

Degrees of Being

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1. Introduction¹

Let us agree that everything that there is exists, and that to be, to be real, and to exist are one and the same. Does everything that there is exist to the same degree? Or do some things exist *more than* others? Are there gradations of being?

Perhaps no view is more despised by analytic metaphysicians than that there are gradations of being. But what if, unbeknownst to them, they have helped themselves to the doctrine that being comes in degrees when formulating various metaphysical theories or conducting metaphysical disputes? What if *gradation of being* is already playing a significant role in their theorizing, albeit under a different guise?

Consider the following technical terms employed in many contemporary metaphysical debates: 'naturalness' as used by David Lewis (1986), 'fundamentality' or 'structure' as used by Ted Sider (2009, 2012), 'grounding' as used by Jonathan Schaffer (2009) and others, and the ubiquitous 'in virtue of'. I have argued elsewhere that, given certain plausible assumptions, the notion of degree of being or grade of being can be analyzed in terms of these notions.² Here I will argue that, given certain plausible assumptions, each of these notions can be analyzed in terms of the notion that being comes in degrees or grades.

There are several reasons why this result is interesting. First, the notions of naturalness, fundamentality, or structure are ones that most contemporary metaphysicians grant are intelligible, whereas the claim that existence, being, or reality might come in degrees is regarded by many metaphysicians as being unintelligible. One way to assist a philosopher in grasping a notion that she regards as unintelligible

1. Versions of this paper were presented to audiences at SUNY Fredonia, the Mellon Metaphysics Workshop at Cornell University, Metaphysical Mayhem at Rutgers University, the Metaphysical Fundamentality Workshop at Australian National University, the University of Birmingham, The University of Nottingham, the University of Toronto, New York University, and the University of Alberta; I thank these audiences for their helpful feedback. I also thank Mark Barber, Elizabeth Barnes, Karen Bennett, Mike Caie, Ross Cameron, Andy Cullison, Neil Feit, Daniel Fogal, Ted Sider, Brad Skow, Jason Turner, and Robbie Williams for helpful comments on earlier drafts of the paper.
2. See McDaniel (2010b).

is to show her how one can use that notion to define ones that she antecedently accepts as intelligible.

Second, it is widely believed by metaphysicians that at least one of the notions of naturalness, fundamentality, structure, or grounding is theoretically fruitful, whereas most contemporary metaphysicians see little use for the thought that existence comes in degrees. For example, metaphysicians such as David Lewis are willing to take the notion of naturalness as a primitive because they recognize that it can be used to define or partially characterize the following philosophically important concepts: *objective similarity*, *intrinsic properties*, *laws of nature*, *materialism*, *meaning* and *reference*, and so forth.³ If we can define the notion of naturalness in terms of degrees of being, then metaphysicians will have an equally strong reason to take the notion of degrees of being as primitive, since it can do all of the work that the notion of naturalness can do.

Third, whenever two notions are shown to be in some sense inter-definable (given certain assumptions), interesting questions arise. If, for example, degrees of being and naturalness are, in some sense, inter-definable, have metaphysicians been, in some sense, really committed to there being degrees of being all along? Can arguments be given that one *ought* to take the notion of a degree of being as a primitive rather than naturalness or vice versa?

Finally, there are some philosophers who remain dubious about metaphysical primitives such as naturalness, grounding, or structure. I suspect that these philosophers would be overjoyed to discover that the notion of naturalness and the notion of degree of being are inter-definable, for then (by their lights) the notion of naturalness would be demonstrably disreputable. And perhaps some philosophers on the fence will be moved one way or the other.

Here is the plan for the rest of the paper. The next section will be devoted to articulating the view that being comes in degrees and briefly discussing several variants of this view. In section 3, I focus

on the notion of naturalness or structure and then recapitulate the definition of degrees of being in terms of it. Since I have argued for this definition in another paper (McDaniel 2010b), I will be somewhat brief. In section 4, I provide and motivate a definition of naturalness in terms of degrees of being. In section 5, I discuss several questions that one might have about naturalness and show that there are parallel questions one might have about degrees of being. In the context of this discussion, I advance what I call *the notational variant hypothesis*, according to which theories that differ only in whether they employ the notion of naturalness/structure or the notion of degrees of being are really the same theory, albeit under different guises. One way to resist the notational variant hypothesis would be to promote an argument that, despite their mutual inter-definability, one of the notions of structure or degree of being is in some way prior, and hence there are two distinct phenomena in play rather than two different guises for the same underlying phenomenon. In section 6, I develop and then critically evaluate two plausible arguments for taking the notion of naturalness as the primary notion. Although these arguments might seem initially compelling, ultimately I do not think that they succeed. In section 7, I investigate whether there is some reason to prefer taking *degree of being* as the primitive notion. There, I discuss an intriguing argument based on the idea that theories making use of *degree of being* are more ideologically parsimonious. Although this argument is inconclusive, I view it as in better shape than the arguments for taking naturalness/structure as the prior notion. I thereby endorse a disjunctive conclusion: either the notational variant hypothesis is true — in which case contemporary metaphysicians have been employing degrees of being in their theorizing, albeit not under that guise — or the notion that contemporary metaphysicians have been employing *ought to be further analyzed in terms of degree of being*. If either disjunct is true, then contemporary metaphysicians need to rethink what they've been up to when theorizing in metaphysics and how their theorizing is oriented towards those long dead who theorized before them. Section 8 briefly discusses an epistemic advantage to

3. See David Lewis (1983, 1984, and 1986) for examples.

taking degrees of being as the prior notion and indicates some lines of further research worth pursuing. Finally, in an appendix, I discuss whether the notion of *metaphysical grounding* can also be accounted for in terms of degrees of being.

