

Locke on Individuation and the Corpuscular Basis of Kinds¹

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In this paper, I examine the crucial relationship between Locke's theory of individuation and his theory of kinds. Locke holds that two material objects—e.g., a mass of matter and an oak tree—can be in the same place at the same time, provided that they are 'of different kinds'. According to Locke, kinds are nominal essences, that is, general abstract ideas based on objective similarities between particular individuals. I argue that Locke's view on coinciding material objects is incompatible with his view on kinds. In order for two material objects to be in the same place at the same time, they must differ with respect to at least one nominal essence. However, Locke thinks that it is impossible that x and y have the same real essence but differ with respect to any nominal essence; and coinciding material objects have the same real essence. Therefore, Locke *cannot* hold what he in fact holds, namely that distinct material objects can be in the same place at the same time.

In a well-known paper, Reginald Jackson expresses a sentiment not uncommon among readers of Locke: "Among the merits of Locke's *Essay*...not even the friendliest critic would number consistency."² This unflattering opinion of Locke is reiterated by Maurice Mandelbaum: "Under no circumstances can [Locke] be counted among the clearest and most consistent of philosophers."³ The now familiar story is that there are innumerable inconsistencies and internal problems contained

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² Jackson (1929) p. 56.

³ Mandelbaum (1964) p. 4. Similar remarks are found in Curley (1972) p. 440 and Stuart (2003) p. 69.

in Locke's *Essay*. In fact, it is probably safe to say that there is not another canonical, well-respected, and seminal philosopher whose work is so widely thought to be swarming with inconsistencies. I, however, do not think that the common, unflattering view of Locke is accurate as a *general* view of the *Essay*. But despite my wishes to the contrary, I do believe that Locke's chapter 'Of Identity and Diversity' (2.27)⁴ leads to (at least) one intractable problem, a problem that is the subject of this paper.⁵

Before I begin spelling out the problem in detail, I want to offer something in the way of a brief history of 2.27 and how it made its way into the *Essay*. I offer this 'history', not only because it is interesting, but also because it will perhaps shed some light on why a tension in Locke's thought arises. In a letter of 2 March 1693, Locke's friend William Molyneux suggests to Locke that he should address some traditional philosophical issues, which did not receive much attention in the first edition of the *Essay*. In particular, Molyneux wanted Locke to give his views on the eternal truths and on the *principium individuationis*.⁶ The chapter 'Of Identity and Diversity' was not included in the first edition of the *Essay* (published in December, 1689); nor had Locke written about this topic in any of the drafts of the *Essay* on which he had been working since the early 1670s.⁷ In a letter from 23 August 1693 to Molyneux, Locke writes the following:

⁴ All references to Locke's *Essay* are to Locke (1975). References are given by book, chapter, and (in most cases) section numbers.

⁵ One of the reasons I say 'despite my wishes to the contrary' here is that I think that one of the methodological obligations of the interpreter of the works of the great dead philosophers is to present an interpretation that shows the philosopher's position(s) to be consistent (if not unproblematic). This methodological obligation, of course, is subject to qualifications: most perspicuously, the interpreter has this obligation to attribute a consistent view to a philosopher only if it is at all possible to attribute a consistent position to the philosopher while remaining faithful to the philosopher's words and to what can be deduced or reasonably inferred from the philosopher's own words.

Of course, I am not alone in recognizing tensions between 2.27 and other parts of the *Essay*. Michael Ayers, for instance, also explicitly notices some tensions. Ayers (1991) vol. 2, p. 206.

⁶ In the same letter, Molyneux mentions that Locke has 'touched' upon the *principium individuationis* in 1.4.4 and 2.1.12. The former text mentions the problem of identity through bodily changes, 'soul-switching' cases, and the importance of the issue of diachronic identity surrounding the resurrection. The latter text presents an early version of the famous 'day-man/night-man' case found fully developed in 2.27.23.

⁷ Locke had been working on drafts of the *Essay* since 1671, shortly after his famous meeting with friends in his chamber recounted in the 'Epistle to the Reader'. So-called 'Draft A' and 'Draft B' were written in 1671, and 'Draft C' was written in 1685. For information about the drafts of the *Essay*, see the introduction to Locke (1990).

[Y]ou will herewith receive a new chapter Of identity and diversity, which, *having writ only at your instance*, 'tis fit you should see and judge of it before it goes to the press.⁸

The picture we have according to this evidence is that, while we know that Locke had been writing and thinking about many of the important issues in the *Essay* for nearly two decades prior to the publication of the first edition of the *Essay* (let alone 23 years before the publication of the second edition, the edition in which 2.27 makes its first appearance), he had not been writing about individuation in much detail, as far as we know.⁹ In fact, if we believe Locke's own words, he wrote 2.27 *only* because Molyneux had suggested it. A few short months later, Locke presented the new chapter for Molyneux's inspection. Given that Locke wrote this chapter—perhaps the most seminal discussion of identity ever written—only on Molyneux's suggestion, *and* that he composed it in the very short period of time between March and August of 1693, we should not be surprised that it is not as well developed as much of the rest of the *Essay*; nor should we be surprised if it does not fit neatly into the *Essay* as a whole.

In this paper, I will argue that there is a problem, an *intractable* problem concerning Locke's theory of the individuation of material objects. I will call the problem, 'the Kinds Problem'. Very briefly stated, the Kinds Problem is the following: Locke's theory of individuation seems to entail that two things can be (and, in fact, *are*) in the same place at the same time. Spatiotemporal-coincidence is perfectly acceptable for Locke as long as the coinciding things are 'of different kinds'. The problem is that there are cases of coincidence in which there do not seem to be acceptable candidates for the relevant kinds to allow for the coincidence. More than that, however, I will argue that not only are there no good candidates for the relevant kinds which allow for coincidence, there *cannot* be any good candidates here. I argue for this on the basis of Locke's theory of real and nominal essences and ultimately the corpuscularianism underlying that theory.

Although I ultimately think that Locke holds incompatible positions, seeing exactly *why* they are incompatible will be quite important, as it will allow us to investigate some of the most fundamental issues in Locke's metaphysics.

⁸ Locke (1976) vol. 4, letter 1655, p. 722. Emphasis mine.

⁹ There is, however, a note from 5 June 1683 (quoted in Ayers (1991) vol. 2, p. 255) in which Locke discusses *personal* identity. The account of personal identity given there, in which personal identity does not consist in the sameness of body or spirit but "in memory and knowledge of ones past self and actions," is basically the same account that would eventually be given more than a decade later in 2.27.

1. The Kinds Problem

In 2.27.1, Locke proposes the following principles concerning individuation:

- L1: It is impossible for two things of the same kind to be in the same place at the same time.
- L2: One thing cannot have two beginnings (i.e., one thing cannot *first* begin at two different places or two different times).
- L3: Two things of the same kind cannot have one beginning (i.e., two things of the same kind cannot *first* begin in the same place at the same time).
- L4: One thing cannot be in two different places at the same time.

In two papers, Vere Chappell has argued convincingly that, from these principles (L1 and L2, in particular) plus Locke's account of the persistence conditions for masses of matter and organisms, two conclusions follow.¹⁰ *First*, a mass at time t and the organism it constitutes at t are not identical to each other. Chappell shows this as follows: A mass, according to Locke, is a 'conjoined' collection of atoms; and being merely a collection of atoms 'anyhow united', the persistence conditions of the mass are simply that there be all and only the same individual atoms united. That is, as William Alston and Jonathan Bennett point out, Locke is a *mereological essentialist* about masses, i.e., a mass cannot survive any subtraction or addition or replacement of parts.¹¹ So, take a mass M_1 at t_1 and an oak tree O_1 at t_1 , which M_1 constitutes at t_1 .¹² O_1 does not have the same persistence conditions as M_1 : The persistence conditions for organisms, according to Locke, require not the very same atoms, but rather the same continuous 'life'. So, O_1 can survive even if one or more of its 'successively fleeting particles' is lost or it gains a new particle (as

¹⁰ Chappell (1989, 1990). In fact, Chappell states that the following argument is "as neat and conclusive as any that is found in the *Essay*, or rather as any that can be drawn out of Locke's words there." (1990, p. 22) William Uzgalis gives basically the same argument. See Uzgalis (1990) pp. 283-284.

¹¹ Alston and Bennett (1988) p. 27.

¹² Although I believe that constitution is an asymmetric and irreflexive relation, I don't wish to beg any questions here. So, for the time being, let us assume that constitution is a relation that can hold between x and y even if $x = y$.

long as the loss or gain is sufficiently gradual),¹³ but M_1 cannot survive such loss or gain. Now, say that at t_2 , M_1 ceases to exist because it either loses or gains an atom. Thus, at t_2 , M_2 (a new mass, not identical to M_1) comes into existence and constitutes O_1 at t_2 . But according to Locke's L2, one thing cannot have two beginnings either in different places or at different times. M_2 begins to exist at t_2 ; O_1 does not begin to exist at t_2 but rather at some earlier time. Therefore, M_2 is not identical to O_1 . Given that *all* organisms are constituted by masses of matter, this argument can be generalized to show that no organisms are identical to the masses that constitute them at a time.

