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Strings, Physies, and Hogs Bristles: Names, Species, and Classification in Locke

ALLISON KUKLOK (ST. MICHAEL'S COLLEGE, VERMONT)

Abstract:

It is often claimed that classification, on Locke's view, proceeds by attending to similarities between things, and it is widely argued that nothing about the sensible similarities between things determines how we are to sort them, in which case sorting substances at the phenomenal level must be arbitrary. However, acquaintance with the "internal" or hidden qualities of substances might yet reveal objective boundaries. Citing what I refer to as the Watch passage in Locke's *Essay* (henceforth *Watches*), many commentators claim that classification at the microphysical level must also be arbitrary. They conclude that sorting is arbitrary at any level of description. I refer to this as the standard reading of Locke on classification. In this paper I argue that Locke does not claim that sorting is arbitrary, either at the phenomenal level, or at the microphysical level. First, Locke does not claim in *Watches* that sorting is arbitrary at the microphysical level. The existence or nonexistence of objective boundaries at the microphysical level is not *Watches'* topic and the passage is in fact silent on that question. Here, the standard reading mistakes a claim about the nature of the task of locating "specific differences" for a claim about the nature of the task of classification. This diagnosis proves instructive, for I argue that a similar conflation underwrites the standard reading's claim that sorting at the phenomenal level must be arbitrary. Far from arbitrarily choosing how to sort things in terms of their phenomenal similarities, Locke thought that the mind simply follows nature's lead. This characterization of the mind's activity, I go on to argue, accords well with Locke's claim that species are the workmanship of the understanding.

Keywords: species, classification, names, essences

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1.1. Introduction

It is often claimed that classification, on Locke's view, proceeds by attending to similarities between things,¹ and it is widely argued that nothing about the *sensible* similarities between things determines how we are to sort them, in which case sorting substances at the phenomenal level must be arbitrary. However, acquaintance with the “internal” or *hidden* qualities of substances might yet reveal objective boundaries. Citing what I refer to as the Watch passage (henceforth *Watches*) in Locke's *Essay concerning Human Understanding*,² many commentators claim that classification at the microphysical level must also be arbitrary. They conclude that sorting is arbitrary at any level of description. I refer to this as the standard reading of Locke on classification.

In this paper I argue that Locke does *not* claim that sorting is arbitrary, either at the phenomenal level, or at the microphysical level. First, Locke does not claim in *Watches* that sorting is arbitrary at the microphysical level. The existence or nonexistence of objective boundaries at the microphysical level is not *Watches*' topic and the passage is in fact silent on that question. Here, the standard reading mistakes a claim about the nature of the task of locating “specific differences” for a claim about the nature of the task of classification. This diagnosis proves instructive, for I argue that a similar conflation underwrites the standard reading's claim that sorting at the phenomenal level must be arbitrary. Far from arbitrarily choosing how to sort things in terms of their phenomenal similarities, Locke thought that the mind simply follows nature's lead. This characterization of the mind's activity, I go on to argue, accords well with Locke's claim that species are the workmanship of the understanding.

The paper is divided as follows. I introduce the standard reading of *Watches*, according to which classification, at any level of description, must be arbitrary (section 1.2). I argue that *Watches* shows rather the irrelevance of hidden internal differences to species whose boundaries are antecedently drawn at the phenomenal level (sections 1.3–5). I then take stock by arguing that the standard reading mistakes a claim about the nature of the task of identifying specific differences for a claim about the nature of the task of classification, a diagnosis that forestalls the temptation to make a similar error with respect to other, *Watches*-like passages (section 2.1). Once we see that *Watches* and *Watches*-like passages do not concern *classification*, we see that Locke never argued that classification is arbitrary, either at the microphysical or phenomenal levels. I then argue that species that minds have already made—species made by the vulgar—cannot plausibly be understood as the upshot of arbitrary choice (section 2.2). On the contrary, the vulgar make species by following nature's lead (section 2.3). I then argue that Locke's claim that

¹ Thus Matthew Stuart writes, “nature makes many things that are similar to one another, but it is we who decide which similarities make things of the same species, which differences form the boundaries between sorts.” *Locke's Metaphysics* (Oxford: Oxford University Press, 2013), 173. It must be noted that the similarities between things are nevertheless objective. Walter Ott notes that “Locke doesn't deny that there are objective resemblances among objects, even at the corpuscular level; what he denies is that those resemblances are sufficient to ground one particular way of sorting those objects as opposed to any other. Which resemblances we select to serve as necessary conditions for membership in a given group is entirely up to us.” *Locke's Philosophy of Language* (Cambridge: Cambridge University Press, 2003), 83–84.

² All references to John Locke, *An Essay concerning Human Understanding*, ed. Peter H. Nidditch (Oxford: Clarendon Press, 1975), will appear by book number, chapter number, and section number.

species are the workmanship of the understanding is consistent with the claim that minds make species by following nature's lead (section 2.4). I draw out the implications of my reading for two influential accounts of Locke on species and classification, those given by Paul Guyer and Michael Ayers, respectively (section 2.5). Finally, I address an objection and make an observation regarding a disagreement between Guyer and Ayers about the true grounds of Locke's claim that species are the workmanship of the understanding (section 3).

1.2. *Watches* and the Standard Reading

In *Watches*, Locke imagines a watchmaker acquainted with the hidden mechanical differences between the internal constitutions of watches. As several commentators read the passage, the watchmaker's acquaintance with these differences, far from putting him in a position to recognize objective boundaries between species, rather presents him with such an array of internal mechanical properties that any choice regarding how to sort watches on their basis must surely be arbitrary. The following excerpt of the passage is typically cited:

There are some *Watches*, that are made with four Wheels, others with five: Is this a specifick difference to the Workman? Some have Strings and Physies, and others none; some have the Balance loose, and others regulated by a spiral Spring, and others by Hogs Bristles: Are any, or all of these enough to make a specifick difference to the Workman, that knows each of these, and several other contrivances, in the internal Constitutions of *Watches*?³

The lesson here—one that applies equally to the case of natural substances⁴—might be described as follows: while classification is arbitrary at the level of *observable* qualities, perhaps discovery of the internal constitutions of things would reveal objective boundaries. *Watches* blocks the latter's possibility, for it shows that classification is arbitrary at the microphysical level. I will refer to this as the standard reading of *Watches*.⁵

³ III.vi.39: 463.

⁴ Locke writes, "Just thus, I think, it is in natural Things." III.vi.39: 463-64.

⁵ What I refer to as the standard reading ranges over accounts that differ as to *why* classification is arbitrary at both the phenomenal and microphysical levels. Paul Guyer takes the significance of the passage to be that knowledge of the internal constitutions of things will not lift the burden of choice when it comes to sorting: "Locke's argument...implies that no matter how much objective similarity there is between natural entities and how much we know about them, we must still choose which similarities to make the basis of our system of classification. This holds even if we can recognize the microscopic constitutions of things." "Locke's Philosophy of Language," in *The Cambridge Companion to Locke*, ed. Vere Chappell (Cambridge: Cambridge University Press, 1994), 136-37. Guyer's interpretation turns on what he describes as the logic of general ideas. The meanings of our species names are given by abstract ideas we make. But making an abstract idea is a matter of representing resemblances in terms of which the idea can pick out more than one thing. However, *which* and *how many* such resemblances matter for the purposes of classification is a question not settled by things themselves, Guyer argues, and this is as true of observable resemblances as it is of hidden ones. According to William Uzgalis, Locke's reference to all of the minute internal differences between particular watches suggests that they lie along a *continuum*. We are thus unable to find clear, non-arbitrary gaps that would ground a natural sorting of watches into kinds: "Locke is suggesting that a continuous distribution of different properties among the internal

1.3. The Necessity of General Names in ‘Completing a Species’

By attending closely to two claims made in *Watches*, it becomes clear that Locke does not take up the question of whether internal constitutions would reveal objective boundaries. *Watches* is in fact silent on that matter.

First, Locke claims that a speaker’s regarding some qualitative difference between things as a specific difference, i.e., a difference that makes for a difference in species, depends on which general terms are part of her vocabulary. And which general terms are part of a speaker’s vocabulary depends in turn on her adoption of conventions established by her linguistic community, conventions about which qualitative differences count as specific differences.

Second, Locke challenges a pervasive tendency to assume that the species in terms of which we name and sort things are “made by nature.”⁶ In fact, they are the “workmanship of the understanding.”⁷ What Locke means is that the way that *we* classify particulars proceeds according to criteria found in abstract ideas we make, which ideas constitute and exhaust the boundaries of our species names. The species picked out by these names are thus parochial—my term, not Locke’s—in that their boundaries are to be traced to the mind’s own activity. To say, then, that the species in terms of which we classify things are parochial is to both capture and emphasize the fact that the criteria for membership in these kinds is exhausted in terms of abstract ideas we make.