2. Degrees of Being

The view I mean to defend is the view rejected in the following passage:

A thing cannot be more or less real than another which is also real. It has been said that reality does admit of degrees. But this can ... be traced to one of two confusions.... Sometimes reality has been confused with power ... [but] a thing which asserts more power is not more real than one that asserts less. Sometimes ... the possibility of degrees of reality is based on the possibility of degrees of truth. ... If, for example, it should be truer to say that the universe was an organism than that it was an aggregate, then it is supposed that we may say that an organic universe is more real than an aggregate-universe. But this is a mistake. [McTaggart 1927: 4–5]

I grant that it would be a mistake to confuse power with reality and a mistake to accept degrees of truth. So let's not make these mistakes. On the view that I am considering, being is not to be conflated with some other feature that comes in degrees. Being itself comes in degrees: to be simpliciter is to be to some degree or other, just as to have mass simpliciter is to have some determinate amount of mass. And just as not everything has the same amount of mass, not everything that exists to the same degree.

There are a number of ways to flesh out this view, and depending on what the correct metaphysics of quantities is, different ways will be more attractive. One possibility is that *existence* is a quantitative determinable akin to *mass* and that degrees of being are determinates of this determinable. Another possibility is to take as basic some

relation such as *x is at least as real as y* and hold that something exists iff it bears that relation to something, including it to itself. I won't settle between these, or any other, views on the metaphysics of quantity now.⁴ For the most part, I will use the locution 'degree of being' more out of stylistic convenience than out of a conviction that being is a determinable such that it makes sense to assign numbers to its determinates.

However, on no option does something hover between being and non-being: everything that there is exists simpliciter, although of some things exist more than others. Perhaps Plato thought that particulars are as much as they are not.⁵ This is not my view. Even though something enjoying 1 gram of mass is less massive than something enjoying 1 kilogram of mass, it would not be sensible to describe an object enjoying 1 gram of mass as being as non-massive as it is massive (or, worse, more non-massive than it is massive). Everything with mass is more massive than non-massive. Similarly, even the things with the smallest amounts of being have more being than non-being.

On the metaphysics I am attracted to, some things do exist to the highest degree, whereas other beings exist to a lesser degree. I am confident in the maximal existence of myself and other conscious beings as well as material objects without parts, but I am less confident that non-sentient composite material objects enjoy full reality. Perhaps the most compelling examples of real but less than fully real entities are *negative entities* such as shadows, holes, cracks, and fissures. Roy Sorenson (2008, p. 189) claims that "holes do not sit any more comfortably on the side of being than of nonbeing". It would be better to say that, although holes sit on the side of being, they occupy a lower position than other beings on this side. I suspect that the view

4. Some interesting papers on the metaphysics of quantity include Eddon (forthcoming), Hawthorne (2006), and Mundy (1987). For the sake of convenience, I will occasionally talk as if the basic notion is 'x has n-units of being', although this is not the view I would ultimately endorse.
5. See Plato's *Republic* 479c–e for a discussion of things that "mill around somewhere between unreality and perfect reality".

that holes and shadows exist but are not fully real is the view of the common person not yet exposed to academic metaphysics.⁶

3. Naturalness and the Definition of Degrees of Being

The world has a privileged structure. Some ways of carving up the world are better than others: they are more natural. The natural properties are those properties that partition the entities within the world in the best way. The notion of a natural property in play here is not the notion of *physical* property, *i. e.*, a property that can be (or perhaps can only be) instantiated by physical objects. Rather, the notion of a natural property is that of a *fundamental* or *basic* property, and it is a substantive hypothesis that the fundamental properties are all and only the physical properties.

One of the characteristics of a natural property is that its instances are objectively similar to each other in virtue of exemplifying it. Not all properties account for objective similarity: a toaster and a leopard are very unlike each other. This is true despite the fact that they are both not violins, are both either a leopard or a toaster, and share infinitely many other properties. The property of not being a violin is a merely *negative* property. Arguably, what makes one property a negation of the other is the fact that although, necessarily, every object has one of the pair of properties and nothing can have both, one of the pair is far more natural than the other.

Nelson Goodman (1965) introduced the so-called *new riddle of induction* by calling our attention to the following predicates: ‘is grue’ and ‘is green’. Say that something is *grue* just in case either it is green and examined before 2200 A.D. or it is blue and not examined before 2200 A.D. Say that something is *bleen* just in case either it is blue and examined before 2200 A.D. or it is green and not examined before 2200 A.D.

Grue and bleen seem like strange properties to us, especially since they were introduced via a “disjunctive” definition. But consider a

6. See McDaniel (2010b) for a further exploration of the mode of being enjoyed by holes, shadows, and other “negative” entities.

speaker of a language in which ‘is grue’ and ‘is bleen’ are primitive predicates and ‘is green’ and ‘is blue’ are introduced via a “disjunctive” definition in the following way: something is green just in case either it is grue and examined before 2200 A.D. or it is bleen and not examined before 2200 A.D.; something is blue just in case either it is bleen and examined before 2200 A.D. or it is grue and not examined before 2200 A.D. Green and blue would seem like strange properties to this speaker.

Nonetheless, green and blue are metaphysically better properties than bleen and grue: although they are, in some sense, inter-definable, grue and bleen *ought* to be defined in terms of green and blue rather than the other way around. Grue and bleen are *disjunctive* properties, whereas it seems that green and blue are not. The notion of a disjunctive property is intimately connected with the notion of naturalness, as the following condition for being a disjunctive property makes clear: P is a mere disjunction of Q and R only if (i) necessarily, something has P if and only if it has either Q or R, and (ii) P is less natural than both Q and R.

