, and supported by some common subject" (E 2.23.4; 297). Substance is the name of this common subject that provides ontological support to accidents. It is certain however, that we have no clear or distinct idea of that *thing*. As the common subject for various predicates, "the Substance is supposed always *something* besides the Extension, Figure, Solidity, Motion, Thinking, or other observable *Ideas*, though we know not what it is." (E 2.23.3; 297)

In this way, Locke thinks our idea of substance is both necessary and flawed: necessary because it is implied by the existence of attributes but flawed because the idea does not reveal what substance is in itself. That is, substance "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 a support or substratum to modes or accidents" (W 4, 21).

C. Substance as Common Subject

In my view, whenever Locke writes about substance, or substratum, or substance in general, he has in mind the idea of a *common subject* for several properties and acts. The textual evidence for this is overwhelming when the relevant passages are compiled:

> Simple ***Ideas*** [that] go constantly together… [are] presumed to belong to **one** thing, and… are called, so united in **one subject**, by one name (E 2.23.1; 295, bold added).

> If anyone should be asked what is **the subject** in which Color or Weight inheres, he would have nothing to say, but the solid extended parts: And if he were demanded, what is it, that Solidity and Extension inhere in… (E 2.23.2' 295-296, bold added).

… complex *Ideas* of Substances, besides all those 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 (E 2.23.3; 297, bold added).

we suppose **them** [i.e. sensible qualities found united in nature] existing in, and supported by some **common subject**; *which Support we denote by the name Substance*, though it be certain, we have no clear, or distinct *Idea* of that *thing* we suppose a support (E 2.23.4; 297, bold added).

… it is evident, that having no other *Idea* or Notion, of Matter, but ***something*** wherein those **many** sensible Qualities, which affect our Senses, do subsist… (E 2.23.5; 297, bold added).

… he supposes… those **several simple *Ideas***, which he has usually observed, or fancied to exist together… to rest in, and be, as it were, adherent to that unknown **common Subject**, which inheres not in anything else (E 2.23.6; 298, bold added).

… *our specifick* Ideas *of Substances* are nothing else but *a Collection of a* ***certain number*** *of simple* Ideas, *considered as* ***united*** *in* ***one*** *thing* (E 2.23.14; 305, bold added).

… and, perhaps, to Man, who has long observed this kind of Birds, [he will signify by the name of that bird] some other **Properties,** which all terminate in sensible simple *Ideas*, all **united** in **one common subject** (ibid, bold added).

… 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; though of this supposed something, we have no clear distinct *Idea* at all. (E 2.23.37; 316, bold added).

… all the simple **Ideas**, that thus **united** in **one common *Substratum*** make up our complex *Ideas* of several sorts of Substances, are no other but such, as we have received from *Sensation* or *Reflection*… (ibid, bold added).

… the greatest part of the *Ideas*, that make our complex *Idea* of *Gold* are Yellowness, great Weight, Ductility, Fusibility, and Solubility, in *Aqua Regia*, *etc*., **all united together** in an unknown *Substratum* (E 2.23.37; 317, bold added)

For our Ideas of the Species of Substances, being, as I have showed, nothing but certain **Collections** of simple *Ideas* united in **one Subject**, and so co-existing together (E 4.3.9; 544, bold added).

The main features to note about these passages is the conception of substance or substratum as a single subject for more than one "simple idea." This is one of those occasions when Locke speaks of ideas as existing in the object but means the corresponding quality (E 2.8.8; 134). After all, it is the qualities represented by simple ideas that exist outside the mind, and it is they – not their representations – that are really united in the material or spiritual substance. The mechanism or natural cause that binds together multiple qualities into a spatio-temporal region is the internal constitution of the substance. In the case of corporeal substances, Locke assumed this was the structure and motion of the minute parts of bodies. However, when we represent a substance to ourselves and form a complex idea of it, we attribute a certain number of predicates to a single subject. We thus form a concept under which the represented object falls and to which it is taken to agree. As Locke repeatedly says, these concepts contain more than mere collections of simple ideas representing individual qualities. They include the additional thought of so many qualities as united in one thing. That common subject is represented to the mind by the generic idea of a substratum, or substance in general. On this point about the *content* of Locke's idea of substance, I agree with Bennett (1971, 1987, 2001) and Martin (1980).

According to Ayers (1975, 1994, 1996), we are forced to represent substances in this fashion precisely because we are ignorant of their real essences and know them in an incomplete and highly superficial way. The way we represent substances to ourselves thus reflects our epistemic status with respect to them: we know several powers and qualities of substance, but these do not describe what the substance is really like in itself. In forming an idea of substance, we thus relate all sensible ideas to an unknown real essence that is the basis of the perception-dependent features we observe. This symmetry is undeniable, but *contra* Ayers I do not think ignorance of real essences explains why we represent a substance as "a *thing* having such or such

Qualities" (E 2.23.3; 297). Locke simply noted correctly that this is how we do in fact represent substances, and he exploited it to show that we can only pretend to classify things on the basis of substantial forms or real essences. As Locke insisted:

> … such a complex *Idea* [by which represent to ourselves any substance] cannot be the real Essence of any Substance; for then the Properties we discover in that Body, would depend on that complex *Idea*, and be deducible from it, and their necessary connexion with it be known; as all Properties of a Triangle depend on, and as far as they are discoverable, are deducible from the complex *Idea* of three Lines, including a Space. But it is plain, that in our complex *Ideas* of Substances are not contained such *Ideas*, on which all the other Qualities, that are to be found in them, do depend. (E 2.31.6; 379)

The reason why the nominal essence and the real essence do not coincide with substances is simply that the internal constitution or essence is not represented in the idea. We know this because "that in our complex *Ideas* of Substances are not contained such *Ideas*, on which all the other Qualities, that are to be found in them, do depend" (ibid). *Contra* Ayers (1996 2, 52), the presence of the substratum idea in the nominal essence is not an indicator or reflection of the mismatch between the nominal and real essence. The reason why the substratum idea is present in ideas of substance, but not mixed modes, is only because the former are "taken to represent distinct particular things subsisting by themselves" (E 2.12.6; 165). Modes, on the other hand, contain no such supposition and therefore their representations do not contain an idea of a subject "which does not inhere in anything else" (E 2.23.6; 298). As Bennett points out, Locke has "no reason to allege any difficulty in principle" with the real essence of a substance being the nominal essence (2001, 99). The reason it is not is purely circumstantial. If they ever were to align, in so far as the complex idea would be an idea of a substance it would contain the idea of a substratum since this idea involves the thought that the entity – a single thing – is capable of independent existence, unlike triangles and acts of heroism which are modes.

Locke's whole point about the classification of substances is that we do it by constructing concepts; but unlike mixed modes for which the nominal essence is the same as the real essence, our substance concepts are not the same as the unknown real essences. This makes our classifications of substances into species conventional and dependent on human decisions (e.g. what ideas to include or exclude from our complex ideas of a given type of substance). The mistake Locke writes at length to avoid is the presumption that in classifying natural things we somehow have access to an objective standard by which to make determinations. In Locke's view, when I claim the ring on my finger is gold I can mean only that it agrees to a concept (a complex idea) called 'gold' that I have either constructed myself or else adopted from my linguistic community. This concept includes a list of distinctive properties plus the thought that these attributes are of the same thing. It is, after all, the same substance that I take to be both yellow, heavy, malleable, and dissolvable in certain acids.

Repeatedly, Locke makes the point that our words signify only the ideas attached to them by the speaker. And due to our limited faculties, the only ideas the human mind can have regarding substances are collections of powers and a few intrinsic qualities, all "*considered as united in one thing*" (E 2.23.14; 305). Locke explains that "though it [i.e. these ideas] be not the real Essence of any Substance that exists, is yet *the specifick Essence*, to which our Name belongs, and is convertible with it; by which we may at least try the Truth of these nominal Essences" (E 3.6.21; 450). He goes on to make an example out of the Cartesians who say the essence of body is extension. Locke argues they are literally saying nonsense since the "Essence of any thing, in respect of us, is the whole complex *Idea*, comprehended and marked by that Name" (ibid). He contends that "the [nominal] Essence of Body is not bare Extension, but an

extended solid thing; and so to say, an extended solid thing moves, or impels another, is all one, and as intelligible, as to say, *Body* moves, or impels" (ibid).

It might appear as though the Cartesian is making an ontological claim about the nature of body, whereas Locke is making a point about what the term 'body' means. If this were true, one might be tempted to say that Locke is talking past his opponent. However, Locke would not see it that way. Insofar as the Cartesian is using the word 'body', he can mean no other essence than the nominal essence since that is what the term properly signifies. The Cartesian is free to define his own terms, but this goes both ways. Locke makes a convincing case that body, and extension are two separate ideas (E 2.13.23; 178). As a result, if the Cartesians want to signify the idea of extension with the word 'body', they are free to do that; however, this should not be mistaken for a metaphysical insight into the real essence of matter. Locke points out that Descartes' *a priori* argument for the impossibility of a vacuum is tantamount to the claim that "body is body", which reveals the limitations to these so-called self-evident "maxims" or "axioms" (E 4.7.12; 604). Conceptual analysis only proves the real/non-existence of things without us when the idea of existence is perceived to agree or disagree with the idea in question, as is the case only with God's existence (E 4.10.1; 619). The existence of a vacuum in nature, however, must be decided empirically. Locke thought it was a substantive question whether space was full of matter and not something that could be decided *a priori* through the definition of terms.

The claim that all material stuff is "bare Extension" is intelligible enough as a linguistic assertion; however misguided Locke thinks it may be for the reason just mentioned. The form of expression that Locke despised was: "the real essence of species S is O". In so far as O means anything, Locke thought it must correspond to some concept in the mind of the speaker, but the

ideas of substances that humans possess are not of real essences but of a collection of properties united in a common subject. The problem is we don't know whether there is exactly one type of real constitution corresponding to that collection of sensible qualities. There could be countless internal constitutions that equally give rise to those qualities contained in the nominal essence. At best, such claims about the real essence of any species amount to unverifiable speculation. At worst, this way of talking makes it easy to forget the true basis on which substances are in fact classified.

To sum up Locke's position, substance terms stand for nominal essences, which are complex ideas in the mind. These representations of substances are conventional because they are made by understanding. Substances are represented to the mind as entities to which a number of attributes belong. Locke expresses this by saying the complex idea contains the idea of a substratum that gives support to the qualities also represented in the complex idea. Because words stand for ideas, we can "test" the meaning of our words by replacing the word in a sentence with the nominal essence. This "test" exposes the strain imposed on language by the Cartesians who define body as extension. Locke would prefer that 'body' and 'space' signify the really distinct ideas of *solid* thing and *pure extension*. Propositions derived from conceptual analysis give the illusion of genuine knowledge; however, they are often "trifling propositions", when made about substances (E 4.8.8; 614). Such *a priori* arguments are common to metaphysics and theology; but, because the nominal essence of terms like 'body' and 'soul' are not the real essences of the substances they represent, "one may make Demonstrations and undoubted Propositions in Words, and yet thereby advance not one jot in the Knowledge of the Truth of Things" (E 4.8.9; 615). None of these arguments involve the thought that the idea of substance is anything like a temporary placeholder for the unknown real essence.

To the extent that Locke conceives of the idea of substance as a common subject for simple ideas, I agree with Edwin McCann (2007) and Robert Pasnau (2011) who deny that Locke is presenting a new or innovative notion of substance. Locke's reference to Robert Sanderson and Franco Burgersdicius in the context of his own understanding of concept of substance is proof of the fact that Locke is discussing a traditional conception of substance (W 4, 8; cf. McCann 2007, 160 footnote). The aim of the remainder of this chapter is to explain the basis for Locke's frequent complaint that "a Man has no *idea* of Substance in general, nor knows what Substance is in it self" (E 2.31.13; 383). The Bare Particular and Real Essence interpretations each provided answers to this question. To recount them here, the Bare Particular reading contends that substance is unknown for Locke because it has no nature of its own. (Locke is thus embroiled in a pseudo-problem.) The Real Essence reading, on the other hand, contends that substance is not *per se* unknown; it is a "dummy concept" to mark our ignorance of real essences. For the reasons outlined in Chapter Two, I do not accept these answers. To find a viable alternative, I will spend some time examining Descartes' account of the idea of substance before contrasting his account with Locke's complaints. This comparison is not without historical motivation since "Locke was no stranger to Cartesian views about the idea substance" (Ayers 1996 2, 50).

D. Descartes on the Idea of Substance

In *Principles of Philosophy*, Descartes describes finites substance as those things that don't depend for their existence on anything except God. (AT VIIIA: 25/ CSM I: 210). This is of a piece with the definition in *Geometrical Presentation of the Meditations*, which says that a substance is that "in which whatever we perceive immediately resides, as in a subject" or that "by means of which whatever we perceive exists" (AT VII: 161/ CSM II: 114). Created

substances enjoy ontological independence from one another, and it is in virtue of them that all attributes and modes exist. Interestingly, Descartes follows that up by admitting: "the only idea we have of substance itself, taken in the strict sense, is that it is the thing in which whatever we perceive (or whatever has objective being in one of our ideas) exists. For we know by the natural light that a real attribute cannot belong to nothing" (ibid). On this point then, Descartes and Locke are in full agreement: our idea of substance itself is starved of qualitative detail.

Descartes also seems to agree with Locke that substance is not immediately perceived, but its existence is inferred by the mind through reasoning: "we do not come to know a substance immediately, through being aware of the substance itself; we come to know it only through its being the subject of certain acts" (AT VII: 176/ CSM II: 124). In other words, substance is not "*per se notum*". Michael Moriarty explains the significance of this denial. It means that the idea of substance is not "directly intuited or apprehended", rather it is "grasped as the conclusion of a process of reasoning" (2008, xliv). Descartes puts the point this way to Arnauld, "We do not have immediate knowledge of substance, as I have noted elsewhere. We know then only by perceiving certain forms or attributes, which must inhere in something if they are to exist; and we call the thing in which they inhere a 'substance'" (AT VII: 222/ CSM II: 156). The process of reasoning described in this passage looks virtually identical to one Locke describes in the *Essay*: "because we cannot conceive, how they [i.e. qualities] should subsist alone, nor one in another, we suppose them existing in and supported by some common subject; *which Support we denote by the name Substance*" (E 2.23.4; 297).

These similarities about (a) the content of our idea of substance and (b) the account of its origin in the mind are interesting to note, but Descartes also holds two additional related theses about substance. The first thesis is that "each substance has one principal property that

constitutes its nature and essence, and to which all the other properties are referred" (AT VIIIA: 25/ CSM I: 210) For bodies, this is a certain quantity of extension. For minds, the principle attribute is its own conscious thinking. Several important metaphysical consequences follow from this. For instance, an extended substance cannot think, nor can a thinking substance be extended. In addition, sensible qualities such as color and scent do not belong to material substances as properties because they do not relate to the attribute of extension. The only properties a body can have are determinations of extension such as shape, size, and motion since they are understood through the idea of extension.[21] Alternatively, the only properties a mind can have are those that relate to its own thinking, namely ideas and desires.

Descartes' second thesis is that only a distinction of reason exists between a substance and its principle attribute. In general, a property is merely rationally distinct from a substance if the substance cannot be understood without it, i.e. when the property is positively excluded and not merely abstracted from it.[22] Thus a substance can be considered in the mind, apart from its existence, but we cannot deny existence of a substance since no substance can exist outside of thought without existence (Nolan and Nelson 2006, 121). In other words, "rational distinctions are confined to our thought, and are produced by regarding substance in diverse ways" (Nolan 1997, 137). There is a sense, then, in which rational distinctions are not distinctions at all since they are based on no extra-mental differences. Relating this to Descartes' second thesis that a substance and its principle attribute are rationally distinct, he explains that thought and extension

[21] Another way to express this would be to say that concepts of shape and motion presuppose the concept of extension.

[22] The difference between exclusion and abstraction and its significance for real and modal distinction is explained in Nolan (1997). The main point is that exclusion implies abstraction but not vice versa and this underscores the difference between things that are modally and rationally distinct.

differ from thinking and extended substance only in reason (AT VIIIA: 31/ CSM I: 215). Like the attribute of existence, thought or extension are ways of considering the nature of thinking and extended substance. In reality, however, they must not be thought to be anything other than "thinking substance itself and extended substance itself – that is, as mind and body" (ibid). The reason for holding this is that rationally distinct items are tightly conceptually bound such that each are necessary to clearly and distinctly understand the other (Nolan 1997, 135). I can always abstract the principle attribute or the attribute of existence from the substance and consider it directly, but when I do this I do not have a complete grasp of the notion in question. (Try contemplating existence without thinking about existing things.)

I follow Lawrence Nolan (1997) in holding that a substance and its principle attribute are identical in reality. This position is challenged by Paul Hoffman on the grounds that Descartes need only to be read as making the weaker and more plausible claim that "thought and mind are inseparable and that extension and body are inseparable" (2002, 61). Hoffman argues for this reading by pointing out that the substances of body and mind are subjects not just for modes but for attributes including extension itself and thought itself. According to Hoffman, "If A is the subject of B, but B is not the subject of A, I do not see how it could be plausible to maintain that A and B are identical. But it is plausible to say that A and B are inseparable" (2002, ibid). Nolan has an easy response to this objection because he denies that rational distinctions are founded on a true relation: "there are no relata because, strictly speaking, there is no distinction. A rational distinction is not really a distinction at all in the sense of there being two things which bear a relation to one another. The term 'distinction' in this case is a misnomer" (Nolan 1997, 137). Nolan's reading is appealing precisely because it does not leave Descartes with a hylomorphic ontology of substance and the daunting task of explaining what mind and body are if not thought

and extension. Hoffman complains that on Nolan's reading we are forced to say that the principle attribute of a substance is identical to all the other attributes, which has the "seemingly unCartesian implication" that thought or "extension can be singled out as the principal attribute of [mind or] body not as [mind or] body is in reality but only as we conceive of [mind or] body" (2002, 61-62). Hoffman seems to be expressing that worry that substances would not have a nature in reality but only insofar as we consider them as having a nature. But Nolan's reading does not deny that minds really possess thought or that bodies really possess extension. What his reading denies is that thought or extension exists as something in the world distinct from the other attributes of a substance, and indeed the substance itself. It is true that the category of principle attribute exists only in the mind as a type of rational distinction, but this is exactly one of the "striking" features of Descartes' metaphysics that Nolan thinks is underappreciated by modern readers (1997, 129).

