# Should an Ontological Pluralist be a Quantificational Pluralist?

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**Abstract:** *Ontological pluralism* is the view that there are different fundamental ways of being. Recent defenders of this view—such as Kris McDaniel and Jason Turner—have taken these ways of being to be best captured by semantically primitive quantifier expressions ranging over different domains. They have thus endorsed, what I shall call, *quantificational pluralism*. I argue that this focus on quantification is a mistake. For, on this view, a quantificational structure—or a quantifier for short—will be whatever part or aspect of reality's structure that a quantifier expression carves out and reflects. But if quantificational pluralism is true, then a quantifier should be more natural than its corresponding domain; and since it does not appear to be the case that a quantifier is more natural than its corresponding domain, quantificational pluralism does not appear to be true. Thus, I claim, an ontological pluralist should not be a quantificational pluralist.

*Ontological pluralism*—or *pluralism about being*—is, roughly, the view that there are different fundamental ways of being. The core pluralist insight, as I see it, is that there are peculiarly ontological differences between certain entities, differences which lie not in the nature of these entities, not in what they are like, not simply in the categories to which they belong, but in the ways of being they enjoy. Take, for example, the difference between an

actual and a merely possible silver dollar. This difference is utterly unlike the difference between a cat and a canary, a mountain and a molehill, or a table and a tablet. For these things differ in their nature, in what they are like. But an actual and a merely possible dollar need not differ in their nature. They might have exactly the same intrinsic as well as extrinsic nature: they might have exactly the same size, shape, weight, and chemical composition; they might well be perfect—perhaps even indiscernible—duplicates. Yet, for all their similarities, there still seems to be an important and fundamentally ontological difference between them: one is actual, the other is merely possible. Or take, for another example, the difference between a number and a nightingale. A nightingale has a determinate size, shape, and weight. It has a determinate number of feathers, it sings a pretty song, etc. These properties help to make up its nature. But a number does not have a size, shape, or weight. It is not anywhere or anywhen. It has a radically different nature from a nightingale. Yet the extent of the difference between these entities seems to transcend any differences in their natures. There appears to be a further and, it seems, fundamentally ontological difference between them: one is abstract, the other is concrete. To be a pluralist is thus to recognize various objective, ontological differences. But what exactly is it that makes these differences peculiarly ontological? What makes them differences in the being as opposed to the nature of entities involved?

Recent defenders of ontological pluralism—such as Kris McDaniel and Jason Turner—have sought to capture and explain the basic phenomenon of ontological difference in terms of quantification.[1] To this end, they have endorsed what I will call *quantificational*

[1] See McDaniel (2009, 2010b, 2017) and Turner (2010, 2012, 2021).

*pluralism*.[2] The true fundamental metaphysical theory, on this view, will contain multiple existential quantifier expressions that range over different domains. These quantifier expressions are supposed to be maximally metaphysically perspicuous; they are supposed to carve reality at the ontological joints. Entities, on a rough characterization of this view, have different natures when different predicates apply to them, and enjoy different ways of being when they are ranged over by different existential quantifier expressions. So, to return to our examples, the difference between an actual and a merely possible dollar is most perspicuously represented by the fact that the former but not the latter is ranged over by the fundamental actualist quantifier expression, '$\exists_@$', which ranges over all and only actual entities; while the difference between a number and a nightingale is captured, at least in part, by the fact that the former but not the latter is ranged over by a different fundamental quantifier expression, '$\exists_a$', which ranges over all and only abstract entities. These differences are, moreover, said to reflect differences that are peculiarly ontological because they involve differences in quantification as opposed to predication. Ontological differences, on this view, are quantificational differences.

[2] Quantificational pluralism, or a view quite like it, appears to have been first suggested—and then quickly rejected—by Morton White (1956: 68). It makes a cameo appearance in W. V. Quine's *Word and Object* (1960: 241-2) as the view that the difference between the way in which abstract objects such as numbers and classes exist and the way in which physical or material objects exist is due to 'a difference in two senses of "there are"', and can later be seen in Herbert W. Schneider's claim that '[i]t may be necessary to have several kinds of existential quantifiers in logic, if ontology finds that things have different ways of being' (1962: 10). A more developed version of quantificational pluralism was defended by Nino B. Cocchiarella (1969, 1991).

I will argue that this focus on quantification is a mistake. It does not, I think, really help to capture and explain the basic phenomenon of ontological difference. For a fundamental quantifier expression, being maximally perspicuous, is supposed to carve at the joints, and that part or aspect of reality's structure which a quantifier expression carves out and reflects is, what I will call, a *quantificational structure* or, for short, a *quantifier*. A quantifier is not, however, assumed to be an entity. It is only assumed to be the worldly correlate of a quantifier expression, the joint in reality that gets carved out by this expression, whatever that joint happens to be.[3] But regardless of what we ultimately take a quantifier to be, it will range over a domain of entities that would seem to comprise a natural class. It thus looks like we can ask the following Euthyphro-style question: is a quantifier's domain a natural class because it is ranged over by a natural quantifier, or is a quantifier a natural quantifier because it ranges over a natural class? The direction of explanation should, I think, be clear: a quantifier inherits the naturalness of its domain. But the domain of a quantifier, being a natural class, would seem to be best represented by a predicate. Thus, the peculiarly ontological nature of the difference between certain entities does not appear to be quantificational. If this is correct, it leaves the pluralist with the difficult—although I do not believe insurmountable—task of saying exactly what it is about these differences that makes them ontological.

[3] I thus make no assumptions about whether we ought to reify the meanings of quantifier expressions, and thereby associate entities with the quantificational joints of reality. See Sider (2009: 407-9) for some attempts to make sense of the quantificational structure of reality, and Sider (2011: 90-1) for some reasons not to reify the meanings of quantifier expressions.

