The Primacy of the Organism: Being, Unity, and Diversification in Aristotle's *Metaphysics*

Anne Siebels Peterson
Review of Metaphysics (forthcoming)

Abstract: What explains the numerical diversity of co-specific organisms in Aristotle's *Metaphysics*? According to two mainstream views, the diversity of such organisms is derivative: the diversity of Socrates and Callias derives either from the diversity of their matter or from the diversity of their forms. I argue that core principles of Aristotle's metaontology give us strong reasons to reject both mainstream views in favor of the thesis that the diversity of co-specific organisms is underived. For maintaining either of the mainstream views conflicts with Aristotle's insistence that unity is always unity under a kind, with generic unity always anchored in specific unity. The diversity of Socrates and Callias, rather than deriving from some other principle that has its diversity non-derivatively, is itself fundamental.

I. The Question of Diversification and the Mainstream Views

In virtue of what, for Aristotle, is a given member of a species numerically distinct from another member of that species? The question of what diversifies members of the same species has a long and vexed history in Aristotelian scholarship. It is a metaphysical question to be distinguished from its epistemological counterpart, the question of how we know that a given member of a species is numerically distinct from another, so that we can, as P.F. Strawson puts it, identify distinct particulars.[1] Traditionally, the answer to this metaphysical question has been that for Aristotle, it is in virtue of having numerically distinct matter that such individuals are

Correspondence to: Anne Siebels Peterson, University of Utah Department of Philosophy, Carolyn Tanner Irish Humanities Building, 215 S. Central Campus Dr., 4th Floor, Salt Lake City, UT 84124.

[1] P.F. Strawson, *Individuals: An Essay in Descriptive Metaphysics* (London: Routledge, 1959): 15-30.

numerically distinct.[2] This traditional answer has been paraphrased time and again as the claim that matter is the principle of individuation. However, as G.E.M. Anscombe and P.T. Geach point out, that same phrase is often used to refer not to what makes one individual *distinct* from another, but to what makes each a genuine *unity*, a genuine individual, in the first place.[3] No matter how interdependent these two issues may turn out to be for Aristotle, neither issue, much less the extent of their interconnection, can be properly investigated without terminology that clearly distinguishes them. To avoid this ambiguity, I will use "diversification" to refer to the first issue and "unification" to refer to the second. The question of what *unifies* a given member of a species is the question of what makes it a genuine unity, a genuine individual as opposed to, say, a mere heap or a stuff; it is a question that seems especially pressing under certain interpretations of Aristotle's doctrine of hylomorphism.[4] But it is distinct from the question of what *diversifies* such individuals, and it is the question of diversification that is my ultimate focus here.[5]

Diversity in number, or numerical diversity, is the sort of diversity that can be had among things that are the same in genus and even in species—the type of diversity had by, e.g., two

---

[2] This view, with various modifications, enjoyed widespread popularity in medieval times and still has a large contemporary following. Cf. Thomas Aquinas, *On Being and Essence* II, trans. Armand A. Maurer (Toronto: Pontifical Institute of Mediaeval Studies, 1949): 32; Avicenna, *Psychology* 5.3. On the contemporary scene, cf. Montgomery Furth, "Transtemporal Stability in Aristotelian Substances," *The Journal of Philosophy* 75.11 (1978): 624-646 at 643; Michael Loux*, Primary Ousia: An Essay on Aristotle's Metaphysics Z and H* (Ithaca, Cornell: 1991): 228-235; Theodore Scaltsas, *Substances and Universals in Aristotle's Metaphysics* (Ithaca, NY: Cornell Univ. Press, 1994): 147.

[3] G.E.M. Anscombe and P.T. Geach, *Three Philosophers* (Ithaca, NY: Cornell University Press, 1961): 72.

[4] It is a more pressing question if one understands hylomorphism as claiming that organisms are ontological composites of matter and form, and less pressing if one does not take hylomorphic structure as ontological structure. For an example of the latter understanding, see Sean Kelsey, "Hylomorphism in Aristotle's *Physics*," *Ancient Philosophy* 30 (2010): 107-24.