The tendency to assume that our parochial species are made by nature is itself driven by the assumption that the unknown constitutions or real essences of things are what in fact make it the case that something belongs to a parochial kind. In *Watches*, we find yet another of Locke’s reminders that *we* individuate our parochial kinds in terms of *known* qualities. The hidden and thus unknown real constitutions of things do not constitute the basis upon which our parochial kinds are individuated.

mechanisms of watches prevents the watch-maker from finding gaps or clear differences between groups, which would mark the boundaries between species in a non-arbitrary way.” “The Anti-Essential Locke and Natural Kinds,” *The Philosophical Quarterly* 38, no. 152 (1988): 336. Michael Ayers, offering a slightly different reading, argues that the passage shows that there is no natural or non-arbitrary point at which to *stop* drawing distinctions between bodies at the corpuscular level, in which case there are no naturally lowest species. “Review Article: The Cambridge Companion to Locke,” review of *The Cambridge Companion to Locke*, edited by Vere Chappell, *The Locke Newsletter* 28 (1997): 175-76. Ayers, it is important to note, argues that Locke’s argument rests on his corpuscularianism, and takes issue with Guyer’s interpretation, a debate I take up briefly in section 3 of the paper. Lionel Shapiro writes that “Locke holds that our sorting would be no less arbitrary if, *per impossible*, it could be based directly on differences in corpuscular constitution.” “Toward ‘Perfect Collections of Properties’: Locke on the Constitution of Substantial Sorts,” *Canadian Journal of Philosophy* 29, no. 4 (December 1999): 582. Citing *Watches*, Jan-Erik Jones argues that “knowledge of internal structure would not tell us what features constitute *differentia*, rather, we have to decide which features are to be included in the definitions of our species terms. This shows that even if the primary qualities of the minute particles were discoverable it would still not give us any insight into the essential features of the kind because the same choices of what to include in our definitions would resurface at the microscopic level.” “Locke on real Essences, Intelligibility, and Natural Kinds,” *Journal of Philosophical Research* 35 (2010): 156-57.

⁶ III.v.9: 433; III.vi.27: 454; III.vi.43: 466; III.vi.49: 470; IV.iv.13: 569.

⁷ III.iii.13: 415.

Hidden real constitutions are therefore *irrelevant* to the individuation of these kinds.

Locke's aim in *Watches* is thus (i) to demonstrate the role general terms or species names play in grounding facts about the taxonomical distinctions a language user is disposed to make, a role he describes as "completing a species," and (ii) to show that nothing apart from the criteria that constitute our parochial kinds determines membership in these kinds.

Let's consider (i). A speaker's vocabulary of general terms, Locke argues, plays a necessary role in explaining the taxonomical distinctions a speaker is disposed to make. Locke describes that role as "completing" a species, which brings to mind his Workmanship metaphor. Our work in making a parochial kind is not "complete" unless we annex a unique general term to an abstract idea or nominal essence. Note how Locke opens *Watches*:

How much *the making of Species and Genera is in order to general names*, and how much general Names are necessary, if not to the Being, yet at least to the completing of a *Species*, and making it pass for such, will appear, besides what has been said above concerning Ice and Water, in a very familiar Example. A silent and a striking *Watch*, are but one *Species*, to those who have but one name for them: but he that has the name *Watch* for one, and *Clock* for the other, and distinct complex *Ideas*, to which those names belong, to him they are different *Species*.⁸

If *A* uses the name "watch" to pick out both silent and striking watches, then to *A* these belong to the same species. But if *B* uses the term "watch" to pick out silent watches, and uses the term "clock" to pick out striking watches, this shows that *B* regards them as belonging to distinct species.

Locke has already illustrated just this point in an earlier passage I will refer to as *Ice/Water*. There, Locke assumes that *his* readers will distinguish ice and water as distinct species⁹:

If I should ask any one, whether *Ice* and *Water* were two distinct *Species* of Things, I doubt not but I should be answered in the affirmative: And it cannot be denied, but that he that says they are two distinct *Species*, is in the right.¹⁰

But Locke then imagines an Englishman bred in Jamaica who encounters frozen water for the first time:

But if an *English-man*, bred in *Jamaica*, who, perhaps, had never seen nor heard of *Ice*, coming into *England* in the Winter, find, the Water he put in the Bason at night, in a great part frozen in the morning; and not knowing any peculiar name it had, should call it harden'd Water; I ask, Whether this would be a new *Species* to

⁸ III.vi.39: 463.

⁹ For the purposes of my argument it won't matter if we agree with Locke that we in fact do distinguish water and ice as distinct "species." After all, part of Locke's aim in the *Essay* is to give a deflationary account of the status of our parochial kinds.

¹⁰ III.vi.13: 447-48.

him, different from Water? And, I think, it would be answered here, It would not to him be a new *Species*.¹¹

What Locke refers to under the description “hardened water” is not a new species to the traveler because he does not have a distinct species name for it. In both *Ice/Water* and *Watches*, then, Locke argues that a speaker’s regarding two qualitatively different things as belonging to distinct species depends on her use of distinct general terms for each. While *x* and *y* might differ qualitatively—where *x* and *y* might be ice and water, or silent and striking watches—and though a speaker’s recognition of that fact may be cashed out in terms of her having an idea of *x* which is distinct from her idea of *y*, her having ideas that reflect that qualitative difference is not yet sufficient for her to distinguish *x* and *y* as belonging to distinct species. She will likely mark the qualitative difference between *x* and *y* with some description that deploys the same species name, e.g., what we find in the descriptions “water” and “hardened water”:

[Hardened water] would not be a new *Species* [to the *English-man*, bred in *Jamaica*], no more than congealed Gelly, when it is cold, is a distinct *Species*, from the same Gelly fluid and warm; or than liquid Gold, in the Fornace, is a distinct *Species* from hard Gold in the Hands of a Workman.¹²

Locke concludes *Ice/Water* on a characteristically deflationary note: “And if this be so, ‘tis plain, that our *distinct Species*, are *nothing but distinct complex Ideas*, with *distinct Names annexed to them*.”¹³

Returning to *Watches*, the same point holds of the man who employs the general term “watch” for all timepieces, including silent and striking ones. In that case, “a silent and a striking *Watch*” are “but one *Species*” to him, because he has “but one name for them.” Conversely, “he that has the name *Watch* for one [silent watches], and *Clock* for the other [striking watches], and distinct complex *Ideas*, to which those names belong, to him they are different *Species*.”¹⁴

However, an imagined interlocutor responds: surely what *makes* for the distinction in kind between silent and striking watches amounts to something independent of a speaker’s employment of distinct general terms for each, *for these two kinds of watch must be different in their internal constitutions*. Furthermore, the watchmaker has an idea of these different constitutions: “It will be said, perhaps, that the inward contrivance and constitution is different between these two [silent and striking watches], which the Watch-maker has a clear *Idea* of.”¹⁵ The moral of *Watches* lies in Locke’s reply to this challenge, which can be articulated as follows: Contrary to what you, *Locke*, say, the measures of species picked out by the names *watch* and *clock* are independent of

¹¹ Ibid.

¹² Ibid.

¹³ Ibid.

¹⁴ III.vi.39: 463.

¹⁵ Ibid.

linguistic practice, and so independent of nominal essences and their corresponding species names. Membership in these species is determined by the internal constitutions of things themselves. In the next section I argue that we find guidance for how to read Locke's response to this challenge in a passage I refer to as *Creatures*.

1.4. 'Our Measures of Species are Only our Abstract Ideas'

In *Watches*, Locke explains the role general terms play in whether some qualitative difference is regarded as, and so counts as, making for a difference in kind. Locke then imagines an objector who disputes this claim. The objector argues that, quite independently of whether a speaker happens to regard, say, silent and striking watches as belonging to two distinct species, which is itself a matter of a speaker's employment of distinct general terms, there really is a difference in kind between them, because they differ in their internal constitutions. In order to adjudicate this dispute, Locke asks us to consider what the watchmaker would be able to do on the basis of his knowledge of the internal constitutions of watches. Clearly the watchmaker's task is to identify or locate something, and the import of the passage is that the watchmaker fails at that task—he comes up empty handed, he is at a loss.

On the standard reading, the watchmaker is tasked with classifying watches on the basis of their internal mechanical differences. The watchmaker's finding himself at a loss and coming up empty-handed is supposed to show that the task of classification must involve arbitrary choice at the microphysical level. I argue that the standard reading misunderstands the task with which the watchmaker is faced. The watchmaker faces, not the task of classifying watches, but rather that of identifying specific differences without appeal to the very thing in light of which any qualitative difference counts as, and so is known to count as, a specific difference, which is a pair consisting in an established species name and its corresponding abstract idea.