Let us turn to two more controversial claims about the notion of naturalness, both recently defended by Ted Sider (2009). First, Sider argues that everyone, even nominalists, should hold that ‘is green’ is a *metaphysically better predicate* than ‘is grue’. Sider points out that there are several strategies available to the nominalist for making sense of the distinction. One of them consists of taking a two-placed operator ‘N’, which operates on open sentences and yields a closed sentence. A sentence of the form ‘N(Fx, Gx)’ states facts of comparative naturalness and, in this case, states that to be F is more natural than to be G.⁷

Second, Sider argues that we ought to make sense of judgments of comparative naturalness in which the things compared are not predicates but rather entities from other linguistic categories.

7. In Sider (2012), Sider abandons the two-place ‘N’ operator and embraces a one-place ‘S’ operator. As far as I can see, nothing in what follows here turns on which locution the nominalist ought to favor when stating facts about naturalness.

Regardless of your views on modality, the sentence operator ‘it is necessarily the case that’ seems to be much more natural than ‘it is wanted or believed by at least two people that’. Sider’s main concern is to argue that some quantifier expressions are more natural than others.

Consider a language L that is much like English. L contains a phrase which sounds like the English phrase ‘there is’. It is written like it too, but we will use ‘there biz’ instead in order to avoid potential ambiguity. ‘There biz’ functions syntactically and inferentially like ‘there is’. For example, if ‘Fa’ is a true sentence of L , then ‘there biz an Fa’ is a true sentence of L . Since ‘there biz’ has the same syntactic properties and inferential role as ‘there is’, I will call ‘there biz’ a quantifier-expression. ‘There biz’ is not synonymous with ‘there is’, and in fact no existing expression in L currently is synonymous with ‘there is’. Moreover, there is some Φ such that ‘there is Φ ’ is false whereas ‘there biz Φ ’ is true. On Sider’s view, we can compare the naturalness of ‘there is’ with that of ‘there biz’. Perhaps we are lucky, and the English quantifier ‘there is’ is the most natural quantifier there is.⁸

Sider (2009) regiments these claims via ‘N’. In what follows, the variables that would be free variables were the ‘N’ operator to be absent are italicized. (Recall that Sider’s ‘N’ operator takes as arguments open sentences and yields closed sentences.)

1. $N(Fx, Gx)$
2. $N(\Box P, KP)$
3. $N(\exists x Fx, \exists^*x Fx)$

Informally, sentence 1 tells us that to be F is more natural than to be G , sentence 2 tells us that to be metaphysically necessary is more natural

8. There is some controversy about whether the “there is” of ordinary English is properly thought of as corresponding to the existential quantifier of formal logic; see Szabo (2011) for discussion. Fortunately, all of the main moves of this paper can be made, albeit in a slightly more complicated way, without making this assumption. I thank Daniel Fogal for helpful discussion here.

than to be wanted or believed by some bachelor, and sentence 3 tells us that to be is more natural than to biz.⁹

Let’s return to the task of defining the notion of degrees of being. Say that a quantifier is a *semantically primitive restricted quantifier* just in case it fails to range over everything that there is but is not a semantically complex unit consisting of the unrestricted quantifier and a restricting predicate or operator. In McDaniel (2009, 2010a), I offer the following account of *modes of being*: there are modes of being just in case there are some possible semantically primitive restricted quantifiers that are at least as natural as the unrestricted quantifier. In McDaniel (2010b), I defend the following definition of *degree of being*: x exists to degree n just in case the most natural possible quantifier that ranges over x is natural to degree n . In slogan form: *An object’s degree of being is proportionate to the naturalness of its mode of existence.*

Both the notion of a mode of being and the notion of a degree of being can be straightforwardly accounted for in terms of the naturalness of certain quantifiers and can be used by friend and foe alike. The foe of modes of being could claim that no other quantifier could be as natural as the unrestricted quantifier, thereby ensuring (given the definitions above) that everything has the same mode of being and exists to the same degree.

Note that Sider (2009, 2012) is himself open to the view that the quantifier employed in ordinary discourse is not a perfectly natural expression. If this view is correct, it might be that some things that exist are not in the domain of any possible perfectly natural quantifier.¹⁰ If something exists and is in the domain of a perfectly

9. There is some reason to be a little nervous about Sider’s N operator. Note that the bound variable in the first sentence takes terms as its substitution instances, the bound variable in the second sentence takes sentences as its substitution instances, and the bound variable in the third sentence takes predicates as its substitution instances. How can one operator bind variables of these three different types? I thank Robbie Williams for discussion here.
10. This claim, of course, does not follow from the claim that the ordinary English quantifier is not perfectly natural. But it might nonetheless be a reasonable conjecture. See also McDaniel (2010b) for further exploration of this conjecture.

natural quantifier, it has the highest degree of being: it *fundamentally* exists. If something exists but is not within the domain of a perfectly natural quantifier, it exists *degenerately*. To exist degenerately is to exist to a less-than-maximal degree.

4. Defining Naturalness in Terms of Degrees of Being

I will now turn to the question of whether one can understand the notion of naturalness in terms of the notion of degrees of being.

Given Sider's nominalism, nothing in the world "backs up" claims about naturalness. Note that, although Sider regiments talk of naturalness in a putatively nominalistic way via his 'N' operator, the realist about properties could agree that other expressions besides predicates can be ranked on the naturalness scale. In fact, the realist view is arguably the more intuitive view: what make sentences using 'N' true are facts about the comparative naturalness of the entities that correspond to the constituents of these sentences. The properties that correspond to sentential operators are properties of propositions, whereas the properties that correspond to quantifiers are properties of properties. On the realist construal, some higher-order properties are more natural than others.