Distinctions of reasons are performed by the mind through a process of abstraction that is best understood along the lines of selective attention (Nolan 1997, 133). Because a substance's attributes are merely rationally distinct from one another, and from the substance to which they belong, by selectively attending to any of them in particular I can represent the *same thing* in different ways, albeit not clearly or distinctly. For example, I can think about a complete substance such as my own mind in (at least) the following three distinct ways: (1) I can think about it as an existing thing that has a thinking nature. (2) I can abstractly consider my mind as an ontologically independent and existing thing without entertaining a thought about its nature, which is none other than its own thinking. (3) Conversely, I can think directly about my mind's nature "without reflecting on the very thing which thinks" (Miller and Miller 1983, 29). Because the distinction between a substance and its principle attribute is only conceptual and not real,

there exists a duality in terms of what it means to *know* a substance. Strictly speaking, to know a substance qua substance is just to recognize that some being exists in its own right as a subject for observed attributes. But since the principle attribute of that thing is only rationally distinct from it, I can also be said to know the substance when I understand its essence or simple nature.

As a result of this duality, there is an inherent over-determination in Descartes' assertion that "I have never thought that anything more is required to reveal a substance than its various attributes" (AT VII: 360/ CSM II: 249). This statement is true on two accounts. It is true because "if we perceive the presence of some attribute, we can infer that there must also be present an existing thing or substance to which it may be attributed" (AT VIIIA: 25/ CSM I: 210). And it is also true because "the more attributes of a given substance we know, the more perfectly we understand its nature" (AT VII: 360/ CSM II: 249). To put the point another way, the same evidence that licenses a correct judgement about the existence of some substance also provides information sufficient to determine what kind of substance it is. For example, by the fact that I perceive a square shape, I know there exists a substance (since no substance has no attributes), and further know its nature is extension (since extension is contained in the concept of shape). This is why Descartes is "surprised" that Gassendi should say that the wax discussion in the Second Meditation proves that the meditator's mind exists but does nothing to establish its nature (AT VII: 359/ CSM II: 248). For as I have explained, on Descartes theory of substance "one thing cannot be demonstrated without the other" (ibid).

In claiming that a substance is rationally distinct from its principle attribute, Descartes is acknowledging the fact that we can form two related partial or abstract thoughts. We can think about a substance as the thing that has a nature without attending to the specifics of what kind of nature it has; and we can think about the kind of principle attribute a substance has without

thinking about the very thing of which it is an attribute. The important thing to realize about this, and why I am mentioning it again, is that both of these thoughts are the result of partial consideration of something that is in reality whole: substances always have natures. Any time we partly consider something and zoom in on only part of it, we thereby necessarily omit something from our view. Descartes emphasizes this very point in his *Principles of Philosophy* with respect to forming an idea of "substance itself". He writes,

> Indeed, it is much easier for us to have an understanding of extended substance or thinking substance than it is for us to understand substance on its own, leaving out the fact that it thinks or is extended. For we have some difficulty in abstracting the notion of substance from the notions of thought and extension, since the distinction between these notions and the notion of substance itself is merely a conceptual distinction. A concept is not any more distinct because we include less in it; its distinctness simply depends on our carefully distinguishing what we do include in it from everything else. (AT VIIIA: 31/ CSM I: 215)

When we do perform the abstraction, the resulting idea is every bit as barren and uninformative as to the *nature* of the substance as the one Locke complains about to Stillingfleet, writing: "Substance is a being or thing; or, in short, something they know not what, or of which they have no clearer idea, than that it is something which supports accidents, or other simple ideas or modes, and is not supported itself as a mode or an accident" (W 4, 8). If Locke had appreciated the abstract nature of the idea of substance, presumably he would not have demanded to know, as he does to Stillingfleet, what substance is stripped of "all its modes and properties" beyond its being a mere "thing" (Works 4, 27-88). To make the same point without some of the technical jargon: had Locke better understood Descartes' theory of rational distinctions, then he would have understood why the idea of substance looks so impoverished when abstracted from rich

thought of a natured thing. Locke would have recognized that while the idea of substance offers no insight into the nature of the substance represented in the complex idea, this is no fault of it.[23]

When Locke claims that the idea of substance is a confused idea of "I know now what" (E 2.23.15; 305), he is not pointing out anything that Descartes didn't already know. Rather, he is making a mistake. Leibniz tried to point it out to him in the *New Essays*. In commenting on a passage in which Locke complains about not knowing what substance is, Leibniz writes:

> 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. (RB, 218)

This passage might be taken by advocates of the Substratum Theory interpretation as showing that Leibniz took Locke to have distinguished ontologically the substratum from all the substance's properties. Jonathan Bennett reads the passage that way, for instance (1987, 202). But that reading is not supported by the text (Pasnau 2011, 169 footnote).[24] Leibniz's point is about an epistemic distinction, and the lesson is not that it is bad to distinguish conceptually between a substance's "common subject' and its "attributes or predicates". Rather, the lesson is simply to be conscious of what we are doing when performing the abstraction: "abstraction is not an error as long as one knows that what one is pretending not to notice, is there" (RB, 57). What we are doing is deliberately isolating the idea of substance itself (which Locke often refers to as a substratum) in such a way that it becomes, in Leibniz's words, "thin" and "sterile" (RB, 218).

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[23] I do not think that Locke would have to accept all that Descartes says about the tight relationship between a substance and its modes understood to be merely ways the principle attribute could exist. Nevertheless, Locke did not divide the substance from its essence in which the substance's qualities and powers are grounded and from which they might be deduced *a priori*.

[24] Ayers also denies that "Leibniz really took Locke explicitly to hold the strange theory that beneath *essence* there lies a further and unknowable unknown called substance" (1994, 65 footnote).

To this Leibniz adds that "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 that understands and wills, which imagines and reasons – is to demand the impossible" (ibid). In saying this, Leibniz criticizes Locke for expecting too much from the "thin" notion of a pure subject in general. Locke expects it to be able to shed light on the qualitative nature of the substance; but, as Leibniz points out, that goes against the process of abstraction by which the subject or substance was separated in thought from all its qualities. As Descartes firmly stated, if we want to know about a substance's nature, we must look to its attributes. To criticize the idea of substance for being of no help is to miss the role it is playing in the representation of the substance.

Kant echoes the Leibnizian line of criticism in his *Prolegomena to Any Future Metaphysics*: "It has long been observed that in all substances the true subject – namely that which remains after all accidents (as predicates) have been removed – and hence the *substantial* itself, is unknown to us; and various complaints have been made about these limits to our insight." (Ak 4:334/ AH:125) It is likely that Kant had Locke specifically in mind. Kant goes on to correct this misunderstanding:

> But it needs to be said that human understanding is not to be blamed because it does not know the substantial in things, i.e., cannot determine it by itself, but rather because it wants to cognize determinately, like an object that is given, what is only an idea. Pure reason demands that for each predicate of a thing we should seek its appropriate subject, but that for this subject, which is in turn necessarily only a predicate, we should seek its subject again, and so forth to infinity (or as far as we get). But from this it follows that we should take nothing that we can attain for a final subject, and that the substantial itself could never be thought by our ever-so-deeply penetrating understanding, even if the whole of nature were laid bare before it; for the specific nature of our understanding consists in thinking everything discursively, i.e., through concepts, hence through mere predicates, among which the absolute subject must therefore always be absent. (ibid)

In short, the idea of substance is “only an idea”. Locke blamed our faculties and limited sense perception for not furnishing us with “a positive clear distinct one of Substance it self” (E 4.3.23; 554). But, as Descartes, Leibniz and Kant all point out, that blame is unfounded. If any faculty is to blame for this, it is the intellect for first abstracting the concept of the substratum away from all the details through which we are able to conceive of it, and then for demanding to know what the substance is beyond a common subject for the abstracted predicates. There can be no better or clearer idea of substance qua pure subject to be had. Not by angels with higher faculties or by anyone else.

V. THE SOURCE OF LOCKE'S CONFUSION

A. Evaluating the Leibniz-Kant Diagnosis

The thesis defended in previous chapter is that for Locke the idea of substance is involved in the mental representation of objects as particulars that have several qualities. Without the idea of substance, objects would be represented merely by a collection of qualities. The idea of substance adds the thought that these qualities are related to a single thing of which they are qualities. This permits the thought that the object represented is ontologically more than the qualities represented in the complex idea such that they depend on the existence of the object for their existence and (not necessarily) *vice versa*. To consider the idea of substance directly, the simple ideas representing the qualities of the object have to be abstracted away and not considered. When this abstraction is preformed, the remaining thought is merely of a generic subject, an unqualified *thing*. Descartes, Leibniz, and Kant all realize that the idea of substance is a logical or formal concept. The only information contained in the idea of substance concerns the ontological support it provides to the qualities that describe the represented object. Locke complains that the idea of substance is missing detail that it ought to possess, but this complaint is unwarranted. The question I want to consider next is whether this line of criticism is right. Could Locke really have been making the mistake Leibniz and Kant described? My goal in this chapter is to establish that it is indeed the cause and best explanation of Locke's complaint about not knowing what substance is.

To make my case as strongly as possible, I need to confront a line of thought that might appear to refute the Leibniz-Kant critique, a line of thought that has its origin in the reception of Descartes' discussion of the piece of wax in the Second Meditation. Before going any farther, it is necessary to distinguish how Descartes' contemporaries read the wax passage from how its

author intended the passage as a meditative exercise on the path to achieving clear and distinct perceptions and secure knowledge. Hobbes, for instance, took the passage to show that "the subject of any act can be understood only in terms of something corporeal or in terms of matter" (AT VII: 173/ CSM II: 122). Descartes replied, "All that I proved with the example of the wax was that colour, hardness and shape do not belong to the formal concept of the wax itself" (AT VII: 175/ CSM II: 124). He adds that "I was not dealing in that passage with the formal concept of the mind or even with that of the body" (ibid). Strictly speaking, this positive knowledge of the essence of mind and body will not be attainable until the meditator recognizes God's existence and what this means about clear and distinct perceptions of the intellect. Nevertheless, there are "hints" contained in the wax passage, the significance of which will not be appreciated until the later Meditations. The wax passage offers preliminary practice at (among other things) conceiving of the modes of body through the attribute of extension, and at distinguishing the intellect from the imagination.

To better appreciate these features of the wax passage, it will be helpful to locate it in the context of the discussion in the Second Meditation. It occurs on the heels of the meditator's discovery that "*I am, I exist*" cannot be directly doubted (AT VII: 25/ CSM II: 17). This realization prompts the meditator to ask: *what am I*? All he knows for sure is that he is a thinking thing, i.e. the subject to various conscious mental acts. Initially, the meditator does not find this overly insightful. He writes,

> From all this I am beginning to have a rather better time understanding of what I am. But it still appears – and I cannot stop thinking this – that the corporeal things of which images are formed in my thought, and which the senses investigate, are

> known with much more distinctness than this puzzling 'I' which cannot be pictured in the imagination. (AT VII: 29/ CSM II: 20)[25]

The meditator finds this especially puzzling since the very existence of what he appears to perceive most clearly of all (material things) is doubtful. He decides to indulge his curiosity and to reflect on what exactly it is that he perceives clearly about material things.

The meditator chooses an object close at hand, a piece of wax, and describes it in vivid detail. It has only recently been removed from the comb and you can still taste the honey on it. It smells of the flowers from which the nectar was taken. Its color, shape, and size are clearly visible. It is cold and firm to the touch. When you tap with your knuckle, the wax makes a distinctive sound. "In short, it has everything which appears necessary to enable a body to be known as distinctly as possible" (AT VII: 30/ CSM II: 20). *But wait!*, the meditator cries out as the wax is brought near to the fire. All the properties just mentioned slowly peter out of existence and new ones take their place. However, the same wax remains: "It must be admitted that it does; no one denies it, no one thinks otherwise" (ibid). The mediator concludes that the wax is perceived by the "mind alone" (AT VII: 31/ CSM II: 21), and this perception can be confused as it was initially when the wax was first examined; or it can be clear and distinct as it is when the wax is viewed as a body whose appearance can fluctuate over time. Such a clear and distinct perception involves "distinguishing the wax from its outward forms" (AT VII: 32/ CSM II: 22). The meditator describes this metaphorically as a stripping off of the wax's garments so as to consider it "naked" (ibid).

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[25] Broackes (2006) hypothesizes that Descartes' phrase "*istud nescio quid mei*", which CSM translate as "this puzzling 'I'", is the the source of Locke's decision to refer to substance as an "I know not what" (E 2.23.15) (60). A more literal translation of the Latin would be "that I know not what of mine" (Broackes, 158), or "that part of me, I know not what" (Heffernan, 102). If Broackes is right, then it follows that substance is unknown in the sense that it cannot be pictured in the imagination. Discovering this was instrumental in the development of my interpretation of Locke's claims about substance.

The clothing metaphor is of particular interest. Descartes' point is that a substance, like the piece of wax, can appear differently to our senses over time, just as same person can put on new outfits. Yet these "outward forms" are not accurate reflections of the wax's essence. Most of the wax's properties as first described by the meditator are not truly modifications of the wax at all but are confused perceptions caused by the mind's union with the body.[26] In contrast to sensible qualities like color and sound, modes like shape that can be clearly and distinctly perceived are real modifications of the wax, whose nature is extension. But even the particular shape of the wax at a given time is not essential to it: as seen when the wax was brought to the fire, the wax can change shape while remaining the same substance. Not all of these points are fully developed in the wax passage itself. Technically, no positive claim is made about the essence of the wax in the Second Meditation. What is established is only that the mind has a purely intelligible representation of the wax when it is perceived by the mind alone. We further notice that this perception is clear and distinct, unlike the representation afforded to us via the senses. This rational perception will turn out to involve a purely intelligible and innate idea of extended substance. Knowledge that the essence of any body is its quantity of extension, however, requires more than a perception of it by the mind alone. We must also know that clear and distinct perceptions of the intellect are trustworthy.

The point of stripping the wax of its outer garments is a step on a path to more clearly perceiving what its nature is. After removing those modes that do not essentially belong to the wax, all that remains is the perception of "merely something extended, flexible, and changeable"

[26] Sensible qualities like color, taste, and smell are only useful but fallible indicators of underlying mechanical structures to help us navigate safely through the world: "For the proper purpose of the sensory perceptions given to me by nature is simply to inform the mind of what is beneficial or harmful for the composite of which the mind is a part…" (AT VII: 83/ CSM II: 57).

(AT VII: 31/ CSM II: 20). Descartes explains that this perception is made by the mind alone. The senses and the faculty of imagination play no part in this clear and distinct representation of the wax, although the senses do alert us to the wax's existence. For it was only in virtue of the wax's color, smell, shape and other sensible modes that we could initially infer that some substance was necessarily present.

We are now ready to consider a charitable response on Locke's behalf to the Leibniz-Kant criticism. Suppose that Locke agrees with Descartes that sensible qualities (all apparent-properties represented to the mind via simple ideas) are all non-essential properties of the substance to which they belong.[27] But since Locke held that we know substances *only* by their sensible qualities, it follows that when we strip a substance of its outer garments for the sake of revealing its essence we find that indeed nothing remains of our qualitative knowledge of it. For Descartes, what remains after the accidents were stripped away is a representation of the substance's nature that is based on an innate idea. But when Locke subtracts all the sensible qualities from the complex idea by which it is represented to the mind, the only thing left is the idea of a substance or subject but no information as to its nature or essence.

According then to this line of thought I am considering, Locke's complaint about the idea of substance is really a complaint about what he might naturally have taken to have been the Cartesian method for identifying a substance's essence or principle attribute. Ayers defends this positive spin on Locke's mostly critical remarks about the nugatory idea of substance in general (1996 2, 51-64). According to Ayers, the stripping-off-garments-procedure doesn't work from Locke's perspective because the only knowledge we have about substances comes from our

[27] This supposition is consistent with denying with Descartes that colors, sounds, tastes, and smells are not real qualities of material objects, and so in a sense are not properties of them at all.

observation of them. Due to this fact, when we strip a substance of its metaphorical garments, we don't perceive the substance "naked" as Descartes had claimed (AT VII: 32/ CSM II: 22). All we perceive is the fact that we have destroyed our entire knowledge of what the substance is. We discover that, despite what we may have thought we knew about the essence of the substance, we have remaining only the logical notion of a common subject and this does not tell us anything interesting about what wax, or gold, or any other substance is. In trying to identify the real essence by stripping away mere accidents, Locke is supposedly showing that our knowledge of a substance is exhausted by its non-essential qualities. Leibniz and Kant are therefore missing Locke's point if they think he abstracted the concept of a substance from all its properties. What Locke did, according to this line of interpretation, was abstract the concept of a substance from its accidents just as Descartes had in order to show that, against what Descartes had argued, our knowledge of substances is in fact exhausted by those sensible qualities. Ayers refers to Locke's argument-so-understood as an "ingenious way of advancing his kind of scepticism about essences" (1994, 70).

Perhaps this what Locke *should* have said, but Locke's writings do not sustain this reading. J. L. Mackie was one of the first cast this sort of interpretation into doubt (1976, 81-82). Locke does indeed argue against the proposal that we know the real essence of any substance by rational insight, but he makes that case independently from his criticisms of the confused idea of substance in general (Bennett 1987, 204). Furthermore, Locke is simply wrong to think the idea of substance itself could ever become more clearly or distinctly perceived. For even if we did know the internal constitution of substances, and all of nature was revealed to us, this would have no effect on the clarity or distinctness of the idea of substance in general, which would still be needed to represent substances as unified things with such and such properties.

One way to frame my objection is that if Locke's intention was to debunk what he took to be the Cartesian method for uncovering a substance's essence, then he criticized the wrong thing. According to Descartes, once the wax's accidents are taken away, all that remains is the perception of an extended, flexible, mutable *thing*. According to Locke, all that remains is the perception of an *unknown* thing. The emphasis in his attack should be on the absence of any further qualities that could describe the wax's essence, not on the concept of *thing*, which is present in Descartes' analysis as well (cf. AT VII: 30/ CSM II: 20). Locke *should* have explained that the substance of the wax (or whatever) is unknown *because* we don't have epistemic access to its internal constitution. Specifically, Locke *should* deny that in representing the wax as an extended, flexible, mutable *thing*, the mind is no less relying on ideas acquired in experience than it did when imaging the wax in pictorial form. These points about what Locke *might* have said explains why the Real Essence reading has appealed so strongly to sympathetic interpreters. Nicholas Jolley notes that it is historically more satisfying since it interprets Locke's discussion of substance "against the backdrop of Royal Society science" (1999, 84).