[5] Of course, it may turn out that whatever serves as the principle of unification also serves as the principle of diversification—it may turn out that the two questions have the same answer. Perhaps the fact that one principle might coherently fulfill both roles, along with some version of a parsimony principle, is responsible for the fact that these two questions have so often been conflated. It may be that there is even intuitive support for thinking that one principle fulfills both roles; Peter King, in "The Problem of Individuation in the Middle Ages," *Theoria* 66 (2000): 159-184, writes, concerning medieval debates about this problem, that "the answers were generally taken to be linked: whatever makes Socrates what he is also makes him different from other humans" (160).

human beings or two horses. Numerical diversity is the most fundamental sort of diversity for Aristotle, in the sense that things unified in genus or species can still differ from each other in number, while things unified in number cannot differ from each other in any sense. As Aristotle puts it in *Metaphysics* V.5, "We call different (1) those things which though other are the same in some respect, *only not in number* but either in species or in genus or by analogy; (2) those whose genus is other, and contraries, and all things that have their otherness in their substance [my emphasis]" (1018^a12-15).

What is it, then, is it that explains difference in *number* for Aristotle in the case of hylomorphic organisms falling under the same species? There have been two dominant and opposing views over the centuries: 1) the traditional view that matter is the principle of numerical diversification, and 2) the view that form is the principle of numerical diversification. Because both of these mainstream views take an organism's numerical diversity to derive from the numerical diversity of something else (albeit something very closely related to the organism), I will refer to them as *derivative* views of diversification.

The central text appealed to in the traditional view that matter is the source of numerical diversity comes at the end of Metaphysics VII.8: "And when we have the whole, such and such a form in this flesh and these bones, this is Callias or Socrates; and they are different on account of their matter, for that is different; but they are the same in form; for the form is indivisible" (1034^a5-8).[6] We should understand this view's reference to "matter" as a reference to what is often called non-functional matter (i.e., some mixture or combination of the elements)[7] rather than to functional matter (i.e., parts of the organism's body—flesh and blood, or the various

[6] Translations from Aristotle are taken from Jonathan Barnes (ed.), *The Complete Works of Aristotle*, 2 vols. (Princeton, NJ: Princeton Univ. Press, 1984).

[7] Of course there is much debate about how to understand what I am calling non-functional matter, or the matter taken independently from the form; certain medieval thinkers saw it not as a mixture or combination of the elements at all, but rather as prime matter.

organs). After all, a thing's functional matter is brought into being (out of non-functional matter) by the activity of the form—it is presence of form that endows functional matter with the unified, functional economy that makes it what it is.[8] As Jennifer Whiting points out, then, to explain diversification in terms of functional matter is (at least in part) to explain diversification in terms of form, which dissents from the traditional view.[9] We can concisely state the traditional view, then, as claiming that the source of the numerical diversity of co-specific organisms is the diversity of their non-functional matter.

The opposing view that co-specific organisms are diversified not by their matter, but by their diverse forms, has gained a number of adherents.[10] It is difficult to identify key texts on which this view centers, as it is often supported not by straightforward claims from Aristotle but rather by its use in overcoming interpretive difficulties arising out of contested passages.[11] However, one text often referenced is found at *Metaphysics* XII.5: "the causes of different individuals are different, your matter *and form* and moving cause being different from mine, while in their universal formula they are the same [my emphasis]" ($1071^{a}28$-29). Although proponents of this view do still tend to maintain that distinct organisms have distinct matter, they also tend to hold that form is responsible for the diversification of this matter, so that form's diversity remains more fundamental than material diversity and has no competition for its status as the ultimate source of one organism's diversity from another.

Both of these mainstream views, as I will refer to them—the traditional view that matter is the principle of diversification and the view that form is the principle of diversification—agree

---

[8] In keeping with this fact, an organism's functional matter cannot survive its corruption.

[9] Jennifer Whiting, "Form and Individuation in Aristotle," *History of Philosophy* 3.4 (October 1986): 359-377. Note that she uses the term "individuation" for what I call "diversification."

[10] Cf. Michael Frede and Günther Patzig, *Aristoteles, "Metaphysik Z"* (C.H. Beck: 1988), volume 1: 45-46; Charlotte Witt, *Substance and Essence in Aristotle: An Interpretation of* Metaphysics *VII-IX* (Ithaca: Cornell University Press, 1989): 3.