Let's provisionally be realists about properties; we'll examine later how much rides on this provisional move. Here is an interesting question: To what extent do non-natural properties exist? Here are two plausible but competing answers. Answer one: All properties, natural or unnatural, exist to the same degree. Answer two: More-natural properties exist to a higher degree than less-natural properties.

It seems to me that the second answer is better than the first. One slogan championed by nominalists is that properties are mere shadows cast by predicates. I disagree: perfectly natural properties have a glow of their own. But less-than-natural properties are mere shadows, although they are cast by the perfectly natural properties rather than by linguistic entities. Shadows are real, but they are less real than that which is their source.

D.M. Armstrong (1997) is a full-blooded realist about natural properties, which he identifies with universals. But his attitude towards the less-than-perfectly-natural properties is harder to discern. Consider the following troubling remarks:

The first-class properties of particulars are the universals they instantiate. The second-class properties of particulars have the following necessary and sufficient condition. They are not universals, but when truly predicated of a particular, the resultant truth is a contingent one. ... What is their status? Will it be said that they do not exist? That will be a difficult saying, since it can hardly be denied that innumerable statements in which these property- and relation-words appear are *true*. [Armstrong 1997, p. 44]

To this is added the thesis of the ontological free lunch. What supervenes in the strong sense is not something that is ontologically anything more than what it supervenes upon. ... [T]he second-class properties are not ontologically additional to the first-class properties. ... [T]he second-class properties are not properties additional to the first-class properties. But it is to be emphasized that this does not make the second-class properties unreal. They are real and cannot be talked away. [Armstrong 1997, p. 45]

Armstrong correctly notes that we cannot deny that there are second-class properties, because there are true propositions about them. In this respect, he is preceded by Aquinas and other medieval philosophers, who said something similar about a different group of second-class ontological entities:

We should notice, therefore, that the word 'being', taken without qualifiers, has two uses, as the Philosopher says

in the fifth book of the *Metaphysics*. In one way, it is used apropos of what is divided into the ten genera; in another way, it is used to signify the truth of propositions. The difference between the two is that in the second way everything about which we can form an affirmative proposition can be called a being, even though it posits nothing in reality. It is in this way that privations and negations are called beings; for we say that affirmation is opposed to negation, and that blindness is in the eye. In the first way, however, only what posits something in reality can be called a being. In the first way, therefore, blindness and the like are not beings. [Aquinas, *Being and Essence*, section 4, p. 21 of Bobik 1965].

According to Aquinas, there are two proper uses of the word ‘being’: the first use is to signify things that belong to the categories — that is, the entities that enjoy non-degenerate existence. But there must also be a sense of ‘being’ in which entities such as blindness in the eye are beings, since we can form true affirmative propositions about them. But this sense needn’t be taken to be metaphysically fundamental, for otherwise negations, privations, and the sort would be full-fledged entities in their own right. Things that are said to be beings in the second sense *posit nothing in reality*. They are “an ontological free lunch”.

Let’s return to our discussion of Armstrong. Consider the claim that the less-than-natural properties (and the states of affairs in which they figure) are “no additions to being” (Armstrong 1997, p. 12). Taken at face value, the claim that something is no addition to being is tantamount to the claim that it does not exist, for if it were to exist, it would have to be *counted* among that which exists and hence would be an *addition* to being. So less-than-perfectly-real properties must be counted among the existents — Armstrong says that they are real — but how can this fact be reconciled with the intuition that they don’t count for much?

How could one existent *ontologically* count for less than another *unless the former is less real than the latter*?

Some philosophers claim that there is a close connection between number and existence.¹¹ There is some connection, as shown by the fact that one can represent claims about the number of things via the apparatus of quantification, identity, and negation. For example, one can say that there are exactly two Fs by asserting that $\exists x\exists y(Fx \ \& \ Fy \ \& \ \sim x=y \ \& \ (\forall z Fz \rightarrow z=x \ \text{or} \ z=y))$.

On the view under consideration, there are at least two possible quantifiers in play: a perfectly natural one, ‘ $\exists n$ ’, that includes all natural properties but no less-than-natural ones in its domain, and a less-than-perfectly-natural one, ‘ $\exists i$ ’, that includes all the properties in its domain. One candidate for being ‘ $\exists i$ ’ is the unrestricted quantifier of ordinary English. For the sake of a simple example, suppose that there are exactly two natural properties, P_1 and P_2 , and one less-than-natural property, namely the disjunction of them, $P_1 \vee P_2$. Accordingly, the following sentences are true:

1. $\forall n z [z \text{ is a property} \rightarrow (z = P_1 \ \text{or} \ z = P_2)]$
2. $\forall i z [z \text{ is a property} \rightarrow (z = P_1 \ \text{or} \ z = P_2 \ \text{or} \ z = P_1 \vee P_2)]$

We respect the intuition that $P_1 \vee P_2$ is no addition of being by endorsing 1. Given 1, there is a straightforward and metaphysically important sense of ‘being’ according to which there are exactly two properties. That which is an *ontological* addition to being is that which is to be found in the domain of $\exists n$. We respect the intuition that $P_1 \vee P_2$ exists by endorsing 2 as well. $P_1 \vee P_2$ must be counted among what there is, but it counts for less in virtue of being less than fully real. The denial of 2 is the difficult saying that Armstrong warns us not to utter, but the denial of 2 must not be confused with affirmation of 1. By accepting both 1 and 2, we accommodate both intuitions in a clean way.