Although Chappell doesn't notice it (or at least does not mention it), there is a different but similar Lockean argument for the same conclusion (i.e., that a mass at t and an organism it constitutes at t are not identical). Most commentators recognize that it is possible for an organism to be constituted by different masses at different times. What is usually unmentioned is the fact that it is also possible, and consistent with Locke's corpuscularianism, for the same mass to constitute a different organism at different times or no organism at all.¹⁴ One of the peculiar things about Locke's theory of 'mass identity' is that, while mereological essentialism is true of masses, masses can survive *any* amount of internal rearrangement or reorganization of the same atoms: "let the parts be never so differently jumbled." (2.27.3) Suppose that there is an oak tree constituted by a mass M_1 at t_1 . If one were able to radically rearrange M_1 , while retaining all and only the same atoms, M_1 would survive. But clearly, radical rearrangement of M_1 could result in the origin of a new organism (say, an elm tree or a dog). Just jumble up the atoms, and so long as there are the same atoms, there is the same mass; but a different arrangement of atoms could result in something else. Hence, it is possible that an organism come into existence at a time later than its constituting mass. In which case, by L2, the mass and what it constitutes would not be identical.

The *second* thing Chappell believes that this argument shows is that a mass and the organism it constitutes at a time are of different kinds. This follows trivially from the fact that they occupy the same place at the same time and are not identical. By L1, they are of different kinds.

¹³ See 2.27.8. Here Locke seems to hold that a necessary condition for diachronic organism identity through loss/gain/replacement of matter is that the matter be lost/gained/replaced in a sufficiently gradual manner, i.e., "not shifted all at once." Though this requirement is stated only once, and only in reference to the diachronic identity of *men*, I don't see any reason to deny this requirement to organisms other than men.

¹⁴ See Alexander (1985) p. 270.

A natural question to ask, at this point, is: What does Locke think the relation is between M_1 and O_1 at t_1 ? Suppose, for the sake of the example, that M_1 and O_1 come into existence at exactly the same time, t_1 . At t_1 , wouldn't M_1 be identical to O_1 , according to L3? Suppose further that the 'careers' of M_1 and O_1 overlap completely.¹⁵ In a case in which a mass and an organism have the same beginning and they coincide throughout their careers, would Locke hold that they are identical? I think that the answer to this question is 'no'. As Chappell rightly argues, whereas Locke held (a)

(a) If x is in place p at time t and y is not in p at t , then $x \neq y$,

Locke did *not* hold (b)

(b) If x is in place p at time t and y is in p at t , then $x = y$.

What Locke *did* hold is something like (c)

(c) If x is in place p at time t and y is in p at t and there is a kind F such that x is F and y is F , then $x = y$.¹⁶

So, as long as M_1 and O_1 are of different kinds, it doesn't automatically follow from their common beginning in a particular place at a particular time (and, hence, their spatial coincidence) that they are identical.¹⁷ It should be clear already that the real task of individuating material things, according to Locke, is going to be split more-or-less evenly between spatiotemporal beginning (and perhaps continuity) and the kind of thing to which the object in question belongs.¹⁸

Let us call any interpretation that holds, as Chappell's does, that Locke held that a mass and an organism at a time (or a mass and a

¹⁵ Those familiar with the contemporary literature on material constitution and identity will recognize cases like this from Allan Gibbard's seminal paper "Contingent Identity" (1975).

¹⁶ I say '*something like* (c)' because, as we'll see, this will need to be qualified. There are going to be substitution instances for F that render (c) false, and some that render (c) true.

¹⁷ See Chappell (1989, 1990), Uzgalis (1990), Bolton (1994).

¹⁸ Uninterruptedness or continuity does not seem to be necessary for *personal* identity according to Locke. In fact, Locke clearly allows for 'gappy' or interrupted existence in the case of persons. This is explicitly illustrated by several examples, including the 'day man/night man' case in 2.27.33.

machine-like artifact¹⁹ at a time) are non-identical things of different kinds occupying the same place at the same time, the ‘*Coincidence Interpretation*’ of Locke.²⁰ If the Coincidence Interpretation is correct, then Locke should have an answer to the following question: What are the different kinds exemplified by a mass and an organism such that *that* difference allows for their coincidence?

An obvious answer is that the different kinds are *mass* and *organism* respectively. A defender of the Coincidence Interpretation might tell the following story:

In 2.27.3, Locke distinguishes *simple* material substances from *compounded* material substances. After stating the “much enquired after...*principium Individuationis*,” Locke states that this principle “seems easier to conceive in simple substances or modes; yet when reflected on, is not more difficult in compounded ones.” One might take it that *simple substances* and *compounded substances* are the most general kinds of substances in Locke’s ontology. (God, finite intelligences and atoms are simple substances.) Locke then gives the persistence conditions for an atom (a simple material substance), a mass (a compounded material substance) and an organism. So, in context, we can see that Locke held that *mass* and *organism* are two different kinds of compounded substance. Moreover, directly following the discussion of compounded and simple substances, Locke goes out of his way to distinguish ‘wherein

¹⁹ Locke does not discuss the identity of artifacts in much detail. In fact, the only artifacts that Locke explicitly discusses, in 2.27, are watches; and, according to Locke, watches (artificial machines) will have *roughly* the same persistence conditions as organisms (natural machines). The only difference Locke mentions between organisms and artificial machines such as watches is that “in an Animal the fitness of the Organization, and the Motion wherein Life consists, being together, the Motion coming from within; but in Machines the force, coming sensibly from without, is often away, when the Organ is in order, and well fitted to receive it.” (2.27.5) The analogy between organisms and artificial machines, is, of course, to be expected, given Locke’s acceptance of mechanism. According to Boyle, the leading proponent of mechanism in the seventeenth century, “corporeal agents as do not appear to either work otherwise than by virtue of the motion, size, figure, and contrivance, of their own parts (which attributes I call the *mechanical affections* of matter, because to them men willingly refer the various operations of mechanical engines).” (1991) p. 17. The mechanistic model of the explanation of the behavior of natural bodies is taken from the explanation of the behavior of artificial machines. As such, the similarity between Locke’s persistence conditions for organisms and for artificial machines should not be surprising. For another example of Locke’s similar treatment of artificial machines and organisms, see 3.6.41. See also Jacovides (2002) pp. 161-163.

²⁰ Other proponents of the Coincidence Interpretation include Bolton (1994) and William Uzgalis (1990), though each fills in the details in different ways.

an Oak differs from a Mass of Matter.’ This would seem to indicate that *mass* and *organism* are different kinds; and the fact that they are distinguished immediately after the discussion of compounded and simple substances would seem to indicate that *mass* and *organism* are different kinds of *compounded* substance.²¹

Although this answer is obvious, it is not obviously right. In fact, some might say that it is obviously wrong, and it is such for two reasons: First, in a passage (unintentionally?) foreshadowing 2.27, Locke explicitly tells us that in virtue of the very notion of what a body is, two bodies cannot coincide. In the chapter ‘On Solidity’ (2.4), in which Locke criticizes the Cartesian notion of the essence of body, Locke tells us: “The Idea of Solidity we receive by our Touch; and it arises from the resistance which we find in Body, to the entrance of any other

²¹ This is basically the interpretation that Chappell proposes (1989), (1990). As Chappell’s Locke uses the term ‘compounded’, however, it is non-univocal. Chappell believes that there are two different ways in which Locke holds a body can be compounded: It can be *synchronously* compounded out of material parts (ultimately of atoms), and in this sense, both masses and the organisms they constitute at any given time are compounded out of the same atoms at that time. Or it can be *diachronically* compounded out of successive things at successive instants. For Chappell’s Locke, organisms are compounded in the latter sense as well as the former. The ‘parts’ out of which organisms are *diachronically* compounded are the successive masses with which they coincide at each particular time.

Martha Brandt Bolton (1994) also thinks that the difference between simple and compounded substances is relevant, but for different reasons. According to Bolton, Locke held that masses are simple substances and organisms are compounded substances. Hence the relevant different kinds that allow for coincidence are *simple substance* and *compounded substance*. I, however, don’t think that Bolton’s interpretation is right. Locke’s clearest examples of simple substances are atoms, God, and finite intelligences. I think that these examples indicate that Locke held a quasi-mereological account of simplicity, i.e., x is simple iff x is without *naturally separable* proper parts (i.e., iff x is naturally indivisible into proper parts). Now clearly masses are not simple in *that* sense. In fact, masses are compounded things *par excellence*. In order for Bolton’s interpretation to work, there must be a sense of ‘simple’ such that masses are simple but organisms are not. I am just not sure what sense can be made of this. What Bolton says is that “God, simple finite intelligences, atoms, and aggregates [are simple substances], since no matter is added nor subtracted from them.” (1994, p. 110) Now it is obvious how ‘no matter is added nor subtracted from’ God, finite intelligences, and individual atoms, but there is a clear sense in which a mass *can* have matter added or subtracted from it. However, the resulting mass would be a different mass after the addition or subtraction of matter. So, Perhaps Bolton’s sense of ‘simple’ is something like: x is simple iff x is without separable proper parts *or* x cannot survive the loss/gain/replacement of parts. Note, however, that this is not a commonly accepted use of ‘simple’ nor is it an obvious reading of Locke’s use of ‘simple’. This sense of ‘simple’ seems *ad hoc*, solely for the purpose of placing masses in a different kind (simple substance) from the organisms (compounded substance) with which they coincide.

Body into the Place it possess, till it has left it.” (2.4.1) It seems to me that Locke’s idea of solidity is conceptually very closely related to L1; that is, solidity is that quality in bodies which precludes any two bodies being in the same place at the same time. Moreover, solidity is “the Idea most intimately connected with, and essential to Body.” (2.4.1) Locke’s discussion of solidity would seem to rule out the possibility of two bodies being in the same place at the same time period, irrespective of whether they are of ‘different kinds’ or not. Admittedly, the case we are considering (i.e., the coinciding mass and organism) is not a case in which we are trying to smooch two footballs into the same place at the same time. Rather, the case we are considering is a case in which one of the bodies ‘constitutes’ the other at a time. Nevertheless, Locke’s account of solidity and its ramifications for his theory of individuation is something that the defender of the Coincidence Interpretation of Locke must address.