Setting aside what he *should* have said, what Locke does instead is complain that the idea of substance is uninformative. This shows he was guilty of the mistake Leibniz and Kant attributed to him, even if the motivation that brought him to the point of making it was otherwise philosophically respectable and part of an empiricist critique of "Cartesian dogmatism" (Ayers 1990 2, 53). Nothing Locke says about unknown substrata or the confused idea of substance weakens the logic of that broader argument; but, for the reasons explained above, such comments distract from the main point.

B. A Case Study of Gassendi

Because my interpretation attributes the Leibniz-Kant error to Locke, I am sensitive to the fact that some people may be reluctant to accept it. However, I believe it fits the text better than other interpretations that have been proposed in the secondary literature. To assuage any lingering concerns, in the remaining pages I shall explain why Locke was prone to make to make the kind of mistake I content he made with the idea of substance. I will show that Locke's confusion over the purely intelligible idea of substance is symptomatic of a more general tendency to blur the line between the intellect and the senses. My interpretive hypothesis draws support and motivation from the writings of Gassendi. Locke would have been familiar with Gassendi's published objections to Descartes' *Meditations*, and he took notes from his personal collection of Gassendi's *Opera Omnia* (1658) in six volumes (Milton 2018, 20). In addition, Locke was on friendly terms with François Bernier, the leading Gassendist in Locke's day, and likely discussed Gassendi's philosophy with him (Aaron 1955, 33). The aim of this section is to highlight the philosophical grounds that lead Gassendi to make similar claims about the unknowability of substance.

It is perhaps ironic that Gassendi should provide evidence for my hypothesis because Michael Ayers has long cited Gassendi to bolster his Real Essence interpretation. Ayers maintains that "The key to understanding Locke's general theory of substance is to realize that it is nothing other than a restatement and elaboration of the sceptical position adopted by Gassendi in his objections to Descartes's *Meditations*" (1996 2, 31). As I have explained before, according to Ayers Locke's complaints about the confused idea of substance have "nothing to do with the notion of a pure logical subject capable of being stripped in thought of every last property" (1996 2, 29). Instead, they reaffirm Gassendi's skeptical point that Descartes has mistaken an

observable quality for an essence. Gassendi compares our knowledge of substance to the knowledge we have of a masked man in costume. Our idea of such a man himself is "very imperfect and utterly confused" – if we even have a genuine idea at all (AT VII: 285/ CSM II: 199) Because substance lies beneath the properties it supports (like the man beneath his costume), it too is unseen and we lack a true representation of it: "our conception of…the substance of the wax or other things…is merely a confused perception of something unknown" (AT VII: 275/ CSM II: 192). Gassendi concedes that

> we conceive that there is something which is the subject of the accidents and changes we observe; but what the subject is, or what its nature is, we do not know. This always eludes us; and it is only a kind of conjecture that leads us to think that there must be something underneath the accidents. (AT VII: 271/ CSM II 189)

All we can muster is to say that substance is a "mysterious something" underneath the properties inhering in it, but we cannot form the slightest mental picture of it: "the alleged naked, or rather hidden, substance is something that we can neither ourselves conceive nor explain to others" (AT VII: 273/ CSM II: 190-191).

This anti-Cartesian theme seems to resonate in a number of Locke's substance texts, such as this one: "By the complex *Idea* of extended, figured, coloured, and all other sensible Qualities, which is all that we know of it, we are as far from the *Idea* of the Substance of Body, as if we knew nothing at all" (E 2.23.16; 306). Gassendi's call for Descartes to "investigate and somehow explain [the mind's] internal substance" (AT VII: 276/ CSM II: 193) (just as one might propose a chemical explanation of the sensible qualities of wine) does at first glance – lend itself favorably to Ayers' view. But I contend that Gassendi's image-based theory of knowledge is the deeper cause of his disagreement with Descartes over the particular issue of having a distinct or a confused idea of substance. I further claim that this is true of Locke as well. Locke's complaints

about the confused idea of substance stem from his tendency to conflate the intellect and the imagination. They have nothing immediately to do with Locke's view that we don't know the inner constitution of substances, as Ayers would have us believe. As in the previous section, I do not deny that Locke and Gassendi's writings contain an argument against Descartes' dogmatic claim that we can know the nature of substances *a priori*; however, this argument could be made independently of their claims that substance is utterly unknown and is represented to the mind by a confused idea.

The source of this additional complaint about substance stems from certain epistemic premises. As Saul Fisher explains, "Gassendi…rejects the Cartesian criterion of clarity and distinctness, as either a standard for judging ideas or source of epistemic warrant" (2014). To Gassendi's mind, sensory information is more reliable than rational inference since it is more immediate and impervious to user-error. Moreover, Gassendi thinks that sensory ideas are more likely, than those demonstrated by reason alone, to be clear and distinct. Ideas such as substance that are arrived at through the use of reason tend to be

> partial and confused…because they lack the immediacy characteristic of judgments we attain by strictly empirical means. Whereas ideas we gain from the senses directly represent worldly objects and events, ideas we attain by deductive proof are but hypothetical analogues to such sensory-derived ideas. (Fisher 2014)

In other words, only sensory ideas distinctly represent reality because only they are images and only images distinctly represent the world. Gassendi explains that

> it is not the same thing for us to conceive something by a veritable idea or a true image, and to conceive that thing by a conclusion that follows necessarily from an anterior hypothesis. In the first case in effect we conceive of the thing as absolutely so; in the second, that it should be some such thing; and also in the first case we know the thing distinctly and as it is in itself, and in the second case we know it only in a confused manner and by analogy, that is, in referring to it as something that must be known by way of some idea (quoted in Fisher 2014).

Gassendi is therefore in agreement with Hobbes who also argued that "There is a great difference between imagining, that is, having an idea, and conceiving in the mind, that is, using a process of reasoning to infer that something is, or exists" (AT VII: 178/ CSM II: 125). Hobbes reasoned that precisely because "a substance is not perceived by the senses but is inferred by reasoning" (ibid), "it is not something that is conceived, or that presents any idea to us" (ibid, 185).

Descartes agrees that there is an important difference between perceiving something with the mind and having a sensory image of it (AT VII: 72-73/ CSM II: 50-51). In fact, this is something he intended his wax example to bring out: "I know that even bodies are not strictly perceived by the senses or the faculty of imagination but by the intellect alone, and that this perception derives not from their being touched or seen but from their being understood" (AT VII: 34/ CSM II: 22). But he consistently maintains against Hobbes and Gassendi that not all ideas are sensory images.[28] Thus, there is nothing at all confused in our conception of substance as the "thing in which whatever we perceive…exists, either formally or eminently" (AT VII: 161/ CSM II: 114). Gassendi's complaint that substance is "this mysterious something that exists over and above all the forms" (AT VII: 273/ CSM II: 190) is unwarranted because (a) there is nothing more to the notion of substance than that it is the subject of certain properties and acts, and (b) this definition is distinctly understood by the intellect. But Gassendi, much like Locke, falls into the trap of equating ideas of the understanding with images produced by the corporeal imagination. Like Locke, this causes him to claim that we do have "a distinct and genuine idea of accidents, but that our idea of the unseen substance beneath them is confused and utterly fictitious" (AT VII: 285-286/ CSM II: 199). Compare this to Locke's first mention of substance in the *Essay*:

[28] Cf. AT VII: 185/ CSM II: 130 and AT VII: 364/ CSM II: 251 among many other instances.

> We have no such *clear Idea* [of substance] at all, and therefore signify nothing by the word *Substance*, but only an uncertain supposition of we know not what; (*i.e.* of something whereof we have no particular distinct positive) *Idea*, which we take to be the *substratum*, or support, of those *Ideas* we do know. (E 1.4.18; 95)

Descartes' reply to Gassendi states that he wants nothing to do with philosophers "who are prepared to use only their imagination and not their intellect" (AT VII: 364/ CSM II: 251). He observes that, like Hobbes, Gassendi is "restricting the term 'idea' to images displayed in the corporeal imagination; but this goes against my explicit assumption" (ibid). This again highlights the central issue operative in their disagreement over the idea of substance and whether it is confused and problematic (e.g. Gassendi) or distinct and indispensable (e.g. Descartes).

In my view, Ayers conflates this issue—concerning what Gassendi calls the confused idea of substance—with the related but in-principle-separate debate over the mind's essence. The two topics are present together in Gassendi's lengthy objections, but they are nevertheless importantly different. It is difficult to distinguish them in the *Replies*, in part, because Gassendi misunderstands (or at least fails to appreciate) Descartes' argument in the Second Meditation. As mentioned previously, the point of the Second Meditation is to begin to distinguish the intellect from the imagination and to show that clear and distinct cognition perceived by the intellect is not directly doubtable, unlike sensations or imaginations, which may be entirely illusory (courtesy of an evil demon or a hyper-realistic dream). In particular, the wax example shows that what we often take to be evident sensory knowledge secretly involves an idea of the intellect that can be clearly and distinctly understood but not imagined. It is on the basis of such (innate) ideas that the mind makes certain judgements, acts of which are characteristic of a human mind (AT VII: 32/ CSM II: 22).[29] In the example of the ball of wax, our perception involves the judgement

[29] For more on the role of innate ideas in forming judgements in Descartes, see De Rosa "Locke's Critique of Innatism*," Blackwell Companion* (2016).

of "something extended, flexible and changeable" (AT VII: 31/ CSM II: 20) – the wax itself – that persists despite changes in those qualities apprehended by the senses.

From the perspective of Gassendi who thinks all ideas are sensory, we necessarily have no conception (i.e. no mental picture) of the naked wax stripped of its external forms. Similarly, and for the same reason, we have no (sensory) idea of the mind that thinks such and such particular thoughts. But this "objection" is simply the conclusion Descartes happily draws at the end of the day's meditation:

> I know now that even bodies are not strictly perceived by the senses or the faculty of imagination but by the intellect alone, and that this perception derives not from their being touched or seen but from their being understood; and in view of this I know plainly that I can achieve an easier and more evident perception of my own mind than of anything else (AT VII: 34/ CSM II: 23)

Although at first it seems that bodies are "are known which more distinctness than this puzzling 'I' which cannot be pictured in the imagination" (AT VII: 29/ CSM II: 20), this turns out to not to be the case: "[that] which I thought I was seeing with my eyes is in fact grasped solely by the faculty of judgement which is in my mind" (AT VII: 32/ CSM II: 21). This suffices to show, not only that the mind's existence is more certain than material things (the judgements concerning the existence of which might turn out to be false), but also that an investigation (even a poorly conducted one via the imagination alone) into the nature of material things counterintuitively serves to reveal, at the same time, the nature of our mind: "every consideration whatsoever which contributes to my perception of the wax, or of any other body, cannot but establish even more effectively the nature of my own mind" (AT VII: 33/ CSM II: 22). The reason for this counterintuitive result is offered right before the wax argument begins. Doubting, understanding, and wishing are actions that manifestly belong to the mind itself, but (when properly considered) so too does "the power of imagining" and "hav[ing] sensory perceptions" – even if it turns out

that none of my images of bodies are true and I am not actually perceiving them by the senses because I am asleep (AT VII: 29/ CSM II: 19). Although they refer to corporeal things, imaginations and sensations are simply modes of thought. These reflections prime the idea that thought itself constitutes the mind's nature since "this alone is inseparable from me" (AT VII: 27/ CSM II: 18). The wax argument and its moral that *substances are distinctly perceived through the intellect* serve to demystify that part of the mind – the substance – we are unable to imagine.

Gassendi finds several problems with Descartes' argument. However, it is difficult to disambiguate these counterpoints from one another in the original *Objections* (which might explain Ayers reading), but Gassendi helpfully lists them in his 1644 *Rebuttals Against Descartes* (1972, 153-278). In fact, he entirely separates his points about Descartes' alleged distinct conception of substance from the question about the mind's essence. The former points are contained in "Doubt Seven", whereas the latter is the subject of "Doubt Eight". In "Doubt Seven" Gassendi takes exception to the central claim that "the substance of the mind is perceived clearly and distinctly… by the understanding alone" (SW, 196). He objects on the grounds that the mind's substance, stripped of attributes, cannot be "disclosed or revealed to us" (SW, 197) – "that bare substance…will always retain its hidden quality; for lying under the accidents there is always something indescribable subject to change" (SW, 198). The reason he thinks this is because he holds that sensory knowledge alone is clear and distinct. Reason "leads us to think that there must be something underneath the accidents" (AT VII: 271/ CSM II: 189) – just as we infer that there is a real man hidden beneath some hat and clothes (SW, 197) – but that is hardly a clear and distinct representation of some particular individual!

On the other hand, in "Doubt Eight" Gassendi raises a sceptical doubt about knowing the mind's essence or "inner qualities" or "what it is really like in itself" (SW, 199). Due to the "weakness of the human mind":

> All we can know is this or that property of such a substance or nature if it is open to observation and becomes familiar by experience…just as when we look at gushing water, we know that this water comes from a certain source, but we do not therefore plunge the forward edge of our gaze into the inner and underground spring. (SW, 199-200)

Because we only know things as they appear to us, Gassendi finds Descartes' characterization of the mind as a thinking thing either immodest or pseudo-explanatory. The claim is immodest (not to mention a complete guess) if it is taken as a claim about the inner nature of the mind, which God "willed it a secret on grounds that it need not be known to us" (SW, 200). But if it is taken as an attempt to explain scientifically what we know of the mind through immediate observation, it achieves as much as "a man who proved after strenuous work on magnets that a magnet is a thing that attracts irons and makes it turn toward the poles" (SW, 200-01). From Gassendi's point of view, Descartes has thus failed to make good on his promise, indicated by the title of the Second Mediation, to reveal the nature of the human mind and show how it is more easily known than the body.

Gassendi's views on the two topics covered in "Doubt Seven" and "Doubt Eight" (an idea of substance itself and knowledge of the mind's essence, respectively) both derive from the foundational tenet of his epistemology: the claim that "The sole originating source of our knowledge is the information the senses provide, such that what we know is closely linked to what we can perceive" (Fisher 2014). As a result, our conception of a substance itself is indirect and confused; and we know things only as they appear to us, but not what they are like in

themselves. If Gassendi had always put it this way, Ayers' interpretation would never have linked the former point with the latter.

But there are passages that pose a challenge to my reading. On occasion, Gassendi appears to suggest that the reason why we cannot form a distinct idea of the mind's substance is because we do not know its inner nature, thus linking the topics together in favorable way for Ayers. For example, Gassendi writes this complaint about the Descartes' Sixth Meditation "real distinction" argument:

> …far from having a clear and distinct idea of yourself you have no idea of yourself at all. This is because although you recognize that you are thinking, you still do not know what kind of thing you, who are thinking are. And since it is only this operation that you are aware of, the most important element is still hidden from you, namely the substance which performs this operation. This leads me to suggest that you may be compared to a blind man who, on feeling heat and being told that it comes from the sun, thinks he has a clear and distinct idea of the sun in that, if anyone should ask him what the sun is, he can reply: 'It is a heating thing.' (AT VII: 338/ CSM II: 234-235)

Gassendi's main point is that thought (like attraction of iron in the example of the magnet) is merely an operation of the mind, but it does not describe its inner essence.[30] I am confident that this is the thrust of the objection because he reiterates it again in "Doubt Six" titled "Once again, it is far from true that a man who sees clearly that the mind thinks therefore sees clearly the entire intimate nature of the mind" (SW, 190) and also in "Doubt Eight" titled "What we know about things is not their inner nature, which God wills to keep hidden from us, for the knowledge that we would have it is not as necessary as the knowledge of accidents" (SW, 199). And "since the attribute or property [of thinking] is one thing and the substance or nature [of the mind] to which it belongs or from which it emanates is another thing", Gassendi reasons that "to know the attribute, or property, or collection of properties is not to know the substance or the nature itself"

[30] Compare to Locke at E 2.1.10 and 4.3.6.

(SW, 199). Note how, in the final clause, Gassendi equates knowledge of the mind's nature with knowledge of its substance. This looks careless, but there is a valid sense in which to know a substance *qualitatively* nothing more is required than to know its essence. However, that is not the only manner of knowing or conceiving of substance. This is because, as Leibniz pointed out, "The word substance is taken in two ways – for the subject itself, and for the essence of the subject" (cited in Bennett 2001, 113).

As a result, there are two distinct thoughts about substance that ought to be kept separate. They are: (1) the idea of a substance as the *thing* that has an *inner nature*; and (2) specific knowledge of what that *inner nature* is. To get clearer on these two points, it is helpful to see where the theoretic disagreements between Descartes and Gassendi lie. Both philosophers accept the following theses:

1. A distinction can be made between a substance and its accidents and modes.
2. All we perceive via the senses are accidents.
3. The substance and its essence are only rationally distinct.[31]

But Descartes also accepts the following claims:

4. Ideas generated through reason can be clear and distinct when understood by the intellect.
5. We can distinctly understand, but not imagine, the bare existence of a substance as the thing that has various essential and non-essential properties.[32]

[31] Gassendi would not express it in these terms, but he held that "there is nothing to substance over and above matter" (LoLordo 2007, 210). Furthermore, Gassendi's atomist theory of substance implies that all the qualities of a substance are reducible by its corpuscular structure. LoLordo explains that this denial of real accidents "leads to the equation of a substance with its nature or essence" (2007, 212).

[32] This mode of cognition corresponds to (1) in the second sentence of this paragraph.