[11] Cf. debates over Aristotle's *Metaphysics* Z.13—for a helpful overview, see Michael Loux, *Primary Ousia: An Essay on Aristotle's* Metaphysics *Z and H* (Ithaca: Cornell University Press, 1991): 197-235.

that numerical diversification is underived at *some* level in the order of composition: the level of matter for the traditional view; the level of form for the other view. After all, numerical diversification *must* be underived at some level—unless one maintains that there are infinite levels of material constitution, as Aristotle certainly does not.[12] The mainstream views maintain either that form needs no principle of diversification or that matter needs no principle of diversification. But why the implicit assumption, shared by both views, that the level of underived numerical diversity cannot be the level of the organism itself? Why not maintain that *organisms* need no principle of diversification?

There has been some support for turning away from the mainstream views in this new direction, which takes the diversity of co-specific organisms themselves to be underived or basic.[13] My project here contributes to this literature by offering a new argument for turning in precisely this direction: an argument deriving from Aristotle's metaontology. The new argument I will offer for this turn is also distinctive in its method: while the turn toward viewing co-specific organisms' diversity as underived is often supported by different sets of problems for each one of the mainstream views, my argument supports this turn by cutting equally against both mainstream views at once. From the perspective of Aristotle's metaontology, it turns out, the two mainstream views are not at opposite ends of the spectrum at all; they err in precisely the same way.

---

[12] "For...one thing cannot proceed from another, as from matter, *ad infinitum*, e.g. flesh from earth, earth from air, air from fire, and so on without stopping...." (994^a2-4). Indeed, Aristotle maintains that there cannot be an infinite regress in any of the four types of causation (cf. *Metaphysics* II.2). And I cannot think of any view which avoids infinite regresses *and* also avoids the conclusion that diversification must be a brute fact at some level of analysis. Suppose one wanted to hold that things were diversified by being in different places; this would only make sense if the places were non-derivatively diversified, or if one were operating with a conception of space as absolute and one held that it contained points which were non-derivatively diversified.

[13] For example, Edward Regis, "Aristotle's Principle of Individuation," *Phronesis* 21.2 (1976): 157-166; W. Charlton, "Aristotle on Identity," in T. Scaltsas, D. Charles, and M.L. Gill (eds.) *Unity, Identity and Explanation in Aristotle's Metaphysics* (Oxford : Clarendon Press, 1994): 41-53 at 46.

II. Numerical Unity in Aristotle's Metaontology

To set the stage for the connection between Aristotle's metaontological views and his views on numerical diversification, we must begin with an exploration of his central ideas about being and unity—the core theses of his metaontology. While the precise meaning of Aristotle's metaontological theses about being and unity has been the focus of much scholarship over the centuries, less attention has been devoted to the implications of these theses for the parallel concept of diversity. And it is precisely these implications, I will argue, that undermine both mainstream views on numerical diversification in Aristotle. In outline, my central argument in this section and the next will proceed as follows: Aristotle's metaontology tells us that a) "one" is an incomplete schema that must be filled out by reference to some kind (whether genus or species), with the most fundamental explanation of a substance's unity referring to its species,[14] and that b) the concept of diversity should be understood as parallel to the concept of unity in these respects.[15] Therefore, claims of diversity likewise require reference to a genus or species, with the most fundamental explanation of a substance's diversity from other substances referring to its species. Both mainstream views break this parallel between unity and diversity, since both explain the diversity of co-specific organisms by reference to a component the unity and diversity of which is determined independently of their species-level unity.

While ontological questions ask what there is, metaontological questions ask what it is to be. W.V. Quine's answer to the latter question is, "[t]o be assumed as an entity is, purely and

[14] Although "one substance" or "one animal" does express a level of unity had by, say, a horse, "one horse" gives the fullest or most fundamental expression of the horse's unity.