Second, and more importantly, in the last sentence of 2.27.1, Locke states: “That which has made the Difficulty about this Relation [i.e., Identity], has been the little care and attention used in having precise Notions of the things to which it is attributed.” Locke then immediately seems to discuss the aforementioned ‘precise Notions’ in the very next sentences. In 2.27.2, Locke claims that we have ideas (‘Notions’) of three sorts of substances: God, finite intelligences, and bodies. He then immediately illustrates the application of L1—the only explicit example of the application of L1 in 2.27—by means of these three kinds:

For though these three sorts of Substances, as we term them, do not exclude one another out of the same place; yet we cannot conceive but that they must necessarily each of them exclude any of the same kind out of the same place...For example could two Bodies be in the same place at the same time; then those two parcels of Matter must be one and the same.²²

For instance, a particular finite intelligence and a particular body can be in the same place at the same time, but no two finite intelligences can be in the same place at the same time; nor can two bodies be in the same place at the same time. The issue is exacerbated by the fact that Locke seems to think that terms ‘body’ and ‘mass’ are equivalent in both meaning and extension. He states the equivalence between “masses” and “bodies” in two consecutive sentences in 2.27.3: “And whilst they exist united together, the Mass,...must be the same Mass,

²² See Mackie (1976) p. 140.

or the same Body: But if one of these Atoms be taken away, or one new one added, it is no longer the same Mass, or the same Body."²³

Here then is the rub: Locke seems to have held each of the following:

- (1) There are only three *kinds* of substances.
- (2) L1 applies to *those* three kinds.
- (3) A mass and the organism it constitutes at a time are not identical but are in the same place at the same time.
- (4) Masses are bodies.

If (1)-(4) are true, then it seems to follow that

- (5) Organisms are not bodies.

But Locke clearly would hold that

- (6) Organisms are not God, nor are they finite intelligences.

Therefore, Locke seems committed to

- (7) Organisms are not substances.²⁴

If the reasoning above is correct, then Locke does not and cannot hold that organisms such as horses, swans, and men are substances. The problem is that Locke constantly refers to horses, swans and men (paradigmatic organisms) as paradigmatic substances.²⁵ That is, Locke holds

- (8) Organisms *are* substances.

²³ See also the 1699 reply to Stillingfleet (*Works* III, especially pp. 301-334) where Locke, without exception, equates bodies with masses and as having the persistence conditions of masses when discussing the resurrection of the body. It is no coincidence, I believe, that around the time of this letter, Locke made several revisions to 2.27 for the Fourth edition of the *Essay*. Among the most noticeable revisions are more explicit identifications of bodies with masses (lines 15-20 of 2.27.3). For discussion of Locke's theory of individuation in the context of his views on the resurrection, see my Forthcoming.

²⁴ Several scholars (Alston and Bennett, Uzgalis, and Lowe) are more than willing to accept (7)—with some qualifications.

²⁵ See 2.23.3; 2.23.4, 2.23.6; 2.23.14 and Alston and Bennett (1988) p. 26.

But, of course, (8) contradicts (7). This is clearly problematic.

Is Locke in as much trouble as he seems to be? Does Locke's view of the relationship between masses of matter and the things they constitute lead to a genuine tension in his thought? Regrettably, it does, as we shall see.

There are several interpretations of Locke that avoid this problem but have problems of their own. The most popular interpretation of Locke on identity argues that Locke holds the view that a mass and an oak tree (or a person and a thinking substance) are *relatively identical*.²⁶ This would avoid the Kinds problem because we would be dealing with *one* individual over time that is both a mass and an organism; as such, we would not have to specify the different kinds to allow for *two* things to coincide. Another interpretation, defended prominently by Christopher Conn, holds that Locke is a four-dimensionalist.²⁷ In so far as I understand four-dimensionalism *as an interpretation of Locke*, it argues that masses are (in most cases, *proper*²⁸) temporal parts of perduring organisms. As such, we are not dealing with two objects occupying the same place at the same time; rather what exists at any instant of time is a *part* of a temporally extended organism. Finally, there is the 'Mode Interpretation', given by William Uzgalis (1990), with some help from Alston and Bennett (1988), and which (in a way) has roots in an interpretation by Edmund Law, an Eighteenth-century commentator on Locke, whose "A Defence of Mr. Locke's Opinion concerning Personal Identity" was included in the 1777 edition of Locke's *Works* (edited by

²⁶ See, for instance, Mackie (1976), Curley (1982), Geach (1967), Thiel (1998), Borowski (1975), Noonan (1978).

According to the relative identity interpretation of Locke, an individual *x* can be the same *F* as an individual *y* without being the same *G* as *y* even if *x* is both an *F* and a *G* and *y* is both an *F* and a *G*. Applying this to the case at hand, there is an individual at *t*₁ that is both a mass of matter and an oak tree. At *t*₂, the individual loses/gains some parts. Nevertheless this individual at *t*₂ is both a mass of matter and an oak tree. However, the individual at *t*₂ is not the same *mass of matter* as the individual at *t*₁, the individual at *t*₂ is the same *oak tree* as the individual at *t*₁.

²⁷ Conn (1999 and 2003). See also McCann (1987).

²⁸ In Gibbard-type cases, in which the careers of the coinciding mass and the organism completely overlap, four-dimensionalists would hold that the mass is an *improper* temporal part of the organism, i.e., the mass is identical with the organism. So, Gibbard-type cases would be problematic for the four-dimensionalist interpretation of Locke, i.e., it is unclear how they could account for the fact that the organism *could* survive the loss/addition of an atom but the mass *could not*. Contemporary four-dimensionalists have the same problem, but they have certain solutions (e.g., David Lewis' appeal to different counterpart relations) that it would clearly be grossly anachronistic at best to attribute to Locke.

Law himself).²⁹ The Mode Interpretation is a version of the Coincidence Interpretation in so far as it affirms that the mass and the organism it constitutes at *t* are not identical despite occupying the same place at the same time, *and*, as such, the mass and the organism are of different kinds. What differentiates the Mode Interpretation from Chappell's version of the Coincidence Interpretation is that the latter holds that both the coinciding mass and organism are substances for Locke. The Mode Interpretation, as presented by Uzgalis, holds that the mass is a substance, but the organism it constitutes at *t* is not a substance; rather the organism is a so-called 'mixed mode' whose features are inherited from the masses whose mode the organism is. Hence the mass and the organisms are of different kinds.

I believe that each of these interpretations makes sense of *some* of Locke's views, and, as such, each has something to recommend it; but these interpretations have major problems of their own. Unfortunately, I do not have the space here to offer detailed accounts of these interpretations or detailed arguments against these interpretations.³⁰ In any case, if the argument of this paper is sound, then none of these interpretations can be correct.

2. Real Essences, Nominal Essences, and Kinds

As we've already seen, the notion of *kinds* is crucial to Locke's theory of individuation. *Kinds* are mentioned explicitly in Locke's formulation of L1, his most fundamental individuation principle, and *kinds* are

²⁹ Law's discussion concerns the relationship between substances and *persons*. He held that in the case of persons and substances, "the word person, then,...stands for a mixed mode or relation, and not a substance." For a discussion of Law's view, see Winkler (1991) pp. 160-162 in reprint.

In my opinion, Uzgalis' Mode Interpretation, of all of the interpretations offered in the literature, has the most to recommend it: It takes seriously the consequences of Locke's principles of individuation, i.e., that they entail that a mass and the organism it constitutes at a time are not identical despite being in the same place at the same time; it explicitly specifies the different kinds to which the mass and the organism belong, i.e., substance and mode respectively; and it takes very seriously Locke's statement in 2.27.2 that there are only three kinds of substances. However, I think that Uzgalis' interpretation is subject to decisive objections. Space limitations unfortunately prevent me from presenting such objections. However, see Chappell (1990) pp. 27-28, for criticisms of Uzgalis' treatment of Lockean *persons* and substances.

³⁰ For arguments against the relative identity interpretation, see Chappell (1989, 1990), Alston and Bennett (1988), Uzgalis (1990), and Conn (2003). In a paper presented at the British Society for the History of Philosophy Locke Conference at Oxford in April 2004 (Stuart (forthcoming)), Matthew Stuart has revived the relative identity interpretation. In my humble opinion, Stuart provides the best defense of this interpretation with which I am familiar. Unfortunately, due to space limitations, I cannot discuss the views of Stuart and Conn at this time.

mentioned in Locke's explanations of L2 & L3. In fact, Locke unequivocally states the indispensability of kinds for his theory of individuation in the following important passages:

'Tis not therefore Unity of Substance that comprehends all sorts of *Identity*, or will determine it in every Case: But to conceive, and judge of it aright, we must consider what *Idea* the Word it is applied to stands for: It being one thing to be the same *Substance*, another the same *Man*, and a third the same *Person*, if *Person*, *Man*, and *Substance*, are three Names standing for three different *Ideas*; for such as is the *Idea* belonging to that Name, such must be the *Identity*. (2.27.7)

For whatever makes the specifick *Idea*, to which the name is applied, if that *Idea* be steadily kept to, the distinction of any thing into the same, and divers will easily be conceived, and there can arise no doubt about it. (2.27.28)

It should be clear to those familiar with Locke that 'idea' in the former passage and 'specifick idea' in the latter passage refer to nominal essences, i.e., those abstract general ideas which serve as the meanings of general terms and which sort individuals into species, sorts, or kinds. Given the importance, then, of nominal essences for Locke's discussion of identity in 2.27, as indicated by these two passages above, it is very surprising how little attention Locke scholars have paid to the relationship between Locke's theory of individuation and his theory of essences.³¹ In the remainder of this paper, I will investigate this relationship. I will first present what I believe to be the correct interpretation of Locke's theory of essences and the relationship between real and nominal essences. I will then see if the theory of real and nominal essences can help us address the Kinds Problem that arises from the Coincidence Interpretation of Locke. I will argue that Locke's theory of real and nominal essences rules out the possibility of two material objects coinciding in place at a time.