## I. Quantificational pluralism

Ontology is concerned with absolutely everything there is. It is the science of being as such. We ask ontological questions when we ask, for example, whether numbers are real, whether dragons and other fictional creatures exist, or whether there are any composite objects. But what exactly are we asking when we ask such questions? Current orthodoxy holds that these questions should be formulated in the idiom of quantification. A central tenet of this meta-ontological orthodoxy is that talk of being is best understood in terms of particular—or existential—quantification. Ontological questions thus have something like the following canonical form: '$\exists x(\mathrm{F}x)$?'; they are quantificational questions.[4]

The received view of being incorporates three theses:

**The Neo-Quinean Thesis**: being is most perspicuously expressed by particular—or existential—quantifier expressions.

**The Monistic Thesis**: being is unitary: there are no ontological differences between any entities.

**The Equivalence Thesis**: being is the same as existence.

The neo-Quinean thesis concerns the representation of being in our fundamental theories. The monistic thesis amounts to an endorsement of *ontological monism*—or *monism about being*—the view that there is exactly one fundamental way of being. And the equivalence

[4] This way of understanding current orthodoxy is due to Kit Fine (2009: 157-8). Adherents of this orthodoxy include Quine (1948, 1969) and van Inwagen (1998, 2009). It is, however, no part of orthodoxy that all quantificational questions are ontological questions: we ask quantificational questions when we ask whether there is water on Mars or whether there are carnivorous plants on every continent, but we do not thereby seem to be asking ontological questions. Thanks to an anonymous referee for encouraging me to draw this distinction.

thesis is needed to properly license the identification of particular with existential quantification in the neo-Quinean thesis.[5]

This now orthodox view rose to prominence in the twentieth century, and with its rise came the subsequent decline of the doctrine that there are different ways of being. There has, however, been a recent resurgence of interest in this doctrine. This is due, no doubt in part, to the fact that McDaniel and Turner have shown us how to square this seemingly heretical doctrine with neo-Quinean orthodoxy. The pluralist can simply grant that talk of being is best captured by existential quantification but insist that our best fundamental theories should contain multiple fundamental existential quantifier expressions. So while the monist and the pluralist agree that ontological structure is quantificational structure, they disagree about the 'shape' or 'complexity' of that structure. This locates the disagreement between monists and pluralists right where we should expect it: over whether being—and, thus, fundamental quantification—is unitary or fragmentary.

If the quantificational structure of reality is unitary as the monist believes, there will be exactly one fundamental—and perfectly natural—existential quantifier. Being will thus

[5] Similar accounts of the received view of being can be found in van Inwagen (1998, 2009) and Moltmann (2020). The monistic thesis should not be confused with what we might call the generality thesis: namely, that there is a generic way of being that absolutely everything enjoys. For this is something that even some pluralists such as McDaniel accept. Moreover, some noneists such as Routley (1980) and Priest (2005: xviii, 14) accept the monistic thesis and grant that there is only one fundamental way of being, but reject the generality thesis and maintain that there are some non-entities, i.e., objects or items that lack being altogether. The equivalence thesis is denied, for example, by Russell (1903: 449), Moore (1903: 110-12), and Meinong ([1910] 1983: 57-61/ AMG IV 73-78), who take existence to be the way of being enjoyed by entities in space and time. I shall, however, simply assume the equivalence thesis here.

be perspicuously represented in our fundamental theories by the unrestricted existential quantifier expression, '∃', of formal logic. For a representation is *metaphysically perspicuous* to the extent that it reflects reality's ultimate structure, and the existential quantifier expression of formal logic, being both simple and unrestricted, will perfectly reflect the fundamentality and universality of being on the monist's picture; it will be maximally metaphysically perspicuous.[6]

But if the quantificational structure of reality is fragmentary as the pluralist believes, there will be fundamental ways of being enjoyed by only some of what there is. The existential quantifier expressions corresponding to these restricted ways of being will not range over absolutely everything there is, they will be *restricted* quantifier expressions.[7] But if these restricted quantifier expressions are to perfectly reflect the fragmented ontological

[6] I am working with a metaphysically substantive understanding of perspicuity: a notion, word, concept, or theory is maximally perspicuous when it carves at the joints. On a more deflationary understanding, there would be nothing deep about the claim that being is most perspicuously represented by quantifier expressions. It would just tell us that we should use a different piece of linguistic machinery to designate aspects of an entity's being than we do to designate aspects of its nature. A theory that sought to capture the nature of entities with quantifier expressions and the being of entities with predicates would seem to be provide us with a perspicuous representation of reality in this deflationary sense. But such a representation would appear to distort the structure of reality, not reflect it. Thanks to Daniel Nolan for encouraging me to draw this distinction.

[7] I am here assuming that there is an all-inclusive domain and that a quantifier expression is unrestricted when it ranges over this all-inclusive domain. Both assumptions are controversial. For an overview of these controversies, see Rayo and Uzquiano (2006). For an attempt to make sense of quantificational pluralism while granting that unrestricted quantification is impossible, see McDaniel (2017: 35-6). Thanks to an anonymous referee for pushing me on this point.

structure of reality, they must lack non-demonstrative, non-circular definitions in the language of our fundamental theories since such definitions would be suggestive of further—more fundamental—structure. If, for example, the restricted quantifier expressions corresponding to the restricted ways of being were ultimately defined in terms of an unrestricted quantifier expression and various primitive restricting predicates, that would suggest that the ultimate quantificational structure is unitary, not fragmentary. For there would then only be one undefined existential quantifier expression in the fundamental language: namely, the unrestricted existential quantifier expression of formal logic. The fundamental language would thus fail to adequately reflect reality's fragmented quantificational structure. A more perspicuous representation would instead take the fundamental restricted quantifier expressions to lack any non-demonstrative, non-circular definitions; that is, it would take them to be *semantically primitive*.[8] A language with multiple semantically primitive quantifier expressions ranging over different domains will, it seems, perfectly reflect the quantificational structure of reality on the pluralist's picture.

[8] McDaniel (2009: 303, 2017: 25) borrows the notion of a semantically primitive restricted quantifier expression from Hirsch (2005: 154). But, as McDaniel himself notes, it is not entirely satisfactory for his pluralistic purposes. For '[i]f a speaker had grasped and internalized the meaning of *exactly* one of [the pluralist's] semantically primitive quantifier [say, for example, '$\exists_{@}$'] (and had no other quantifiers in her language), this speaker would not be in a position to say or even believe that there is anything more than what is ranged over by that quantifier', she would take absolutely everything there is to be actual. There thus appears to be, as McDaniel goes on to note, a sense in which any semantically primitive quantifier expression is unrestricted: namely, that of being a possible meaning for the unrestricted quantifier expression. For a helpful discussion of semantically primitive quantifier expressions and domain restriction, see Sider (2011: 177-80).