Both Armstrong and Aquinas feel similar pressure to recognize in some way the reality of second-class entities while still holding that

11. See, for example, van Inwagen (2001).

these entities are second-class *qua entity*. I suggest that in response to similar pressures, similar tactics should be employed.

Suppose I am right that unnatural properties are less real than natural properties, and that their degree of being is proportionate to their degree of naturalness. If this is correct, then a straightforward account of naturalness *in terms of degrees of being* is apparent: Property P is *more natural than* property Q =df. P is more real than Q; property P is natural to degree *n* =df. the degree to which P exists is *n*. In short, we can define what it is for a property to be natural *in terms of the notion of degree of being*. The most natural properties are the most real properties.

Two of the provisional assumptions employed here are that there are properties, and that talk of naturalness should be regimented by appealing to a naturalness-ordering on properties. Although there are ways to regiment talk about comparative naturalness without presupposing that there are properties, and the doctrine that some things exist more than others does not presuppose that there are properties, the analysis of *natural* offered here in terms of degrees of being seems to make ineliminable use of the assumption that there are properties. For this reason, it will be worthwhile to determine the extent to which the view that there are no properties is defensible and the extent to which the presupposition that there are properties is ineliminable.

Let us distinguish *extreme nominalism* from *moderate nominalism*. Extreme nominalism is the view that properties in no way exist. Moderate nominalism is the view that properties do not fundamentally exist but do degenerately exist.

Extreme nominalism is not a sustainable doctrine. Consider the sentence 'There is an anatomical property had by both whales and wolves'. This sentence is literally true; it explicitly quantifies over properties; it is not amendable to paraphrase in terms of some sentence that does not.¹² These facts ensure that properties enjoy

12. Pace Yablo (1998) and elsewhere, I can detect no whiff of make-believe associated with such sentences. But perhaps here is a place where one might attempt to resist the argument; there's obviously a lot to be thought about

some kind of reality. (Similar facts about shadows or holes could be adduced to show that shadows or holes enjoy some kind of reality.) Even if the sense of 'there is' in the above sentence is not the same sense as in 'There is a donut in the next room', it suffices that there is *some* sense of 'there is' in which the above sentence is true.¹³ For this sense of 'there is' is either a maximally natural sense of 'there is' or it is not. If it is a maximally natural sense, then properties exist to the maximal degree. If it is not, then properties exist to at least the extent that that sense of 'there is' is natural. Either way, properties exist to some degree or other.

Could it be that the quantifier employed in the sentence 'there are properties' is *maximally unnatural*? Let's provisionally identify being maximally unnatural with being natural to degree zero. An entity that falls *only* within the range of a *maximally* unnatural quantifier is an entity that exists to 0 degrees. Perhaps the claim that properties exist to degree zero is a version of extreme nominalism worth considering.

Unfortunately for the extreme nominalist, even if the quantifier in question is *highly* unnatural, it is not *maximally* unnatural. With respect to the naturalness scale, there are possible semantically primitive quantifiers that score far worse. Consider, for example, a semantically primitive quantifier that ranges over everything ranged over by the ordinary English quantifier except for pinky fingers, things with exactly seven proper parts, and the property of being a bachelor. The ordinary English quantifier, which ranges over properties, is doing better on the naturalness scale than that one! So there is at least one quantifier that ranges over properties that is not maximally unnatural — *i. e.*, that is

here. On paraphrase strategies, the classic piece is Quine's "On What There Is", reprinted in Quine (1963), along with Alston's (1958) important rejoinder. Carrara and Varzi (2001) provide a useful discussion to the possibility of paraphrase strategies of various sorts.

13. For example, Cian Dorr (2008) distinguishes between what he calls a *superficial* sense of 'there is' and a *fundamental* sense of 'there is'. That there is a superficial sense of 'there is' suffices to make my point, but it is not necessary: all that is necessary is that some *possible* meaning for the quantifier that ranges over properties is not maximally unnatural.

natural to a degree greater than 0. Since there is at least one possible quantifier ranging over properties whose naturalness is greater than 0, properties exist to a greater-than-0 degree.

Extreme nominalism cannot be sustained. If the analysis of naturalness in terms of degrees of being ineliminably presupposes that extreme nominalism is false, then so be it. Good analyses are allowed to assume that false theories are false.

Moderate nominalism, on the other hand, is neither absurd nor obviously unsustainable. However, the analysis offered here does *not* presuppose the falsity of moderate nominalism. Recall the analysis of naturalness in terms of degrees of being: Property P is *more natural than* property Q =df. P is more real than Q; property P is natural to degree *n* =df. the degree to which P exists is *n*. Neither part of the analysis ineliminably presupposes that any property exists to a maximal degree. A perfectly natural property is a property such that no other *property* is more real than it. It might well be, though, that there are other entities than properties that are more real than even the perfectly natural properties.

Let *Platonism* be the view that some properties are more real than any individuals; let *non-reductive realism* be the view that some individuals and some properties are such that nothing else is more real than them. Let *otherism* be the view that there are some entities that are more real than any property or individual. Platonism, non-reductive realism, and otherism are the main competitors to moderate nominalism. The analysis of naturalness in terms of degrees of being does not presuppose any of these views or any of their denials.

Given plausible assumptions, we can define the notion of degree of being in terms of the notion of naturalness. Given plausible assumptions, we can define the notion of naturalness in terms of degree of being. We now face some puzzling questions. Is a theory that makes use of the notion of naturalness *merely a notational variant* of a theory that makes use of the notion of a degree of being? If one of these notions is in some way prior, which notion *should be* defined in terms of the other?