[15] The support for this parallel between the concepts of unity and diverse is not merely supported by Aristotle's textual insistence upon it; there is, I will argue, a conceptual connection between unity and diversity that supports the parallel.

simply, to be reckoned as the value of a variable";[16] or as Peter van Inwagen has put the Quinean view, "the statement that "Fs exist" means that "[t]he number of Fs is not zero."[17] Aristotle likewise ties being to unity—so closely, in fact, that to be for Aristotle just is to be one.[18] But despite this superficial similarity, Aristotle's metaontology involves a further claim that Quine's does not. Aristotle often repeats the thesis that being is "said in many ways."[19] This thesis has a variety of implications, but here I will focus on just one. According to this thesis, there is no such thing as just *being*; put another way, to be is not the same for all the things there are. Put yet another way, "being," taken by itself, does not express a complete concept. After all, as Aristotle tells us, unity and being go hand in hand,[20] and as we read in *Metaphysics* XIV.1, to be one is always to be one *under some count-noun*: "'One' evidently means a measure. And in every case it is some underlying thing with a distinct nature of its own" ($1087^{b}33$-34). Whenever we count "one," it is always one *human being* or one *dog* or one *shade of whiteness* (or at more generic levels, one *animal* or one *color*); "one" must always be supplemented with a count-noun expressing a type of being. The same is true for "being": there is no such thing as just plain "being," but rather "being a human being" or "being a dog" (or, at more generic levels, "being an animal" or "being a color"). Aristotle explains the thesis in more detail in *Metaphysics* X.2:

> [W]e must also ask in general what unity is, as we must ask what being is, since it is not enough to say that its nature is just to be unity or being.... Therefore if all existent things were colours, existent things would have been a number, indeed, but of what? Clearly of

---

[16] W.V. Quine, "On What There Is," in Michael J. Loux (ed.), *Metaphysics: Contemporary Readings* (New York, NY: Routledge, 2001), 42-56 at 50.
[17] van Inwagen, *Metaphysics* (3rd Edition) (Philadelphia, PA: Westview Press, 2009), 284.
[18] See, e.g., *Metaphysics* IV.2: "unity is nothing apart from being" ($1003^{b}31$).
[19] This thesis is discussed in detail in *Metaphysics* IV.2.
[20] See, for example, *Metaphysics* IV.2 ($1003^{b}23$), *Metaphysics* VII.16 ($1040^{b}17$-20).

> colours; and the 'one' would have been a particular 'one', e.g. white. And similarly if all existent things were tunes, they would have been a number, but a number of quarter-tones, and their substance would not have been number; and the one would have been something whose substance was not the one but the quarter-tone.... And the same argument applies to all other classes. Since, therefore, while there are numbers and a one both in affections and in qualities and in quantities and in movement, in all cases the number is a number of particular things and the one is one something, and its substance is not to be one, the same must be true of substances; for it is true of all cases alike. That the one, then, in every class is a definite thing, and in no case is its nature just this—viz. unity, is evident; but as in colours the one itself which we must seek is one colour, so too in substance the one itself is one substance. ($1053^{b}27$-$1054^{a}12$)

This passage makes two key points about Aristotle's metaontology:

1) Just as there is no such thing as being *simpliciter*, neither is there any such thing as unity *simpliciter*: rather, "one," taken by itself, is an incomplete schema that must be filled out by a species or genus within one of the ten Aristotelian categories.
2) The *most fundamental* expression of a thing's unity must include the *most specific form of unity* under which it falls (e.g., one shade of whiteness rather than one color or quality; one human being rather than one animal or substance); its less determinate forms of unity (genera) are parasitic on its most determinate form of unity (species).

To paraphrase (1), whenever we count "one," it is always one "something"—one quality, one quantity, one substance, etc. In more detail, nothing is shared among items in different categories of being: although each of these things is “one,” unity amounts to something different

for items in different categories of being.[21] The category of being under which a thing falls, then, is not something that characterizes it *in addition to*, or over and above, its unity. Rather, its unity is itself either qualitative unity, or quantitative unity, or substantial unity, etc. There is no such thing as just plain unity. As Aristotle puts it, "in 'one man' nothing more is predicated than in 'man', just as being is nothing apart from substance or quality or quantity; and to be one is just to be a particular thing" (1054a16-18).