McDaniel formulates ontological pluralism along these lines as 'the view that there are possible languages with semantically primitive restricted quantifiers that are at least as natural as the unrestricted quantifier'[9] and tells us that 'there are ways of being just in case there is more than one perfectly natural quantifier expression'.[10] Turner follows suit, describing it as 'the doctrine that a logically perspicuous description of reality will use

[9] McDaniel (2010a: 635, 2017: 146).

[10] McDaniel (2013a: 12, cf. 2009: 314, 2013b: 281, 2017: 122). The language of our fundamental theories must, on this view, contain semantically primitive restricted quantifier expressions. If, in addition to the specific, restricted ways of being corresponding to these semantically primitive quantifier expressions, there is a fundamental way of being that absolutely everything enjoys, then the language of our fundamental theories will also need to include a semantically primitive *unrestricted* quantifier expression to capture this generic, unrestricted way of being. But whether the pluralist accepts such a way of being will depend upon just how fragmented that pluralist takes being to be; that is, it will depend upon whether she accepts the strong—or just the weak—fragmentation thesis.

**Weak Fragmentation Thesis**: there are ontological differences between certain entities.

**Strong Fragmentation Thesis**: there are no ontological similarities between certain entities.

(We can say that there is an *ontological difference* between two entities when there is a way of being that one enjoys that the other does not, and that there is an *ontological similarity* between two entities when there is a way of being that they both enjoy.) To be a pluralist is simply to accept the weaker of these two theses. For both of these theses conflict with the monistic thesis. Historically, some pluralists have taken certain ways of being to be nested rather than disjoint (where we will say that two ways of being are *nested* when everything that enjoys one of them enjoys the other, but not vice versa; and that two ways of being are *disjoint* when nothing that enjoys one of them enjoys the other). So, for example, Meinong ([1910] 1983: 57-61/ AMG IV 73-78, 1921: 18, trans. in Grossmann 1974: 228/ AMG VII 20) claims that existence is nested in subsistence, while Moore (1903: 110-12) and Russell (1903: 71, 449-50) claim that existence is nested in being. This point does not appear to be sufficiently appreciated by Trenton Merricks (2019: 601-2), who takes something like the strong fragmentation thesis to be the core 'conviction or insight or intuition' that motivates pluralism. For discussion, see Simmons (forthcoming: sect. 2).

multiple quantifiers which cannot be thought of as ranging over a single domain',[11] and telling us that, by the pluralist's lights, '[t]here are multiple joint-carving existential quantifiers—each of which ranges over a different [domain]—and any fundamental theory that has a hope of getting things right must use them all. To put ontological pluralism in a nutshell: *the true fundamental theory uses multiple existential quantifiers*'.[12] It should, however, be clear that the view so formulated is not simply ontological pluralism, it is quantificational pluralism.[13] Our official formulation of this view can now be given as follows.

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[11] Turner (2012: 419).

[12] Turner (2010: 9). A *fundamental theory* is, for Turner (2010: 9), a theory that only uses expressions of a fundamental language, and a *fundamental language* is in turn a language where every simple expression is fundamental. The pluralist, on this picture, is thus committed to there being more than one fundamental—or maximally perspicuous—existential quantifier expression.

[13] I do not mean to suggest that either McDaniel or Turner would insist otherwise. Indeed, Turner (2021: 185) explicitly notes that '[c]ontemporary thinking about ontological pluralism links it with *quantificational pluralism*'. And McDaniel clearly takes ontological pluralism to be distinct from quantificational pluralism, which, he thinks, is the position you arrive at when you combine ontological pluralism with 'the neo-Quinean orthodoxy that there is a deep connection between quantification and existence' (2017: 80). For, as McDaniel points out:

> If you accept that there is a close connection between existence and quantification, then you will be attracted to Quine's slogan that to be is to be the value of a bound variable. And if you also think that there are fundamentally different ways to exist, you will hold that there are different fundamental quantifiers. You should then hold that to be in some fundamental way is to be within the scope of a fundamental quantifier. (2017: 92)

It thus strikes me as a mistake to complain as Nicholas Stang (2019) does that McDaniel simply assumes that the idea that there are different ways of being 'needs to be articulated through the idea of what quantifiers would appear in a metaphysically ideal language' and that 'the way to express the question of whether being is univocal or whether it fragments is to cast…it in terms of a question about the style of the quantifiers in an ideal metaphysical language'.

**Quantificational pluralism** is the view that:

i. there are different fundamental ways of being, and

ii. these ways of being are most perspicuously represented, both logically and metaphysically, by different semantically primitive existential quantifier expressions ranging over distinct domains.

The question I wish to consider here is whether someone who accepts the claim that there are different fundamental ways of being should also accept the neo-Quinean thesis that being is most perspicuously expressed in an ideal metaphysical language by (semantically primitive) existential quantifier expressions—or, to put this another way, whether an ontological pluralist should be a quantificational pluralist.

## II. The priority of the domain

Suppose that there are multiple highly-natural, existential quantifiers that range over different domains. The domains of these quantifiers would seem to comprise highly-natural classes: that is, they would appear to have a high degree of internal unity.[14] For entities belonging to the same domain appear to be objectively similar to each other, and entities belonging to distinct domains appear to be objectively different from each other. But what, if anything, can we say about the relationship between the naturalness of one of these

[14] I here assume that a domain is a class. This is a fairly standard assumption. But an alternative approach, endorsed by Stanley and Szabó (2000: 252), would be to take a domain to be a property. This alternative approach would, I think, be even more favorable to the argument put forward in this section. For a brief overview of various accounts of what a domain of quantification is supposed to be, see Stanley and Szabó (2003: vol. 3, 395-6).

quantifiers and the naturalness of its corresponding domain? I will assume that we can make meaningful comparisons between the naturalness of a quantifier and its domain.