6. The essence of a substance is understood by reason to be the attribute common to all its modes.[33]

Gassendi rejects 5 and 6 because he rejects 4. He is committed to the strong empiricist claim that we only know things as they appear to us through the senses. Reasoning beyond what is immediately present to the senses involves guesswork and conjecture, and it never will lead to a true idea (i.e. a mental image) of the inner nature of any substance. Distinct knowledge of essences is thereby ruled out in principle (LoLordo 2007, 216-17). On the other hand, Descartes rejected the suggestion that all ideas are sensory. He held instead that the clearest and distinct ideas are the merely intelligible concepts perceived by the intellect, not mental pictures at all. One of these clear and distinct ideas concerns the existence of a substance or subject for one or more attributes: "it is certain that thought cannot exist without a thinking thing; and in general no act or accident can exist without a substance for it to belong to" (AT VII: 175-176/ CSM II: 124). In defense of this, Descartes offers "something very well known by the natural light: nothingness possesses no attributes or qualities" (AT VIIIA: 8/ CSM I: 196). Consequently, "wherever we find some attributes or qualities, there is necessarily some thing or substance to be found for them to belong to…" (ibid). The idea of this "thing or substance" is admittedly bare-boned: "The only idea we have of substance itself, in the strict sense, is that it is the thing in which whatever we perceive (or whatever has objective being in one of our ideas) exists, either formally or eminently" (AT VII: 161/ CSM II: 114). This is how any material or spiritual object looks from the view point of its being a substance; i.e. "*sub ratione substantiae*" (AT VII: 175).

As Descartes explains, whenever we think of a mind or a body *as a substance*, "Besides the attribute that specifies the substance, still the substance itself must be conceived, which is

[33] This mode of cognition corresponds to (2) in the second sentence of this paragraph.

spread out under that attribute: so, since the mind is a thinking thing, there is in addition to the thought yet the substance that thinks, and so on" (AT V, 156).[34] The other side of this perspective involves considering the qualitative essence of the substance without dwelling on the fact that it can *exist by itself*: "we sometimes consider thought or extension without reflecting on the very thing which thinks or is extended" (Miller and Miller 1982, 29). We can adopt either perspective precisely because Descartes holds a substance and its essence to be merely rationally distinct. Indeed, as Thomas Lennon has argued, this shifting of perspective on a unitary reality outside of thought is characteristic of Descartes' rationalism (2005, 13).

These two ways of cognizing a single substance closely track Aristotle's notions of matter and essence, whereby the matter functions as the substratum for the substantial form. Aristotle noted in *Metaphysic*s 7.3 that our knowledge of the "matter alone" is skeletal and in an important sense logical:

> By matter I mean that which in itself is neither a particular thing nor of a certain quantity nor assigned to any other of the categories by which being is determined. For there is something of which each of these is predicated, so that its being is different from that of each of the predicates; for the predicates other than substance are predicated of substance, while substance is predicated of matter). Therefore the ultimate substratum is of itself neither a particular thing nor of a particular quantity nor otherwise positively characterized; nor yet negatively, for negations also will belong to it only by accident. (1029a20-28)

To explain how the elements could change into one another, e.g. how the food I ate was once a living thing and later comes to be a part of my body, Aristotle posited (at least) a modal distinction between the ultimate substratum and the substantial form inhering in it. Descartes

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[34] This is my translation from the Latin which reads: ""Praeter attributum quod substantiam specificat, debet adhuc concipi ipsa substantia, quae illi attributo substernitur: ut, cum mens sit res cogitans, est praeter cogitationem adhuc substantia quae cogitate, etc." This passage is not included or translated in CSMK: 340. These words are a summary of what Descartes is supposed to have answered in reply to Burman's inquires. Some scholars question the accuracy of Burman's report, but this passage does not introduce anything new; rather, it is a clear expression of what I go on to call a hylomorphic way of requiring substance.

insists there is only a rational distinction between the substantial thing and its essence, i.e. its principle attribute. Due to this fact, we can zoom in on either the "form" or the "matter" in our thoughts, while the other goes out of focus. Taken together, these two ways of considering a substance constitute the compound thought *thinking substance* or *thinking thing*.

Where Aristotle's hylomorphism is ontological, Descartes' endorses what one might call a hylomorphic way of regarding substance mentally. As Descartes explains, a "complete thing" is "a substance endowed with the forms or attributes which enable me to recognize that it is a substance" (AT VII: 222/ CSM II: 156). This does not mean that my mind (or any other finite substance) is a compound thing in reality, but it has the consequence that my knowledge of it (both as an ontologically independent *thing* and as possessing a *thinking nature*) depends on my being aware of its attributes. So much so that "if we subsequently wanted to strip the substance of the attributes through which we know it, we would be destroying our entire knowledge of it" (ibid). The phrase "our entire knowledge of it" most obviously entails our knowledge of what kind of substance it is, be it corporeal or immaterial. Less obviously, though of no less importance, it also includes our knowledge of the fact that it is a substance, i.e. an existing thing with such and such attributes. Descartes is very clear that "we cannot initially become aware of a substance merely through its being an existing thing, since this alone does not of itself have any effect on us" (AT VIIIA: 25/ CSM I: 210). However, "if we perceive the presence of some attribute, we can infer that there must also be present an existing thing or substance to which it may be referred" (ibid). If we tried to strip the substance of every attribute through which we know it, we would have none through which to conceive of it. Consequently, the only thought we could think about it is that it is a substance – a thing that might serves as a subject to some

attribute. This is analogous to considering the substance qua "matter alone", as opposed to its essence or form.

I have argued that Gassendi's epistemic commitments render him unable to know a substance in either of the two senses described. He held that we cannot form a distinct idea of substance itself *qua* subject because (in his view) rational notions are never distinct ideas (only mental images are). And we cannot possess knowledge of a substance's inner nature because (again form from his perspective) that knowledge cannot be gained by empirical observation alone, and the intellect provides no insight into the essence. When he says that substance is mysterious, concealed, unknown, or imperceptible Gassendi *could* be referring to either way of thinking about substance. Context is needed to settle the question definitely for any given passage. However, when Gassendi describes our cognition of substance as a "confused perception of something unknown," (AT VII: 275/ CSM II: 192) it must be taken as referring to mode of representing "the subject that exists under the quality" (cited in LoLordo 2007, 220). It must be taken this way because for Gassendi the "inner nature" of a substance is not confusedly known but utterly unknown. The same is true of Locke's real essences. The strict idea of substance itself is confused for Gassendi and Locke because, when pictured in the imagination, the notion of *a thing* is as confused as an imagistic idea could be. In the next section, I will make the case that Locke's remarks about the confused idea of substance derive from the same source: trying to form a distinct mental image of a purely intelligible idea.

C. <u>The Confused Idea of Substance in Locke</u>

Few interpretations of Locke on substance attempt to explain why Locke's own theory of confused ideas might cause him to conclude, as frequently as he does, that the idea of substance is one such confused idea (E 2.12.6; 2.13.19; 2.23.3; 3.6.21; W 4, 27, 29, 64, 236, etc.). It is vital

to recognize that ideational confusion is a technical term for Locke that describes ideas in relation to language. In opposition to Descartes and Spinoza, Locke denied that confusion was an intrinsic defect of an idea since "No *Idea*… can be undistinguishable from another, from which it ought to be different, unless you would have it different from it self: for from all other, it is evidently different" (E 2.29.5; 364).[35] Just as no property can be thought essential to anything without associating it with a name (E 3.6.4; 440-441), no idea can be confused until it is associated with a word. Locke's official definition of a confused idea is as follows:

> Now every *Idea* a man has, being visibly what it is, and distinct from all other *Ideas* but it self, that which makes it *confused* is, when it is such, that it may as well be called by another Name, as that which it is expressed by, the difference which keeps the Things (to be ranked under those two different Names) distinct, and makes some of them belong rather to the one, and some of them to the other of those Names, being left out; and so the distinction, which was intended to be kept up by those different Names, is quite lost. (E 2.29.6; 364-365)

Locke erroneously claims that "*confusion always concerns two* Ideas" that are similar to one another, but he really means that confusion often involves at least two names that signify ideas that "most approach one another" (E 2.29.11; 367). This is brought out by Locke's own examples. In section 7 he considers the idea of a beast with spots. There is nothing inherently confused in this one idea, but nonetheless it makes for a confused idea of a leopard since a lynx is also a spotted beast. If "spotted beast" were my idea of a leopard – the idea I signify by the name 'leopard' –, I will be unable to distinguish a leopard from a lynx in the wild. This is problematic insofar as my linguistic community acknowledges leopards and lynx. I may parrot that distinction verbally, but, if my idea of a leopard is "spotted beast", I mean something more general by that term than do speakers (experts mostly) who possess a distinct idea of a leopard.

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[35] Presumably this is the basis for Locke claim in the Epistle to the Reader that "Clear and distinct Ideas *are terms, which, though familiar and frequent in men's mouths, I have reason to think every one who uses, does not perfectly understand*" (E 12).

In section 8, Locke offers the analogy of an abstract painting. Considered in and of itself, the painting is not at all confused since the mind can discern the shapes and shades of color exactly. But if we are told the painting is a portrait of Caesar, it becomes a mightily confused portrait of him since it no more resembles his face than it does a baboon's. Locke then extends the point as follows:

> Just thus it is with our *Ideas*, which are as it were, the Pictures of Things. No one of these mental Draughts, however the parts are put together, can be called confused (for they are plainly discernible as they are,) till it be ranked under some ordinary Name, to which it cannot be discerned to belong, any more than it does to some other Name of an allowed different signification. (E 2.29.8; 366)

This example serves to illustrate the point that ideational confusion typically concerns a single idea (as it were a picture of something) that could not be uniquely matched (by a competent speaker of the language) to the name signifying it. In section 9, Locke describes a different sort of case in which a "mutable *Idea*" (though it really isn't *one* idea) could be said to be confused (E 2.29.9; 366). Locke has in mind a case where somebody uses a term indiscriminately whereby they "change the *Idea*, they make this or that term stand for, almost as often as they use it" (ibid). Even if this counts as a legitimate case of ideational confusion, it doesn't prove that confusion *always* involves two (or more) ideas. The important thing to remember on Locke's account is that confusion never pertains solely to ideas by themselves, but always ideas in relation to language. Thus, what is confused is never A's idea X but A's use of X as an idea of Y in certain circumstances. What has to some appeared as different accounts of ideational confusion (e.g. Mattern 1983, 264), are really just examples spelling out the range of circumstances in which A's use of X as an idea of Y are problematic. In general – and this is what makes it a unified account – ideas are said to be confused when they would not support a listener's ability to make the distinctions intended by the speaker's word given its accepted meaning in the language.

As for those ideas most likely to be confused, Locke identifies those complex ideas that contain many constituent simple ideas ordered or related in an intricate manner (E 2.29.7-8; 365-366). It would be easy to leave some crucial and distinguishing detail out of such a complex idea, thus rendering it capable of representing two or more things that are really different (like in the example of the leopard). Surely, simple ideas of sensation are the ideas least likely to be confused since they consist in a uniform appearance before the mind, but Locke's account explains nicely why a color-blind individual would be said to have confused ideas of red and green. The perception such a person would receive when confronted with a red object is qualitatively the same as the perception they would receive when confronted with a green object.[36] Therefore, the color-blind individual has the same idea for 'red' *and* 'green', just the person who has the idea of spotted beast for 'leopard' *and* 'lynx'.

Why specifically Locke found the idea of substance to be confused is a question that has been discussed at length by Ayers (1996, 2), and recently by Stuart (2013) and Priselac (2017). All three studies focus on *Essay* 2.13.18-20 where Locke accuses unnamed "*European* Philosophers" of using the word substance without a clear and distinct idea of what they are talking about (175). To show that the word 'substance' does not stand for a determined idea, Locke poses a challenge:

I desire those who lay so much stress on the sound of these two Syllables, *Substance,* to consider, whether applying it, as they do, to the infinite incomprehensible GOD, to finite Spirit, and to Body, it be in the same sense; and whether it stands for the same *Idea,* when each of those three so different Beings are called *Substances*" (174)? Either 'substance' means the same thing in all three cases or it doesn't. If it doesn't, then the idea of substance is confused since distinct

[36] In red-green colorblindness one cannot distinguish red and greed objects by their perceived color.

ideas are being expressed by the same word and those distinctions are being missed. A terminological distinction should be made "to prevent in so important a Notion, the Confusion of Errors, that will naturally follow from the promiscuous use of so doubtful a term" (ibid); but a distinction is not made. Locke is skeptical of this possibility anyway. He writes that the term 'substance' is "so far from being suspected to have three distinct [significations], that in ordinary use it has scarce one clear distinct signification" (ibid). On the other hand, if 'substance' is being used consistently in all three cases (the more likely but still improbable reality), then God, spirits, and body "differ not any otherwise than in a bare different modification of that *Substance*; as a Tree and a Pebble, being in the same sense Body, and agreeing in the common nature of Body, differ only in a bare modification of that common matter; which will be a very harsh Doctrine" (ibid).

As mentioned previously, Descartes denied that the term 'substance' applied in the same way to God and created things (AT VIIIA: 24/ CSM I: 210). He argued that God is the only thing that "exists in such a way as to depend on no other thing for its existence" (ibid). For this reason, "'substance' does not apply *univocally*, as they say in the Schools, to God and to other things; that is, there is no distinctly intelligible meaning of the term which is common to God and his creatures" (ibid). In other words, Descartes happily endorses the first horn of Locke's dilemma (which Locke's thinks is improbable). Descartes wants to say, in effect, that there is an additional meaning of the term substance: those things which "need only the ordinary concurrence of God in order to exist" are also called substances (ibid). Descartes thinks this meaning of 'substance' covers both minds and bodies equally well (AT VIIIA: 25/ CSM I: 210). Locke would prefer a new term to be introduced to mark that distinction in meaning, but he questions more fundamentally whether any idea at all is ever signified by the word 'substance'. I do not deny

that this is one way in which Locke saw the idea of substance as confused, but it does not constitute the primary reason.

To find the primary reason, we must confront the fact that Locke appears to give two divergent accounts of how an idea of substance is made by the understanding (Ott 2004, 110). In one account, Locke says that the idea of substance is one of the most general ideas attainable by the mind. We proceed via iterative abstractions from the idea of a particular material substance, to "*Body*, *Substance*, and at last to *Being*, *Thing*, and such universal terms, which stand for any of our *Ideas* whatsoever" (E 3.3.9; 412). But in other passages, Locke says that the idea of substance is obtained by the mind through a seemingly different process. To Stillingfleet, Locke explains that the idea of substance is inferred by the mind because it perceives that accidents or qualities cannot exist without something to inhere in: "we cannot conceive how simple idea of sensible qualities should subsist alone, and therefore we suppose them to exist in, and be supported by, some common subject, which support we denote by the name substance" (W 4, 19). Or, as he expounds upon the same point a few pages later,

> [1] …the ideas of these qualities and actions, or powers, are perceived by the mind to be by themselves inconsistent with existence…i.e. that they cannot exist or subsist of themselves. Hence the mind perceives their necessary connexion with inherence or being supported… [2] But because a relation cannot be founded in 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; [3] and that general indetermined idea of something, is, by abstraction of the mind, derived also from the simple ideas of sensation and reflection; and thus the mind, from the positive, simple ideas got by sensation or reflection, comes to the general relative idea of substance; [4] which, without the positive simple ideas, it would never have. (W 4, 21-22)

Locke can be seen as making four points about the idea of substance. First, it is logically implied by simple ideas of qualities, actions, and powers. Second, although the being of substance is

implied by simple ideas, its nature is not at all revealed. Third, the idea that stands at the substance end of the relation as the support to modes and accidents is the general idea of a thing, which is attainable through abstraction from any idea. And finally, the idea of substance is therefore secondary in order of acquisition (but not logic) to simple ideas of outer and inner sense. Without the latter, no human mind should ever form the relative idea of substance. But as it has been said, the former (substance) is logically entailed by the latter (simple idea).

On this more detailed account, abstraction is also involved since it is responsible for generating the "obscure, indistinct, vague idea of thing of something", which is all the content to our idea of what substance *is* apart from what it *does*, i.e. support accidents. Locke is adamant that all general ideas "are made by abstracting; and therefore could not be understood to mean, that that of substance [i.e. the general idea of substance] was made any other way" (W 4, 16). The idea of substance qua relative idea of support is not made by abstraction; only the idea of the support itself – the general idea of a thing – is arrived at through abstraction.

Locke's account is further complicated by the fact that he often tells the etiology of the idea of substance through a particular case, such as experiencing the sensible qualities of a cherry. On the basis of those accidents, we infer the existence of an unknown substratum, "which… we call Substance" (E 2.23.1; 295). The same thing occurs when we observe a horse or a stone: because we cannot conceive how various collections of sensible qualities "should subsist alone, nor one in another, we suppose them existing in, and supported by some common subject; *which Support we denote by the name Substance*, though it be certain, we have no clear, or distinct *Idea* of that thing we suppose a support" (E 2.23.4; 297). This gives the impression that an idea of substance in general is formed via abstraction from the particular cases. The idea of

substance in general is the idea of a support – a common subject – for any and all qualities whatsoever (cf. E 2.23.2; 295).

Matthew Stuart is right, then, to conclude that Locke gives us what appear to be two different ideas of substance (2013, 211). One is obtained via abstraction from the idea of a body or a spirit, but it contains more content than the idea of a mere a thing, which is an additional step of abstraction beyond it (E 3.3.9; 412). The other idea of substance is one of a substratum to accidents, a relative idea containing that most general idea of all – thing – as one relata (W 4, 21-22). Stuart senses that "there must be a close connection between [the two ideas], since the idea of the ontological category of substance is the general idea of an ontologically independent thing, and the idea of substratum is the idea of that on which ontologically dependent things depend" (2013, 213). Stuart is right, but the "two" ideas are not closely related; they are necessarily linked. The complex ideas of body and spirit, from which the general idea of substance is abstracted, already contain the relative idea of a substratum. The abstraction in forming the general idea of substance operates at the level of leaving out whether the substratum supports simple ideas of sensation (in the case of body) or reflection (in the case of mind) (cf. E 2.32.5; 297-298).

The 19th century British Idealist T. H. Green thought this pointed to a problematic circularity – a self-contradictory see-sawing – in Locke's thinking (1968, 30). For the idea of substance is, on the one hand, obtained by abstracting from an idea of a particular substance (E 3.3.9; 412), and on the other hand it is contained "always the first and chief" as an element inside of the idea abstracted from (E 2.12.6; 165). But the circularity is only an illusion at the level of description. Nothing in Locke's account of the etiology of either idea of substance presupposes something that it should not. Locke's point in the *Essay* that the idea of substance can be reached

by abstracting it from complex ideas of any kind of substance is a trivial consequence of the fact that such complex ideas were originally assembled by the understanding. What might at first blush seem like an alternative account of the genesis of the idea of substance is in fact nothing more than an application of the truism that complex ideas can be deconstructed by the understanding into their simple ideas out of which they were made.