2.1. *Abstract Ideas*

Locke introduces real and nominal essences in 2.23.3, but the full-blown theory of essences does not make its appearance until 3.3 when Locke discusses the use of general terms. Locke is a nominalist, in the vague sense of holding that only particulars exist; and he holds an

³¹ Christopher Conn and Matthew Stuart are especially notable exceptions. Conn's recent book (2003) is without question the most detailed investigation into this topic yet published. Stuart (Forthcoming) also pays close attention to the relationship between the theory of individuation and the theory of kinds.

'idea-based semantics', in which (most) terms refer to ideas.³² As such, he explains the meaning of general terms by means of general ideas. As Locke states:

Words become general, by being made the signs of general *Ideas*: and *Ideas* become general, by separating from them the circumstances of Time, and Place, and any other *Ideas*, that may determine them to this or that particular Existence. By this way of abstraction they are made capable of representing more Individuals than one; each of which, having in it a conformity to that abstract *Idea*, is (as we call it) of that sort. (3.3.6)

One of the obvious things that Locke notices is that there are kinds (referred to by general terms) that include less general kinds (referred to by less general terms). For instance, the kind *animal* includes the less general kinds *cat* and *dog*; as such, the extension of the general terms 'cat' and 'dog' will form a subset of the objects that comprise the extension of the general term 'animal'. Locke has a story to tell about the formation of more general nominal essences. Unfortunately, the only *explicit* discussion we get of the levels of generality is found in 3.3.7-9. In these texts, Locke addresses the issue of how we form nominal essences and use general terms to refer to them.

And thus they come to have a general Name, and a general *Idea*. Wherein they make nothing new, but only leave out of the complex *Idea* they had of *Peter* and *James*, *Mary* and *Jane*, that which is peculiar to each, and retain only what is common to them all. (3.3.7)

And we reach greater and greater levels of generality by leaving out more peculiarities:

For let any one reflect, and then tell me, wherein does his *Idea* of *Man* differ from that of *Peter*, and *Paul*; or his *Idea* of *Horse*, from that of *Bucephalus*, but in the leaving out something, that is peculiar to each Individual; and retaining so much of those particular complex *Ideas*, of several particular Existences, as they are found to agree in? Of the complex *Ideas*, signified by the names *Man*, and *Horse*, leaving out but those particulars wherein they differ, and retaining only those wherein they agree, and of those, making a new distinct complex *Idea*, and giving the name *Animal* to it, one has a more general term, that comprehends, with *Man*, several other Creatures. Leave out of the *Idea* of *Animal*, Sense and spontaneous Motion, and the remaining complex *Idea*, made up of the remaining simple ones of Body, Life, Nourishment, becomes a more general one, under the more comprehensive term, *Vivens*. And not to dwell longer upon this particular, so

³² Particles and the copula are exceptions. See 3.7 and Kretzmann (1968).

evident in it self, by the same way the Mind proceeds to *Body*, *Substance*, and at last to *Being*, *Thing*, and such universal terms, which stand for any of our *Ideas* whatsoever. (3.3.9)

What Locke's discussion here makes clear is that one and the same individual belongs to different nominal essences at different levels of generality. In the example at hand, Paul belongs to the nominal essences man, animal, *vivens*, body, substance, and being; and presumably there is another, more fine-grained hierarchy of levels of generality, listing more nominal essences to which Paul belongs. In fact, according to Locke, for any natural or objective similarity obtaining between Paul and another individual, there is (potentially) another nominal essence to which Paul and that individual belong.³³ The fact that the same individual will belong to many different kinds at different levels of generality should not be surprising. Locke holds that a more general nominal essence is simply a complex idea that is only a 'part' of a less general nominal essence. This is explicitly stated in 'Draft B' (1671) of the *Essay*: "[F]or a more Generall word is but a name of a complex Idea which is but a part of that complex Idea which a lesse generall word or Specific name stands for."³⁴

Now, we have seen that Locke's principles of individuation, in particular L1 and L2, only vaguely tell us that difference/sameness of kind is important to the theory of individuation. What Locke does not tell us is at which level(s) of generality L1 and L2 have applicability.³⁵ So, a very good question to pose to Locke is: At which level(s) of generality are the individuation principles supposed to apply? In other words, how broad or fine-grained do kinds need to be construed in order to apply these principles? Clearly there are some individuals who, in virtue of a fine-grained understanding of nominal essences, simply cannot be in the same place at the same time. Take, for instance, two *different (sub-) kinds* of the kind *animal*, cat and dog. Despite the fact that *cat* is a different kind from *dog* (at least as different as a circle is from an oval and rain is from snow),³⁶

³³ See 3.6.12, and Guyer (1994) pp. 128-129.

I say 'potentially' here to indicate the fact that for Locke, it is *we* who form nominal essences. So, there can be all the objective similarity in the world between two individuals, but if *we* do not form an abstract general idea based on these similarities, there will be no nominal essence based on those similarities.

³⁴ Locke (1990) p. 173. See also 3.6.32.

³⁵ Unless, of course, we take Locke's words in the beginning of 2.27.2, in which he states that we have ideas of only three kinds of substances, as specifying the kinds relevant to the application of L1 and L2. However, given what this 'three kinds doctrine' leads to (e.g., the denial of the substancehood of organisms and persons) I will consider it an interpretive last resort.

³⁶ These are some of Locke's examples of essentially different things in 3.3.14.

it would be ridiculous to think that Locke held that at *this* level of generality, two members of different kinds could coincide; that is, any individuals belonging to kinds falling under the more general kind *animal* cannot coincide.³⁷ Admittedly, Locke is silent about cat-dog coincidence, but I think we may safely say that he would not accept such coincidence. Therefore, *mere difference of kind does not guarantee acceptable application of L1 and L2*. So, even if we were to grant that a mass and an organism are of different kinds, this by itself would not be enough to help the Coincidence Interpretation. We will have to keep looking.

2.2. *The Formation of Kinds*

An examination of the relationships between real and nominal essences will reveal the range of possible relationships between individuals and kinds; and this, in turn will reveal the restrictions on an interpretation of an individual's membership in a kind. And, clearly, this will bear directly on the issue of whether a particular mass and organism do (or can) belong to different kinds.

It has become a widely held interpretation of Locke to believe something like the following: Real essences presuppose and depend on nominal essences.³⁸ While I believe that Locke does sometimes understand real essences in this way (and I will discuss this below), I also think that Locke uses the term 'real essence' to refer to the corpuscular structure of 'unsorted particulars'.³⁹ In fact, the first few times that Locke mentions *real* essences (e.g., 2.23.3, 2.31.6, 3.3.15, 3.3.17, first Letter to Stillingfleet (*Works* III, p. 91)), they are characterized as those unknown arrangements of matter responsible for *all* of an individual's observable qualities. Following Pauline Phemister, I will call this type

³⁷ Unless they trivially 'coincide' in virtue of being identical, e.g., a dog and a pit bull (i.e., a dog that is a pit bull).

³⁸ This view is held by Ayers (1981, 1991, vol 2), Guyer (1994), and Bolton (1998a,b) (though Bolton seems a little ambivalent), *inter alia*. For dissenters other than myself, see Phemister (1990), Owen (1991), and Conn (2003). My view of Locke's theory of essences, though developed independently at first, has been subsequently influenced by the writings of Owen, Phemister, and Conn.

³⁹ 'Unsorted particular' is David Owen's term (1991).

Jean-Michel Vienne (1993) argues that Locke distinguishes between the *internal constitution* of a body and the body's *real essence*. Guyer (1994) agrees. I do not think this is right (neither does Phemister (1990) p. 31). Locke repeatedly calls internal constitutions 'real essences'. In any case, even if Vienne et al. are correct, and Locke does distinguish the internal constitution of a body from its real essence (individual real essence, in this case), it has no bearing on the argument of this paper. The argument could simply be restated using 'internal constitution' in place of 'individual real essence'. So, those sympathetic to the Vienne-line should feel free to substitute 'internal constitution' for 'individual real essence' throughout.

of real essence, the ‘individual real essence.’⁴⁰ These are the real essences that individuals have ‘before we give them a Name’, before we sort them into a kind. As Locke states

[T]he real internal, but generally in Substances, unknown Constitution of Things, whereon their discoverable Qualities depend, may be called their Essence...And in this sense it [i.e., the term ‘essence’] it is still used, when we speak of the Essence of particular things, *without giving them any Name.* (3.3.15, emphasis mine)⁴¹

This line of thought is reiterated in the 20 January 1693 letter to Molyneux:

This I do say, that there are real constitutions in things from whence these simple ideas flow, we observ’d combined in them. And this I farther say, that there are real distinctions and differences in those real constitutions one from another; whereby they are distinguished one from another, *whether we think of them or name them or no.*⁴²

Clearly, if these real essences are had by substances without our thinking of them (*a fortiori*, without forming general abstract ideas concerning them) or naming them (i.e., not calling them by general terms), then these real essences are ontologically independent of nominal essences and general terms, respectively.

It is these individual real essences Locke discusses in the famous ‘two opinions’ passage. After dismissing ‘Aristotelian real essences’ “according to which, all natural things are made, and wherein they do

⁴⁰ Phemister (1990). What I have in mind are called ‘real essences of unsorted particulars’ by David Owen. I prefer Phemister’s term only for considerations of brevity.