We can get a better grip on the nature of the watchmaker's task if we turn to a passage I refer to as *Creatures*. Not only does *Creatures* offer guidance for how we should understand the nature of the watchmaker's task, it supplies an explanation for why the watchmaker cannot locate "specific differences" in the internal constitutions of watches.

In *Creatures* Locke writes:

There are Creatures...that have shapes like ours, but are hairy, and want Language, and Reason. There are Naturals¹⁶...that have perfectly our shape, but want Reason, and some of them Language too. There are creatures...that with Language, and Reason, and a shape in other Things agreeing with ours, have hairy Tails; others where the Males have no beards, and others where the Females have. If it be asked, whether these be all *Men*, or no, all of humane *Species*; 'tis plain, the Question refers only to the nominal Essence: For those of

¹⁶ By a "Natural" Locke means what he elsewhere refers to as a *Changeling*, a creature that has the shape and appearance of a human being but lacks rationality. We find the following definition of the term "Natural" in the Oxford English Dictionary: "A person having a low learning ability or intellectual capacity; a person born with impaired intelligence." *Oxford English Dictionary*, s.v. "natural (n.)", www.oed.com. See also John W. Yolton's entry for "changeling" in *A Locke Dictionary* (Oxford: Oxford University Press, 1993), 36-37.

them to whom the definition of the Word *Man*, or the complex *Idea* signified by that Name, agrees are *Men*, and the other not.¹⁷

Here Locke provocatively cites creatures that invite doubt about whether they are “*Men*.” And while “’tis plain” to *Locke* that, whether these creatures are of “humane *Species*” “refers only to the nominal essence” of *Man*, Locke is aware his response will satisfy few of his readers. Elsewhere Locke notes:

When a man asks, whether this or that thing he sees, let it be a Drill, or a monstrous *Foetus*, be a *Man*, or no; ’tis evident, the Question is not, Whether that particular thing agree to his complex *Idea*, expressed by the name *Man*: But whether it has in it the real Essence of a Species of Things, which he supposes his name, *Man* to stand for.¹⁸

When we ask whether a Drill (a baboon) belongs to the parochial species *man*, Locke knows that we are not concerned to answer that question in reference to our nominal essence. Rather, we tacitly assume that what makes it the case that something is a *man* is not its agreement with criteria embodied in our nominal essence, but its possession of a real essence.¹⁹ But this, Locke points out, is to treat the kind *man* not as a parochial species, i.e., as a species made by us, but rather as a species “made by nature.” Nature, so the mistaken assumption goes, makes the species *man* by imparting a supposed “real essence”—the real essence of man—to particulars that are *men*. The species is thus understood to be individuated by a real essence and so individuated prior to and independent of any way we happen to define it in our nominal essence.

Returning to *Creatures*, Locke writes:

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 specific *Idea* [nominal essence].

The “Enquiry” concerns whether “these several Creatures be specifically different.” By “specifically” Locke means species-wise. Are these creatures different *in kind* because of differences in their “internal Constitution and Frame”? That question is impossible to answer, Locke replies, because “no part of” the internal constitution and Frame of these creatures goes into the nominal essence of *man*. It is important to see, then, that Locke takes the enquiry to be, not about whether differences between the internal constitutions of these creatures make for a difference in just *any* kind, but rather whether they make a difference to their *being men*. It is “impossible” to answer that question, not because these differences in internal constitution are hidden, but rather because these differences are *irrelevant* to whether they are men. Invoking them in order to answer that question is otiose.

¹⁷ III.vi.22: 450-51.

¹⁸ III.x.21: 502-3.

¹⁹ II.xxxi.6: 378; II.xxxi.7: 380.

Certainly, Locke admits: “...we have Reason to think, that where the Faculties, or outward Frame so much differs, the internal Constitution is not exactly the same.”²⁰ That is, differences in the sensible qualities of these creatures—differences in faculties or outward frame—indicate that they are correspondingly different in their internal constitutions. But, Locke writes:

What difference in the internal real Constitution makes a specifick difference, it is in vain to enquire; whilst *our measures of Species* be, as they *are*, *only our abstract Ideas*, which we know; and not that internal Constitution, which makes no part of them.²¹

The lesson of *Creatures* is to unmask and debunk a way of thinking about our parochial kinds. We are liable to treat them not as the product of our own workmanship but rather as species “made by nature.” In *Creatures* this mistaken way of thinking is exposed when we invoke the real constitutions of things as the basis for *settling* questions about membership in a parochial kind. In the next section I argue that a similar lesson is at work in *Watches*.

1.5. *Watches Reconsidered*

In *Watches*, an interlocutor suggests that surely what makes for the distinction in kind between silent and striking watches is something independent of a speaker’s employing a distinct general term for each, for these two kinds of watch are different in their internal constitutions. In response, Locke appeals to an overwhelming array of hidden mechanical properties and asks: “Are any, or all of these enough to make a specifick difference to the Workman[?]”²² Call this the Rhetorical Question. According to the standard reading, Locke invokes the Rhetorical Question to argue that not one of these mechanical properties stands out as *the* basis for classification, in which case any sorting of substances by their internal constitutions must be arbitrary.

The Rhetorical Question is in fact aimed at showing, not that sorting by internal constitutions is arbitrary, but that differences in the internal constitutions of watches are silent regarding the parochial distinction in kind between silent and striking watches. Timepieces that differ in their outward behavior—in terms of whether they are striking or silent—certainly differ in their internal constitutions, since it is in light of those internal differences that differences in their observable behavior are to be explained. However, the distinction in kind between silent and striking watches is an already established parochial distinction in terms of observable qualities. It is a distinction not written into the natures of things, but rather drawn by human beings on the basis of observable criteria they deem significant. Whether timepieces that differ internally belong to the same or different parochial species depends not on those internal differences but on the content of the nominal essence (or nominal essences) of the parochial kind (or kinds) in question.

To see this, note that *A*’s nominal essence may embrace both silent and striking

²⁰ III.vi.22: 450-51.

²¹ Ibid.

²² III.vi.39: 463.

watches, while *B*'s nominal essence may exclude striking watches, because *B* regards them as a distinct species. Differences in internal constitution between silent and striking watches are thus idle with respect to the parochial distinction in kind between silent and striking watches; in some cases watches that differ in internal constitution are said to belong to the same parochial species; in other cases they are said to belong to distinct parochial species. And that shows that facts about whether watches belong to the same or to distinct parochial species do not depend on differences in internal constitution.

Further, if Locke's objector were right, there should be some difference in the internal constitutions of watches *by which* striking and silent watches are known to be distinct species, independently of the actual parochial criteria in terms of which speakers distinguish striking from silent watches as belonging to distinct kinds. In that case, the watchmaker ought to be able to identify those internal mechanical differences as specific differences, and he must be able to do so just by eyeballing them, so to speak. That is—and this is the crucial point—he should be able to identify them as specific differences independently of the nominal essences annexed to the terms “watch” and “clock,” respectively. Indeed, given that these nominal essences advert to the outward features of timepieces alone, they wouldn't help the watchmaker even if he did refer to them.²³

It should come as no surprise, then, that the watchmaker is unable to locate any specific differences among the various internal mechanical differences he surveys. Here is a simple-minded analogy. Suppose you were charged with the task of identifying bachelors on the basis of mass alone. But the criteria for bachelorhood make no reference to the mass of a thing. So something's mass is going to be silent with respect to whether a thing is a bachelor. Were we to attempt to sort things into bachelors and non-bachelors by reference to their mass alone we would be at a loss. I'm suggesting that we read Locke as making a similar point in *Creatures* and *Watches*. The internal constitutions of various creatures are silent as to whether they are men; that is, they are silent as to whether they belong to the *parochial species* we pick out with the general term “man.” For similar reasons, the internal constitutions of timepieces are silent in regards to which parochial species they belong to, and so silent as to whether they belong to the same or different parochial species.

Additional confirmation of this reading comes in the passage that directly follows *Watches* at III.vi.40, where Locke observes that, in artifacts, the abstract ideas speakers annex to one and the same species name are largely invariant across speakers. That invariance is due to the fact that their essences are regarded as settled in terms of a relatively simple set of observable qualities that are easy to know.²⁴ But then it is a bit of

²³ My reading is thus in broad agreement with Margaret Atherton's observation that the lesson of *Watches* “seems to be that differences in internal structure, surely the analog of corpuscularian structure, don't affect the choices made when people classify things as watches.” “Locke on Essences and Classification,” in *The Cambridge Companion to Locke's Essay*, ed. Lex Newman (Cambridge: Cambridge University Press, 2007), 273n14.