I will also assume that a quantifier and its domain will never both be perfectly natural: one will always be metaphysically prior to the other. This assumption could be challenged, but it does not appear to be something that the quantificational pluralist can plausibly deny. For a domain is best understood either as a class or, alternatively, as a property, and both classes and properties are most perspicuously represented by predicates. But it is a central part of quantificational pluralism that ways of being are better represented by quantifier expressions than by predicates. If, however, it were to turn out that the fundamental quantifiers and their corresponding domains are both perfectly natural, then the ontological structure of reality would seem to be represented just as well by primitive predicates as it is by semantically primitive quantifier expressions.

And I will assume, finally, that if a quantifier expression is the most perspicuous representation of a fundamental way of being, then the quantifier designated by that expression will be perfectly natural. Thus, if quantificational pluralism is true, a quantifier should be more natural than—and metaphysically prior to—its corresponding domain.

I shall argue that the most natural restricted quantifiers do not appear to be more natural than their corresponding domains. But the nature of this argument will depend upon what it takes for an expression to count as a quantifier expression. There are two plausible criteria which pluralists have employed: a *semantic* criterion, according to which an expression counts as a quantifier expression if it has a certain kind of semantic value, and an *inferential* criterion, according to which an expression counts as a quantifier expression if it

plays a certain kind of inferential role.[15] These criteria might simply be taken to provide us with a standard for what counts as a quantifier expression which allows us to reliably divide those expressions that are quantifier expressions from those that are not.[16] But if, with the quantificational pluralist, we take these expressions to perspicuously reflect the quantificational structure of reality, then we should admit that these criteria allow us to see the deep nature of that structure—although perhaps only through a glass, darkly.

*II. 1. The Semantic Criterion.* Let us begin with the semantic criterion. The semantic value of the quantifier expression '∃' of formal logic (and its closest English natural language equivalent 'something') is usually taken to be the set of nonempty subsets of a domain M.[17] This gives us a way to say when $\exists x(\mathrm{F}x)$ is true: namely, whenever the set of Fs (on M) is contained in the set, ∃, of all non-empty subsets on M. The semantic value of the pluralist's semantically primitive restricted existential quantifier expressions would thus seem to be best understood as sets of nonempty subsets of distinct domains. So, for example, the semantic value of the actualist existential quantifier expression, '$\exists_{@}$', would be the set of nonempty subsets of $\mathrm{M}_{@}$ (where $\mathrm{M}_{@}$ is the set of actual entities), while the semantic value of

[15] See Turner (2010: 14-21) and McDaniel (2013b: 273-4, 2017: 34-5, 165). Turner borrows these criteria from Lewis (2004: 11). We might seek to identify a third, *syntactic* criterion according to which an expression counts as a quantifier expression if it plays a certain kind of syntactic role, but, following Hirsch (2002: 71, 2011: xiv) and Hofweber (2016: 65), I will take this to be part of the inferential criterion.

[16] Thanks to Nicholas Tourville and Jason Turner for pushing me on this point.

[17] Or, at least, this is how it is understood on the theory of generalized quantifiers developed by Mostowski (1957) and Lindström (1966). See Glanzberg (2006) and Westerståhl (2011) for helpful introductions, and Peters and Westerståhl (2006) for a comprehensive survey. Heim and Kratzer (1998: sect. 6.3) take quantifier expressions to be second-order functions, but this is arguably a mere notational variant of the set of sets approach.

the existential quantifier expression, '$\exists_a$', would be the set of nonempty subsets of $M_a$ (where $M_a$ is the set of abstract entities).

Suppose that the semantic criterion provides us with the correct account not just of the nature of a quantifier expression but of the quantificational structure of reality as well. A quantifier over a domain, $M_i$, would then seem to be a set of subsets of $M_i$. And any difference in the naturalness of two quantifiers would have to be due to (i) a difference in their *domains*, (ii) a difference in the *clauses* specifying the relevant sets of subsets to select on those domains, or (iii) a difference in the *resulting sets* of subsets on those domains, that is, a difference in the quantifiers themselves.

What then could account for the difference in naturalness between two different existential quantifiers? I do not think it can be the clauses. For the clauses of both quantifiers tell us to select the set of all non-empty subsets on their domains; that is what makes them both *existential* quantifiers.[18] Nor do I think it should be taken to be due to a primitive difference in the naturalness of the resulting sets.[19] For, to consider a toy example, suppose that it is a primitive fact that

$$\exists_1 = \{\{a\}, \{b\}, \{c\}, \{a, b\}, \{a, c\}, \{b, c\}, \{a, b, c\}\}$$

is more (or less) natural than

[18] I do not mean to suggest that the clauses could never help to account for the difference in naturalness of two quantifiers. For it seems plausible to maintain that the quantifiers designated by 'something' and 'everything' are more natural than those designated by 'at least three things' or 'exactly seventeen things'. And it seems equally plausible to think that this difference in naturalness is due, at least in part, to the different clauses specifying the relevant sets of subsets to select in each case.

[19] Thanks to Anthony Nguyen for pushing me on this point.

$\exists_2 = \{\{a\}, \{b\}, \{a, b\}\}$.

Then, if we value parity, we should also say that it is a primitive fact that

$\forall_1 = \{\{a, b, c\}\}$

is more (or less) natural than

$\forall_2 = \{\{a, b\}\}$.

But this would seem to leave us at an explanatory disadvantage. A more unified explanation could be had by taking $\exists_1$ and $\forall_1$ to be more (or less) natural than $\exists_2$ and $\forall_2$ because $M_1 = \{a, b, c\}$ is more (or less) natural than $M_2 = \{a, b\}$.[20] The difference in naturalness between these two existential quantifiers would thus appear to be due to a difference in the naturalness of their domains. This suggests that, in general, the naturalness of the domain of a quantifier is prior to—or, at least, independent of—the naturalness of the quantifier ranging over that domain.