⁴¹ This text is a bit peculiar and more than a bit ambiguous. The lines preceding this quotation read: “*First, Essence* may be taken for the very being of any thing, whereby it is, what it is.” This may lead some to think that Locke is here discussing n-relative real essence, not individual real essences, as I claim. I admit that the statement that the real essence of something is that “whereby it is, what it is,” if taken in isolation, might cause problems for my interpretation. However, there are two reasons to think that Locke is talking about individual real essences here: First, Locke writes about the dependence of ‘qualities’ on the real essence here. If he were talking about n-relative real essences here, then it would be more appropriate to talk about *properties*. (The difference between qualities and properties will be discussed shortly.) Second, Locke is discussing the essence of “particular things, without giving them any Name.” That Locke is discussing *particulars* in the absence of names should indicate that he is still discussing individual real essences. So, in this context we should read the preceding line as saying that the real essence of x is that whereby it is the *particular* (unsorted) *thing* it is, not as saying that it is that whereby x is the *kind* of thing it is.

⁴² Locke (1976) vol. 4, p. 626, emphasis mine.

exactly every one of them partake, and so become of this or that *Species*,” Locke states:

The other, and more rational Opinion [concerning essences], is of those, who look on all natural Things to have a real, but unknown Constitution of their insensible Parts, from which flow those sensible Qualities, which serve us to distinguish them one from another, according as we have Occasion to rank them into sorts, under common Denominations. (3.3.17)

The essence referred to in this passage must be something that a body has prior to the formation of nominal essences because Locke is characterizing the corpuscular arrangement that *produces* the qualities which allow us to distinguish individuals and create nominal essences ‘as we have occasion to rank them into sorts.’ Locke repeatedly states that the qualities included in a nominal essence ‘flow from’ and ‘depend on’ these individual real essences. I take this to mean, as I have mentioned, that individual real essences have *ontological* priority over nominal essences. This is perhaps most explicit in 3.6.2: “I call it by a peculiar name, the *nominal Essence*, to distinguish it from that real Constitution of Substances, *upon which depends this nominal Essence*.” (emphasis mine) Moreover, Locke also thinks that individuals have these individual real essences *before* we name them; so, these individual real essences exist *temporally* prior to the existence of nominal essences.⁴³

On the other hand, there is the corpuscular feature or group of corpuscular features that are responsible for the particular qualities included in some nominal essence. For example, consider the nominal essence of gold. Malleability is a quality included in this nominal essence. Locke believes that there is some corpuscular feature (or features) of the individual real essence of each particular piece of gold that is responsible for that piece of gold’s malleability. Take the corpuscular feature or group of features of the individual real essence of each particular piece of gold that are the features responsible for the qualities included in the nominal essence of gold. Let us call this feature or group of features, the ‘n-relative real essence’ of gold. More explicitly, let us say then that, where x is a non-atomic material object,⁴⁴

⁴³ Once again, I am in agreement with Phemister (1990) p. 38.

⁴⁴ It is not entirely clear what Locke would say about the real essences of *atomic* bodies; but atomic bodies need not concern us here.

The *individual real* essence of x is the total, intrinsic corpuscular constitution of x responsible for all of x's qualities.

The *n-relative real essence* of x is just those corpuscular features of the individual real essence responsible for those qualities included in a nominal essence to which x belongs.

It is the n-relative real essence that scholars are referring to when they say that real essences presuppose and depend on nominal essences.

Given what has been said, we can now see the 'chronology' of the generation of kinds and the relationship between individual real essences, n-relative real essences, and nominal essences:

First, a body B₁ has an individual real essence that is responsible for *all* of B₁'s observable qualities.⁴⁵ For instance, not only are all of the qualities that are included in the nominal essence of gold (color, malleability, dissolvability in *aqua regia*, certain weight, etc.) had in

⁴⁵ See, for instance, 2.21.73, 2.23.3, 2.31.6, 2.31.10, 2.31.13, 2.32.24, 3.3.15, 3.3.17, 3.3.18, 3.6.2., 3.10.21, 4.4.12, 4.6.10. Admittedly, some of these texts may be referring to qualities included in a nominal essence, and hence may concern n-relative real essences as well. However, given that Locke speaks of these qualities as depending on and flowing from the internal constitution *and* there is no reason to think that the qualities included in a nominal essence are produced in some *special* way, a way in which the rest of the qualities are *not* produced, we should think that the internal constitution (what I have been calling the 'individual real essence') produces all of a body's qualities, even those not included in a particular nominal essence. Moreover, some of these texts explicitly state that, what I've been calling, the individual real essence is responsible for *all* of a body's qualities. For instance, in 2.31.13, Locke states that the "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." (emphasis mine) Locke reiterates this, using much of the same language, in 3.3.15. And several times in 4.6.10, Locke makes reference to the 'real Constitution' upon which *all* sensible qualities are founded. Finally, in 2.32.24, Locke says of substances that "their real Essences lie in a little compass; though the Properties flowing from that internal Constitution, are endless." (Although Locke speaks of 'Properties' here, I think this must be understood as a deviant usage of this term; it would not make sense to say that something had *endless* properties, in the technical sense, because there will be a rather small number of qualities that count as properties relative to any given nominal essence. So, here I take Locke to be saying that the *qualities* that flow from the real essence are endless.) Of course, in most of these passages, Locke speaks of 'discoverable' or 'observable' qualities and 'sensible' qualities. However, given that it is *we* who construct nominal essences on the basis of *observable* similarity of qualities, even if there were qualities other than those produced by individual real essences, they would be completely irrelevant to the formation of nominal essences. That is, even if the individual real essence of a body does not produce *all* of a body's qualities—something I severely doubt Locke thinks—it still produces *all of the qualities that we could possibly include in a nominal essence*.

See also Conn (2002) p. 478, Phemister (1990) p. 38, and Owen (1991) p. 107.

virtue of the individual real essence, so too are the qualities that get left out of the nominal essence.⁴⁶ Given Locke's commitment to corpuscularianism, nothing other than the individual real essence of an individual *could* serve as the basis for the observable qualities which go into the creation of the nominal essence of a kind.^{47,48}

Second, in virtue of the natural or objective similarities between B_1 and another body B_2 , we form a general abstract idea, which includes these similarities and leaves out the dissimilarities (or at least things we consider irrelevant). This general abstract idea is the nominal essence of a kind K to which B_1 and B_2 belong.⁴⁹

Nominal essences are the "Workmanship of the Understanding" (3.3.14), according to Locke. Among the reasons for this label is that despite the fact that the qualities included in the nominal essence are produced by the individual real essence of a body, it is *we* who decide which qualities to include in the nominal essence.⁵⁰ Thus, Locke believes that in the formation of nominal essences, both we and the individual real essence play the crucial roles.

Third, the qualities included in the nominal essence acquire the status of *properties*, where properties are understood (very roughly) as *propria* of the Aristotelian five predicables.⁵¹ That is, these qualities are now considered essential to B_1 and B_2 in so far as they are members of K . (3.6.4-6) So, according to Locke: If q is a quality of a body B , and

⁴⁶ I speak of *qualities* being included in nominal essences, but, strictly speaking, Locke thinks that only *ideas* are included in nominal essences. However, these ideas are caused by qualities in bodies, and, in 3.6.3, Locke states that *qualities* are the 'Ingredients of our complex *Idea*' (i.e., nominal essence).

⁴⁷ See 2.21.73, and Mandelbaum (1964) p. 5.

⁴⁸ There is a huge body of scholarly literature on the extent of Locke's acceptance of/commitment to corpuscularianism. I do not wish to enter too far into this debate because it will take us far away from our subject. I will say only the following: Locke's own words lead me to believe that at times he thought that corpuscularianism was simply the *best available theory* of the natural world, a theory that, like all theories, faces *some* difficulties. See 4.3.16, and Atherton (1984) p. 204 (in reprint). But at other times he was absolutely committed to the truth of corpuscularianism. For instance, in *Elements of Natural Philosophy*, written most likely after 1698 and published posthumously in 1720, Locke unequivocally endorses corpuscularianism: "By the figure, bulk, texture, and motion of the small and insensible corpuscles, all the phenomena of nature may be explained." (*Works* II, p. 440) See also 2.23.11-12. For some of the best *recent* discussion of Locke and corpuscularianism, see Downing (1992, 1998), Jacovides (2002), and Stuart (1998), who attempts to undermine the evidential weight of the *Elements* passage.

⁴⁹ See 2.23.3; 2.23.11; 3.3.12; 3.3.17; and Conn (2002b) p. 480.

⁵⁰ See Guyer (1994).

⁵¹ See Ayers (1981) pp. 251-252 and Ayers (1991) vol. II, pp. 21, 67-68, 71-74, Bolton (1998b) note 4, Owen (1991) pp. 109-111 and note 9, and Vienne (1993) p. 145.

q is included in a nominal essence K to which B belongs, then q is a *property* of B in so far as B is a member of K.⁵²

Prior to sorting individuals into kinds by means of nominal essences, Locke believes that individuals “will be found to have all their Qualities equally *essential*; and every thing, in each Individual, will be *essential* to it, or, which is more true, nothing at all.” (3.6.5) And: “[T]ake but away the abstract *Ideas*, by which we sort Individuals, and rank them under common Names, and then the thought of any thing *essential* to any of them, instantly vanishes.” (3.6.4.) Moreover, what counts as a property of something is always relative to a nominal essence. For instance, in so far as a particular individual is a member of the kind *gold*, that individual will have dissolvability in *aqua regia* as a property; but the same individual in so far as they are a member of the kind *metal* will not have dissolvability in *aqua regia* as a property (though it will have dissolvability as a *quality*).