The discussion in this section about the processes by which the mind can arrive at an idea of substance serves to highlight the complexity of the complex idea of substance in general. To review, it contains the idea of a nondescript *thing* that stands in a relation of support or subject to the various properties inhering in it. According to Matthew Priselac, Locke found this complex idea to be confused because philosophers often mistake the whole complex idea for an idea of the substratum, which is contained in that complex idea and itself represented to the mind merely by the idea of an unspecified thing or being (2017, 66). In this way, the "*European* Philosophers" (175) Locke's mentions in *Essay* 2.13.18-20 construct pseudo-explanations of the existence of accidents since the complex idea of substance already contains the content that accidents are supported by substance. According to Priselac, this linguistic use renders substance a confused idea on Locke's account because it is an example (like the leopard/lynx case) where people assume they are signifying two different ideas by using different words, but they are in fact signifying the same idea by two phrases (2017, 79 footnote). Perhaps some philosophers who attempt such explanations are mistaken, but Locke gives no indication that the idea of substance is confused for only some people. Furthermore, Locke himself uses separate terms to talk about substance in general, the substratum itself, and internal constitutions/ essences. On Priselac's account, then, the idea of substance would not be confused for Locke or others who followed him in making those linguistic distinctions.

I have more sympathy for Matthew Stuart's observation that both substance ideas – the idea of "the category of substance" and the idea of "supporter of qualities" – are sometimes signified by the same term (2013, 243). This points to further ambiguity in the word substance and renders the "mutable *Idea*" (E 366) of it confused on the grounds outlined in *Essay* 2.29.9 discussed above. Locke is guilty of this ambiguity whenever he complains that we don't know what substance is or that we have no idea of it. Bennett (1987) and Newman (2000) have noted that such denials are inconsistent with what he says elsewhere about the existence of an idea of substance in general. While Bennett implausibly sees this inconsistency as an indication of Locke's frustration, Newman reasonably suggests that Locke only meant to deny that we possess a clear and distinct idea of substance. Newman's solution is preferable to Bennett's, but it misses Stuart's insight into the existence of separate substance ideas. In my view, Locke's claims about not knowing what substance is, and about having no positive idea of it, are directed specifically at substance itself *qua* supporter of qualities. This unknown substratum is represented in the complex idea of substance in general by the abstract idea of thing or being. But as Locke observes the idea of a thing is overly generic, and for this reason he complains that we do not have a "distinct conception" of the substratum itself (W 4, 27). For what is not, in some sense or another, a thing? As Locke puts the point to Stillingfleet:

> …strip this supposed general idea of a man or gold of all its modes and properties, and then tell me whether your lordship has as clear and distinct an idea of what remains, as you have of the figure of the one, or the yellow colour of the other. I must confess the remaining something, to me affords so vague, confused and obscure an idea, that I cannot say I have any distinct conception of it; for barely by being something, it is not in my mind clearly distinguished from the figure or voice of a man, or the colour or taste of a cherry, for they are something too." (W 4, 27-8)

Thus, our idea of substance itself as a mere "being" is as confused as any idea could be. Gassendi makes an identical complaint against Descartes' conclusion that the mind is a thinking thing:

> But to say first of all that you are a 'thing' is not to give any information. This is a general, imprecise and vague word which applies no more to you than it does to anything in the entire world that is not simply a nothing. You are a 'thing'; that is, you are not nothing, or, what comes to the same thing, you are something. But a stone is something and not nothing, and so if a fly, and so is everything else. (AT VII: 276/ CSM II: 192)

Both Gassendi and Locke are right that the idea of thing is one of the most abstract ideas the mind can form, and it certainly does not single out only those things that are substances (even though Gassendi's examples of a stone and a fly are substances), nor does it convey information about the nature of substance. However, there is more to the notion of substance than the concept of a mere thing. As Locke recognized, the notion of substance includes the further information that the substance – represented itself to our mind by only abstract idea of *thing* – supports and unites attributes in a single subject and also enjoys a degree of ontological independence from both its non-essential features and from other substances. None of this additional information contained in the complex idea of substance is representable to the mind in picture form, but it is vital content to the notion of substance just the same as part of its definition.

As I will explain in the next section, Locke tends to equate ideas with sensory images. This tendency causes him to conclude that concepts without a distinct image corresponding to them are confused ideas, and it affects what Locke says about the confused idea of substance in several ways. Locke finds the idea of a thing to be confused because it is not associated with a constant mental image. However, in making the point to Stillingfleet (above) Locke shows in practice that there is no uncertainty about what the concept means. Secondly, Locke's close association of ideas with sensory images causes him to fixate disproportionately on one part of the definition of substance at the expense of the rest. [37] Locke focuses on the substratum itself,

[37] Since words get their meaning by signifying ideas, the definition is just the complex idea of substance in general.

which is represented specifically to the mind via the "confused" idea of a thing. The other parts of the definition receive significantly less attention from him. On one rare occasion, Locke writes about the support given to accidents by substance: "of *Substance*, we have no *idea* what it is, but only a confused obscure one of what it does" (E 2.13.19; 175). When he says we have no idea of substance itself, he means we have no specific idea of what it is, other than that it is something. Locke acknowledges that in some sense a substance supports its attributes, but Locke finds this relation obscure. He never discusses an idea corresponding to the ontological independence of substance, although he includes it in the definition of what 'substance' means.

These facts are all explained by Locke's tendency to treat ideas as images. The idea of a thing is the only part of the definition of substance that could be represented as a highly out of focus image. (Imagine a hazy blob.) The other aspects of the definition are intelligible only. The relation of support given to accidents by substance might be imagined metaphorically as a physical support as the ground is for a pillar (cf. E 2.13.20; 175). However, the true type of support is metaphysical (without substance no accident would exist) and logical (multiple attributes describe a single thing), and consequently cannot be imagined. The ontological independence of substance from accidents and from other substances is not at all imaginable even metaphorically. For this reason, Locke was not tempted to mistake this part of the definition of substance for a confused image, like he did on one occasion for the support aspect (cf. E 2.13.19; 175) and frequently did for the idea of a thing.

Locke's complaints about the confused idea of substance are directed at the confused idea of thing, which is only a part of the complex idea.[38] When confronted by Stillingfleet with the claim that "the general idea of substance…is as clear and distinct a conception in our minds, as we can have from any such simple ideas as are conveyed by our senses," Locke responds:

> Here I must crave leave to dissent from your lordship. Your lordship says in the former part of this page, "that substance and essence do imply that which makes the real being." Now what, I beseech your lordship, do these words, that which, here signify more than something? And the idea expressed by something, I am apt to think, your lordship will not say is as clear and distinct a conception or idea in the mind, as the idea of the red colour of a cherry, or the bitter taste of wormwood, or the figure of a circle brought into the mind by your senses. (W 4, 27)

This important passage confirms the true source of Locke's complaint about the confusion concerning the idea of substance. My account of why Locke finds the idea of substance to be confused thus locates the source at a more fundamental level than does the readings of Ayers (1996), Stuart (2013), and Priselac (2017). Locke's tendency to treat definitions (i.e. ideas proper to the intellect) as mental pictures induces him to find confusion in the relative idea of substance – just as it does the idea of a chiliagon, and many other ideas that cannot be distinctly imagined. In the next section, I will highlight these other instances where Locke unfairly criticizes an idea for being confused because it cannot be distinctly represented as an image in the mind. It will thus be shown that Locke's criticism of the idea of substance as "confused" and "loose" reflects a pervasive tendency not to recognize the purely intelligible nature of certain ideas.

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[38] I therefore disagree completely with Priselac who writes, "The idea of substance-support is not likely to be an idea that is confused or distinct because as a component in ideas of particular and kinds of substances it is not itself named" (2017, 67). As I explained above, Stuart correctly points about that Locke often ambiguously refers to this idea simply as substance or substance itself.

D. Ideas Versus Images: The Source of Locke's Confusion

Locke's finding the idea of substance in general to be confused can be traced back to his tendency to mistake ideas in understanding for images of sense produced by the faculty of imagination. The error is mostly glaringly on display is his discussion of a thousand-sided figure, obscurely called a chiliagon or a chiliaedron. Ostensibly, Locke's main point is that a complex idea might be distinct in one part and confused in another. To illustrate this point, he offers the idea of a chiliagon. He asserts that our idea of the number of its sides (i.e. 1,000) is evidently distinct from that of 999, but he claims that our idea of the chiliagon's shape is confused since we have "no precise idea of its figure, so as to distinguish it by that, from one that has but 999 sides" (E 2.29.13; 368-369). In saying this, Locke treats the numerical idea of a thousand as a concept grasped by the intellect. He does not mistake our idea of it for the mental image of a thousand strokes or a thousand pebbles. Yet this is exactly what he does to the idea of shape. Locke is of course right that we cannot distinctly imagine the shape of a chiliagon, but neither can we imagine precisely a thousand anything. It is worth noting that we can explicate the general idea of shape or figure in terms of a two-dimensional area enclosed by continuous lines. A chiliaedron is a figure whose boundary is enclosed by a series of straight lines draw at an angle of 0.36 degrees from one another. Locke is right that we cannot distinctly imagine this shape, but it is hasty to conclude that we have no precise idea of its shape.

Leibniz makes precisely this point while commenting on this passage in the *New Essays*. He accuses Locke of confounding the idea of shape with an image of it: "But the knowledge of figure does not depend upon the imagination, any more than knowledge of number does, though imagination may be a help" (RB, 261). An image, even a clear one, does not suffice to "reveal the nature and properties" of a figure (ibid). For that, a distinct idea is required. Like Descartes,

Leibniz distinguishes between "pure ideas" and "images of sense" (RB, 77). The former involves the mind alone and are "composed of definitions" RB, 137), whereas the latter require a faculty of imagination that depends in part upon the body.

If Locke were an imagist about all ideas, it would not make sense for him to treat the ideas of shape and number differently in the example of the chiliagon. This is important because if Locke said that ideas of large numbers are also confused then Locke could potentially sidestep Leibniz's objection by simply denying that there are merely intelligible ideas. Such a denial would have ramifications for interpretating Locke's theory of substance. If Locke sided with Gassendi in denying the existence of any clear and distinct ideas of reason, then the Kant-Leibniz diagnosis would fail to be a rebuke of Locke on his own terms. In order to better access this possibility, it will be helpful to observe where else Locke's conflation of sensory images with intelligible ideas crops up and how it causes him to conclude that certain ideas are confused.

Locke says that both space and duration appear to us endless and infinitely divisible:

> Every part of Duration is Duration too; and every part of Extension is Extension, both of them capable of addition or division *in infinitum*. But the least Portions of either of them, whereof we have clear and distinct *Ideas*, may perhaps be fittest to be considered by us, as the simple *Ideas* of that kind, out of which our complex modes of Space, Extension, and Duration, are made up, and into which they can again be distinctly resolved. Such a small part in Duration may be called a *Moment*, and is the time of one *Idea* in our minds in the train of their ordinary Succession there. The other, wanting a proper Name, I know not whether I may be allowed to call *a sensible Point*, meaning thereby the least Particle of Matter or Space we can discern, which is ordinarily about a Minute, and to the sharpest eyes seldom less than thirty Seconds of a Circle, whereof the Eye is the centre. (E 2.15.9; 202-203)

Although we recognize the fact that space and time have infinitely many and small parts (an hour or a mile can be divided into as many parts as a minute and a yard), Locke insists that the smallest parts for which we have a clear and distinct idea are a sensible point and a sensible moment. He defines a sensible moment in terms of the time it takes the mind to recognize an

idea before another takes its place. Essentially, this is the rate at which the human mind is able to process and detect successive change, and the time it takes the mind to perceive one idea Locke calls an "*Instant*" (E 2.14.10; 185). He doesn't hazard a guess about how long a time this is[39], but he does supply the relative measurement for a sensible point: an arcminute, which is a measure of the visual angle, which is a function of the height of the object and the distance from it. Both a moment and a sensible point are relative to typical human faculties for perception. Conceptually, any measure of time is equally clear and distinct, so the fact that Locke concludes otherwise about our ideas of space and time show that again he is treating ideas as if they were sensations.

But on Locke's official view, these ideas cannot be taken as identical to any sensations. The idea of extension is acquired through both visual and tactile sensations (E 2.13.2; 167), which are phenomenologically different from one another. Without visual or tactile sensations, the mind would not come to have an idea of extension. But our common idea of extension is neither a seeing nor a touching; otherwise Locke could not hold that a single idea like extension is conveyed into the mind via different senses. In the estimation of Laura Berchielle, "When one takes into account the whole of Locke's *Essay,* it becomes difficult to accept the existence of two heterogeneous ideas of figure (2002, 48)."

Locke's negative answer to William Molyneux's (1656-1689) question (about whether a man blind from birth could distinguish, by sudden sight alone, a cube and a sphere he formerly could discern by touch) might appear to cast doubt on my claim that there exists a common idea of extension (cf. E 2.9.8; 145-146). For if the same idea of extension can be occasioned by either touch or sight, then arguably the man should be able to recognize the shapes of the cube and the

[39] It is estimated by present-day researchers to be around five milliseconds for a conscious discrimination between two different sounds ("The Possibilian" by Burkhard Bilger published in the April 25, 2011 issue of *The New Yorker*).

sphere soon after seeing them (Bruno and Mandelbaum 2010, 166). Locke's negative answer to Molyneux's question might thus be taken either as conflicting with his view of sensible qualities perceived through more than one sense (cf. Ayers 1996 1, 65) or as motivation to look for a reading that denies that there is heterogeneity between the ideas of figure/extension received from sight and touch on the grounds that shapes are not perceived through sensation but judged on the basis of light and color (cf. Bolton 1996, 82).

I would resist either conclusion, however, for the following reasons. First, it is difficult to know exactly what philosophical or empirical issues Locke took to be at stake in asking the question. This is due in part to the fact that "Locke never provided a complete explanation for his negative response" (Vaughn 2018, 1). Consequently, the questions of (1) what Locke's explanation is for his negative response and (2) what he took the question to be asking needs to be decided in tandem and with respect to other historical, philosophical, and textual considerations.[40]

Second, if we look at the broader discussion in the *Essay* around where the discussion of Molyneux's question occurs, we find that Locke's topic is how ideas of sensation can be altered by judgement. Immediately before the passage, Locke makes the point that visual images are only two dimensional and it is only through sufficient experience that we judge on the basis of the image that we are perceiving a three-dimensional object (cf. E 2.9.8; 145). In light of this, I take it Locke's main reason for mentioning Molyneux's question is just to comment that visual and tactile sensations are different, and it is only through experience that we can judge that because an object felt like this it would look like that. Consequently, the blind man could not predict how the sphere would look before he saw it. Furthermore, based on what Locke said

[40] An impressive number of them are discussed by Bolton (1996).

previously about the two-dimensionality of visual images, the man would have to see the sphere and the cube from multiple angles before we could accurately judge their three-dimensional shape.[41] Only then could the man correctly identify the objects he had formerly only touched, and only if he was in the habit of thinking with his intellect.[42] This way of understanding Locke's rationale behind Locke's negative answer to Molyneux's question is consistent with the claim that ideas of shape from sight and touch are homogeneous, and so, to that extent, intellectual.

Similar to extension, the idea of succession, which provides a basis for our idea of duration (duration is the measure of temporal distance between items in a succession), is an idea received both through sensation and reflection (E 2.7.9; 131). By watching a dog run across a field, I am made aware of the idea of succession, just as I am when I reflect upon the "train" of ideas parading through my mind when I daydream. These experiences are very different from the first-person point of view, but the same idea of succession is produced in the mind as a result of them. Even if it were true that I would never have an idea of duration if everything that happened in the world took place at cannonball-speed (E 2.14.10; 185), it is not the case that once I have an idea of duration I can only clearly and distinctly think about lengths of time that are sensible to me. I may not be able to clearly or distinctly imagine what it would be like to experience shorter moments of time, but this limitation is not at all conceptual. To do it, I wouldn't need a better intellect but a different sensibility.

Despite his tendency to substitute an image for an idea, Locke consistently resists the temptation when it comes to number, though not entirely. As he realizes, the idea of number is

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[41] For more discussion of why Locke would have thought this to be the case, see Bruno and Mandelbaum 2010, 169-73.

[42] As Leibniz points out, "the blind man whose sight is restored could discern [the two objects] by applying *rational principles* to the sensory knowledge which he has already acquired by touch" (RB, 136, emphasis added).

"the most intimate to our Thoughts,…[and] the most universal *Idea* we have" since "it applies it self to Men, Angels, Actions, Thoughts, every thing that either doth exist, or can be imagined" (E 2.16.1; 205). Now one might expect Locke to call the idea of the number one to be the most confused idea there is precisely due to its generality and the fact that I cannot imagine the number one by itself without thinking about one table, or one cat, one something-or-other. But instead he finds each mode of number to be as distinct from all others as any two ideas could be:

> *The simple modes of Numbers are of all other the most distinct*; every the least Variation, which is an unite, making each Combination, as clearly different from that, which approacheth nearest to it, as the most remote; two being as distinct from one, as Two hundred; and the *Idea* of Two as distinct from the *Idea* of Three, as the Magnitude of the whole Earth is from that of a Mite. This is not so in other simple Modes, in which it is not so easie, nor, perhaps, possible for us to distinguish betwixt two approaching *Ideas*, which yet are really different. For who will undertake to find a difference between the white of this Paper, and that of the next degree to it: Or can form distinct *Ideas* of every the least excess in Extension? (E 2.16.3; 205)

There are three things to note about this passage. First, Locke finds all numbers to be equally distinct from one another, and this is only possible if each number is distinct in itself as a number. So, in effect Locke is saying that 12.8 billion (the magnitude of the earth's length measured in millimeters) is as distinct a number as one (the measure of a mite's length in millimeters). He consistently says this about numbers. In the example of the chiliagon discussed above, Locke insists the number 100 is perfectly distinct from all others, including those nearest to it (viz. 99). And in general, when it comes to ideas of extreme (i.e. very big or small) portions of space and time, "it is the Number of its repeated additions, or divisions, that alone remains clear and distinct" (E 2.15.9; 202).