So far, so good. But the quantificational pluralist might grant that the semantic value of a quantifier expression can be modeled as a set of sets, and yet, under the influence of the Kant-Frege thesis, insist that what such an expression is really about is a property of

[20] This problem might be avoided were the quantificational pluralist to accept what Sider (2020: 194) calls a form of mild quotienting, according to which '$\exists_i$' and its dual '$\forall_i$' are somehow equivalent and non-redundant. These two quantifier expressions would, on this view, merely reflect different aspects of the same fundamental quantificational joint. But if, as we have been assuming, the semantic criterion gives us the correct account of the nature of a quantifier, this response would seem to be unavailable. For the relevant sets of subsets, being distinct sets, are clearly distinct entities, not different aspects of a single entity.

properties.[21] What the unrestricted existential quantifier expression '$\exists$' is really about, on this approach, is the generic, second-order property of *being generically instantiated*—or *having at least one instance*. And what the pluralist's semantically primitive restricted existential quantifier expressions are really about are various specific, second-order properties which are had by only some of the properties that are generically instantiated. So, for example, what the actualist existential quantifier expression, '$\exists_@$', is really about is the specific, second-order property of *being actually instantiated*—or *having at least one actual instance*—and what the existential quantifier expression, '$\exists_a$', is really about is the specific, second-order property of *being abstractly instantiated*—or *having at least one abstract instance*.[22] A quantifier, on this pluralistic version of the Kant-Frege approach, is a second-

[21] Indeed, this is just what McDaniel (2013b: 273-4) does. See McDaniel (2010b: 689-91, 2017: 55-6) for discussion of the Kant-Frege thesis that being, or existence, is a second-order property.

[22] These second-order properties should not, I think, be understood as somehow relativized to a domain. For this would effectively characterize a quantifier expression in terms of its domain. If, for example, the actualist quantifier expression, '$\exists_@$', were to correspond to the generic, second-order property of *being generically instantiated*—or even the specific, second-order property of *being actually instantiated*—relativized to the domain of actual entities, then a first-order property would seem to have the specific, second-order property of *being actually instantiated* because the extension of that first-order property on the domain of actual entities has the generic, second-order property of *being generically instantiated*. Similarly, if the quantifier expression, '$\exists_a$', were to correspond to the generic, second-order property of *being generically instantiated*—or even the specific, second-order property of *being abstractly instantiated*—relativized to the domain of abstract entities, then a first-order property would seem to have the specific, second-order property of *being abstractly instantiated* because the extension of that first-order property on the domain of abstract entities has the generic, second-order property of *being generically instantiated*. But in relativizing the same, generic, second-order property to different domains, the pluralist would thus seem to be forced to take

order property: a way of a first-order property's being instantiated. And the naturalness of one of these second-order properties—one of these ways of being instantiated—need not be inherited from the naturalness of its corresponding domain.[23]

But while taking quantifiers to be second-order properties might allow the quantificational pluralist to claim that the naturalness of a quantifier is independent of the naturalness of its domain, what the quantificational pluralist really needs to show is that the naturalness of a quantifier's domain is inherited from the quantifier itself. For if this cannot be shown, the quantificational pluralist will not be able to account for the basic phenomenon of ontological difference: the fact that certain entities appear to differ not simply in their nature, but also in their being. A problem arises, however, due to the fact that on the Kant-Frege approach, a quantifier is a second-order property that applies directly to properties and, at best, only indirectly to the entities that instantiate those properties. This, as we will see, makes it difficult to capture a domain's extension in a way that also accounts for its unity.

There would be no problem in accounting for various ontological differences between entities if each restricted domain of being had its own unique first-order properties and nothing that enjoyed one way of being had a property in common with anything that enjoyed a different way of being. For we could then take the domain of a restricted quantifier to be the class of entities that have at least one first-order property of which that quantifier holds. And by defining a quantifier's domain in this way, we would thereby be able to offer a plausible account of its unity. But, in the case of actuality, we cannot take the domain of the

differences in the naturalness of the semantic values of various quantifier expressions to be due to differences in the naturalness of their domains. Thanks to an anonymous referee for encouraging me to elaborate on this point.

[23] Thanks to Kris McDaniel, Mike Rieppel, and Jason Turner for pushing me on this point.

actualist quantifier to be the class of entities that have at least one first-order property of which the specific, second-order property of *being actually instantiated* holds. For the first-order property of *being a narwhal* is had by both actual and merely possible narwhals, but a merely possible narwhal no more belongs to the domain of the actualist quantifier than a merely possible unicorn. Nor can we simply appeal to the actualist universal quantifier expression, '$\forall_{@}$', and take the relevant domain to be the class of entities that have at least one first-order property of which the specific, second-order property of *being universally actually instantiated* holds. For the first-order property of *being self-identical* is had not only by every actual entity, but also by every merely possible entity as well. The problem arises in the case of actuality, then, because some of the properties had by actual entities—indeed, some of the properties had by all actual entities—are had by non-actual entities as well.[24]

The Kant-Frege pluralist might respond to this problem by suggesting that an actual and a merely possible narwhal don't have or instantiate the property of *being a narwhal* or the property of *being self-identical* in exactly the same way: one actually instantiates these properties, the other only possibly instantiates them. The basic idea is that in addition to there being various ways in which properties are instantiated, there are also various corresponding ways in which objects instantiate properties. This essentially combines

[24] This problem is not unique to actuality. It will arise for every specific, restricted way of being provided that there are logical or mereological properties such as *being self-identical* or *having parts* which are topic-neutral and can apply to objects from any ontological category. It does not, however, arise for the generic, unrestricted way of being enjoyed by absolutely everything. This might, I think, be taken to provide evidence that on the Kant-Frege approach, there is only one perfectly natural existential quantifier: the second-order property of *being generically instantiated*. Thanks to an anonymous referee for encouraging me to elaborate upon the argument in this paragraph.

quantificational pluralism with a kind of copula pluralism and allows the quantificational pluralist to define the domain of the actualist quantifier as the class of entities that *actually have* at least one first-order property of which the actualist quantifier holds.[25] The resulting class includes all and only actual entities and is highly unified. Problem solved.