5. Theoretical Claims and Questions

Let *the notational variants hypothesis* ('the NVH') be the hypothesis that two theories that differ only with respect to whether they employ the notion of naturalness or the notion of a degree of being are mere notational variants of each other.

It sometimes happens that what we take to be two different phenomena really are the same phenomenon appearing under two different guises. And it sometimes happens that a phenomenon appearing in one theory under a particular guise is the same phenomenon playing the same role in an apparently different theory under a different guise. In either case, we have two different ways of talking about the same underlying reality. According to the NVH, *degrees of naturalness* and *degrees of being* are, at rock-bottom, the same phenomenon showing up under different guises.

The NVH is supported by more than the fact that these notions can be defined in terms of each other (given plausible assumptions). Let's first note that the two primitive notions can be used to partition classes of entities in exactly the same ways. One might wish to apply the notion of naturalness to substances as well as properties. Just as it is intuitive that some ways of partitioning classes of entities are more natural than others, it is intuitive that some decompositions of an entity are more natural than others. Consider an arbitrary undetached part of Theodore Sider. Why does the part deserve to be called arbitrary? It just isn't as natural as Sider himself, or, *e.g.*, his brain or one of his cells. The friend of degrees of being might wish to grant that both Sider and this arbitrary undetached part exist, but hold that Sider is more real than his arbitrary parts. Friends of naturalness employ the phrase 'carving nature at its joints' — and it is, of course, objects that can have joints to be carved.

Just as there is arbitrary decomposition, there is arbitrary composition: one might hold that arbitrary fusions of individuals are less natural than the individuals they fuse. The arbitrary sums countenanced by unrestricted mereology have an air of unreality to

them — consider the thing made out of Sider, the moon, and a piece of cheese — and the friend of degrees of being might grant that arbitrary fusions are real, albeit less real than that which they fuse.

Just as negative “substances” — shadows and holes — are less real than “positive entities”, so too are negative properties less real than positive ones. Recall that one can use the notion of naturalness to account for the difference between positive and negative properties: P_1 is the negation of P_2 just in case, necessarily, everything has exactly one of them and P_1 is less natural than P_2 . And just as arbitrary sums of substances are less real than what they sum, arbitrary disjunctions of properties are less real than that which they disjoin. (From a logical perspective, the summing function and the disjunction function behave very similarly.) Recall that P is a disjunction of Q and R only if (i) necessarily, if something has Q or R it has P and (ii) P is less natural than Q and less natural than R . A friend of degrees of being will hold that P is a disjunction of Q and R only if (i) necessarily, if something has Q or R it has P and P is less real than Q and less natural than R .¹⁴

It is true that some philosophers use ‘is natural’ primarily to predicate something of an attribute, but as the examples above show, there is insufficient reason to claim that ‘is natural’ cannot also be applied to objects.¹⁵ As far as I can see, each of the above claims that employs the notion of naturalness and its analogue that employs the notion of degree of being are equally defensible.

That they are equally defensible is predicted by the NVH, since on the NVH, each such claim is a mere notational variant of its analogue.

Further evidence for the NVH stems from the fact that there are many important questions about naturalness for which there are parallel questions about degree of being.

14. See McDaniel (2010a) for antecedents to these claims.

15. If it were to turn out that ‘is natural’ could only be predicated of properties, we could always add a clause to the definition of ‘is natural’ requiring this. The more interesting upshot would be that degrees of being would emerge as the more general notion, which would suggest that it is also the notion that is prior. I thank an anonymous referee for helpful discussion here.

If we take naturalness as primitive, we can define the notion of a degree of being. But there are hard questions facing anyone who takes the notion of naturalness as primitive. For example, consider the following questions:

1. Is being natural natural? How natural is being natural to degree n ?
2. Is x *more natural than* y more basic than x is natural to degree n ?
3. Can things other than properties have degrees of naturalness?

If we take degrees of being as primitive, we can define the notion of naturalness. But there are equally hard questions facing anyone who takes the notion of degrees of being as primitive, such as the following:

4. Does the property of maximally existing maximally exist? To what extent does the property of existing to degree n exist?
5. Is x *exists more than* y more basic than x exists to degree n ?
6. Can things other than properties have degrees of being?

That parallel questions arise in this fashion is *predicted* by the NVH. On the NVH, questions 1–3 are merely notational variants of questions 4–6, and so, given the NVH, it is unsurprising that parallel questions arise about one and same primitive notion.

6. Is Naturalness the Prior Notion?

I’ve sketched a case for the NVH. But we shouldn’t immediately embrace the NVH, for there might emerge reasons to think that one notion is in some way prior to the other. We can define ‘grue’ and ‘bleen’ in terms of ‘blue’ and ‘green’ (plus some other machinery), but ‘blue’ and ‘green’ can also be defined in terms of ‘grue’ and ‘bleen’ (plus the same machinery). But it doesn’t follow from this fact that a theory stated using ‘green’ and ‘blue’ is just a notational variant of a theory stated in terms of ‘grue’ and ‘bleen’. ‘Green’ and ‘blue’ are *metaphysically* prior to

'grue' and 'bleen', so *ought to be* prior in definition as well. A theory that takes the notion of 'grue' as *undefined* is making a *metaphysical* mistake.

Let's examine two arguments for taking the notion of naturalness rather than degrees of being as the *metaphysically* prior notion.