To paraphrase (2), although we can count one "substance" or one "animal" (or one "quality" or one "color"), these more generic terms do not express the fundamental unity of the items we are counting—this is expressed by their species. In more detail, although there is such a thing as, e.g., "substantiality" and "animality" (unlike "being"), these generic forms of unity are indeterminate; they are abstractions from the more fundamental *specific* form of unity possessed by the animal. As Aristotle tells us in the above passage, if all that existed were colors, the "one" would not have been one color in general, but one fully determinate shade of whiteness; if all that existed were tunes, the "one" would not have been one tune in general, but rather one fully determinate tune, e.g., a quarter-tone.[22] So too in the case of substance, Aristotle invites us to conclude, we give the most complete account of the unity of a substance by proceeding all the way down to a fully determinate type within the category of substance: "human being" or "horse."[23] As he emphasizes in *Metaphysics* VII.13, "if man and such things are substances...none of the elements in their formulae is the substance of anything, nor does it

---

[21] Although, of course, these items are all related by their central connection to items in the category of substance ($1003^{a}35$-$1003^{b}10$).

[22] In such a world, there would not be a temptation to view "one" as a stand-alone, determinate concept; the concept "one" would be inextricably tied to the concept "one tune." Naturally enough, we live in a world with more than just tunes, tempting us when we think of "being" to think of something that ranges indiscriminately over *all* of the beings there are. But just because there are more types of beings than tunes, it does not follow that the metaphysical content of "being" is any less determinate in this world.

[23] Here we might be reminded of Aristotle's claim in *Categories* 5 that "if one is to say of the primary substance what it is, it will be more informative and apt to give the species than the genus. For example, it would be more informative to say of the individual man that he is a man than that he is an animal" ($2^{b}9$-12).

exist apart from the species or in anything else; I mean, for instance, that no animal exists apart from the particular animals" ($1038^{b}30$-33). Rather, the ways of being an animal are being a horse, being a dog, being a geranium, being a human being, etc.; and being one human being is irreducibly different from being, say, one horse. The type of unity associated with the category *substance* is an indeterminate generalization of the more fundamental, determinate types of unity associated with the different species within that category.[24] So while there is always a better account of the unity at more generic levels (e.g., we specify the unity of a "substance" more fully if we go on to identify its species), there is not likewise a more precise account of the unity found at the level of the species. The endeavor of specifying or explaining a substance's unity bottoms out at the level of its species.

To paraphrase both key points, "one" does not fully express or describe the unity of anything whatever—rather, everything that is one is one under some category of being, and some fully determinate type of being at that. These results have important implications for questions about the nature of *numerical unity* in Aristotle. The key implication is that things that are numerically one are never *just* numerically one, and also never *just* numerically one substance or quality or quantity, etc. They are, fundamentally, numerically one *dog*, *horse, human being*, or *shade of whiteness*. At this level, the specific level, the fundamental analysis of their unity is given: higher genera are less determinate, and beneath the specific level there is no longer any more determinate analysis of their unity. The upshot is that while there is, for Aristotle, an explanatory answer to the question "Why is there one animal?"—namely, "Because there is one

[24] As Aristotle puts it quite strongly: "For not only must the common nature attach to the different things, e.g. not only must both be animals, but this very animal must also be different for each (e.g. in the one case horse, in the other man), and therefore this common nature is specifically different for the two things. One then will be in virtue of its own nature one sort of animal, and the other another, e.g. one a horse and the other a man. This difference then must be an otherness of the genus. For I give the name of 'difference in genus' to an otherness which makes the genus itself other" ($1058^{a}1$-8).

horse"—there is for him no explanatory answer to the question "Why is there one horse?"[25] To assume that there is an explanatory answer to this question is to assume, in opposition to Aristotle, that the unity of the horse is not *itself* a fundamental kind of unity. It is to assume that the unity had by the horse must be parasitic on or explained in terms of some more fundamental sense(s) of unity.

Thus far neither proponent of one of the mainstream views on diversification meets with any trouble; for neither view holds that there can be a more determinate analysis of a thing's *unity* than that which refers to its species. The trouble comes when we find, as I will now argue, that unity and diversity are parallel concepts, and indeed that Aristotle himself emphasizes this point. If this is so, then just as the account of a thing's unity bottoms out at the level of its species, with no explanatory answer to the question of why one horse is one horse, so the account of a thing's diversity must bottom out at the level of its species, with no explanatory answer to the question of why one horse is different from another horse.