There are, however, two potential problems with this response. The first is that it introduces new non-quantificational machinery to account for the naturalness of a quantifier's domain. For a way of an entity's instantiating a property would seem to be best represented as a copula, and it is this additional machinery that allows the pluralist to account for a quantifier's domain. But the addition of this machinery will only be objectionable if it is somehow *ad hoc* and otherwise unmotivated. And given that it seems fitting to pair different ways of a property's being instantiated with different ways of an object's instantiating a property, this non-quantificational machinery appears to be an apt supplement to the pluralistic version of the Kant-Frege approach.[26]

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[25] The most familiar version of copula pluralism is probably the neo-Meinongian dual copula theory—first suggested by Ernst Mally (1912) and later developed by Edward Zalta (1983, 1988)—according to which objects can have properties in two different ways. To put things roughly: concrete, existent objects exemplify properties, whereas abstract, non-existent objects encode them. For helpful overviews, see Reicher (2019: sect. 5.5) and Berto (2013: 128-37). Another version of copula pluralism is the endurantist adverbial theory—suggested by some remarks in Johnston (1987: 127-9), Lowe (1988), and Haslanger (1989)—according to which objects have properties in different ways at different times. Suppose, for example, that Theaetetus is standing at one time, $t_1$, and sitting at another, $t_2$. He thereby has-at-$t_1$ the property of *being bent* and has-at-$t_2$ the property of *being straight*. These different ways of having a property are different 'non-relational ties', different temporary 'attachments'. For helpful overviews, see Haslanger (2003: 342) and Wasserman (2006: 54-5).

[26] McDaniel (2017: 99-100) makes a similar observation.

A second, more serious, problem arises from the fact that a way of an object's instantiating a property appears to be explanatorily prior to a way of a property's being instantiated. For given the disconnect between the actual entities and the first-order properties that are actually instantiated, we cannot account for this new non-quantificational machinery in terms of the pluralist's quantificational machinery, but we can account for the Kant-Frege pluralist's quantificational machinery in terms of this new non-quantificational machinery. So, for example, the fact that some entity actually instantiates the property of *being a narwhal* explains the fact that the property of *being a narwhal* is actually instantiated, but not vice versa. But this is not something that a quantificational pluralist can accept. For a quantificational pluralist is committed to the claim that a way of being is most perspicuously represented by a quantifier expression, and, on the present approach, a way of being would seem to be better represented by a copulative expression.

The quantificational pluralist cannot, as we have just seen, provide a straightforward characterization of the domain of actual entities in terms of those entities that have at least one first-order property of which the specific, second-order property of *being actually instantiated* holds. For some of the first-order properties had by actual entities are had by merely possible entities, and the proponent of the Kant-Frege approach cannot establish the requisite connection between the actual entities and the properties of which the actualist quantifier holds without thereby giving up on quantificational pluralism. If, however, there are first-order properties had by all and only actual entities, these properties might be used to provide a more complicated characterization of the domain of the actualist quantifier.

But what sorts of properties are only had by actual entities? If no merely possible worlds are qualitatively indiscernible from the actual world, then some of these properties

might be purely qualitative; otherwise, they will all have to be haecceitistic, that is, they will all have to somehow involve or make essential reference to a particular individual. We should not, I think, take the domain of the actualist quantifier to be the class of entities such that the actualist quantifier holds of the purely qualitative property of *being part of a* $P_@$ *world* (where $P_@$ offers a complete qualitative description of the actual world). For this will only help to characterize the domain of actual entities if indiscernible worlds are identical. But there is something unsatisfactory about taking quantificational pluralism to be dependent upon the acceptance of the identity of indiscernible worlds—both because this principle is controversial and because it would be nice to be able to explain how a quantificational pluralist who did not accept this principle might account for the naturalness of the actualist quantifier's domain.[27] Nor, I think, should we take the domain of the actualist quantifier to be the class of those entities, the *n*, such that the actualist quantifier holds of the wildly disjunctive haecceitistic property of *being identical to one of the n*. For while this might capture the domain's extension, it does so by sacrificing any hope of accounting for its unity.[28] It thus seems unlikely that there are properties had by all and only actual entities

[27] I have here borrowed a line from Kit Fine (2003: 218). This worry is especially pressing for McDaniel (2017: 73-5) who seems to think that the best way to make sense of the difference between the actual and the merely possible is to accept some form of modal realism with absolute actuality. For this view—at least as it is developed by Phillip Bricker (2001: 127. 2006: 137)—rejects the identity of indiscernible worlds.

[28] The quantificational pluralist might attempt to provide a more unifying definition by taking the relevant haecceitistic property to be *being a part of @* (where @ is the actual world). But this definition will only capture the extension of the actualist quantifier's domain if our world is the only actual world: the more actual worlds there are, the more disjunctive the relevant property will have to be. There is, however, something unsatisfying in taking the success of

which could also be used to characterize the domain of the actualist quantifier in a unified way.

Yet even if there were such properties, the Kant-Frege pluralist would still be left with a problem. For it is unclear what is supposed to be special about these properties as opposed to any other properties. Indeed, it looks to be the very fact that these properties are had by all and only actual entities that explains why they can be used to provide a unifying characterization of the domain of actuality. The only reason they had any hope of unifying the domain of actuality was because that domain was already, independently unified. The Kant-Frege pluralist thus seems to reverse the proper direction of explanation.[29]

It is difficult to see how a quantificational pluralist could account for the unity of the domain of a restricted quantifier on the Kant-Frege approach: a straightforward characterization would have to give up on quantificational pluralism, while a more complicated characterization would seem to get the direction of explanation wrong. It would thus seem that if the semantic criterion provides the correct metaphysical account of the nature of the quantifier, then the most natural restricted quantifiers will fail to be more natural than their corresponding domains.

Some quantificational pluralists will likely refuse to take the semantic criterion seriously as an account of the true nature of quantification. For while this criterion might provide us with a reliable test for demarcating quantifier expressions, it would, when taken

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this definition to rely upon the acceptance of the dogma that only one world is—or could even be—actual. For a principled rejection of this dogma, see Bricker (2001, 2006).

[29] Thanks to an anonymous referee for encouraging me to elaborate on the argument in this and in the preceding paragraph.

seriously, also reify the meanings of those expressions by taking them to designate various entities (be they sets of sets or properties of properties). But if, as the quantificational pluralist maintains, ways of being are taken to be best expressed by quantifier expressions, and if, as the metaphysically serious interpretation of the semantic criterion demands, quantifier expressions designate entities, then ways of being must themselves be entities. This, however, is an intolerable conclusion for those pluralists who, following Martin Heidegger, maintain that the being of an entity is not itself an entity.[30] In order to accommodate such pluralists, we need a more neutral characterization of the nature of the quantifier.[31]

*II. 2. The Inferential Criterion.* Let us turn then to the inferential criterion, which should provide the desired neutrality. The inferential role of '$\exists$' is given by the standard natural deduction introduction and elimination rules. The pluralist's semantically primitive restricted existential quantifier expressions permit various similar inferences. So, for example, from 'Smaug is a dragon' or 'The creature I'm thinking about right now is a dragon' I can presumably infer '$\exists_p x$($x$ is a dragon)' (where $\exists_p$ is the possibilist quantifier ranging over both actual and merely possible concrete entities), but not '$\exists_@ x$($x$ is dragon)'.