²⁴ Locke writes:

...in the species of artificial Things, there is generally less confusion and uncertainty, than in natural. Because an artificial Thing being a production of Man, which the Artificer design'd, and therefore well knows the *Idea* of, the name of it is supposed to stand for no other *Idea*, nor import any other Essence, than what is certainly to be known, and easy enough to be apprehended. For the *Idea*, or Essence, of the several sorts of artificial Things, consisting, for the most part, in

a mystery as to why, in *Watches*, Locke would task the watchmaker with *classifying* timepieces on the basis of their internal constitutions given that, as Locke goes on to tell us in the very next passage, their classification is not up for grabs in the first place.

That's not to deny that speakers may appeal to internal differences to draw *finer* distinctions within the already settled category, as Locke makes clear in *Watches*:

But if any one will make minuter Divisions from Differences, that he knows in the internal frame of Watches; and to such precise complex *Ideas*, give Names, that shall prevail, they will then be new *Species* to them, who have those *Ideas* with names to them; and can, by those differences, distinguish Watches into these several sorts, and then *Watch* will be a generical name.²⁵

Even so, the original parochial classification is still in force because internal differences are taken to be the object of more minute divisions *within* it. Such finer distinctions would not upend the initial classification—would not be seen as rivals to it—but would rather presuppose it.

Further, Locke describes those internal differences by appeal to their functional role—“some have the Balance loose, and others are regulated by a spiral Spring, and others by Hogs Bristles”—which suggests that those further distinctions would not go on forever, as Michael Ayers argues,²⁶ but are restricted to parts that are themselves fashioned by an artificer and/or play some functional role within the system of that artifact.

Indeed, this suggests a final reason for the irrelevance of differences in internal constitution to the already settled essences of artifacts. The internal differences Locke names in *Watches* are just so many hidden mechanisms and parts that contribute to the realization of one and the same *general* function. It's that function, a function recognizable in terms of a “determinate Figure of sensible Parts; and sometimes Motion depending thereon, which the Artificer fashions in Matter, such as he finds for his Turn,”²⁷

nothing but a determinate Figure of sensible Parts; and sometimes Motion depending thereon, which the Artificer fashions in Matter, such as he finds for his Turn, it is not beyond the reach of our Faculties to attain a certain *Idea* thereof; and so settle the signification of the Names, whereby the Species of *artificial* Things are distinguished, with less Doubt, Obscurity, and Equivocation, than we can in Things natural. (III.vi.40: 464)

It is worth emphasizing Locke's claim in this passage that the relative invariance in the meanings of the names of the species of artifacts is due to the fact that their essences are settled in terms of observable function and so easily known: “the *Idea*, or Essence, of the several sorts of *artificial* Things, [consist], for the most part, in nothing but the determinate Figure of sensible Parts; and sometimes Motion depending thereon, which the Artificer fashions in Matter, such as he finds for his Turn.” III.vi.40: 464.

²⁵ III.vi.39: 464.

²⁶ Ayers writes that Locke argues in *Watches* that “there are no naturally last species because there is no end to the structural differences between members of any species we like to name, difference any one of which might just as well be made the basis for a finer division between species.” “Review Article: The Cambridge Companion to Locke,” 175-76.

²⁷ III.vi.40: 464. For an interesting and thought-provoking discussion of artifacts and their essences in relation to Locke's discussion of the differences between ideas of modes and ideas of substances see Antonia LoLordo, “Three Problems in Locke's Ontology of Substance and Mode,” in *Contemporary*

not how that function is realized *internally and in the particular case*, that in the first instance individuates the kind *watch*. Again, we can divide that kind into further lower species, either on the basis of observable differences (being striking or silent) or internal differences, but those finer distinctions would leave the initial classification in force.

2.1. *Watches, Watches-Like Passages, and Classification*

On its standard reading, *Watches* makes a claim about the nature of the task of classification undertaken at the micro-physical level. This is nowhere more evident than in the following remark by William Uzgalis: “If the Watch-maker has a clear idea of these different mechanisms, surely he could classify them on this basis. Locke thinks that this will not be the case.”²⁸ I’ve claimed that the watchmaker instead faces the task of identifying specific differences without appeal to the very thing in light of which any qualitative difference counts as, and so is known to count as, a specific difference, which is a pair consisting in an established species name and corresponding abstract idea.

What about the widely accepted claim that classification at the *phenomenal* level requires arbitrary choice? We may be tempted to read the following *Watches*-like passages as characterizations of the task of classification as it presents itself to the mind at the phenomenal level:

[A] Take 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: we have no notion of the one, without the other: which plainly shews their relation.²⁹

[B] None of these [qualities] are essential to the one, or the other, or to any Individual whatsoever, till the Mind refers it to some Sort or *Species* of things; and then presently, according to the abstract *Idea* of that sort, something is found *essential*.³⁰

But [A] and [B] are claims about the task of identifying essential qualities, which, like the task of identifying specific differences, again requires the mind’s appeal to a pair consisting of a species name and corresponding abstract idea. For it’s not just that we name and sort particulars according to abstract ideas we make, the practices of naming and sorting present particulars and their qualities in a new light, so to speak. The things we name and sort are not only regarded as members of a sort, they are now thought to *have* the essence of the sort. And insofar as they are thought to have the essence of the sort, the qualities making up that essence are now said to be essential to the things themselves. But these attributions, Locke takes pains to point out, are ultimately

Perspectives on Early Modern Philosophy: Nature and Norms in Thought, eds. Martin Lenz and Anik Waldow (Dordrecht: Springer, 2013), 62-63.

²⁸ Uzgalis, “The Anti-Essential Locke,” 336.

²⁹ III.vi.4: 440-41.

³⁰ *Ibid.*

underwritten by abstract ideas we make: “So that *essential*, and *not essential*, relate only to our abstract Ideas, and the names annexed to them.”³¹ It follows that we cannot merely eyeball a thing’s qualities and thereby know which of its qualities are essential.

It doesn’t follow, however, that the mind is similarly at a loss as to how to *classify* things. That is, we should distinguish:

1. Texts in which Locke describes the task of identifying essential qualities or specific differences
2. Texts in which Locke describes the task of classification

Indeed, the standard reading of *Watches* mistakes a claim about the task of identifying specific differences for a claim about classification. Uzgalis claims that the watchmaker, surveying internal mechanical differences between watches, finds himself at a loss as to how to classify them. Locke does not make this claim in *Watches*, and the passage is in fact silent on that question. (Indeed, one could make the stronger claim that the passage is not merely silent, i.e., neutral, on that question. For the passage that immediately follows *Watches* shows that the essence of a watch is already settled, which makes the task of classifying them otiose.)

Locke is not, however, silent on the mind’s predicament vis-à-vis the task of classification at the *phenomenal* level. In the remainder of the paper, I argue that the mind does not find itself at a loss, or in a state of indifference, as to which phenomenal qualities are to be the basis for classification. Far from arbitrarily choosing how to sort things, the mind rather follows nature’s lead. Finally, I argue that this characterization of the mind’s activity as one of following nature’s lead is compatible with Locke’s claim that species are the workmanship of the understanding.

2.2. Classification and the Vulgar

According to the standard reading, minds must decide which similarities and differences are important for naming and sorting because, all by themselves, similarities and differences do not tell us which among them are to be the basis for classification. Jan-Erik Jones writes:

The decision of how to group objects into classes is unavoidably based on an arbitrary assessment of important similarities among bodies. Since similarities do not classify, we must determine which among these similarities are important enough to constitute a species difference. This kind of arbitrariness in classification is stated in Locke.³²

Note that Jones’s argument is exactly analogous to the standard reading’s gloss on *Watches*. Uzgalis writes, “if the Watch-maker has a clear idea of these different mechanisms, surely he could classify them on this basis. Locke thinks that this will not be the case.”³³ Uzgalis concludes that the mind must therefore make an arbitrary choice. Yet,

³¹ Ibid.

³² Jan-Erik Jones, “Boyle, Classification and the Workmanship of the Understanding Thesis,” *Journal of the History of Philosophy* 43, no. 2 (April 2005): 171-72.

³³ Uzgalis, “The Anti-Essential Locke,” 336.

in arguing that classification is (in Jones's words) "unavoidably based on an arbitrary assessment," both Jones and Uzgalis imply that the mind either *experiences* or *considers* similarities and differences as equal and with indifference. For arbitrary choice is necessary only if the mind is at a loss as to which qualities are important for classification, and what puts the mind at a loss is its being in a state of indifference as to which similarities and differences matter. But that state of indifference is itself explained by the fact that the mind either experiences or considers similarities and differences as equal.