Some readers may have noticed that I have taken some liberties with Locke’s view of properties and kinds. Strictly speaking, Locke holds that only *kinds* have properties, not individuals (3.6.6). And given that an individual may belong to indefinitely many nominal essences, an individual’s properties will vary depending on the particular nominal essence we are then considering. However, as long as we keep this in mind, I don’t see any problem with saying that an individual, *in so far as it is a member of a certain kind*, has properties.

Fourth, we can now characterize the real essence of a kind K (K’s n-relative real essence) as those features of the individual real essence on which depend just those qualities that are properties relative to K.⁵³ It is this kind of real essence Locke refers to in a famous passage from 3.6.6:

By this *real Essence*, I mean that real constitution of any Thing, which is the foundation of all those Properties, that are combined in, and constantly found to co-exist with the *nominal Essence*; that particular constitution, which every Thing has within it self, without any relation to anything without it. But *Essence*, even in this sense, *relates to a Sort*, and presupposes a *Species*: For being that real Constitution, on which the Properties depend, it necessarily supposes a sort of Things, Properties belonging only to *Species*, and not to Individuals; v.g. Supposing the nominal Essence of *Gold* to be Body of such a peculiar Colour and Weight, with Malleability and Fusibility, the real Essence is that Constitution of the parts of Matter, on which these Qualities, and their Union depend.

⁵² See 3.6.4-3.6.6 and Vienne (1993) p. 145.

⁵³ See 3.3.18, 3.6.2, and Conn (2002b) p. 478.

Unlike individual real essences, Locke holds that n-relative real essences are the same in every member of that nominal essence.⁵⁴ As Locke states in his first exchange with Edward Stillingfleet, Bishop of Worcester :

The internal constitution or real essence of a species: which in plain English, is no more but this, whilst the same specific name, v.g. of *man*, *horse*, or *tree*, is annexed to or made the sign of the same abstract, complex idea, under which I rank several individuals; it is impossible but the real constitution on which that unaltered, complex idea or nominal essence depends, must be the same, *i.e.* in other words, where we find all the same properties, we have reason to conclude there is the same real, internal constitution, from which those properties flow. (*Works* III, 91)

The real essence in this passage *must* be the n-relative real essence. Otherwise we run the risk of attributing to Locke the view that all members of a kind have the same individual real essence; but that would entail independent natural kinds. Moreover, the real essence here is called the ‘real essence of a species’; but species are determined by nominal essences. Finally, if real essences in the passage were individual real essences, then this passage would contradict Locke’s explicit position that not all members of a kind have the same individual real essence. If each member of a nominal essence has the same n-relative real essence, this fact does not entail that there are independent natural kinds; after all, n-relative real essences are determined by nominal essences, and nominal essences are the ‘workmanship of the understanding’.

But what could Locke mean by holding that every member of a certain nominal essence will have the *same* n-relative real essence (relative to that nominal essence)? Certainly, he cannot mean that they have exactly the same total arrangement of parts; nor can he mean that there will be qualitatively identical microstructures that are responsible for the qualities included in a nominal essence. For instance, suppose that malleability is a property relative to a nominal essence K, such that all members of K are malleable. I don’t think that Locke held that there is exactly one type of arrangement of corpuscles that is responsible for the malleability of all malleable things. Likewise, I don’t believe that Locke held (or was committed to holding) that there is exactly one type of arrangement of corpuscles that results in qualities such as fusibility, fragility, dissolvability in aqua regia, etc. That is to say, I think Locke leaves open the possibility that there can be different corpuscular

⁵⁴ Phemister agrees. (1990) p. 36.

features that are responsible for the same observable quality. For instance, suppose that gold and wax are both members of K. If both are members of K, and K includes malleability, then both the gold and the wax will have malleability as a property relative to K. As such, there will be some corpuscular feature(s) included in K's n-relative real essence responsible for the malleability of members of K. But clearly the corpuscular feature(s) responsible for the malleability of the gold can be very different from the corpuscular feature(s) responsible for the malleability of the wax. Given what little Locke says by way of characterization of n-relative real essences, *plus* the fact that he thinks that they are the 'same' in all members of a kind, we would be wise to think of n-relative real essences as *whatever* feature or group of features that are responsible for the qualities included in the relevant nominal essence.⁵⁵ So, even if the categorical 'ground' for a certain quality (e.g., malleability) is different in some ways, this does not affect Locke's point that *whatever* the categorical, corpuscular ground of malleability is in individuals, it will be part of the n-relative real essence of a nominal essence that includes malleability.

3. Essences, Kinds, and Individuation

Now that we have characterized the relevant parts of Locke's theory of essences, we can return to the Kinds Problem. The defender of the Coincidence Interpretation must establish that a mass and the organism it constitutes at a time are of different kinds. Given the discussion of the formation of nominal essences, we can now clearly state precisely what the defender of the Coincidence Interpretation must establish in order to make her case: Given that (i) kinds are (or, at least, are determined by) nominal essences, *and* (ii) nominal essences are created by abstracting qualities that depend on the corpuscular arrangement of material parts, *and* (iii) (if *anything* is true, then it is true that) at any given time, a mass and the organism it constitutes have all and only the same material parts arranged in exactly the same manner, the defender of the Coincidence Interpretation needs to establish that Locke held that two things that are composed of numerically-identical material parts arranged in a numerically-identical manner at a time can be of different kinds.⁵⁶ That is, the defender of the Coincidence Interpretation of Locke must show that two things with the same individual

⁵⁵ Phemister seems to hold a similar view ((1990) pp. 35-36), as does Ayers (1991), volume 2, p. 67).

⁵⁶ This may remind some of an issue in contemporary debates concerning the metaphysics of identity and material constitution called the 'grounding problem'. See Heller (1990), Bennett (2004), Burke (1992), and Zimmerman (1995).

real essence can differ with respect to at least one of their nominal essences. When stated in this way, the problem seems intractable, and ultimately I think that it is (i.e., that the defender of the Coincidence Interpretation cannot make her interpretation consistent with Locke's theory of essences); but I think that it is instructive to see just how far the defender of coincidence can take their interpretation in the face of Locke's theory of essences. We will see how far things can be taken in the next section.

It should be noted before moving on that, in formulating the challenge to the Coincidence Interpretation here, I have assumed that the *arrangement* of parts is a feature of individual real essences. However, if this were not the case, if the individual real essence of *x* were merely *x*'s parts, then perhaps there might be a way for the Coincidence Interpretation to meet my challenge.⁵⁷ The way I have characterized Locke's individual real essences in this paper does make the arrangement of parts a crucial feature of individual real essences. I think that this was certainly Locke's view of the matter: Individual real essences are supposed to be responsible for the qualities a body has, and arrangement of parts will figure indispensably in mechanical/corpuscularian accounts of qualities. In many places, Locke speaks of *texture* as a feature of corpuscular constitutions largely responsible for the qualities bodies have.⁵⁸ In 4.3.13, Locke, writes about the "size, figure, and *texture* of Parts" which is "the Root" the qualities "spring from." And in 4.6.10, Locke discusses "what *texture* of Parts made it [i.e., a body] malleable, fusible, and fixed..."⁵⁹ In fact, Locke sometimes goes so far as to *identify* textures with real essences (e.g., 3.6.9). Now, despite some minor differences in use of the term, differences irrelevant to the present discussion, there is every reason to think that Locke inherits the term 'texture' from Boyle.⁶⁰ Boyle speaks repeatedly of "a certain disposition⁶¹ or contrivance of parts in the whole, which we may call the *texture* of it." ((1991) p. 30) The fact that texture is perhaps the most important mechanical feature of bodies relevant to the production of

⁵⁷ I thank an anonymous referee for pointing this out to me.

⁵⁸ See the discussion of qualities in 2.8.

⁵⁹ Emphasis mine. See also 2.23.11 and 2.23.12.

⁶⁰ The only noticeable difference between Boyle and Locke on texture is that Locke calls texture a 'primary quality' (2.8), whereas Boyle calls texture a 'mechanical affection' of compounded bodies, i.e., bodies consisting of at least two atomic corpuscles. Boyle *never* uses the term 'primary quality'; *a fortiori*, he never refers to texture as a 'primary quality'.

⁶¹ More often than not, Boyle uses the term 'disposition', as was common in the seventeenth century, to refer to the arrangement or structure of bodies. See Anstey (2000) p. 87.

qualities *and* that individual real essences are almost always mentioned in relation to the production of qualities, lead me to believe that the individual real essence of x includes the arrangement of x 's parts; it is not simply x 's parts.⁶²

3.1. Relationships between Essences: Do Any Help the Coincidence Interpretation?

In order to see if there is any way for the Coincidence Interpretation to meet the challenge, let us look at the various possible relationships

⁶² However, as an anonymous referee has brought to my attention, if arrangement is a feature of individual real essences, then two *prima facie* peculiar consequences follow. *First*, given Locke's view of the persistence conditions for masses, according to which a mass cannot survive *any* change of parts but can survive *any amount* of internal rearrangement as long as all of the parts remain 'united', it is possible that M_1 at t_1 is the same mass as M_2 at t_2 even if M_1 and M_2 have different individual real essences as a result of rearrangement of parts. *Second*, if individual real essences include arrangements, then individual real essences would be very short-lived things. After all, arrangements of parts typically do not last very long.