Suppose that the inferential criterion gives us the correct metaphysical account of quantification. A quantifier, on this account, is not an entity; it is an aspect of reality that

[30] See Heidegger ([1927] 1962: 26/ SZ 6).

[31] An alternative semantic approach due to Tarski ([1956] 1983) gives the semantics of quantifier expressions using 'syncategorematic' clauses (see Hodges 2018 for a helpful overview). But while this Tarskian approach neither assigns semantic values to quantifier expressions nor reifies their meanings, it places heavy emphasis on the domain of a quantifier expression and thus appears to provide little help for the quantificational pluralist.

licenses various inferences. But given that some of these quantifiers are restricted and do not range over absolutely everything there is, these patterns of inference will have to be bound to a specific domain. Those who champion the inferentialist approach tend to do so, in part, because it does not build in this kind of domain specificity.[32] But these inferentialists tend not to be pluralists.[33] So they have no need to demarcate different domains.[34]

What then might the pluralist's inference rules look like? And how should they build in a kind a domain specificity? Turner suggests that we formulate these rules as follows:

$\exists_i$I: $F(t)$ & $\exists_i x(x = t) \vdash \exists_i x F(x)$.

$\exists_i$E: If Q, R, ..., $F(t)$, and $\exists_i x(x = t) \vdash$ P, and if $t$ does not occur in P, Q, R, ..., or $F(x)$, then Q, R, ..., and $\exists_i x F(x) \vdash$ P.[35]

It is the inclusion of $\exists_i x(x = t)$ that builds in the desired domain specificity. I will assume that these rules tell us something important about the quantificational structure of reality. But we can ask about the relationship between the patterns of inference licensed by these

[32] See, for example, Hirsch and Warren (2019: 353). Similarly, Hofweber (2016: 70) holds that quantifier expressions 'have at least two different readings: one is the domain conditions reading, where they make a claim about the domain of objects in the world; the other is the inferential role reading, where they are inferentially related to their instances', and argues that neither reading implies the other (2016: 77-80).

[33] McDaniel (2017: 37) classifies quantifier variantists, who hold with Hirsch (2002) that there are multiple possible primitive meanings for our quantifier expressions that are all equally good from a metaphysical perspective, as ontological pluralists. But this strikes me as a mistake; most actual quantifier variantists would seem to be monists. For discussion, see Javier-Castellanos (2019) and Turner (2021: 186-7).

[34] Thanks to an anonymous referee for pushing me on this point.

[35] See Turner (2010: 26).

inference rules and the domains associated with their corresponding quantifier expressions. These patterns of inference should, according to the quantificational pluralist, help to explain the naturalness of the domains they carve out: Smaug will belong to the domain of $\exists_p$, on this view, because we are licensed to infer '$\exists_p x$($x$ is a dragon)' from 'Smaug is a dragon', and not the other way around.

But this, I think, cannot be maintained. For it seems that the quantificational pluralist needs to presuppose these very domains in order to formulate adequate inference rules. So, for example, we need to assume '$\exists_p x$($x$ = Smaug)' in order to infer '$\exists_p x$ ($x$ is a dragon)' from 'Smaug is a dragon'. And since the claim that $\exists_p x$($x$ = Smaug) is, I think, most intelligibly understood as the claim that Smaug is in the domain of $\exists_p$, this essentially ensures that the patterns of inference allowed by the possibilist quantifier are determined by its domain.[36] But if the quantificational pluralist needs to presuppose these very domains in order to formulate adequate inference rules, it seems that the naturalness—and not just the validity—of these rules will depend upon the naturalness of the domains we must presuppose, and not the other way around.[37] So, for example, consider the following valid inference rules:

[36] The quantificational pluralist might insist '$\exists_p x$($x$ = Smaug)' is better understood as the claim that $\exists_p$ ranges over Smaug. That would seem to give priority to the quantifier over its domain since it would then be because $\exists_p$ ranges over Smaug that Smaug is in the domain of $\exists_p$, and not the other way around. But the most literal translation of '$\exists_p x$($x$ = Smaug)' is 'Smaug is identical to something$_p$', and, taken on its own, this would appear to tell us that Smaug is identical to something in the domain of $\exists_p$—or, more simply, that Smaug is in the domain of $\exists_p$. Thanks to Jason Turner for pushing me on this point.

[37] Thanks to Nicholas Tourville for pushing me on this point.

$\exists_{@}$I: $\quad F(t)\ \&\ \exists_{@}x(x = t) \vdash \exists_{@}xF(x)$

and

$\exists_{@\backslash ET}$I: $F(t)\ \&\ \exists_{@\backslash ET}x(x = t) \vdash \exists_{@\backslash ET}xF(x)$

(where $\exists_{@\backslash ET}$ ranges over all and only those actual entities that are not themselves identical to—or parts of—the Eiffel Tower). The reason why $\exists_{@}$I seems to captures a natural pattern of inferences and $\exists_{@\backslash ET}$I does not appears to be because the domain of $\exists_{@}$ is highly natural and the domain of $\exists_{@\backslash ET}$ is not. But if that is right, then it seems that we cannot grant that a domain is explanatorily prior to a pattern of inference without also accepting that the naturalness of this domain is prior to the naturalness of that pattern of inference. This would suggest that, in general, the naturalness of the domain of a restricted quantifier is prior to—or, at least, independent of—the naturalness of any patterns of inference licensed by that quantifier.[38] Thus, if the inferential criterion provides the correct metaphysical account of the quantificational structure of reality, the most natural restricted quantifiers will fail to be more natural than their corresponding domains.[39]

[38] This argument only applies to the inference rules of restricted quantifiers. It thus has no bite against a quantificational monist like Sider (2011). It could, I think, even be used to argue that there is only one perfectly natural existential quantifier: the absolutely unrestricted existential quantifier. Thanks to Cian Dorr for pushing me on this point.