If minds must make an arbitrary assessment as to which similarities and differences are important for the purposes of classification, then presumably the minds responsible for our going classificatory scheme had to make such arbitrary assessments. It stands to reason, then, that if species minds have already made were not made as the standard reading claims, that would be a significant reason for doubting the standard reading. For surely proponents of the standard reading intend for it to hold of *any* species minds make, including species minds have already made.³⁴

Locke tells us that our going species concepts are a holdover from the vulgar. Indeed, Uzgalis draws attention to this fact: "Locke emphasizes the point that the classificatory systems of ordinary language were made by ordinary, vulgar and illiterate persons for ease of communication in the conduct of ordinary practical affairs."³⁵ If the standard reading is correct, surely the vulgar make species by arbitrary choice.³⁶ I argue that it is implausible that the vulgar make species by arbitrary choice, for three reasons. First, the vulgar do not experience similarities (and differences) as equal. Second, the vulgar do not consider similarities (and differences) as equal. Third, the vulgar are inveterate realists and the most plausible explanation for their realism is that things in the world appear to be sorted into kinds. Far from sorting by arbitrary choice, the vulgar simply follow appearances.³⁷

One final, preliminary remark is in order. The *Essay* is rife with descriptions of how

³⁴ Guyer, an oft-cited proponent of the standard reading, makes it clear that the standard reading is a view about how the mind makes *any* species:

[Locke] argues that when we use general terms to group things into kinds or species we are not attempting to discover determinate species that exist independently of our own classificatory activity, but are rather choosing from among the innumerable many similarities (as well as, of course, dissimilarities) that are to be found among the particular objects comprising nature those that will be central to our own classificatory scheme. ("Locke's Philosophy of Language," 117)

I do not deny that a mind *could* make species by arbitrarily choosing similarities and differences. But the standard reading is surely making a claim about how *Locke* thinks the mind *actually* makes species, in which case sheer possibility can hardly be counted in favor of the reading.

³⁵ Uzgalis, "The Anti-Essential Locke," 330.

³⁶ Locke writes, "[General names] have, for the most part, in all Languages, received their Birth and Signification, from ignorant and illiterate People, who sorted and denominated Things, by those sensible Qualities they found in them, thereby to signify them, when absent, to others, whether they had an occasion to mention a Sort, or a particular Thing." III.vi.25: 452-53.

³⁷ In what follows I will be ignoring the "philosophical" use of words, focusing instead on what Locke refers to as the "civil Use" of words, by which Locke means "such a communication of Thoughts and *Ideas* by Words, as may serve for the upholding common Conversation and Commerce, about the ordinary Affairs and Conveniences of civil Life, in the Societies of Men, one amongst another." III.ix.3: 476.

minds in the usual case make species. I will assume that these are as much descriptions of the mind's activity in the abstract as they are descriptions of how, historically, minds have made species.³⁸ I will assume, then, that these descriptions are as much descriptions of the *vulgar mind* as it names and sorts things as they are descriptions of any mind in its approach to that task. It is on the basis of these descriptions that I argue that the vulgar neither experience nor consider similarities as equal.

Take the first claim, i.e., that the vulgar do not experience similarities as equal. If we are considering what the task of classification looks like from the perspective of the mind undertaking it, Locke says plenty to suggest that the task is not one of indifferent confrontation with a sea of distinct but phenomenologically equivalent similarities. Certain resemblances stand out as singular and distinctive, for instance, the shape and markings of a giraffe, the particular shining yellowness of gold,³⁹ and the taste of pineapple. Indeed, Locke writes that we sort natural substances according to what he refers to as one or two "*leading Sensible Qualities*," which "*make the chief Ingredients of our Specific Ideas*," and which are "consequently the most observable and invariable part in the Definitions of our specific Names."⁴⁰ The fact that these leading qualities make up the most invariable parts of our definitions suggests that these qualities strike any mind as the most salient and distinctive feature(s) of the things that possess them. In living things, the leading quality is typically shape, in non-living things it is color.⁴¹

These claims are supported by Locke's observation that "Nature in the Production of Things, makes several of them alike," and that "there is nothing more obvious, especially in the Races of Animals, and all Things propagated by Seed."⁴² Many things, he writes, "have agreement and likeness one with another," which affords "a Foundation of being ranked into sorts."⁴³ But Locke isn't saying that nature makes things with "innumerable many"⁴⁴ respects of resemblance, none of which stand out as distinctive or remarkable, for that would hardly serve as a *foundation* for ranking things into sorts. And if Locke is appealing to what is obvious, nothing is more obvious than the fact that certain

³⁸ Indeed, Peter Anstey argues that "the *Essay* is a genuine attempt at a natural history of the understanding; a natural history both of the genealogy of our ideas in general...and of our ideas about the particular sorts of substances that are to be found in nature." *John Locke and Natural Philosophy* (Oxford: Oxford University Press, 2011), 224.

³⁹ Locke even appears to suggest that the "peculiar Yellow" of the substance we call gold is *unique* to it and is that by which one can distinguish true from counterfeit gold:

The *Idea* of the particular Colour of *Gold*, is not to be got by any description of it, but only by the frequent exercise of the Eyes about it; as is evident in those who are used to this Metal, who will frequently distinguish true from counterfeit, pure from adulterate, by the sight, where others, (who have as good Eyes, but yet, by use, have not got the precise nice *Idea* of that peculiar Yellow) shall not perceive any difference. (III.xi.21: 519)

⁴⁰ III.xi.20: 518.

⁴¹ III.vi.29: 456-57; III.ix.15: 484; III.xi.19: 518-19.

⁴² III.iii.13: 415.

⁴³ III.vi.30: 457-58.

⁴⁴ Guyer, "Locke's Philosophy of Language," 117.

similarities stand out, while others fade into the background. It's simply not true that, phenomenologically speaking, similarities strike the mind as just so many shades of gray.

True, my cat bears similarities to a rosebush, but it would take some work to identify them. Further, we have “need of general names for present use.”⁴⁵ Time is of the essence, and in the usual case we quickly divide things “by certain obvious appearances.” Indeed, “we stay not for a perfect discovery of all those Qualities, which would best shew us [the] most material differences and agreements” between things.⁴⁶ It seems unlikely, then, that anything but “obvious appearances” are the basis upon which the mind first groups things. The speed and haste with which we proceed speaks, not to a plodding consideration of phenomenologically equal similarities and differences, but to rough and ready distinctions made on the basis of features immediately salient to the mind.

Our actual practices of naming and sorting, as reflected in, say, “the Races of Animals,” have, then, a prior, phenomenological foundation in certain obvious and distinctive similarities and differences. In fact, the reason Locke refers to those qualities in terms of which we initially sort things as “leading” is because we are *led* by these qualities: “As in Vegetables and Animals ‘tis the Shape, so in most other Bodies, not propagated by Seed, ‘tis the Colour we most fix on, and are most led by.”⁴⁷ So it's not that the things we call “giraffes” resemble each other in a way that we had to decide was more important than other resemblances, it's that giraffes have a shape that strikes us as particularly salient—it's the feature “we most fix on”—which explains why we've found it natural to group those things together.

Bearing these considerations in mind, it is implausible that the vulgar experience similarities as equal and with indifference. But if similarities do not appear to the vulgar as equal, perhaps the vulgar nevertheless consider them as equal. But such consideration requires a bit of philosophical reasoning that is likely foreign to the vulgar. For note one of Locke's arguments against the claim that we sort things by way of insight into their real essences:

‘tis their own Collections of sensible Qualities, that Men make the Essences of their several sorts of Substances; and that their real internal Structures, are not considered by the greatest part of Men, in the sorting them. Much less were any *substantial Forms* ever thought on by any, but those who have in this one part of the World, learned the Language of the Schools.⁴⁸

But, Locke reasons, even if real essences could be discovered,

yet we could not reasonably think, that the *ranking of things under general Names, was regulated by* those internal real Constitutions, or any thing else but

⁴⁵ III.vi.30: 458.

⁴⁶ Ibid.

⁴⁷ III.vi.29: 456.

⁴⁸ III.vi.24: 452.

*their obvious appearances.*⁴⁹

And this is because

Languages, in all Countries, have been established long before Sciences. So that they have not been Philosophers, or Logicians, or such who have troubled themselves about *Forms* and *Essences*, that have made the general Names, that are in use amongst the several Nations of Men.⁵⁰

Those who have “made the general Names, that are in use” are not philosophers or logicians who have troubled themselves about forms or essences, but nor are they philosophers or logicians who’ve troubled themselves with the abstruse philosophical argument that similarities are equal. For surely the vulgar are not privy to the sort of argument by which one recognizes the grounds and validity of the claim that resemblances “do not constitute natural boundaries.”⁵¹

Finally, like Hume’s arguments against the vulgar’s causal realism, part of the point of Locke’s claim that species are the workmanship of the understanding is to counter the vulgar’s reflexive realism about species.⁵² Indeed, Locke frequently takes aim at the common if tacit belief that our species names pick out *real essences*, as if the mind has no role to play at all in the individuation of species.⁵³ Besides, just as there *appears* to be a necessary connection between cause and effect, which explains the vulgar’s causal realism, surely the vulgar are realists about species because things just appear as though they are divided into kinds. But then the most plausible story of vulgar classification is the story on which the vulgar innocently follow those appearances and sort things accordingly—hardly the picture of a philosophically sophisticated mind that recognizes the need for arbitrary choice.