Although these consequences *seem* peculiar, I think that Locke does hold that it is possible (and in most cases, actually the case) that diachronically-identical material things have different individual real essences; and there is no reason why we should think that Locke held that individual real essences are particularly durable. I don't, however, think these consequences are problematic for Locke. In the case of diachronically-identical masses, we must remember that masses are very peculiar things: They are the only things in Locke's ontology that cannot survive *any change of parts* but can survive *any amount* of rearrangement of parts. Suppose that, while retaining all and only the same parts, we were able to rearrange a mass that constitutes a dog into a mass that constitutes an end-table. In this case, as I have already pointed out, Locke is committed to the view that the dog-constituting-mass is the same *mass* as the end-table-constituting-mass. However, the individual real essence of the dog-constituting-mass is a different individual real essence from the individual real essence of the end-table-constituting-mass. Locke almost always mentions real essences (both individual and *n*-relative) in contexts in which he is discussing the relationship between real essences and the qualities which 'depend' on or 'flow from' them; and clearly, the dog-constituting-mass will have radically different qualities from the end-table-constituting-mass. In line with Locke's acceptance of corpuscularianism, in which qualities are in principle to be explained by the corpuscular constitutions of things (i.e., individual real essences), we should suppose, given the radically different qualities produced by the individual real essences of the dog-constituting-mass and the end-table-constituting-mass, that they are different individual real essences. Also, I don't find any texts in Locke to support the view that individual real essences are durable or persist for any noticeable length of time. What *is* necessary on Locke's theory of diachronic identity is that an individual continue to fall under the same nominal essence at different times, that the individual has the same *properties* (and hence the same *n*-relative real essence) at different times. It is *not* necessary that that individual have the same individual real essence at different times or even the same qualities at different times. Of course, falling under the same nominal essence at different times is merely a necessary condition for diachronic identity. As I mentioned earlier in the paper, spatio-temporal origin *and* sameness of kind are separately necessary and jointly sufficient for diachronic identity.

between individual real essences, n-relative real essences, and nominal essences. Start with an obvious relationship between real and nominal essences for Locke:

- (A) It is possible for x and y to belong to the same nominal essence while having (qualitatively) different individual real essences.

(A) is supported by the *entirety* of Locke's discussion of essences in 3.3 and 3.6; and in his first letter to Stillingfleet, Locke states: "The truth is, every distinct, abstract idea, with a name to it, makes a real, distinct kind, whatever the real essence (which we know not any of them) be." (*Works* III, 90) Also consider Locke's discussion of the futile searches of the chymists in 3.6.8:

That we find many of the Individuals that are ranked into one Sort, called by one common Name, and so received as being of one *Species*, have yet Qualities depending on their real Constitutions, as far different one from another, as from others, from which they are accounted to differ *specifically*. This, as it is easy to be observed by all, who have to do with natural Bodies; so Chymists especially are often by sad Experience, convinced of it, when they, sometimes in vain, seek for the same Qualities in one parcels of Sulphur, Antimony, or Vitriol, which they have found in others. For though they are Bodies of the same *Species*, having the same nominal *Essence*, under the same Name; yet do they often, upon severe ways of examination, betray Qualities so different one from another, as to frustrate the Expectation and Labour of very wary Chymists.⁶³

The lesson is that all individuals of a given kind need not have *all* of their qualities in common. This is to be expected, given Locke's theory of essences. All that is necessary (and sufficient) for two individuals to belong to the same kind is that they have their Properties in common, i.e., they have in common those qualities included in the nominal essence of that kind. So, in conformity with the corpuscularian hypothesis, if two individuals can belong to the kind, say, *sulphur* without having *all* of their qualities in common, then clearly there can be a difference of individual real essences among samples of sulphur, i.e., among individuals falling under the same nominal essence *sulphur*. Therefore, Locke holds (A). The possibility expressed by (A), however, does not seem to help with the Kinds Problem.

Next consider something that we have already seen. In the most explicit account of the formation of nominal essences given by Locke (3.3.9), he makes it clear that:

⁶³ See also 3.10.20.

- (B) It is possible that x and y (individuals with (perhaps dramatically) different individual real essences) can belong to some of the same nominal essences, but can differ with respect to their membership in other nominal essences.

Even though x and y have the same nominal essence at one level of generality, they can differ in their nominal essences at other levels of generality. For instance, a tree and a man have the same nominal essence at the level of generality: *vivens*; but they differ in their nominal essences at a more-fine-grained level, namely when considering the nominal essences *tree* and *man*). Moreover, because n-relative real essences are just those corpuscular features of the individual real essence responsible for the qualities included in a particular nominal essence, it follows that

- (C) It is possible for x and y to have the same n-relative real essence at one level of generality but differ in their n-relative real essence at another level of generality.

Therefore, it is possible for two objects to have the same (n-relative) real essence and yet differ in *some* of their nominal essences; hence, two things with an *n-relative* real essence in common can belong to some different kinds.

Prima facie, this might seem to be of help to the Coincidence Interpretation. After all, we have found a way for two things to have the same real essence (in one sense of ‘real essence’) but differ with respect to some of the kinds to which they belong. But does establishing (B) and (C) as Lockean principles actually help the Coincidence Interpretation? No. In the cases in which (B) and (C) are true, there must be at least *some* corpuscular differences between x’s individual real essence and y’s individual real essence; and this explains how they can have different observable qualities; and that in turn explains how they can differ with respect to the things to which they are similar. But in the case of a spatiotemporally-coinciding mass and organism, there are no corpuscular differences. They have all and only the same corpuscles in exactly the same arrangement; they have the same individual real essence. Thus, (B) and (C) do not help the Coincidence Interpretation.

Let us look at another relationship between essences, in order to see if there is some way in which things with the same real essence could differ in kind. Suppose, as I think any good corpuscularian would, that it is possible for the same corpuscular feature of an individual real essence of

a body to be responsible for two or more observable qualities of that body.⁶⁴ Locke repeatedly indicates that this is the case in his discussion of qualities in 2.8. For example: “[W]hat is Sweet, Blue, or Warm in *Idea*, is but the certain Bulk, Figure, and Motion of the insensible Parts in the Bodies themselves, which we call so.” (2.8.15; see also 2.31.6) I take it that one of the main points of the discussion of qualities in 2.8 is that *all* the observable qualities (or, if you prefer, the simple ideas caused by qualities) are the result of a few primary qualities of corpuscles and their arrangement. In fact, all of the secondary qualities are produced by the corpuscular arrangements and their degrees of motion/rest; and Locke is quick to point out that in *most* cases, ideas produced by secondary qualities are those ideas included in nominal essences.⁶⁵

Remember that Locke holds that nominal essences are the ‘workmanship of the understanding’. This entails for Locke both that not all of the qualities of a particular body need be included in any of its nominal essences, and that our interests may play some role in which qualities get included in nominal essences.⁶⁶ For instance, suppose that there are two different kinds of metal, K_1 and K_2 . Samples of K_1 are used to make ship anchors because they are particularly heavy and malleable (imagine that the process by which these anchors are made is aided by the malleability of the metal). K_2 is used to make jewelry because samples have a striking color and are particularly fusible. Just because a body has a certain quality, that doesn’t entail that that quality will be included in all (or any) of its nominal essences. An individual may be both malleable and fusible, and, in fact, the individual’s malleability and fusibility may have their ‘ground’ in exactly the same corpuscular feature. But, remembering that it is *we* who create nominal essences, if *we* think that malleability is relevant for some reason and fusibility is irrelevant, then there could be nominal essences that include malleability and don’t include fusibility. Now, suppose that there is a corpuscular feature F_1 that is responsible both for heaviness and for the striking color in question; and there is a corpuscular feature F_2 that is responsible both for the malleability and fusibility in question. Remember that *n*-relative real essences are just those corpuscular features of the individual real essence that are responsible for the qualities included in a nominal essence. If F_1 is responsible for two qualities Q_1 and Q_2 , and F_2 is responsible for two qualities Q_3 and Q_4 , and there is a ‘splitting up’ of the qualities into two different kinds (i.e., Q_1 and Q_3 are included in K_1 , and Q_2 and Q_4 are included in K_2), then we have a situation in

⁶⁴ See, for instance, Boyle (1991) p. 27.

⁶⁵ See 2.23.10, 3.2.3, 3.6.29, 3.9.17.

⁶⁶ See for instance 3.6.29.

which the kinds K_1 and K_2 have the same n-relative real essences (i.e., $[F_1 \ \& \ F_2]$) despite being different kinds of metal. Therefore,

- (D) It is possible that x and y can have different individual real essences and different nominal essences (at the *same* level of generality), while having the same n-relative real essence (at the *same* level of generality).⁶⁷

The discussion here has established that Locke held (or, at least, was committed to) various relationships between individual real essences, n-relative real essences, and nominal essences. Unfortunately, none of the various relationships we have discussed establishes that Locke held the following:

- (E) It is possible for x and y to have the same (numerically or qualitatively⁶⁸) individual real essence and yet differ with respect to at least one of their nominal essences (irrespective of levels of generality).

But (E) is precisely what the defender of the Coincidence Interpretation needs to establish. Is (E) true according to Locke? I cannot see how it could be. In fact, what Locke seems to be committed to is the following:

- (F) Necessarily, for any x and y, if x and y have the same individual real essences, then for any kind K, either (i) both x and y are members of K or (ii) neither x nor y are members of K.

(F) clearly entails the falsity of (E), and we have seen that (E) is what the Coincidence Interpretation needs to establish in order for it to be compatible with Locke theory of essences. So, if it can be shown that Locke held (F), we will have shown either that the Coincidence Interpretation is false or that Locke's theory of individuation is incompatible with his theory of essences. And, to repeat, we have seen the plausibility of the argument for the Coincidence Interpretation. This

⁶⁷ Contra Bolton who states: "things with the same real essence cannot have different properties (i.e., qualities that flow from the real essence)" (1998b) p. 221.