[39] There is a further problem for the quantificational pluralist given the inferential criterion. If a quantifier is prior to its domain as quantificational pluralism predicts, then that domain should be carved out by the patterns of inference allowed by that quantifier. And if the patterns of inference were prior to the domain in this way, then the fact that a certain entity belongs to a given domain—and, more important, enjoys a certain way of being—would seem to be purely relational. But, I claim, the fact that I am actual is not merely relational: my being actual does not have anything to do with my being related to something else. It is a way of being that I enjoy intrinsically. The same goes for my being concrete.

*II. 3. Primitivism.* I have been laboring under the assumption that either the semantic or the inferential criterion will help capture the quantificational structure of reality. The quantificational pluralist might, however, simply insist that quantification's essence admits of no elucidation: the semantic and inferential criteria just tell us about how we conceptualize quantification, not the underlying metaphysics, and there is no reason to take the former as a guide to the latter.[40]

The problem, as I see it, with this primitivist approach is that it leaves the quantificational pluralist at a dialectical disadvantage. For while the primitivist's quantifier expressions might be metaphysically perspicuous, they are conceptually opaque. They might, we can grant, perfectly carve at the quantificational joints, but what we want to know is whether they best carve at the *ontological* joints. If the essence of quantification is utterly inexplicable as the primitivist maintains, then we will have no reason to think that the quantificational pluralist can capture and explain the basic phenomenon of objective, ontological difference.

## III. Conclusion

I have argued as follows:

(1) If quantificational pluralism is true, then the most natural restricted quantifiers will be more natural than their corresponding domains.

(2) But it is not the case that the most natural restricted quantifiers are more natural than their corresponding domains.

[40] I here echo a line from Sider (2011: 210). See Dasgupta (2009: 66) for some related remarks.

(3) *Therefore*, quantificational pluralism is not true (from 1 and 2).

This argument does not target the claim that there are different fundamental ways of being, it merely targets the claim that these ways of being are most perspicuously represented by different semantically primitive existential quantifier expressions ranging over distinct domains Thus, it gives us reason to reject quantificational pluralism, not ontological pluralism itself.

But what we take away from this argument will depend upon whether we think the claim that there are different ways of being is intelligible apart from its combination with the claim that each of these ways of being corresponds to a different fundamental existential quantifier expression. For this argument would seem to suggest that there is only one fundamental existential quantifier expression: the absolutely unrestricted quantifier expression of formal logic. I suspect that those who, in the grips of the neo-Quinean thesis, had begrudgingly been brought to recognize the intelligibility of ontological pluralism by the availability of quantificational pluralism might now simply say: so much the worse for ontological pluralism.

Indeed, Peter van Inwagen has argued, along just these lines, that the fact that there is an absolutely general quantifier expression, strongly suggests that ontological pluralism—and not just quantificational pluralism—is false.[41] For, he argues, the quantificational pluralist must accept a fully general quantifier expression since, without it, she will not be able to express claims of the effect that everything is thus and so.[42] And, he continues, once

[41] See van Inwagen (2014b).

[42] See also Merricks (2019: 593-8, 608-9).

the pluralist accepts an absolutely general quantifier expression, she must confront a stark form of the notational variance objection: every statement made using domain-restricted but semantically primitive quantifier expressions is equivalent to a statement made using only fully general quantifier expressions and 'restriction-to-domain' predicates.[43] Thus, van Inwagen concludes, the fact that these statements are mere notational variants 'strongly suggests that there's just nothing *to* this idea of modes of being'.[44] Ontological pluralism, he maintains, would seem to be based on the 'fundamental meta-ontological error' of 'ascribing to the *being* of a thing a feature that properly belongs to its *nature*'.[45]

I believe, however, that what van Inwagen's argument shows is not that ontological pluralism is really nothing other than a notational variant of ontological monism, but, at best, that quantificational pluralism is really nothing other than a notational variant of a version of what we might call *non-quantificational pluralism*.[46] For I maintain that careful attention to the basic phenomenon with which we began—namely, that of objective, ontological difference—should suffice to show that the pluralist need not ascribe to the being of an entity

[43] For additional discussion of the notional variance objection, see McDaniel (2009: 304-5, 307-10, 2017: 29-31), Turner (2012, 2021: 191-3), and Whittle (2020).

[44] van Inwagen (2014b: 21).

[45] van Inwagen (2014b: 21-22).

[46] McDaniel (2009: 307-10, 2017: 29-31) maintains, in response to the notational variance objection, that the pluralist's renderings of the relevant statements are more perspicuous than the monist's. One upshot of the above argument is that this response cannot be maintained: the quantificational pluralist's renderings of these statements fail to be more perspicuous than the non-quantificational pluralist's (and thus, by extension, than the ontological monist's as well). Thanks to an anonymous referee for suggesting that my argument might in a certain sense be understood as a pluralistic reworking of van Inwagen's argument.

a feature that properly belongs to its nature. A pluralist can, I think, adopt an appropriately thin conception of being. This should be enough to convince us that ontological pluralism is indeed independently intelligible.

If ontological pluralism can indeed be show to be an intelligible position, then the above argument gives us reason to reject the neo-Quinean thesis.[47] For the neo-Quinean thesis, if true, should be compatible with every intelligible position about the nature of being.[48] But since the neo-Quinean thesis is incompatible with pluralism, we should ultimately give it up. The significance of this objection is that, unlike the more standard noneist criticisms of the neo-Quinean thesis that quantification need not be existentially or otherwise ontologically loaded, it does not call into question the Quinean criterion of ontological commitment according to which we are committed to the being of those things over which our best theories quantify.[49] But even if the claim that some things enjoy no way of being at all is ruled out by the very nature of quantification, that doesn't mean that being itself is ultimately quantificational.

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[47] Thanks to Steve Woodworth for encouraging me to elaborate on this point.

[48] To borrow a line from Kit Fine (1994: 5), no reasonable account of being should be biased toward one meta-ontological view over another.

[49] For the standard noneist criticisms of the neo-Quinean thesis, see Routley (1980) and Priest (2005). For the Quinean criterion of ontological commitment, see Quine (1948), Rayo (2007), and Bricker (2014: sect. 1).

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