2.3. Species Realism and Locke’s *Workmanship* Claim

The phenomenology of leading qualities is no proof that Locke was a realist about species, and the vulgar’s unlikely appreciation of the argument that similarities are equal does not mean that Locke himself didn’t endorse it. But we are evaluating the standard reading’s claim that minds make species by deciding which similarities and differences are important for the purposes of classification. Locke holds up the vulgar as a model for

⁴⁹ III.vi.25: 452-53.

⁵⁰ Ibid.

⁵¹ Michael Ayers, *Locke: Epistemology and Ontology*, 2 vols (London, 1991), 2:68.

⁵² For Hume’s reference to the vulgar’s causal realism, see David Hume, *A Treatise of Human Nature*, 2nd ed., eds. L.A. Selby-Bigge and P.H. Nidditch (Oxford: Clarendon Press, 1978), 222-23. Turning to Locke, for the vulgar’s realism about parochial species see especially III.x.20-21. For Locke’s account of the origins of the vulgar’s realism about parochial species see his parable of Adam at III.vi.47-50.

⁵³ Locke notes the common “supposition” that “Nature works regularly in the Production of Things, and sets the Boundaries to each of those *Species*, by giving exactly the same real internal Constitution to each individual, which we rank under one general name.” III.x.20: 501.

understanding how the world appears to the mind vis-à-vis the task of classification, which in turn informs how we are to understand the mind's activity as it undertakes that task. And it turns out that there is little if any reason to appeal to arbitrary choice in that characterization.

More dramatic are the consequences of this argument for our understanding of Locke's claim that species are the workmanship of the understanding [henceforth *Workmanship*]. According to the standard reading's gloss of *Workmanship*, species are the workmanship of the understanding because they are the upshot of the mind's activity, and that activity must involve arbitrary choice. Surely *Workmanship* applies to the species we inherit from the vulgar if it applies to any species. But we now have strong reasons to reject the claim that the vulgar make species by arbitrary choice, which give us strong reasons to reject a characterization of the mind's activity as one of arbitrary choice. In the next section I argue that there is indeed a form of liberty that characterizes the mind's activity as it makes species, but that liberty is best understood, not as the liberty of choice, but the liberty to fail to adequately, or completely, capture a representational target.

2.4. Workmanship and The Liberty to Fail

Workmanship is the claim that species are the product of the mind's activity. Indeed, in respect to all of its complex ideas, the mind is not passive but active, and "uses some kind of Liberty":

Though the Mind be wholly passive, in respect of its simple *Ideas*: Yet, I think, we may say, it is not so, in respect of its complex *Ideas*: For those being Combinations of simple *Ideas*, put together, and united under one general Name; 'tis plain, that the Mind of Man uses some kind of Liberty, in forming those complex *Ideas*: How else comes it to pass, that one Man's *Idea* of Gold, or Justice, is different from another's? But because he has put in, or left out of his, some simple *Idea*, which the other has not.⁵⁴

Here Locke deploys a concept of liberty that need not entail choice, for choice isn't the only explanation for why *A* leaves out some simple idea from her complex idea, which, say, *B* has put in. Even if we assume that the going definition of gold is itself the upshot of arbitrary choice, *A*'s deviation from that definition need not be explained as a matter of *A*'s *choosing* to leave out one of its component simple ideas. In that case, the sort of liberty in question would, for lack of a better description, be the liberty of the mind *to fail* to match some intended representational target.

In fact, Locke's recognition of this kind of liberty is evident in the comparison he draws between simple and complex ideas in the passage above. All things being equal, a mind does not have the liberty to fail to have the simple idea of blueness upon confrontation with a violet—this is the significance of the claim that the mind is "wholly passive, in respect of its simple *Ideas*." But the mind does have the liberty to fail to have a complete or adequate idea of a *violet* because such an idea consists of many simple ideas, any one

⁵⁴ II.xxx.3: 373.

of which the mind might fail to combine in its complex idea.⁵⁵ It is not as though how things are with a violet *necessitates* someone's getting it right in conception. If it did, Locke would say that the mind is wholly passive in respect of its complex ideas, too. We might recognize, then, two sorts of liberty in respect to the complex ideas the mind makes, *Liberty to Fail* and *Liberty to Choose*. The question now is which sort of liberty best characterizes the mind's activity as it makes species.

Liberty to Choose is an implausible characterization of the mind's activity as it makes species for two reasons. First, leading qualities *lead* the mind to sort things on their basis. Second, the most plausible explanation for the vulgar's realism is that things in the world appear to be sorted into kinds, so surely the vulgar follow the lead of appearances in sorting things.

And while leading qualities form part of the explanation for why the world appears to be sorted into kinds, there is more to say. Locke also claims that certain qualities tend to cluster together. Matthew Stuart provides the following helpful gloss on clustering:

We experience sensible qualities not as evenly or randomly distributed, but as occurring in clusters. [...] The distribution of any one sort of quality across individuals is not uniform, but patchy and uneven. The world that we experience is not a multi-colored test pattern with dots of color spread about randomly; instead, we find a big blue thing here, a medium-sized yellow thing there, and so on. Similar remarks apply to shapes, sounds, odors, flavors, and so on. Second, the sensible qualities within our ken are not distributed independently of one another. Perhaps we can imagine a world in which the distribution of colors is independent of the distribution of odors, in which the distribution of odors is independent of the distribution of flavors, etc., but that is not our world.⁵⁶

Qualities cluster in certain identifiably characteristic and reliably repeated ways across space and time. Like leading qualities, clustering also explains why things appear to be sorted into kinds.

Further, just as the mind takes its cue from leading qualities, the mind attends to clustering. Locke refers to the clusters we find repeated across space and time as the external "standards," "patterns," and "archetypes" to which the mind is and ought⁵⁷ to be directed as it makes its ideas of substantial sorts.⁵⁸ The ideas our species names stand for

⁵⁵ At III.iv.15: 427 Locke notes that confusion with respect to the names of the species of mixed modes and substances is a matter of the variable content of their corresponding ideas, which itself stems from the fact that these ideas consist "of parts, whereof more or less being put in, the *Idea* may be varied, and so the signification of its Name, be obscure, or uncertain."

⁵⁶ Stuart, *Locke's Metaphysics*, 188.

⁵⁷ "The *simple* Ideas that are found to *co-exist in Substances*, being that which their Names immediately signify, these, as united in the several sorts of Things, *are* the proper *Standards* to which their Names are referred, and by which their Significations may best be rectified." III.ix.13: 482.

⁵⁸ See also Antonia LoLordo, "Three Problems," 58-60, who argues that our ideas of substantial *sorts* "are intended to correspond to an archetype existing outside of the mind."

are “referred to *Standards* made by Nature.”⁵⁹ When we make our ideas of substantial sorts, we “have Patterns to follow,”⁶⁰ patterns Locke describes as “those simple *Ideas*,” which are “constantly and inseparably united in Nature, and are always to be found together in the same subject.”⁶¹ Finally, insofar as the mind adopts these patterns and standards as its representational targets, it takes itself to be constrained by them.⁶² Taken together, these considerations give us reason to doubt that *Liberty to Choose* best characterizes the mind’s activity as it makes species.

Liberty to Fail, on the other hand, provides a more plausible rendering of the mind’s activity as it seeks to copy⁶³ “*Standards* made by Nature.” But it also best accounts for the inevitable mismatch between the mind’s ideas of species and the patterns or standards to which the mind directs its activity. These patterns “*can be known but imperfectly and uncertainly*,”⁶⁴ because it “requires much time, pains, and skill, strict enquiry, and long examination, to find out what, and how many those simple *Ideas* are”⁶⁵ and there are “at least so many [simple ideas], that no Man can know [their] precise and definite number.”⁶⁶ Locke concludes that “*all our complex Ideas of Substances* are imperfect and inadequate,”⁶⁷ where it is clear that he’s talking about our complex ideas of substantial sorts.⁶⁸

Liberty to Fail rests on a claim about how the look of the world informs our understanding of the mind’s activity as it makes species. Things appear to be sorted into kinds, the mind follows those appearances and sees that it fails to represent them perfectly. Again, it doesn’t follow that things really are sorted into kinds. Still, consider the claim that the *inadequacy* of our ideas with respect to external patterns implies the existence of real species. Michael Ayers counters that Locke was merely “concerned with

⁵⁹ III.ix.11: 481.

⁶⁰ Ibid.

⁶¹ III.vi.30: 457.