III. Numerical Diversity in Aristotle's Metaontology

How do these points about numerical unity connect with our worry about numerical diversification? To start, it is a constraint shared by any metaontological theory (Aristotelian, Quinean, or otherwise) that diversification presupposes unification. After all, it only makes sense to talk about the diversity of things each of which is antecedently unified, and only to whatever degree each thing counts as a unity (given that certain metaontological theories allow for degrees of unity). Unity and diversity, then, are conceptually tied together; however, unity

[25] Of course, we still might say that there is one horse because there is some matter which has the form of a horse; the point here is just that the horse's matter and form cannot serve as a *deeper explanation* of the horse's unity *as a horse*—not in the way that the existence of one horse serves as a deeper explanation of why there is one animal.

holds primacy. After all, there could be *one* without *many* (Parmenidean monism is at least coherent), but there could not be *many* without *one*. For if there are *many*, they are many *ones*; diverse things are different *ones*.[26] As Whiting puts the point,

> [M]atter has to make up one thing before it can be the same as (or different from) another individual at a time. It also has to make up one thing at each of t_1 and t_2 in order for it to be the same (or a different) thing at each of t_1 and t_2. In a way, this priority of unity should be obvious. For we are asking when one individual (i.e., a unity) is the same as or different from other individuals (i.e., other unities) both at and across times. There is thus a conceptual connection between unity and individuation...[27]

Given that individuation, as she calls it, or diversification, as I am calling it, presupposes unification in just this sense—that it must be the diversification of things *each of which is a unity*—it follows that one's theory of diversity must mirror one's theory of unity. That is, if we take unity to be said in many ways, we must also take diversity to be said in many ways: for if a category-neutral sense of diversity were admitted, it would be a diversity *of category-neutral unities*, which cannot be if being is said in many ways. We cannot maintain an Aristotelian view of unity and a Quinean view of diversity, or vice versa.

We should not be surprised, then, to find Aristotle maintaining that just as there is no such thing as unity *simpliciter*, so there is no such thing as diversity *simpliciter*. Rather, "diverse" is an incomplete schema that requires supplementation in just the way "one" does. Aristotle explicitly makes this connection between unity and diversity in *Metaphysics* IV.2:

---

[26] Avicenna seems to reflect this point when he claims, "plurality requires that it be understood that it derives from unity, because it is in itself an effect of unity." *The Metaphysics of the Healing*, trans. Michael Marmura (Provo, UT: Brigham Young University Press, 2005), Book II, Ch. 6: 99.

[27] Whiting, "Form and Individuation in Aristotle": 362.

> [T]he other and the dissimilar and the unequal, and everything else which is derived either from these or from plurality and unity, must fall within the province of the science above-named [the science of being *qua* being].—And contrariety is one of these concepts, for contrariety is a kind of difference, and difference is a kind of otherness. Therefore, since a thing is said to be one in many ways, these terms also will be said in many ways. (1004a18-23)

Diversity, like its parallel concept of unity, is said in many ways; just as "one" is an incomplete schema that must be supplemented, in the fullest analysis, with a fully determinate species, so "diverse" or "different" is an incomplete schema that must be supplemented with a genus or species shared by the two items that differ. Things that differ numerically, that is, are never numerically different *simpliciter*. Rather, they are numerically different *somethings*—e.g., numerically different *animals* (if one is a horse and one is a dog), or numerically different *horses* (if both are horses). Aristotle clarifies this point in *Metaphysics* X.3: "that which is different from anything is different in some respect, so that there must be something identical whereby they differ. And this identical thing is genus or species" (1054^{b}25-28).

This means that if we have two horses, there is an explanatory answer to the question "Why are there two animals?"—namely, "Because there are two horses"—but there is not in turn an explanatory answer to the question "Why are there two horses?" For in this case there is no more determinate shared level of unity in terms of which an analysis of their diversity can be given. Indeed, if we have one horse and one dog, then there is no explanatory answer even to the question "Why are there two animals?" (We might, of course, be tempted to answer in this case by saying that there are two animals because there is one horse and one dog; but this is not to give a more determinate explanation of their diversity, their *twoness*. It is just to give a more

determinate explanation of the oneness of each.) Just as the account of a thing's unity bottoms out at the level of its species, so the account of multiple things' diversity from each other bottoms out at the level of their species—unless they do not share a species, in which case it bottoms out at the level of their lowest shared genus. Thus our two key points about unity can be extended to the case of diversity: 1) Diversity for Aristotle is always diversity under a category of being, and 2) diversity under less determinate types is always anchored in diversity under more determinate types.