Second, in this passage Locke treats ideas of colors and ideas of spatial magnitude on the level, arguing that, unlike number, the mind cannot easily distinguish between simple ideas such as these that approach one another yet are really different. The many shades of white are indeed

hard to distinguish, but this is because, as Locke himself says, colors and other sensible qualities are "made, and counted by degrees, and not quantity" (E 4.2.11; 535). As a result, "we have not so nice and accurate a distinction of their differences, as to perceive, or find ways to measure, their just Equality, or the least Differences" (ibid). But the idea of extension and its modes (e.g. size and figure) are not "appearances or sensations" (ibid) like colors are. As I have argued in this chapter, there is no kind of *sensation* that extension could plausibly be an appearance of, especially if the mind is made aware of this notion via sight *and* touch. Unlike color, extension *is* made and counted by quantity and not by degrees. For this reason, extension can be measured, and those measurements can be precisely compared. However, in the passage above Locke suggests it is impossible to "form distinct *Ideas* of every the least excess in Extension" (E 2.16.3; 205).[43] This matches what he said about the chiliagon, and again he is conflating the idea of extension with an image of it.

Third, it does not make sense for Locke to treat ideas of number and those of extension differently, as he does both in this passage (E 2.16.3; 205) and elsewhere: "in comparing their Equality or Excess, the Modes of Numbers have every the least difference very clear and perceivable: and though in Extension, every the least Excess is not so perceptible" (E 4.2.10; 535). By Locke's own account, extension and number are both primary qualities of bodies, which "the Mind finds inseparable from every particle of Matter, though less than to make it self singly be perceived by our Senses" (E 2.8.9; 135). This remark shows that Locke recognized a purely intelligible aspect of extension since he attributed it to insensible bodies. In his example of chopping up a grain of wheat, he is confident that no matter how much we divide the grain, the resulting parts will still be extended and possess the other primary qualities (ibid). This

[43] By "excess" Locke means "difference". Cf. E 4.2.10.

confidence is only possible if the idea of shape is not an image since we cannot have an image of the shape of an imperceptible grain of wheat. For this reason, Locke should have recognized the possibility of distinctly understanding a particular shape (like he did with numbers) without being able to have a distinct image of it.[44]

Descartes explained the difference between pure intellection and imagination in terms of understanding versus seeing with the "mind's eye" (AT VII: 72/ CSM II: 50). He held that the same object could be considered (i.e. represented objectively to the mind) by pure thought and by imagination, as was shown in the case of the two ideas of the sun (AT VII: 39. CSM II: 27). But some objects can only be clearly understood while at best confusedly imagined, such as a chiliagon. Because this shape can be clearly perceived by the intellect, Descartes insisted we have an idea of it, even though "I do not in the same way imagine the thousand sides or see them as if they were present before me" (AT VII: 72/ CSM II: 50). These ideas, which cannot be imagined but are clearly understood, are either themselves innate ideas or derive from them. In this case, the idea of a chiliagon is derived from the more general innate idea of extension. Locke famously denied the innateness of any of our ideas; however, he did not go so far in the other direction as to maintain with Hume that all ideas ultimately derive from sense impressions (T 1.1.1).

John Yolton agrees that "Locke was not out to defend some form of radical reductionism, showing how every idea is either itself a direct result of sensory stimuli or is a complex whose

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[44] Perhaps Locke missed this parity between shape and numbers because numbers fall more naturally under the jurisdiction of the understanding (we rarely attempt to imagine numbers), but this is not true of shapes and figures. Unless we are reasoning about them and their properties, it is much more common to picture figures and shapes in our imagination. And even in geometry we often employ diagrams and pictures to facilitate our reasoning. This makes it easier to confuse the idea of extension, found in the understanding, with an image of it.

parts are so derived from sense" (1978, xviii).[45] The argument in this section showed that Locke acknowledged the existence of "rational" ideas, though he often confused them for confused images. As Leibniz would say, these ideas are "conceived through pure reason, though the senses provide a basis for [forming them]" (RB, 124). This is the case regarding the idea of substance. The reason why Locke did not deny or dismiss the idea of substance as wholly fictitious, as Hume later would, is because he, as much as Aristotle and Descartes, recognized that qualities and actions can only be understood as existing in things. As Hobbes put the familiar Aristotelian point in down-to-earth terms, "We cannot conceive of jumping without a jumper, of knowing without a knower, or of thinking without a thinker" (AT VII: 173/ CSM II: 122). Locke's belief in the *existence* of substance is also explained on these grounds. The existence of a substance is implied by the existence of any property or act:

> These modes being then known to exist by our senses, the existence of them (which I cannot conceive can subsist without something to support them) makes me see the connexion of those ideas with a support, or, as it is called, a subject of inhesion, and so consequently the connexion of that support (which cannot be nothing) with existence. And thus I come by a certainty of the existence of that something which is a support of those sensible modes, though I have but a very confused, loose, and undetermined idea of it, signified by the name substance. (W 4, 29)

Just as Locke was wrong to call the idea of shape and extension confused because the image of the quantity represented by the idea could not be distinctly pictured in the imagination, he was wrong to criticize the idea of substance for being "confused" and "loose". In both cases, he loses sight of the purely intelligible nature of the idea in question, arguably because he did not fully understand the proper sphere of the intellect and its independence from the senses.

[45] See also Szabó (2000, 42) and Bolton (2007, 89; 99).

E. Summary of Chapter

The aim of this chapter was to defend the Leibniz-Kant diagnosis of how Locke goes wrong in his discussion of the idea of substance. According to the Leibniz-Kant reading, Locke is wrong to complain that substance is unknown because the idea of substance does not contain any qualitative content. By Locke's own lights, the idea of substance is a perception involved in representing substances as unified things with various properties. As such, it supplies the thought that objects are not merely bundles of qualities, but particulars qualified in different ways depending on the attributes represented in the complex idea by the simple ideas of sensation and reflection contained in it. To consider the idea of the substratum itself, it is necessary to abstract away the simple ideas belonging to the complex idea of some kind of substance. In doing so, all the qualities through which the substance could be conceived are blocked from view. Leibniz and Kant thus argue that Locke is wrong to think this is a shortcoming of the idea of substance as it exists in the human mind, nor could it ever appear richer in detail to a mind like ours that employs the idea of a common subject to represent objects.

I defended the legitimacy of this interpretation against an extension of the Real Essence interpretation that claims that Locke's complaints about our impoverished idea of substance are part of "ingenious way of advancing his kind of scepticism about essences" (Ayers 1994, 70). I point out that if Locke did make such an argument, he emphasized the wrong thing in the final stage of the argument. If Locke wished to deconstruct our representations of substances to show that no essential properties are represented in the complex idea, he should have emphasized the fact that when all the accidents are stripped away *only* the representation of a no longer qualified *thing* remains. Instead, Locke draws our attention to the trivial point that the idea of substance, when isolated in thought from all attributes present in the representation, contains only the

thought about some unspecified *thing*. I argued that Locke's repeated claims about (a) substance being unknown *because* we do not have clear and distinct idea of substance distract from the claim he was in position to make about (b) the unknowability of substance *because* we do not know any substantial essences.

The case-study of Gassendi supported my reading of Locke because it provided an example of a philosopher, one who greatly influenced Locke, who also criticized the idea of substance for being confused. I determined that Gassendi's complaints about the unknowability of substance actually involve two different conceptions of substance. Sometimes 'substance' is used as a synonym for 'essence', in which case his claim is that essences are not discovered through sense perception – the only way of perceiving objects. Other times, 'substance' is used to signify "the subject that exists under the quality" (cited in LoLordo 2007, 220). When this is the meaning, Gassendi's complaint is that substance is unknown because it cannot be represented distinctly in the imagination: there is no iconic representation of substance itself. From Descartes' perspective, both of these claims about substance's imperceptibility are mistaken and indicate that Gassendi was suffering severely from prejudices of sensation. Gassendi defended himself by arguing that all ideas are in fact imagistic and derive from sensation. So, it is Descartes who is mistaken in believing he has purely intelligible thoughts derived from non-existent innate ideas.

Locke can adopt Gassendi's answer to the claim about substance's imperceptibility in the first sense, where what is meant is that the nature of a substance is unknown because our representation of it is not adequate. Indeed, this is exactly what Locke argues in *Essay* 2.31 and 2.23; though, unlike Gassendi, he does not express the point in terms of substance's imperceptibility. However, there is some debate in the secondary literature about why Locke

concluded that the idea of substance is an obscure and confused idea. I suggested that existing explanations do not go far enough in their analysis. I argued that Locke found the idea of substance to be a confused perception because he attempted represent substance in his imagination. Further, I explained how Locke's tendency to conflate ideas with images caused him to conclude that other ideas with intellectual content were confused. Locke is guilty of a genuine conflation here, and not merely an intentional reduction, since he admitted the existence of intelligible ideas. These include the ideas of extension, duration, and number – all ideas of more than one sense. Although it is derived only via touch, solidity (in contrast to extreme hardness) is another idea with intelligible rather than sensuous content.

Locke appears to give different accounts of how the idea of substance is framed by the mind. In one account, he says that the idea of substance is achieved through a process of abstraction from complex ideas of material and spiritual substances. This is the idea of the general category of substance. In another account, he says that the mind constructs the idea of substance by framing the relative idea of a support for modes and qualities, which it perceives to be incapable of independent existence. This is the idea of substance in general. It contains the thought of a substratum for some attributes. In this way, it is a relative idea since it is the thought of two things standing in a relation. One of those *relata* is the substratum itself. Locke explains that the mind forms the idea of substance in general in order to represent objects. The objects are represented as things possessing such and such qualities. Given any one of these representations, the mind has the ability to abstract away all the qualities and to consider the thing itself as unqualified. This is the idea of substance itself. I suggested that Locke's complaints about the unknowability of substance stem from the fact that Locke found the idea of substance itself to be wanting. Locke found the idea of substance itself to be confused because it is represented to the

mind by the very abstract idea of a thing or being. While there is nothing inherently confused about the idea of substance itself, Locke's criteria for ideational confusion is wholly extrinsic. For him, ideas are confused when they are signified by words in discourse in situations where the idea signified does not capture a distinction intended by the speaker or implied by the accepted meaning of the term used to signify it. Expressed another way, accidents are things as much as substances are.

At the same time, it might be replied that accidents are not things at all; rather they are attributes *of things*. That is correct, but to have this thought one makes use of the idea of substance in general. As a complex idea, the idea of substance in general contains important content that is not represented in the idea of substance itself. It contains vital ontological information that allows one to see that substances and modes are not things in the same way: substances support accidents, which in turn inhere in the substance. Locke failed to appreciate the distinctness of the idea of substance in general because he was drawn toward only that part of the complex idea that could be represented as an image in the imagination – the idea of substance itself qua idea of mere thing. The other parts of his own definition of substance are overlooked by Locke, and this causes him to render a judgment specifically about the idea of substance itself.

In the final chapter, I will apply these insights towards answering the four questions laid out in the first chapter. Before I do that, however, I want to clarify how my reading relates to and differs from the traditional Bare Particular and Real Essence readings. In particular, I want to explain how Locke's desire for a clear and distinct idea of substance can be given a reading that neither commits Locke to a bare particular ontology nor equates the idea of substance with a "dummy concept" on a par with dark matter in physics. Once again, I will explain Locke's

performance as involving a degree of confusion, stemming from the fact that he found the idea of substance itself to be a confused idea. Despite these compounded mistakes, I suggest that Locke's discussion of substance contains merits not found in Descartes or Hume, merits that anticipate features of Kant's celebrated epistemology.

VI. CONCLUSION

A. The Extent of Locke's Empiricism

Locke found the idea of substance to be confused because he attempted to form a mental image of the logical notion of a common subject for various attributes. I believe Leibniz puts his finger on this error as well, writing:

> My own view is that this opinion about what we don't know [about substance] springs from a demand for a way of knowing that the object doesn't admit of. The true sign of a clear and distinct notion is one's having means for giving a priori proofs of many truths about it. (RB, 219)

In this passage, Leibniz in effect scolds Locke for assuming that to have a clear and distinct knowledge of substance in general we require a detailed mental image of it. Leibniz reminds Locke that such a demand could never be met by merely intelligible idea like substance.[46] Leibniz had already made the point that to know the nature of a substance we must look to its attributes. He now adds that all that is required to have a distinct idea of something is to be in possession of nominal definition of it (cf. AG, 24). And in the case of substance in general, the usual definition of it does just fine: "when several predicates are attributed to a single subject and this subject is attributed to no other, it is called an individual substance" (AG, 40-41). According to Leibniz, this definition might appear, as it did to Locke, "empty and sterile" (RB, 218) and so "not much use in philosophy" (RB, 150). Nevertheless, he is adamant that "Several

[46] In his letter titled "One What Is independent of Sense and Matter" Leibniz identifies the idea of substance as one of the first merely intelligible ideas that the mind grasps with its innate faculty of understanding (AG, 188).

consequences arise from it; these are of the greatest importance to philosophy, to which they can give an entirely new face" (RB, 218).[47]

Locke thought that if we had such a clear and distinct mental picture of substance, we would know, or at least be closer to knowing, real essences: "we may be convinced that the *Ideas* we can attain to by our Faculties, are very disproportionate to Things themselves, when a positive clear distinct one of Substance it self, which is the Foundation of all the rest, is concealed from us" (E 4.3.23; 554). As I explained in Chapter Three, passages like this one cast doubt upon any interpretation of Locke (mine included) that understands his idea of a substratum as the skeletal idea of a particular and existent but otherwise unqualified "thing". But the objection assumes that Locke made no mistakes. However, according to my reading Locke's belief that a clear and distinct image of substance in general would be "of general use for Mankind to have" (E 1.4.18; 95) constitutes what Kant described as a paralogism of pure reason:

> It has long been observed that in all substances the true subject – namely that which remains after all accidents (as predicates) have been removed – and hence the *substantial* itself, is unknown to us; and various complaints have been made about these limits to our insight. But it needs to be said that human understanding is not to be blamed because it does not know the substantial in things, i.e., cannot determine it by itself, but rather because it wants to cognize determinately, like an object that is given, what is only an idea. (Ak 4:334/ AH:125)

[47] In the *Discourse on Metaphysics*, Leibniz points out that this merely nominal definition doesn't specify exactly which attributes a particular substance is capable of possessing. In other words, if you stopped merely with the nominal definition you might wonder (as Locke did in E 4.3.6) whether a single substance could both think and be extended? To bypass these uncertainties, we must form a real definition of substance by attending to the nature of true predication. These considerations lead Leibniz to his complete concept theory of substance: "the nature of an individual substance or of a complete being is to have a notion so complete that it is sufficient to contain and to allow us to deduce from it all the predicates of the subject to which the notion is attributed." (RB, 41)

The fact that Locke treated the idea of substance as something that could be pictured in the imagination, I think, encouraged this mistake since it presented the idea of substance as an object of empirical (sensory) knowledge.

My reading is thus distinguished from Bennett's and other Bare Particular readings by this critical point: I deny that Locke actually believed in the existence of a natureless substratum. And yet, in solidarity with those Bare Substratum readings, I claim that as far as the idea of substance is concerned, there is nothing more to the thought than of a logical, common subject to which attributes, modes and predicates are related.

My reading also explains why Locke found the idea of substance to be unhelpful and uninformative (E 2.13.20; 175). It is because the idea of substance – such as it is – does not reveal anything qualitative about the nature of substances. It is a confused idea (i.e. mental picture), and Locke believes that "It is not enough to have a confused Perception of something in general: Unless the Mind had a distinct Perception of different Objects, and their Qualities, it would be capable of very little Knowledge" (E 2.11.1; 155). However, Locke's specific complaints about the confused idea of substance are directed against the bare-boned idea of the substratum itself as it is represented to the mind in the complex idea of substance in general. *Contra* Ayers, Locke's infamous complaint that substance is "something I know not what" is not code for *what we really need to know are internal constitutions/ real essences, for then we would know all there is to know about substances*. To this extent, I agree with the self-described "controversial" conviction of Walter Ott who claims that Ayers' Real Essence view is untenable because

> The 'support' of properties cannot be read simply as the ultimate 'explanation' of why those properties go together…[since] Locke's adherence to the traditional model [of substance] seems to entail that even if we had a God's-eye view and

> fully knew the real essence, we could *still* sensibly ask what the properties we observe inhere in. (2004, 109)

As a mere idea of reason, Kant made a similar point that "the substantial itself could never be thought by our ever-so-deeply penetrating understanding, even if the whole of nature were laid bare before it" (Ak 4:333/ AH:125). By situating Locke's claims about our confused idea of substance in the context of his own epistemology, and the epistemologies of Gassendi and Descartes, I hope the previous chapter provided a much-needed argumentative basis for Ott's conjecture. The idea of "a thing in which properties inhere" is not a dummy-concept to someday be supplanted by knowledge of a substance's inner nature. One idea is not a placeholder for the other since they are separate ways of looking at, or considering what Descartes called a "complete thing" or what Aristotle called a "primary substance". Because we will always be able to think about a substance *sub ratione substantiae* and cognize the existing thing itself, such a bare-boned idea will always be involved in the representation of any substance. It will always look confused to Locke, even if real essences were known, because he had the habit of evaluating the distinctness of ideas with the imagination rather than with the intellect.[48]

Writing in the 1930's, decades before the debate between the Substratum and Real Essences interpretations got started, William Swabey hit on something important when he pondered parenthetically why Locke did not recognize the idea of substance itself to be a simple idea grasped by reason alone: "There seems to have been no very good reason why Locke should have excluded the idea of substance from the class of simple ideas" (1933, 579). Swabey notes that the reason Locke does cite "is that we have 'no clear or distinct idea of that thing which we

[48] As I explained above, Locke only breaks temporarily from this habit when dealing with numbers, and I should add that he does it also when considering the solidity, as opposed to the hardness, of the minute parts of body (E 2.4.1; 123).

suppose a support' (Essay 2.23.4)". Swabey nearly saw his way through the confusion, but three things stood in his way.