The first argument is the *meta-Euthyphro argument*. Two properties are not metaphysically on a par simply because they mutually supervene on each other. Euthyphro puzzles arise whenever we suspect that one of the properties is more fundamental than the other. Is the fact it is morally obligatory why God commands that it be done, or does God's commanding that it be done make it the case that it is morally obligatory? The question 'Which property, *being morally obligatory* or *being commanded by God* is prior?' is intelligible, and tough to answer even if we grant that both properties are necessarily co-extensive. (The atheist has an easier time with this puzzle.)

A plausible account of the notion of priority explicates it in terms of *supervenience* and *naturalness*:

(IV₁): Property P obtains *in virtue of* property Q obtaining =df. P supervenes on Q; Q is more natural than P.

The tricky cases are ones in which the relevant properties are necessarily co-extensional and therefore supervene on each other. In such cases, IV₁ says the sole factor that determines which property is prior is which is more natural. More formally:

1. If two properties *p*₁ and *p*₂ are necessarily co-extensional and *p*₂ obtains in virtue of *p*₁ obtaining, then *p*₁ is more natural than *p*₂.

The properties that concern us here are *naturalness* and *degrees of being*, and we are considering the hypothesis that:

2. *Naturalness* and *degrees of being* are necessarily co-extensional, but one of them obtains in virtue of the other obtaining.

It follows from premise 1 and 2 that:

3. One of *naturalness* and *degrees of being* is more natural than the other.

But which is more natural? I don't have much to say in favor of premise 4, but isn't naturalness just intuitively more likely to be natural than any competitor to it? That is:

4. If one of *naturalness* and *degrees of being* is more natural than the other, then *naturalness* is more natural than *degrees of being*.

∴ So *naturalness* is more natural than *degrees of being*.

This argument is interesting. However, it can be resisted.

Note that the champion of degrees of being needn't accept IV₁. Instead, she should accept:

(IV₂): Property P obtains in virtue of property Q obtaining =df. P supervenes on Q; Q is more real than P.

IV₂ has as at least as much going for it as IV₁. IV₂ belongs as a part of a nice picture according to which the maximally real serve as the complete supervenience base for the less-than-maximally real.

A parallel meta-Euthyphro argument using IV₂ as a basis can be constructed as follows:

- 1*. If two properties *p*₁ and *p*₂ are necessarily co-extensional and *p*₂ obtains in virtue of *p*₁ obtaining, then *p*₁ is more real than *p*₂.

- 2*. *Naturalness* and *degrees of being* are necessarily co-extensional, but one of them obtains in virtue of the other obtaining.

- 3*. So: one of *naturalness* and *degrees of being* is more real than the other.

- 4*. If one of *naturalness* and *degrees of being* is more real than the other, then *degrees of being* is more real than *naturalness*.

∴ So *degrees of being* is more real than *naturalness*.

Premise 1* relies on IV2. Premise 2* is numerically identical with premise 2. Premise 3* is a logical consequence of premises 1* and 2*. Premise 4* is as at least as plausible as premise 4. In my opinion, neither version of the meta-Euthyphro argument is more convincing than the other.

In fact, the NVH provides an explanation why neither argument is more convincing than the other. First, the friend of the NVH will hold that IV1 and IV2 are notational equivalents of each other. Moreover, on the NVH, the parallel arguments are notational variants of each other, and so both have faulty second premises. Finally, it is well known that human beings are subject to framing effects: one and the same phenomena when presented under different guises can elicit different psychological reactions. When presenting this paper in various venues, I would occasionally switch the order in which the arguments appeared. According to the reports of some of my audience members, the first argument was always somewhat tempting, regardless of which argument it was. If the NVH is true, it is unsurprising that we might be susceptible to this kind of framing effect.

Let's consider a second argument. This is the argument from *ways of being*. A presupposition of this argument is that not only do some things have more reality than others, but additionally some things have a different *kind* of reality than others. I take this claim seriously and have presented arguments for it elsewhere.¹⁶ One argument for caring about accounting for *modes* as well as *degrees* of being in one's metaphysic is that the best account of what it is to be an ontological category is one that identifies them with modes of being. On this view, things belong to the same ontological category if and only if they enjoy the same mode of being.¹⁷

If we take naturalness as primitive, we can use it to define the notion of a *way of being* in addition to the notion of a *degree of being*. In

16. See McDaniel (2009, 2010a).

17. See McDaniel (ms) for an extensive argument for this claim.

McDaniel (2009), I offered the following account of ways of being in terms of naturalness: there are ways of being just in case there is more than one perfectly natural quantifier expression.

But how could we define the notion of a *way* of being in terms of the notion of a *degree* of being? It seems that if the proposed primitive notion is *x has n-units of being*, then we cannot use that primitive to define the notion of a way of being. If there are units of being, then there is a function from the things that have being to the positive real numbers within (0,1]. And if this is the case, then the relation *x has at least as much being as y* will be *comparable* — i. e., for all x and y, either: $x \geq y$ or $y \geq x$. If this relation is comparable, then everything must be real in the same way, even though things might enjoy different amounts of the same kind of reality. Compare: everything is massive in the same way, although some things are more massive than others. In none but the thinnest sense is an elephant massive in a different way than a Lego.

This argument is tempting, but not good. There is a way to formulate the doctrine that there are modes of being even if *x has at least as much being as y* is comparable.¹⁸ This way mimics the formulation that employs the notion of naturalness. We start with the idea that there are possible alternative meanings for the unrestricted quantifier. These meanings are entities. (Perhaps they are higher-order properties.) Some of these entities are more real than others. There are modes of being just in case there are at least two possible meanings for the unrestricted quantifier that are maximally real.

This response requires that some abstract entities be fully real. A more cautious formulation is one that requires that the modes of being be such that no other entity of their type is more real than them. (So if modes of being are higher-order properties, there will be no other properties that are more real than them.)