We can now see precisely where each of the two mainstream views on diversification in Aristotle go astray, and we can see that they go astray in precisely the same way: they purport to give an explanatory answer to the question of why diverse co-specific organisms are diverse. They explain the diversity of co-specific organisms in terms of the diversity of items not falling under that species.[28] But given that the unity had by, say, one horse, is fundamental and not to be explained in terms of some further case of unity, and given the conceptual connection between unity and diversity, the diversity had by two horses is likewise fundamental and not to be explained in terms of some further case of diversity. While there may be an explanatory answer to the question of why diverse co-generic organisms are diverse—the diversity of co-generic organisms may be explained in terms of some further case of diversity, if they also share a single species—there cannot be an explanatory answer to the question of why diverse co-specific organisms are diverse. For in the case of co-specific organisms, there is no more determinate shared genus in terms of which their diversity can be explained. Explaining their diversity in terms of some further case of diversity, then, would make their diversity derivative from a case of diversity *not* at the level of their shared species, and would violate Aristotle's

[28] Although a horse's matter and form are deeply connected to its species, neither its matter nor its form is a horse.

claim that diversity (like unity) is always diversity under a shared category of being, with diversity under higher genera ultimately anchored in diversity under the most determinate genus shared by the items that differ.[29]

This is not to say that it cannot be true that diverse co-specific organisms always *have* diverse matter or diverse forms—for all I have said here either claim might be true. It is just to say that even if they do always have diverse matter or diverse forms, the diversity of these items cannot be explanatory of *their* diversity. At most, difference in matter or form can be necessary and sufficient for their diversity, not explanatory of it.

My argument thus far has been that because the account of a thing's unity bottoms out at the level of its species for Aristotle, and because the concept of diversity always at least implicitly references some concept under which each diverse thing is itself *one*, it follows that there cannot be an explanation of the diversity of co-specific organisms. But it is illuminating to lay out the argument in the reverse direction as well. Suppose that there were an explanation of the diversity of co-specific organisms, e.g. of two horses. That explanation would explain the diversity of the horses in terms of the diversity of two further items each of which is a unity in some sense (e.g., in terms of the diversity of two *pieces of matter* or of two *forms*). But if the source of their diversity *as horses* were the diversity of their matter or of their forms, then likewise the source of each one's *unity* as a horse would be the unity of its matter or of its form.

---

[29] To see the problem in more detail, consider the mainstream views' claim that the diversity of co-specific organisms is explained by the diversity of their matter or form. Then the diversity of those items (whether matter or form) that explain the co-specific organisms' diversity must be either *just plain diversity*, or else diversity under some higher genus than the species under which the organism falls, e.g. diversity as substances (after all, there are no *more* determinate forms of being than the species). In the first case, the diversity of the co-specific organisms would be explained by items with *just plain diversity*, making *just plain diversity* prior to diversity under a category of being. Given the conceptual connection between unity and diversity, this would violate the first key point of Aristotle's metaontology. In the second case, the diversity of the co-specific organisms would be explained in terms of the diversity of items with some more generic form of diversity (e.g., diversity as *substances*, but not as horses), but given the conceptual connection between unity and diversity, this would violate the second key point of Aristotle's metaontology (not to mention his commitment that substances cannot be composed of substances [cf. *Metaphysics* VII.13, $1039^{a}3$-4, and VII.16, $1041^{a}4$-5]).

Whatever explains the *distinctness* of distinct horses will also explain the unity of *each* of those horses—for whatever it is that diversifies horses, it cannot do so without making each of them *into a unity that is one horse*. To put it the other way around, if it did not make each of them into one horse—if the unity of each as a horse were already achieved independently—then the diversity of those horses would also already be achieved independently. But Aristotle clearly does *not* maintain that each horse is one horse because of the unity of its matter or of its form (after all, this would just be to admit the unity had by horses as non-fundamental); therefore he likewise does not maintain that distinct horses are distinct because of the distinctness of their matter or form.