First, he overestimated the number of "simple" ideas that Locke recognized to have an intellectual aspect. In my view, only certain simple ideas that are "suggested to the mind" (E 2.3.1; 121) fall into this class (cf. E 2.6.7; 2.16.1). Second, Swabey discounted the fact that Locke considered the idea of substance to be a complex (not a simple) idea formed by the understanding. Thirdly, and by far the most important, Swabey failed to see how Locke's "not very good reason" for excluding substance from that special class of intelligible ideas pointed to an underlying problematic and pervasive tendency to treat definitions as images. The very same tendency caused Locke to conclude that we have "no clear, or distinct *Idea* of that *thing* which we suppose a Support" (E 2.23.4; 297), and that "when the *Idea* under Consideration becomes very big, or very small, its [i.e. a body's] precise Bulk becomes very obscure and confused" (E 2.15.9; 202); and that "the Word Place, has sometimes a more confused Sense, and stands for that Space, which any Body takes up" (E 2.13.10; 171). All these instances are evidence of the underlying cause of his finding the traditional conception of substance (as a subject for various properties and acts) to be confused. Influenced by his predecessors, Locke accepted the idea of substance as a logical subject suggested/supposed by the mind to account for our experience of qualities. His acceptance of this and other "rational" ideas is consistent with his modest brand of empiricism according to which experience is necessary but not sufficient for all ideas. However, Locke's tendency to find these ideas confused can be attributed to what Descartes would call a "prejudice" caused by "the images of things perceived by the sense… besiege[ing]… [our]

thought[s] on every side" (AT VII: 69/ CSM II: 47).[49] Too often, Locke fails to distinguish ideas of the understand from images of the imagination.

Locke might have resolved this problem in different ways to various degrees of success. He could have embraced Hume's Copy Thesis and held that all ideas can be reduced to copies of original sensations. Given that Locke frequently treated ideas as images he might be thought to have been heading in this direction anyways. According to a familiar narrative, Hume is thought to have brought British Empiricism to its logical conclusion. While it would make for a tidy solution to Locke's trouble with the idea of substance, it would clash mightily with the otherwise prominent role he gives to reason as the authority over the habitual associations of ideas the mind is apt to make on the basis of untutored experience. Given this common narrative, some early modern scholar might be surprised to find Locke calling the natural associating of ideas "a disease of the mind" and identifying it as "a frequent cause of mistake and error" (W 3, 252). Locke says we have "a fundamental duty which everyman owes himself" to exercise our innate faculty of reason to "contest the empire of habit, and look into its own principles" (W 3, 253). Only then can we enjoy a "freedom" not attainable by lower animals whose minds are governed strictly by the association of ideas – a freedom that allows for both moral actions and justified beliefs (ibid).

Nearly a century ago, the notable historian Sterling P. Lamprecht emphasized this underappreciated rationalistic element in Locke's epistemology. His eloquent words on the subject are worth quoting in full:

> Locke was attacked in his own day and frequently since for reducing reason to a mere succession of ideas. Such reduction was actually done later by some members of the British school of empiricism. But Locke never did so. Reason was for him a faculty which we possessed prior to and independently of experience.

[49] For more discussion of these "prejudices" in Descartes, see Nolan and Nelson (2006).

> Reason could not, to be sure, generate knowledge out of itself, as rationalists sometimes supposed. Rather it needed material to work upon, and it obtained this material through the ideas which experience brought to it. But ideas were only the *materials* for reason, the *materials* which reason used to get knowledge. And the activity of reason upon these materials was as indispensable for knowledge as the presence of the materials. Perhaps it was the long discussion of the origin of ideas which led Locke's readers to suppose that he reduced reason to a mere succession of ideas. But the whole tone of the *Essay*, as well as the explicit description of knowledge in the later pages of the *Essay*, is hostile to such an interpretation. Reason must, in order to furnish us with knowledge, perceive the agreement or disagreement of our ideas. And the reason which so acts is not produced by the ideas, but is an activity expended upon the ideas. (1928, 322)

Lamprecht would no doubt be crestfallen by recent interpretations of Locke's idea of substance that locate the genesis of the idea in "a phycological principle of association" (Newman 2000, 303). On Locke's view, reason – not habit – is the builder of the mind's complex ideas (cf. W 4, 71-2), and the idea of substance in general is no exception. The idea of substance in general acquires its intellectual content due to the fact that is birthed from reason. Locke's failed to recognize this sufficiently, but he could not have avoided this error by throwing himself in Hume's direction without undercutting the very basis for the idea of substance itself. Nor does a solution to his problem require that Locke throw himself violently in the opposite direction of nativism. Locke very plausibly accounts for the mind's construction of the idea of substance out of simple ideas of sensation and reflection. Therefore, he need not abandon his trademark claim that experience is necessary for ideas and knowledge in order to explain the existence and content of the idea of substance. To solve his problem, Locke simply had to recognize the idea of substance for what his own account revealed it to be: an idea of reason posited by the understanding to render experience intelligible.[50]

[50] Matthew Priselac defends a Kantian interpretation of Locke's epistemology according to which the mind is "involved in the construction of sensory experience from the simple ideas of sensation" (2017, 71).

To his credit and despite his mistake, Locke recognized two important features of the idea of substance missed by nativists and reductionists. Unlike nativists, Locke realized that the idea of substance has limited empirical and metaphysical use since it does not tell us what substances exist or inform us about their essences. Unlike reductionists, Locke recognized the importance of the idea of substance to the mind in representing self-sufficient *things* as opposed to modes. Kant went on to make similar observations decades later, but Locke did it first. According to Forrai, "Locke was not thinking of substance in the same way as Kant. He did not regard the idea of substance as a concept of the understanding necessary for the organization of experience, which might not correspond to any metaphysically real entity" (2000, 40-41). This goes wrong at every turn: Locke *was* thinking about substance in a similar way as Kant as a subject of predication[51]; he most certainly *did* consider the idea of substance to be a concept formed by the understanding and necessary for representing objects in experience[52]; and he *denied* (to Stillingfleet) the existence of a general substance corresponding to the idea of substance in general (W 4, 27).

B. The Four Questions Answered

It is now time to return to the four questions introduced in Chapter One. The answers to most of the questions have already been answered, but I will recount them here for the reader's sake. The first question asked whether Locke's various claims about substance cohere with one another? A worry is that Locke's so-called "positive" and "negative" claims point to an unresolved tension or doubleness in attitude toward substance. I argued it misleading and counterproductive to attempt to sort Locke's remarks about substance into generally-positive and

[51] Kant certainly read Locke to have this conception of substance in mind; otherwise his little lesson about rational ideas would have missed its mark.

[52] This is not a controversial claim. See Bolton (2007, 88-89) and Priselac (2017, 72).

generally-negative categories irrespective of context or topic. Alternatively, in Chapter One, I demonstrated how each of Locke's claims could be classified as pertaining primarily to one of four topics: epistemology, ontology, language, and normativity. This reveals that Locke's "negative" claims are actually directed at different targets.

Locke finds the idea of substance itself to be confused because he attempts to form a mental image of it (epistemological) To his mind, this renders the term substance ineffective and robs it of almost all meaning (linguistic). Finally, Locke bemoans the fact that we don't possess a clear and distinct idea of substance because he is under the false impression that having one would help to illuminate the internal constitution of substances (normative). The reason why Locke did not dismiss the idea of substance as wholly fictitious is because he, as much as Aristotle and Descartes, recognized that qualities and actions can only be understood as existing in things; such "simple ideas" – as Locke ambiguously called them – are, from the point of view logic, "substance-hungry" (Butler 1973, 142).

Locke's belief in the existence of substance as an ontologically independent being is also explained on these grounds. The existence of a substance is implied by the existence of any property or act:

> These modes being then known to exist by our senses, the existence of them (which I cannot conceive can subsist without something to support them) makes me see the connexion of those ideas with a support, or, as it is called, a subject of inhesion, and so consequently the connexion of that support (which cannot be nothing) with existence. And thus I come by a certainty of the existence of that something which is a support of those sensible modes, though I have but a very confused, loose, and undetermined idea of it, signified by the name substance. (W 4, 29)

A passage like this can easily look two-faced because in it Locke simultaneously argues for the necessity of the idea of substance (given our experience of simple ideas) while pointing to its deficiencies. My reading explains why Locke and Gassendi, but not Descartes or Leibniz,

encountered those deficiencies, and why, despite Locke's condemnation of those Cartesian philosophers who reject the ontological distinction between body and pure extension on the grounds that space divested of body is not a substance (E 2.13.16; 173), the idea and existence of substance cannot be entirely written off as a metaphysical fiction.

The closest Locke comes to straightforwardly contradicting himself about substance arises in the passage in which he first refers to the "poor *Indian* Philosopher":

> 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. Had the poor *Indian* Philosopher (who imagined that the Earth also wanted something to bear it up) but thought of this word *Substance*, he needed not to have been at the trouble to find an Elephant to support it, and a Tortoise to support his Elephant: The word *Substance* would have done it effectually. And he that inquired, might have taken it for as good an Answer from an *Indian* Philosopher, That *Substance*, without knowing what it is, is that which supports the Earth, as we take it for a sufficient Answer, and good Doctrine, from our *European* Philosophers, That *Substance*, without knowing what it is, is that which supports *Accidents*. So that of *Substance*, we have no *Idea* of what it is, but only a confused obscure one of what it does. (E 2.13.19; 175)

The first sentence could easily be taken as suggesting that accidents don't require something to inhere in, and it constitutes a mistake to think that they do. Such a reading is apparently supported by the fact that the earth requires nothing (material) to bear it up, so the mistake of the Indian philosopher lies not in positing a menagerie of animals, each of which requires an additional support, but in supplying an explanation for something that is not needed in the first place. If that were Locke's point in this passage, it would plainly be at odds with what he says elsewhere about how the very existence of accidents and qualities imply the existence of substance. But perhaps there is another way to understand what Locke is saying. Locke's stigmatization of the "poor" Indian philosopher distracts from the main point. Far from misguided, in comparison to "our *European* Philosophers" who peddle the doctrine of substance as a sufficient explanation of what supports accidents, the Indian philosopher is, to Locke's

mind, at least engaged in the right sort of explanatory enterprise. The Indian philosopher could have saved his time and labor had he simply concluded, mirroring the European philosophers, that an unknown something – a substance – supports the earth. That, and that alone, is the only lesson to be drawn from Locke's example of the Indian philosopher.[53] In fact, Locke says not to read too far into the comparison as some readers have been apt to do (Stillingfleet 1698; Bolton 1976, 502 footnote) since he did not give it much thought:

> It was upon serious consideration, I own, that I entertained the opinion, that we had no clear and distinct idea of substance. But as to that similitude, I do not remember that it was much deliberated on; such inaccurate writers as I am, who aim at nothing but plainness, do not much study similes; and, for the fault of repetition, you have been pleased to pardon it. But supposing you had proved, that simile was to ridicule the notion of substance, published in the writings of some European philosophers; it will by no means follow from thence, "that upon my principles we cannot come to any certainty of reason, that there is any such thing as substance in the world." (W 4, 448-449)

It because we have no distinct idea of substance itself that Locke's argues the idea of substance in general is not a sufficient account of that which supports accidents. Consequently, because it is of no explanatory value, Locke concludes that "the doctrine of *Substance* and *Accidents*" (E 2.13.20; 175) is "*of little use in Philosophy*" (E 2.13.19 section title; 175). He thus denies that his "simile about the elephant and tortoise, 'is to ridicule the notion of substance, and the European philosophers for asserting it'" as Stillingfleet had thought (W 4, 448). What Locke is objecting to is not the idea of substance *per se* but the explanatory use to which some philosophers put that confused idea.

Although he does not contradict himself about substance, Locke's thoughts about it do reflect a confusion. Locke's assumption that the logical idea of substance might become clear and distinct in such a way as to allow for explanations of empirical phenomena (i.e. accidents) is

[53] Locke may be referring to an Iroquois myth about the creation of the world (Converse 1908, 33).

misguided. Substance explains *that* a such and such an accident exists, but to understand *why* we need to look to the substance's nature, which is not ontologically distinct from the substance itself.

Descartes happened to think he knew, courtesy of innate ideas, the fundamental nature of finite substances. Consequently, he was able to view a "complete thing" distinctly from either perspective: he could consider his mind as some particular, existent *res* that doubts, wills, afforms, etc., and he could contemplate its thinking nature directly. In opposition, Locke, like Gassendi, emphasized the senses (both outer and inner) the as proper (and sole) means for collecting information about substances. As a result of this, Locke concluded that the internal constitutions of substances were at present unknown. The emphasis he placed upon the senses in acquiring the materials for thought and knowledge no doubt encouraged him to equate ideas with images and thereby "sensationalize" the rational idea of substance.

As I explained previously, Locke's "sensationalization" of the idea of substance occurred in several ways. First, he ignored the merely intelligible content contained the idea of substance is general and placed disproportionate attention on the idea of the substance itself represented to the mind by in the complex idea by the generic idea of a thing. Secondly, he found that there is no distinct mental image of a generic thing. As such, it is a highly confused idea when it is used to represent something specific, just as the abstract painting is a confused representation of a particular person. The two ways of sensationalizing substances complement one another since once the merely intelligible aspects of the complex idea are ignored, it looks like the entire idea of substance is none other than the idea of an unknown something, of which the mind has practically no image whatsoever. Because Locke was inclined to identify ideas with images, he was prone to making yet another error with respect to substance. Under the impression that the

idea of substance is nothing more than an blurry image of "I know not what", Locke understandably was drawn toward assuming that a clear and distinct image/idea of substance might be attainable with the possession of acuter sensory faculties or an improved understanding; and if such a clear and distinct idea of substance were in our possession, then substance really might be used to explain the co-existence of qualities in nature. This train of thought tempted Locke into thinking that the metaphysical concept of substance could be useful in the explanatory project of natural science, if only it were clear and distinct. Locke's rebuke of the unnamed European philosophers in *Essay* 2.13.19 is thus revealed to be right but for the wrong reason (175). Locke is correct in pointing out that substance does not explain why certain qualities co-exist in nature, but he thought this limitation was due to the contingent, confused condition the idea of substance was in with respect to human minds. The truth is that the idea of substance could not be made clear or more distinct than we find it to be; and the fundamental reason why it cannot be used to explain the co-existence of qualities is because it is a construct of reason.

Locke's confusion in this area is probably the source of his saying that substratum is both the thing in which the qualities "subsist" (i.e. a metaphysical support) and thing from which they "result" (i.e. their efficient cause) (E 2.23.1; 295). The confusion is more obviously present in the second passage that references Indian philosopher:

> If any one 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 Solidity and Extension inhere in, he would not be in a much better case, than the *Indian* before mentioned; who, saying that the World was supported by a great Elephant, was asked, what the Elephant rested on; to which his answer was, a great Tortoise: But being again pressed to know what gave support to the broad-back'd Tortoise, replied, some thing, he knew not what. And thus here, as in all other cases, where we use Words without having clear and distinct *Ideas*, we talk like Children; who, being questioned what such a thing is, which they know not, readily give this satisfactory answer, That it is *something*;

> which in truth signifies no more, when so used either by Children or Men, but that they know not what; and that the thing they pretend to know, and talk of, is what they have no distinct *Idea* of at all, and so are perfectly ignorant of it, and in the dark. (E 2.23.2; 295-296)

The question of inherence is properly a metaphysical issue. All properties equally inhere in the substance or common subject, though some might be essential, others accidental, to it. But in this passage, Locke either **(a)** understands inherence causally, or else he **(b)** introduces elements from the corpuscular hypothesis (primary and secondary qualities to be exact) into a context in which they do not belong. Either way, he gets the rational idea of substance mixed up in an explanatory project in which it has no place. If you read the passage according to **(a)**, Locke is saying that secondary qualities (viz. colour and weight) are caused by primary qualities, and primary qualities are themselves caused by something unknown, which we call substance, but that is *not* a "satisfactory answer". The problem with this way of thinking is not that the search for causes will never end; rather, it consists in Locke's calling the ultimate *cause* by the name of substance and in alleging that what is properly the notion of an ultimate *subject* might relieve the natural philosopher of his duty to search for explanations. In fact, to Kant's mind the rational idea of substance has precisely the opposite effect. Precisely because "we are unable through any possible experience to make the concept of a simple being sensorily intelligible, hence intelligible *in concreto*", it follows that "this concept is therefore completely empty with respect to all hoped-for insight into the cause of the appearances, and cannot serve as a principle of explanation of that which supplies inner or outer experience" (Ak 4:331/ AH:123).[54] But it nevertheless plays an important role of an ever-out-of-reach carrot that motivates the

[54] Ellington's translation of this passage is friendlier to the non-expert. It reads: "we cannot render the concept of a simple being understandable sensuously and concretely by any possible experience. The concept is therefore quite void as regards all hoped-for-insight into the cause of appearances and cannot serve as a principle of the explanation of that which internal or external experience supplies" (2001, 67).

understanding to investigate nature as completely as possible (ibid). In other words, the idea of complete subject is not a cop-out alternative to empirical science, it is the rational driving force behind the whole investigative enterprise.

On the other hand, if the passage is read according to **(b)**, Locke is saying that secondary qualities inhere in the primary ones, and the primary ones inhere in the unknown substance. In doing so, Locke is trading on an ambiguity, created by the fact that because they are essential to the substance, the primary qualities are only rationally distinct from the substance. This allows one to truly say that the secondary qualities inhere in the primary qualities, which constitute the very essence of the substance. But from another point of view, the secondary and primary qualities equally inhere in the substantial subject. No matter what qualities we discover or posit, and no matter the relation of dependence between them (e.g. the secondary qualities depend reductively upon the primary ones), the common subject or substratum is never going to be revealed. Kant correctly explains why this is the case:

> Pure reason demands that for each predicate of a thing we should seek its appropriate subject, but that for this subject, which is in turn necessarily only a predicate, we should seek its subject again, and so forth to infinity (or as far as we get). But from this it follows that we should take nothing that we can attain for a final subject, and that the substantial itself could never be thought by our ever-so-deeply penetrating understanding, even if the whole of nature were laid bare before it; for the specific nature of our understanding consists in thinking everything discursively, i.e., through concepts, hence through mere predicates, among which the absolute subject must therefore always be absent. Consequently, all real properties by which we cognize bodies are mere accidents for which we lack a subject – even impenetrability, which must always be conceived only as the effect of a force. (4: 333-334/ AH: 125)

No matter how much we learn about substances through natural science, the ever-present concept of substance as the "substantial itself" is not going away. The most charitable way, then, of taking what Locke is saying in *Essay* 2.23.2 is that the idea of substance is no substitute for empirical knowledge. Even if he is making that point, Locke does not appear to realize that

substance is the proper and sufficient answer to the question of "In what do qualities or properties inhere?" He does not recognize the rational idea of substance for what it is – "only an idea" (Ak 4:333/ AH:125) capable of represting "a thing in general" (Ak 4:332/ AH:124). While this points to a philosophical confusion, Locke's specific claims about substance – misunderstood in parts as they may be – are not in tension with one another: Locke is at least consistent in his confusion.