⁶² For instance, Locke writes “In our *Ideas* of Substances we have not the liberty as in mixed Modes, to frame what Combinations we think fit, to be the characteristical Notes, to rank and denominate Things by. In these we must follow Nature, suit our complex *Ideas* to real Existences, and regulate the signification of their Names by the Things themselves, if we will have our Names to be the signs of them, and stand for them.” III.ix.11: 481. See also II.xxxii.23: 392.

⁶³ II.xxxi.8: 380. It’s clear from the passage that precedes II.xxxi.8 that Locke is talking about our ideas of substantial sorts, as well as from Locke’s summary of the findings of Book II, chapter xxxi just four sections later: “Thus the Mind has three sorts of abstract *Ideas*, or nominal Essences.” III.xxxi.12: 382–83. See also III.xxxi.13: 383 and IV.iv.12: 568.

⁶⁴ III.ix.11: 482.

⁶⁵ III.vi.30: 457.

⁶⁶ III.ix.13: 483.

⁶⁷ II.xxxi.11: 382–83.

⁶⁸ Just one section later, Locke writes: “Thus the Mind has three sorts of abstract *Ideas*, or nominal Essences.” III.xxxi.12: 382–83.

the inadequacy of our ideas of what falls within the boundaries that we impose on reality.”⁶⁹ That is, Locke’s talk of patterns in respect of which our ideas of species are inadequate is to be understood as talk of what is ultimately individuated by the mind’s arbitrary choice.

On the account of the mind’s activity offered here, however, there appears to be no moment at which the mind chooses (or must choose), in which case it is difficult to see how the mind imposes boundaries in terms of which external patterns are individuated. For one thing, the mind usually doesn’t bother with qualities beyond leading qualities: “The complex *Ideas* of the sorts of Substances, are usually made up of only a small number of simple ones; and in the *Species* of Animals, these two, *viz.* Shape and Voice, commonly make the whole nominal Essence.”⁷⁰ Elsewhere Locke writes that “Men generally content themselves with some few sensible obvious Qualities; and often, if not always, leave out others as material, and as firmly united, as those that they take.”⁷¹ If we generally content ourselves with one or two leading qualities, which qualities are not themselves chosen, at what moment does choice makes its appearance in the mind’s activity?⁷²

Of course, Locke also draws attention to cases in which the ideas speakers annex to one and the same species name vary in content beyond leading qualities, which could be taken to suggest that choice makes its entrance with respect to qualities beyond leading qualities.⁷³ But the texts don’t mandate this reading. In fact, such differences may just as well reflect differences in how well a speaker knows the pattern. Locke writes that

the Properties of any sort of Bodies [are] not easy to be collected, and completely known by the ways of enquiry, which our Faculties are capable of. They being therefore at least so many, that no Man can know the precise and definite number, they are differently discovered by different Men.⁷⁴

And though Locke also writes that no speaker has authority to define the name of a substantial sort,⁷⁵ this is easily understood to follow from the fact that the mind takes an external pattern to be the ultimate arbiter of what belongs to the sort, rather than any given speaker’s idea of it, given that the mind regards any such idea as necessarily incomplete.⁷⁶

⁶⁹ Ayers, *Locke*, 2:76.

⁷⁰ III.v.13: 436.

⁷¹ III.vi.29: 456.

⁷² Unless, of course, one interprets the haste with which the mind proceeds in the usual case as a kind of choice, but haste reflects the arbitrariness of the *results* of the mind’s haste, not arbitrary choice itself.

⁷³ III.ix.13: 482-83; III.ix.17: 485-86.

⁷⁴ III.ix.13: 483.

⁷⁵ III.ix.17: 486.

⁷⁶ At II.xxxi.8 Locke suggests that when the mind “endeavor[s] to copy Substances, that exist in the World, by putting together the *Ideas* of those sensible Qualities, which are found existing in them” it “arrive[s] not at perfectly adequate *Ideas* of those Substances, they would thus copy into their Minds: nor do those Copies, exactly, and fully, contain all that is to be found in their Archetypes.” Three sections later,

Finally, I would be remiss if I didn't address passages [C] and [D] below:

[C]: ...though these *nominal Essences of Substances* are made by the Mind, they are *not yet made so arbitrarily, as those of mixed Modes*.⁷⁷

[D]: [The Names] of *mixed Modes* stand for *Ideas* perfectly *arbitrary*: Those of *Substances*, are not perfectly so; but *referr to a pattern, though with some latitude: and those of simple Ideas* are perfectly taken from the existence of things, and are *not arbitrary at all*.⁷⁸

A closer look at Locke's remarks about our ideas of substances in [D] indicates that by "arbitrary" Locke means "made *with latitude*" with respect to a pattern to which these ideas are referred. But we can understand this claim on the model of *Liberty to Fail*, where we invoke latitude to explain the fact that these ideas are not, like simple ideas, *perfectly* "taken from the existence of things." Indeed, it is because simple ideas are perfectly taken from the existence of things that they are "*not arbitrary at all*." This suggests that the difference in degree of arbitrariness between ideas of substances and simple ideas concerns the degree to which they are perfectly taken from the existence of things. The perfect arbitrariness of mixed modes would lie in the fact that there are no standing patterns to which these ideas are referred.⁷⁹ We have, then, a plausible alternative to the standard reading's likely gloss of [C] and [D].

Stepping back, there is no moment at which choice must be appealed to in order to explain one or other of Locke's commitments about our ideas of substantial sorts and how the mind makes them. Again, Locke's recognition of leading qualities and patterns is not necessarily evidence that Locke was a realist about species. It is, I'm arguing, evidence that Locke thought that *the mind* operates on a presumption in favor of realism, not unlike the way Hume thought the mind operates on a presumption in favor of causal realism.

2.5. The Standard Reading and *Workmanship*: Taking Stock

Advocates of the standard reading all articulate some variant of the claim that similarities are equal and conclude that species are the upshot of arbitrary choice. According to what Guyer claims is the logic of general ideas, general terms can "mark off any similitude that can be found among particulars," in which case nature "cannot tell us which [similarities] to mark off with our abstract ideas."⁸⁰ Guyer concludes that "we must decide...which

Locke concludes "So that *all our complex Ideas of Substances* are imperfect and *inadequate*." III.xxxi.11: 382. Again, any doubt Locke is discussing our ideas of substantial *sorts* is immediately dispelled (just one section later) in Locke's summary of the findings of Book II, chapter xxxi: "Thus the Mind has three sorts of abstract *Ideas*, or nominal Essences." III.xxxi.12: 382-83.

⁷⁷ III.vi.28: 455.

⁷⁸ III.iv.17: 428.

⁷⁹ "The "*Essences of the Species of mixed Modes*, are not only *made* by the Mind, but made *very arbitrarily*, made without Patterns, or reference to any real Existence." III.v.3: 429.

⁸⁰ Guyer, "Locke's Philosophy of Language," 128-29.

species to recognize in our system of classification.”⁸¹ But surely the vulgar have not worked out the logic of general ideas for themselves. The vulgar are in thrall to appearances and classify things accordingly.

Ayers emphasizes instead Locke’s rejection of Aristotelian substantial forms. Reality, Ayers writes, “can supply resemblances, but resemblances do not constitute natural boundaries.” But this is true, Ayers takes pains to point out, because “Locke really believed that nothing on earth could possibly perform the function that the Aristotelians ascribed to their specific essences or forms,” which function is to draw boundaries ontologically.⁸² Something must underwrite the claim that some resemblances are privileged over others, and corpuscularianism entails that nothing does. But if the vulgar have not troubled themselves with essences or forms, surely they haven’t troubled themselves with corpuscularianism, let alone its ontological entailments.

Besides, it’s not clear that corpuscularianism does entail species anti-realism. At least, it’s not clear that all of corpuscularianism’s *proponents* embrace that entailment. Jones argues persuasively that Robert Boyle thought that “all of the functions of form are performed by natural corpuscular structures” and that “it is God’s creation that orders the matter into kinds and regularly produces them in such a way that the natural world is ‘an orderly and well-contrived fabric.’”⁸³

Indeed, these remarks bring to mind Locke’s discussion of a Great Chain of Being at *Essay* III.vi.11-12. Locke writes that “we shall find every-where, that the several *Species* are linked together, and differ but in almost insensible degrees.” He continues:

When we consider the infinite Power and Wisdom of the Maker, we have reason to think, that it is suitable to the magnificent Harmony of the Universe, and the great Design and infinite Goodness of the Architect, that the *Species* of Creatures should also, by gentle degrees, ascend upward from us toward his infinite Perfection, as we see they gradually descend from us downwards.⁸⁴

Ayers and Uzgalis read Locke’s discussion of a Great Chain of Being as proof of the arbitrariness of any boundaries we might draw at the phenomenal level, and Ayers again suggests that Locke’s corpuscularianism has some role to play in the argument. While the lack of chasms or gaps at the phenomenal level is, Ayers writes, inconsistent with “the doctrine of fixed specific forms and objective boundaries between sorts” it “can be accounted for by a hypothesis with the shape of corpuscularianism.”⁸⁵

But we need not accept the premise of Ayers’ argument, i.e., that the absence of chasms and gaps is inconsistent with the existence of objective boundaries between species. While there may be no chasms or gaps between species, it does not logically follow that the

⁸¹ Guyer, “Locke’s Philosophy of Language,” 130.