According to my interpretation, then, just as Aristotle holds that the unity conferred by membership in a species is fundamental, not to be explained in terms of unity at some other level, he holds the parallel thesis for diversity: that there is no explanatory answer to the question of what makes Socrates a different human from Callias, or to what makes two horses different horses. Their diversity is underived. Maintaining the contrary claim, as both mainstream views do, violates the key claims of Aristotle's metaontology: that "diverse," like "one," is an incomplete schema requiring supplementation by some kind term within one of the Aristotelian categories, with unity/diversity at any level higher than the level of the species always anchored in unity/diversity at the level of the species (itself a fundamental level of unity/diversity). After all, since no two things can be diverse without each being a unity, making the diversity of co-specific organisms derivative from the diversity of other items makes not only the diversity but also the the *unity* of those items prior to the unity of the organisms, violating Aristotle's insistence on the fundamentality of specific unity. But if, instead, the diversity of co-specific organisms is underived, then the unity each has as, e.g., a human being or horse remains a

fundamental type of unity itself. Rejecting the mainstream views on diversification and maintaining that diversity for organisms is underived—that an organism's diversity from other organisms, like its unity, is decided at the level of its species—allows us to maintain the core theses of Aristotle's metaontology.

IV. Conclusion

Aristotle's metaontology provides strong reasons for rejecting both derivative mainstream views on the numerical diversification of co-specific organisms in Aristotle. The core theses of his metaontology favor the opposing view that the numerical diversity of co-specific organisms is underived or basic, not admitting of explanation in terms of a further case of diversity. Keeping in mind the constraints of Aristotle's metaontology helps to illuminate the invalidity of an inference that is sometimes made in defenses of the derivative mainstream views of diversification. As Loux puts it,

> [S]ince Callias and Socrates belong to the same lowest-level substance kind, they have precisely the same constituting universal—the substantial form associated with their common proper kind, and it is a monadic universal. So Callias and Socrates overlap; they share a constituent. How, then, is it that they are numerically different? The assumption is that since they are numerically different, they must differ in a constituent; and Aristotle tells us that they do; they have numerically diverse parcels of matter as constituents.[30]

[30] Michael Loux, "Aristotle's Constituent Ontology," in vol. 2 of Oxford Studies in Metaphysics, 6 vols. (New York: Oxford University Press, 2006): 229.

Scaltsas takes a similar line of reasoning to the next step in defense of his conclusion that "the Aristotelian position is that matter, whatever it may be, differentiates substances of the same kind":[31]

> [W]hen substances are of the same kind, their difference must rest on something other than the form, namely, matter. This is a general, a priori argument that is not restricted in application to physical matter, but would apply to any kind of matter. The argument is that if there are substances that are of the same kind, because they differ from one another, they must each consist of more than the form of that kind. Otherwise, they would not differ from each other.[32]

What I have argued is that even if it is in fact true that diverse organisms must have diverse matter (or diverse forms for that matter), it in no way follows that the diversity of their matter or the diversity of their forms is the source of *their* diversity as, e.g., distinct horses. It may be, for one thing, that diverse horses have diverse matter without the diversity of their matter being the source of their diversity. Indeed, it may even be that the matter of the two horses is diverse because *they* are diverse (rather than the other way around). If we remain mindful of the fact that for Aristotle, unity, like being, is said in many ways, and that specific unity is more fundamental than generic unity, then inferences from the presence of a diverse component within diverse organisms to the conclusion that that component is the source of the diversity of those organisms will be discouraged—and for precisely the same reason whether that component be matter or form. By analyzing the diversity of organisms falling under a given species in terms of the diversity of their matter or form, the mainstream views undermine the fundamentality of the diversity of those organisms—thereby undermining the fundamentality of their unity as well,

---

[31] Theodore Scaltsas, *Substances and Universals in Aristotle's* Metaphysics: 147.
[32] Theodore Scaltsas, *Substances and Universals in Aristotle's* Metaphysics: 147.

given Aristotle's parallel analyses of unity and diversity. We find in Aristotle's metaontological discussions in the *Metaphysics* new motivation for a commitment central to his thought even in the *Categories*: the fundamentality of the being and unity had by individual organisms, organisms for which to be, unlike Plato's forms, is to *live*.[33]

University of Utah

[33] First and foremost, I am grateful for the many discussions during my time at the University of Notre Dame with Michael Loux, whose feedback and guidance as my doctoral advisor were at the center of the formation and development of this project. I am also grateful to Sean Kelsey and Peter van Inwagen, who provided many insightful comments as I refined my views on Aristotelian metaontology and related issues.