The second question asks whether Locke's claims about substance are in tension with his other philosophical commitments. I have explained Locke's mistakes in handling the rational idea of substance ultimately stem from his empiricist tendency to treat definitions if though they could be distinctly imaged, thereby failing to distinguish ideas of the understanding from images of the imagination. The charge that Locke "totally **sensitvized**" the understanding dates back to Kant (A 271/ B 327), but my interpretation goes beyond that initial observation. I have argued that Locke gave the correct account of how the idea of substance in general is constructed by the faculty of reason. I also explained how Locke's proclivity toward identifying ideas with images both caused him to find the idea of substance to be confused and caused him to think a clearer and distinct idea of substance would be useful to have. These two beliefs contravene the status Locke granted to substance as an idea of reason. For this reason, these specific claims about the confused idea of substance are in tension with the rationalistic element in Locke's theory of ideas. To solve this problem, I have argued that Locke need not embrace extreme nativism or reductionism. A better solution would be to distinguish the understanding from the imagination. This would have allowed him to appreciate the intellectual content contained in the rational idea of substance as he described it.

The third question asks whether Locke advanced a novel theory of substance. Defenders of the Bare Particular reading consider Locke to be the originator of Substratum Theory, which posits a property-less bare particular as an ontological part of concrete particulars. The aim of Substratum Theory is to explain both persistence through change and true predication (Loux 2002, 106-07). Edwin McCann (2001, 2007) does well to point out that Locke puts the notion of substance to no explanatory use, either in metaphysics or in natural science. The evidence is overwhelmingly clear that Locke was not formulating a new conception of substance; rather, he was struggling to come to terms with a very old one.[55] While Locke's conception of substance as a subject of predication is not innovative, I have explained how Locke's account of the genesis of the idea of substance in reason anticipates Kant's view in an important way. Had Locke better appreciated the significance of this, he might have explained (as Kant later did) that substance itself will never be represented to the mind by anything other than the idea of a thing, even if real essences of material and immaterial substances were known, it being a mere idea of reason.

Since Locke is not offering his own theory of substance, it is appropriate to ask whether he is attacking an existing theory and if his criticisms effective. While I would resist saying that Locke is "attacking" Aristotle's conception of substance as a subject for predication, he does make the case that both Aristotelians and Cartesians abuse language in the way they talk about substance. I mentioned Locke's rebuke of Cartesianism at the beginning of this chapter, but it is important to recognize that not all of *Essay* 2.13.18 (174) is directed at that target.

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[55] "He that would show me a more clear and distinct idea of substance, would do me a kindness I should thank him for. But this is the best I can hitherto find, either in my own thoughts, or in the books of logicians: for their account or idea of it is, that it is "Ens," or "res per se subsistens et substans accidentibus;" which in effect is no more, but that substance is a being or thing; or, in short, something they know not what, or of which they have no clearer idea, than that it is something which supports accidents, or other simple ideas or modes, and is not supported itself as a mode or an accident." (W 4, 8)

In that passage, Locke criticizes "those who lay so much stress on the sound of these two syllables" and implies that philosophers either (a) have the "bare substratum" (the Aristotelian) view of substance in mind or (b) they mean nothing at all by insisting that God, finite spirits, and matter are all substances, but empty space is nothing (the Cartesian view) (E 2.13.18; 174). Both the Aristotelians and the Cartesians abuse language when talking about substance, but they abuse it in different ways. Operating again under the assumption that only substances and their accidents exist, the Aristotelians assumes that there must be some natureless entity that is the "bare substance" beneath the inherent forms (cf. Newton 2004, 32). This belief in the existence of "pure substance" (ibid) without qualities or forms results in "a very harsh Doctrine" (E 2.23.18; 174) that God and finite substances agree "in the same common nature of *Substance*" and "differ not otherwise than in a bare different modification of that *Substance*" (ibid).

The Cartesians are also misled (in Locke's opinion) by language. They call bodies and finite spirits substances, but they also admit they have completely different natures. Therefore, being a substance has nothing essentially to do with being solid (since minds aren't) or having thought (since bodies don't). This leaves the door open for the possibility of an extended, unsolid, unthinking substance. To Locke's mind, the Cartesians pay lip service to minds and bodies by calling them both substances even though there is nothing really substantial about them – at least not more so than pure space. To the extent that they can be substances (despite depending on God), empty space can be a substance too (as it depends on God's presence everywhere).

Answering the fourth and final question, Locke's error with respect to the idea of substance points to a certain degree of philosophical and conceptual confusion – a mistake that Descartes warned about and that Leibniz and Kant adequately diagnosed. Above all else, I think

Locke's greatest mistake was not seeing clearly what his patient and thoughtful reflection on our ideas revealed – that certain ideas owe contain intelligible content and ought not to be confused with sensations. The fact that he often did confused them is a shortcoming on his part, but he never went so far as to reject, as Hume did, rational ideas as mere fictions of the mind caused by habit. At the same time, Locke's emphasis on experimental science as the correct means for investigating nature must be seen as an improvement over the pretensions of rationalism. He did not adequately realize just how important and the precise way in which the idea of substance found so obscure and confused is to that empirical investigation. Then again, a practicing scientist such as Locke need not be consciously aware of exactly what he is doing from the philosophical point of view in order to be effective. In short, Locke's error regarding his criticism of the idea substance did not seriously impede the force of the anti-Aristotelian and anti-Cartesian arguments contained in the *Essay*.

CITED LITERATURE

Aaron, R.I.: John Locke. 1937. Second Edition. Oxford, Clarendon Press, 1955.

Aristotle.: The Complete Works of Aristotle: The Revised Oxford Translation. 2 vols. ed. J. Barnes. Princeton, Princeton University Press, 1984.

Ashworth, E.J.: Logic and language: Traditional logic. In: The Cambridge History of Renaissance Philosophy, eds. C.B. Schmitt, Q. Skinner, E. Kessler, and J. Kraye, pp. 139-172. Cambridge, Cambridge University Press, 1988.

Atherton, M.: Knowledge of Substance and Knowledge of Science in Locke's Essay. History of Philosophy Quarterly 1:413-428, 1984.

Aune, B.: Metaphysics: the elements. Minneapolis, University of Minnesota Press, 1985.

Ayers, M.R.: The Ideas of Power and Substance in Locke's Philosophy. The Philosophical Quarterly 25.98:1-27, 1975.

Ayers, M.R.: Mechanism, Superaddition, and the Proof of God's Existence in Locke's Essay. The Philosophical Review 90.2:210-251, 1981.

Ayers, M.R.: Structure of Locke's General Philosophy. In: Locke's Philosophy: Content and Context, ed. G.A.J. Rogers, pp. 49-74. Oxford, Clarendon Press, 1994.

Ayers, M.R.: Locke. 2 vols. 1991. Reprint (2 vols. in 1). New York; London: Routledge, 1996.

Berchielli, L.: Color, Space and Figure in Locke: An Interpretation of the Molyneux Problem. Journal of the History of Philosophy 40.1:47-65, 2002.

Berkeley, G.: The Works of George Berkeley, Bishop of Cloyne: Volume 2, eds. A.A. Luce and T.E. Jessop. London: Thomas Nelson and Sons, 1949.

Bennett, J.: Locke, Berkeley, Hume: central themes. Oxford, Clarendon Press, 1971.

Bennett, J.: Substratum. History of Philosophy Quarterly 4.2:197-215, 1987.

Bennett J.: Learning from Six Philosophers: Volume 2. Oxford, Clarendon Press, 2001.

Bilger, B.: The Possibilian. The New Yorker April 25, 2011.

Bolton, M.B.: Substances, Substrata, and Names of Substances in Locke's Essay. The Philosophical Review 85.4:488-513, 1976.

Bolton, M.B.: The Real Molyneux Question and the Basis of Locke's Answer In: Locke's Philosophy: Content and Context, ed. G.A.J. Rogers, pp. 75-100. Oxford, Clarendon

Press, 1994.

Bolton, M.B.: The Taxonomy of Ideas in Locke's Essay. In: The Cambridge Companion to Locke's 'Essay Concerning Human Understanding', ed. L. Newman, pp. 67-100. Cambridge, Cambridge University Press, 2007.

Broackes, J.: Substance. Proceedings of the Aristotelian Society 106.1:131-166, 2006.

Bruno, M., and Mandelbaum, E.: Locke's Answer to Molyneux's Thought Experiment. History of Philosophy Quarterly 27.2:165-180, 2010.

Carter, W.R.: The Elements of Metaphysics. New York, McGraw Hill, 1990.

Connolly, N.: Yes: Bare Particulars!. Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition 172.5:1355-1370, 2015.

Converse, H.M.: Myths and Legends of the New York State Iroquois. New York State Museum Bulletin, ed. A.C. Parker no. 125. Albany, University of the State of New York, 1908.

De Rosa, R.: Locke's Critique of Innatism. In: A Companion to Locke, ed. M. Stuart, pp. 157-174. Chichester, Blackwell, 2016.

Descartes, R. et al.: Oeuvres de Descartes: Volume V, eds. C. Adams and P. Tannery. Paris, Vrin, 1903.

Descartes, R. et al.: Oeuvres de Descartes: Volume VII, eds. C. Adams and P. Tannery. Paris, Vrin, 1904.

Descartes, R..: Oeuvres de Descartes: Volume VIII, eds. C. Adams and P. Tannery. Paris, Vrin, 1905.

Descartes, R.: The Philosophical Writings of Descartes: Volume I, tr. J. Cottingham, R. Stoothroff, and D. Murdoch. Cambridge, Cambridge University Press, 1984.

Descartes, R., et al.: The Philosophical Writings of Descartes: Volume II, tr. J. Cottingham, R. Stoothroff, and D. Murdoch. Cambridge, Cambridge University Press, 1984.

Descartes, R. et al.: The Philosophical Writings of Descartes: Volume III, tr. J. Cottingham, R. Stoothroff, D. Murdoch, and A. Kenny. Cambridge, Cambridge University Press, 1991.

Downing, L.: Are Body and Extension the Same Thing? Locke vs Descartes (vs More). In: Locke and Cartesian Philosophy, eds. P. Hamou and M. Pécharman, pp. 63-79. Oxford, Oxford University Press, 2018.

Ellington, J.W. tr.: Prolegomena to Any Future Metaphysics and the Letter to Marcus Herz, February 1772. 1977. Second Edition. Indianapolis, Hackett Publishing Company, 2001.

Fisher, S.: Pierre Gassendi. In: The Stanford Encyclopedia of Philosophy, ed. E.N. Zalta. Spring 2014 Edition, URL = <https://plato.stanford.edu/archives/spr2014/entries/gassendi/>.

Forrai, G. Locke on Substance in General. Locke Studies 10.27:27-59, 2010.

Gassendi, P.: Selected Works, tr. C. Brush. New York, Johnson Reprints, 1972.

Heffernan, G., ed. and tr.: Meditations on First Philosophy: A Bilingual Edition. Notre Dame, University of Notre Dame Press, 1990.

Hill, B.: Locke's Modes: Ideas as Properties. Southwest Philosophy Review 20 (1):173-82, 2004.

Hoffman, P.: Descartes's Theory of Distinction. Philosophy and Phenomenological Research 64.1:57-78, 2002.

Hume, D.: A Treatise of Human Nature, ed. P.Hs. 1888. Second Edition. Oxford, Clarendon Press, 1978.

Jolley, N.: Leibniz and Locke: A Study of the New Essays on Human Understanding. Oxford, Clarendon Press, 1984.

Jolley, N.: Locke's Touchy Subjects: Materialism and Immortality. Oxford, Oxford University Press, 2015.

Kant, I.: Kant's Gesammelte Schriften, ed. Königlichen Preußischen (later Deutschen) Akademie der Wissenschaften. Berlin, Georg Reimer (later Walter De Gruyter), 1900.

Kant, I.: Critique of Pure Reason, eds. P. Guyer and A. Wood. Cambridge, Cambridge University Press, 1998.

Kant, I.: Theoretical Philosophy after 1871, eds. H. Allison and P. Health. Cambridge, Cambridge University Press, 2002.

Klever, W.: Hudde's Question on God's Uniqueness: A Reconstruction on The Basis of Van Limborch's Correspondence with John Locke. Studia Spinoza 5:327-358, 1989.

Korman, D.: Locke on Substratum: A Deflationary Interpretation. Locke Studies. 10:61-84, 2010.

Lamprecht S.P., ed.: Locke: Selections. New York, Charles Scribner's Sons, 1928.

Leibniz, G.W.: Monadology and Other Philosophical Essays, tr. P. Schrecker and A.M. Schrecker. Indianaopolis: The Boobs-Merrill Company, 1965.

Leibniz, G.W.: Philosophical Writings, eds. R. Ariew and D. Garber. Indianapolis: Hackett Publishing Company, 1989.

Leibniz, G.W.: New Essays on Human Understanding, eds. P. Remnant, and J. Bennett. Cambridge, Cambridge University Press, 1996

Locke, J.: The Works of John Locke: Volume 4. Germany, Scientia Verlag Aalen, 1969.

Locke, J.: An Essay Concerning Human Understanding, ed. P.H. Nidditch. Oxford: Clarendon Press, 1975.

Locke, J.: The Correspondence of John Locke: Volume 6, ed. S. De Beer. Oxford, Clarendon Press, 1981.

Locke, J.: Drafts for the Essay Concerning Human Understanding and Other Philosophical Writings: Volume1: Drafts and B, eds. P.H. Nidditch and G.A.J. Rogers. Oxford, Clarendon Press, 1990.

LoLordo, A.: Pierre Gassendi and the Birth of Early Modern Philosophy. New York, Cambridge University Press, 2007.

Loux, M.J.: Metaphysics: a contemporary introduction. 1998. Second Edition. New York, Routledge, 2002.

Lowe, E.J.: Locke, Martin, Substance. The Philosophical Quarterly 50.201:499-514, 2000.

Lowe, E.J.: Locke. London, Routledge, 2005.

McCann, E. Locke on Substance. In: The Cambridge Companion to Locke's 'Essay Concerning Human Understanding', ed. L. Newman, pp. 157-191. Cambridge, Cambridge University Press, 2007.

McCann, E.: Locke's Theory of Substance Under Attack!. Philosophical Studies 106.1:87-105, 2001.

Miller, V.R. and Miller, R.P. tr.: Principles of Philosophy. Dordrecht, Reidel, 1983.

Millican, P.: Locke and Substance and Our Ideas of Substances. In: Locke and Leibniz on Substance, ed. P. Lodge, pp. 8-27. New York, Routledge, 2015.

Milton, J.R.: The Genesis and Composition of the *Essay*. In: A Companion to Locke, ed. M. Stuart, pp. 123-139. Chichester, Blackwell, 2016.

Milton, J.R.: Locke and Descartes: The Initial Exposure, 1658-1671. In: Locke and Cartesian Philosophy, eds. P. Hamou and M. Pécharman, pp. 15-32. Oxford, Oxford University Press, 2018.

Moriarty, M., tr.: Meditations on First Philosophy with Selections from the Objections and Replies. Oxford, Oxford University Press, 2008.

Newman, L. Locke on the Idea of Substratum. Pacific Philosophical Quarterly 81.3:291-324, 2000.

Newton, I.: Philosophical Writings, ed. A. Janiak. Cambridge, Cambridge University Press, 2004.

Nolan, L.: Reductionism and Nominalism in Descartes's Theory of Attributes. Topoi: An International Review of Philosophy 16.2:129-140, 1997.

Nolan, L. and Nelson, A.: Proofs for The Existence of God. In: The Blackwell Guide to Descartes' *Meditations*, ed. S. Gaukroger, pp. 104-121. Malden, Blackwell Publishing, 2006

Ott, W.: Locke's Philosophy of Language. Cambridge, Cambridge University Press, 2004.

Pasnau, R.: Metaphysical Themes, 1274-1689. Oxford: Oxford University Press, 2011.

Priselac, M.: Locke's Science of Knowledge. New York, Routledge, 2017.

Robinson, H.: Substance. The Stanford Encyclopedia of Philosophy, ed. E.N. Zalta (Winter 2018 Edition) URL = <https://plato.stanford.edu/archives/win2018/entries/substance/>.

Secada, J.: The Doctrine of Substance. In: The Blackwell Guide to Descartes' *Meditations*, ed. S. Gaukroger, pp. 67-85. Malden, Blackwell Publishing, 2006

Sider, T.: "Bare Particulars". Philosophical Perspectives 20.1:387-397, 2006.

Spinoza, B.: The Collected Writings of Spinoza: Volume 1, tr. E. Curley. Princeton, Princeton University Press, 1985.

Stillingfleet, E.: Three Criticisms of Locke. Hildesheim, Georg Olms Verlag, 1987.

Stuart, M.: Locke's Metaphysics. Oxford, Clarendon Press, 2013.

supposition, n. 3.a. OED Online. December 2018. Oxford University Press. http://www.oed.com.proxy.cc.uic.edu/view/Entry/194705?redirectedFrom=supposition&

Swabey, W.: Lock's Theory of Ideas. Philosophical Review 42.6:573-593, 1933.

Szabó, Z.: Locke on Supposing a Substratum. Locke Studies 31:11-42, 2000.

Thomas, E.: On the "Evolution" of Locke's Space and Time Metaphysics. History of Philosophy

Quarterly 33.4:305-326, 2016.

Uzgalis, W.: Locke's Essay Concerning Human Understanding: A Reader's Guide. New York, Continuum International Publishing Group, 2007

Anna V.: Is Locke's answer to Molyneux's question inconsistent? Cross-modal recognition and the sight–recognition error. Canadian Journal of Philosophy:1-19, 2018.

Walmsley, J.: Locke's Natural Philosophy in Draft A of the Essay. Journal of the History of Ideas 65.1:15-37, 2004.

Winkler, K.P., ed.: An Essay Concerning Human Understanding. Indianapolis, Hackett Publishing Company, 1996.

Woolhouse, R.S.: Locke. Brighton, Harvester Press, .1983.

Yolton, J.W.: An Essay Concerning Human Understanding. 2 vols. 1961. Reprint (2 vols. in 1). London, Dent, 1978.

Yolton, J.W.: Locke: An Introduction. Oxford, Blackwell, 1985.

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