⁸² Ayers, *Locke*, 2:68.

⁸³ Jones, “Boyle, Classification and the Workmanship of the Understanding Thesis,” 182.

⁸⁴ III.vi.12: 447.

⁸⁵ Ayers, “Review Article: The Cambridge Companion to Locke,” 172.

boundaries between them must be arbitrary.⁸⁶ And if, by God's design, species ascend upwards by degrees of perfection, surely there is an objective *ranking* of species accordingly. But if there is an objective ranking of species according to God's design, surely God could have made things such as to belong to species, by, say, "[ordering] matter into kinds." It's worth noting that Locke recognizes objective boundaries between *higher* taxa. He writes that "it is Perception in the lowest degree of it, which puts the Boundaries between Animals, and the inferior ranks of Creatures,"⁸⁷ and he cites the power of abstraction as that in which "the Species of *Brutes* are discriminated from Man," adding that the power of abstraction "'tis that proper difference wherein they are wholly separated, and which at last widens to so vast a distance."⁸⁸

3. Conclusion

By way of conclusion I address an objection and briefly weigh in on a recent debate in Locke scholarship.

Uzgalis claims that classification at the phenomenal level is arbitrary because there is a continuity of similarities and differences between things. Indeed, Uzgalis cites Locke's arresting examples in *Creatures* (see section 1.4) as evidence of this continuity. Doesn't the uncertainty aroused by the various creatures in *Creatures* show that we are, after all, at a loss as to how to classify them, and so at a loss as to how to classify things in general?

But the objection misses something important about the argument of *Creatures*. The uncertainty Locke describes is not uncertainty about how to classify the various creatures, as if we arrived on the scene with no general names and nominal essences in hand. The uncertainty rather has to do with whether any of them are *men*, i.e., whether they belong to that parochial kind.⁸⁹ And if, as I've argued, our going classificatory scheme proceeds in a rough and ready way in terms of leading qualities, and if shape is the leading quality we typically go by for the species we pick out with the general term "man,"⁹⁰ then of course

⁸⁶ That is, to say that there are no chasms or gaps does not *amount* to saying that there are no real species. Uzgalis himself notes that there is a "Platonist or essentialist interpretation of the Chain," according to which the Great Chain of Being is "composed of immutable species as links." "The Anti-Essential Locke," 334.

⁸⁷ II.ix.15: 149.

⁸⁸ II.xi.11: 160.

⁸⁹ After describing the various creatures, Locke writes, "If it be asked, whether these be all *Men*, or no, all of humane *Species*." III.vi.22: 450-51.

⁹⁰ Discussing the parochial species *man*, Locke writes that "'tis the Shape, as the leading Quality, that seems more to determine that Species, than a Faculty of Reasoning." III.xi.20: 519. Note that this is a claim about our *practices* of naming and sorting, about the presumptions that underlie them. Indeed, Locke will frequently stress the leading role shape plays in our concept of a human being: "For however some Men seem to prize their Definition of *Animale Rationale*, yet should there a Creature be found, that had Language and Reason, but partaked not of the usual shape of a Man, I believe it would hardly pass for a *Man*, how much soever it were *Animale Rationale*." III.vi.29: 456.

there will be uncertainty about such cases, because all of these creatures have our shape,⁹¹ but differ in ways that seem to be important, but in respect to which our nominal essence offers *no guidance*.

Our uncertainty, then, is not an indication that classification is arbitrary, but of the inadequacy of our current classificatory scheme to reality, which, I've argued, is hardly the product of careful observation and prolonged inquiry. Indeed, passages like *Creatures* are intended to destabilize our unearned confidence in the adequacy of our parochial species to reality.⁹²

Finally, a note of irony regarding a recent debate about the true ground of *Workmanship*, in which *Watches* features as a central point of contention.⁹³ Guyer argues that *Workmanship* rests on the logic of general ideas alone, and points to *Watches* to clinch his case.⁹⁴ Ayers dismisses Guyer's interpretation in general, and of *Watches* in particular, in rather pointed terms: "Guyer's attempt to extract from all this an argument based *purely* on a theory of meaning and totally independent of Locke's world-view (and with a conclusion smacking fashionably of ontological relativism, to boot) gets no support here."⁹⁵ *Workmanship*, Ayers counters, is entailed rather by Locke's corpuscularianism.⁹⁶

But note Locke's argument against the scholastic Aristotelian, who thinks that sorting is "regulated" by insight into real essences:⁹⁷

Men make the Essences of their several sorts of Substances [...] and their real internal Structures, are not considered by the greatest part of Men, in the sorting them. Much less were any *substantial Forms* ever thought on by any, but those who have in this one part of the World, learned the Language of the Schools.⁹⁸

Sorting, Locke argues, has as a matter of fact proceeded without philosophical sophistication: the "*ranking of things under general Names*," has been "*regulated*" by

⁹¹ "There are Creatures in the World, that have shapes like ours, but are hairy [...] There are Naturals among us, that have perfectly our shape, but want Reason [...] There are Creatures...that with Language, and Reason, and a shape in other Things agreeing with ours, have hairy Tails." III.vi.22: 450.

⁹² "So uncertain are the Boundaries of *Species* of Animals to us, who have no other Measures, than the complex *Ideas* of our own collecting: And so far are we from certainly knowing what a *Man* is [...] the certain Boundaries of that *Species*, are so far from being determined, and the precise number of simple *Ideas*, which make the nominal Essence, so far from being settled, and perfectly known, that very material Doubts may still arise about it." III.vi.29: 455.

⁹³ Atherton, "Locke on Essences and Classification," 266-74. Atherton, provides a helpful and incisive overview of the debate between Paul Guyer and Michael Ayers over why Locke thought that species are the workmanship of the understanding.

⁹⁴ Guyer, "Locke's Philosophy of Language," 136-37.

⁹⁵ Ayers, "Review Article: The Cambridge Companion to Locke," 176.

⁹⁶ Ayers, "Review Article: The Cambridge Companion to Locke," 175-76.

⁹⁷ "We could not reasonably think, that the *ranking of things under general Names*, was regulated by those internal real Constitutions, or any thing else but *their obvious appearances*." III.vi.25: 452.

⁹⁸ III.vi.24: 452.

nothing but “*obvious appearances*.” So hylomorphism, *even if it were true*, would still have been idle in respect to the story of how we actually arrived at a ranking of things under general names.⁹⁹ But then the debate between Guyer and Ayers is moot, for their respective positions are surely idle on that count as well.¹⁰⁰

Here is another way to put the point. Proponents of the standard reading appear to reason as follows: There is no fact of the matter about how things should be classified. (Here, insert either Guyer’s or Ayers’ gloss as to *why* this is true.) And if there is no fact of the matter about how things should be classified, any way of classifying is as good as any other. But it doesn’t follow that any way of classification appears or is considered to be as good as any other. It doesn’t follow, then, that classification has proceeded or must proceed by arbitrary choice. The comparison with Hume is again instructive. For imagine if someone were to argue that, because *Hume* thought there were no real causes, the vulgar must have developed their concept of cause out of an apprehension or appreciation of the nonexistence of real causes. But that’s to get things backwards. The starting point for both Locke and Hume is a conceptual scheme already up and running, and one underwritten by a naïve presumption in favor of the reality of the thing in question (causes, species). The philosopher then comes along to show why that presumption doesn’t hold up to scrutiny.¹⁰¹

St. Michael’s College, Vermont

⁹⁹ True, the Aristotelian might quibble that sorting by appearances is, as a matter of fact, a rough and ready way to sort by substantial forms (whether we are aware of this or not), and Locke would have to provide further argument as to why sorting by appearances could not reasonably be thought to be a sorting by substantial forms. Still, it’s clear that *Locke* thinks that the fact that the vulgar sort things by nothing but their obvious appearances is sufficient to invite skepticism that our sorting could be a sorting by substantial forms. But that argument blocks the standard reading as well. For even if there are no real species, surely our actual classificatory scheme was already in place before anyone thought about such things.

¹⁰⁰ Again, neither the logic of general terms nor corpuscularianism and its ontological entailments entered the vulgar’s thoughts as they ranked things under general terms. The vulgar just follow obvious appearances.

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