⁶⁸ Phemister (1990) argues that it is possible, according to Locke, for two distinct, non-coinciding individuals to have qualitatively identical individual real essences. Although I think she is right about this, I need not be committed to this view in order to make my argument. After all, in the case under discussion (i.e., the mass and the organism) there is no question about their having the same (i.e., *numerically* identical) individual real essences.

leaves us in the uncomfortable but justified position of attributing incompatible views to Locke.

3.2. Evidence for (F)

Let us begin with a passage, which at first glance appears to provide exactly the evidence we need to show that Locke held (F):

[I]t is as impossible, that two Things, partaking exactly of the same real *Essence*, should have different Properties, as that two Figures partaking in the same real *Essence* of a Circle, should have different Properties.” (3.3.17)

Prior to my discussion of Locke’s theory of essences, this passage could have been taken as very strong evidence in favor of (F). However, given Locke’s theory of essences as presented in this paper, this passage should now strike us as ambiguous. I suggest that this passage could be read in two general ways: A *Lockean reading* and an *Aristotelian reading*. I think that *if* we read this passage in a Lockean way, then it does provide support for (F). There are four possible Lockean readings of this passage.⁶⁹

- R1. It is impossible that x and y have the same individual real essence but differ in their qualities.
- R2. It is impossible that x and y have the same n-relative real essence but differ in their qualities.
- R3. It is impossible that x and y have the same n-relative real essence but differ in their properties.
- R4. It is impossible that x and y have the same individual real essence but differ in their properties.

I think that *if* we give a Lockean reading of the 3.3.17 passage, then we should embrace R4. We should reject R1 and R2 because they require a deviant use of ‘properties’.⁷⁰ Moreover, R2, as we have already seen, is

⁶⁹ These options are exhaustive because Locke only believes in two kinds of real essences (i.e., individual real essences and n-relative real essences), and he only uses the term ‘properties’ to denote *propria* and to denote qualities.

⁷⁰ There are ninety (relevant) occurrences of ‘property’ or ‘properties’ in the *Essay*, and only nine could plausibly be considered exceptions: 2.23.6, 2.23.30, 2.31.10, 2.32.24, 3.3.18, 3.4.15, 3.6.8, 3.11.23, and 3.9.17; and only 2.32.24 and 3.9.17 can be considered so with a high degree of confidence.

false according to Locke. We should reject R3 because it is incompatible with (D) (see above), and we have good reason to think that Locke held (D). But consider R4. Suppose that ‘real essence’ in our passage from 3.3.17 refers to the individual real essence, and that ‘properties’ has its technical (*propria*) sense. If this is right, then Locke is saying that two things with the same individual real essence cannot differ with respect to their properties. But aren’t properties relative to nominal essences? And don’t individuals have individual real essences independent of their inclusion in some nominal essence? Yes and yes. However, individuals retain their individual real essences after being sorted into a kind K and after ‘acquiring’ n-relative real essences relative to K. Things with properties still have individual real essences; the mere mention of ‘properties’ in 3.3.17 doesn’t entail that the ‘real essences’ in question must be n-relative real essences. So, then all Locke is saying, if R4 is correct, is: If x and y have the same individual real essence, then everything that is a property for x is a property for y and vice versa. We’ve admitted already that properties are relative to nominal essences/kinds. So, if everything that is a property of x is a property of y and vice versa, then x and y will belong to all and only the same nominal essences/kinds. In other words, reading 3.3.17 as R4 supports (F). Therefore, *if* a Lockean reading of 3.3.17 is correct, then this passage supports (F).

There is, however, a quite plausible Aristotelian reading of this passage, in which Locke is discussing neither individual nor n-relative real essences. Rather, Locke is discussing *Aristotelian real essences*. If we look at the context, we see that the passage appears in the context of an objection to Aristotelian real essences based on the “frequent Productions of Monsters,...Changelings, and other strange Issues of humane Birth.” Locke states that these phenomena are incompatible with the view, “which supposes these *Essences*, as a certain number of Forms or Molds, wherein all natural Things, that exist, are cast, and do equally partake.” These essences are clearly Aristotelian essences and not Lockean essences. He then goes on to explain why monsters are incompatible with this view: “Since it is impossible, that two Things, partaking exactly of the same real *Essence*, should have different Properties...” On the Aristotelian view, it is impossible for individuals with the same real essence to differ in the properties that ‘flow from’ or are entailed by the real essence.⁷¹ So, on the Aristotelian reading, the 3.3.17 passage is simply used in an objection to a certain (non-Lockean) understanding of essences, and, as such, the passage is irrelevant to Locke’s positive theory of real and nominal essences; *a fortiori*, the passage does not provide evidence for or against (F).

⁷¹ See Ayers (1981) pp. 251-253.

Fortunately, we need not rely heavily on 3.3.17 for textual evidence. My contention that Locke is committed to (F) is independently supported by Locke's words concerning the real and nominal essence of *man* and whether hairy creatures lacking language and reason could be men:

But if the Enquiry be made concerning the supposed real Essence; and whether the internal Constitution and Frame of these several Creatures be specifically different, it is wholly impossible for us to answer, no part of that going into our specifick *Idea*: only we have Reason to think, that where the Faculties, or outward Frame so much differs, the internal Constitution is not exactly the same. (3.6.22)

I take this passage to be claiming that, even though real essences are unknown, we can still be confident that the following is true:

If the observable qualities of x and y differ, then the internal constitutions (i.e., individual real essences) of x and y differ.⁷²

This, of course, should be expected, given Locke's acceptance of corpuscularianism. But the contrapositive of this conditional is:

If it is not the case that the internal constitutions of x and y differ, then it is not the case that the observable qualities of x and y differ.

The fact that Locke holds this is clearly crucial to the problem we have discussed in this paper: An organism and the mass that constitutes it at any given time have not merely qualitatively identical internal constitutions or individual real essences, they have numerically identical internal constitutions or individual real essences. Therefore, the mass and the organism *cannot* differ with respect to their observable features. But it is precisely the observable features of individuals that are the 'ingredients' in nominal essences. So, there seems to be no way in which the mass and organism can differ with respect to their nominal essences; therefore, there can be no way in which the mass and the organism can differ with respect to their kinds. Given this fact, Locke's theory of individuation and his theory of essences are incompatible.

Someone may object that I am downplaying the fact that Locke thinks it *likely but not certain* that bodies with many of the same observable qualities have the same or very similar individual real essences.⁷³ As Locke states: "*Nature makes many particular Things,*

⁷² See Alexander (1985) p. 272.

⁷³ For instance, Ayers (1981) p. 257.

which do agree one with another, in many sensible Qualities, and probably too, in their internal frame and Constitution...” (3.6.36)⁷⁴ And in the passage from 3.6.22 quoted above, Locke does not say that we can be certain or know that difference of observable qualities indicates difference of individual real essence; he says simply that “we have Reason to think” that this is the case. Given this, someone might object that I have not made my case because Locke does not claim that the conditionals above are true, but simply that we have reason to think that they are true or they are probably true.

I don’t think that Locke’s ‘epistemic modesty’, however, counts as evidence against my argument.⁷⁵ After all, there is a huge difference between cases in which two individuals have *some* or *many* of the same observable qualities (in which case, Locke thinks they *probably* have similar individual real essences) and a case in which two individuals have *all and only* the same observable qualities, as is the case with the coinciding mass and organism. Moreover, the latter is a case in which we *know* that the mass and the organism at a time have (numerically) the same individual real essence. So, Locke’s epistemic modesty about whether similarity of observable qualities entails similarity of individual real essence or whether difference in qualities entails difference in individual real essence is irrelevant to the present discussion.⁷⁶

Conclusion

We have seen that Locke held certain principles of individuation and persistence conditions for masses and organisms, and that these entail that a mass and the organism it constitutes at a time are not identical despite being in the same place at the same time. We have also seen that Locke’s theory of essences entails (F). Therefore, Locke is committed to the contradictory positions that a mass and the organism it constitutes at a time are of different kinds, and that there is no way for a mass and the organism it constitutes at a time to be of different kinds.

Many readers of Locke will not be surprised to find out that there is yet another tension in Locke; “just add it to the list,” they might say. However, unlike some *alleged* tensions in Locke’s *Essay*, I believe that the one that exists between his views on identity and his views of

⁷⁴ See also 3.3.13.

⁷⁵ The term ‘epistemic modesty’ is borrowed from Downing (1998) p. 395.

⁷⁶ Also, it should be noted that both 3.6.22 and 3.6.36 are texts addressing the issue of whether there are natural species/kinds, i.e., whether real essences constitute kinds. We already have seen that Locke held that there are natural similarities between individuals but *not* natural species/kinds. As such, any reservations that Locke expresses in these texts are irrelevant to *our* discussion.

essences is a *genuine* tension. That is to say: this is not a tension, which, like his views on substratum, qualities, freedom, etc., arises (I believe) solely because of ambiguous and/or misleading use of terms and occasional sloppiness on the part of Locke. The tension I have exposed is not going to go away that easily.

Finally, for those readers dissatisfied with the situation in which I have left Locke, there are, of course, the options I mentioned in section two (e.g., relative identity, four-dimensionalism, the Mode Interpretation). I have serious doubts about the viability of these alternative interpretations. Of course, one may think that whatever the shortcomings of those interpretive options, they are better than leaving Locke committed to contradictory positions, as I have. I agree that, in most cases, this would be better (in some sense of ‘better’), but in this case, the better alternative is not a *genuine* alternative. As a result, I must (unenthusiastically) join the ranks of those scholars who think that Locke is inconsistent. However, I would happily leave their ranks if it can be shown that there is any interpretation of Locke on the issues discussed in this paper that will get him out of the problems I have mentioned.

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