Furthermore, note that the friend of ways and degrees of being needn't take *x has n-units of being* as the basic notion. She might opt

18. This way was suggested to me by Mark Barber.

instead to take the comparative relation *x has at least as much being as y* as basic. She should say something about the logical properties of this relation: it is intuitive that it is reflexive, transitive, and non-symmetric. But she needn't hold that the relation is comparable in the sense just elucidated.

Arguably, some relations are comparative without being comparable, although examples are controversial. Consider the relation *x has at least as much intrinsic value as y*. I think that many states of affairs have intrinsic value, including those in which someone experiences some pleasure and those in which someone knows something. There is at least limited comparability: it is intrinsically better to know whether God exists than it is to experience a very minor pleasure. But it is not at all obvious that every possible episode of pleasure is less than, greater than, or equal in value to every possible episode of knowledge.

And in this context, it is worth noting that it is not obvious that *x is more natural than y* is comparable.

A second way of capturing the idea that there are modes of being is by claiming that *x has at least as much being as y* fails to be comparable. Say that something *x* has a *maximum degree of being* just in case there is no *y* such that *y* has at least as much being as *x* but *x* does not have at least as much being as *y*. On this picture, if there are ways of being — different ways to be real — then there are some things that have a maximum degree of being but are such that none of them has at least as much being as the others. Let us suppose that objects and properties enjoy different ways of being. Both you and your shadow are objects, but you are more real than your shadow. *Having -1 charge* is more real than *being grue*. But since you enjoy a different kind of reality than *having -1 charge*, it is not the case that either one of you has at least as much reality as the other.

There is an interesting question of what is the proper linguistic guise for *x has at least as much being as y*, if we wish to preserve a connection between being and quantification. (I have been assuming throughout this paper that we do; if we don't, things change in interesting ways that I lack the space to address here.) Fortunately, the idea of a *polyadic*

quantifier, which informally we can take to be a single expression capable of binding multiple free variables within an open sentence so as to yield a sentence with no free variables, has been well studied.¹⁹ On the view under consideration, the fundamental existential expression would be a kind of polyadic quantifier. Although this is not the place to develop a formal semantics for such an expression, it might be useful to briefly see how such a device could function. Let's have '\$' be the polyadic quantifier that has as its semantic value *x has at least as much being as y*. Informally, a sentence such as '\$x,y (Fx,Gy)' could be used to say that some F has at least as much being as some G, while a sentence like '\$x,y (x=a, y=b)' could be used to say that *x* has at least as much being as *y*. And of course either of *x* or *y* might be individuals, or properties, or objects of any ontological type.

I know of no other arguments for taking naturalness to be more basic than the notion of a degree of being. This doesn't show that the NVH is true. But it is disquieting.

7. Is Degree of Being the Prior Notion?

We have explored arguments against the NVH that tried to establish that naturalness is the prior notion. A second way of undercutting the NVH is to argue that degree of being is the more basic notion. Here I will discuss one plausible argument for this claim, which is an argument from *ideological parsimony*.

The ideology of a theory consists in the notions taken as primitive or undefined by the theory. Consider two theories. The first theory appeals to the notion of existence, but claims that existence comes in amounts. The second theory appeals to both the notion of existence *and* the notion of naturalness, and claims that naturalness comes in amounts. Every interesting philosophical notion defined or partially characterized in terms of the ideology of the second theory can be defined or partially characterized in terms of the ideology of the first theory. From the perspective of ideological parsimony, the first theory

19. See, for example, Stanley and Westerstahl (2006).

is simpler. Both theories postulate a primitive that comes in amounts, but the second theory employs an additional primitive notion.

The prospects for defining the notion of existence are not clear, and so, by my lights, every metaphysical theory will probably have that notion as part of its ideology. Note that Sider (2012) commits himself to both the structuralness of quantification and the structuralness of structure itself, which suggests that Sider is also dubious about defining up a notion of quantification in terms of structure. In this respect, both being and structure are parts of Sider's ideology.²⁰ But let us explore whether such a definition is possible.

For the sake of clarity, let's first consider the view that the fundamental existential notion is comparative: *x has at least as much being as y*.²¹ Recall that in the previous section we briefly discussed how the proper linguistic vehicle for a comparative notion of being is a polyadic quantifier, which, for simplicity's sake, we will assume is capable of binding two variables at once. With the comparative notion, we can easily define up the "absolute" notion of being: to be is to have at least as much being as oneself. We capture this idea by defining "absolute" or "monadic" existential quantification in terms of the polyadic quantifier as follows: for any formula in which 'x' is the only free variable, 'Ex Ψ ' if and only if '\$x,x (\Psi)'. And to say that a property F is at least as natural as property G is to say, '\$x,y (x=F & y=G)'. We have an existential notion, expressed by a polyadic quantifier, and both "absolute" existential quantification and naturalness are defined in terms of it and the notion of identity.²²

20. Similar remarks apply to the system of Jonathan Schaffer (2009: 374), who makes use of a primitive notion of *grounding* rather than structure but who also explicitly denies that *existence* can be defined in terms of grounding.

21. I am confident that a similar story can be told for other views about the nature of quantities, but I focus on this one in order to clearly express the moral of the story.

22. I am inclined to believe that identity is another notion that will be part of the ideology of any viable metaphysical theory. If the friend of naturalness can define away identity *in a way not available* to the friend of degrees of being, we would have to reassess the question of ideological parsimony. I see no route

The question now is whether a theory that makes use only of the notion of naturalness or structure but does not have quantification in its fundamental ideology can nonetheless define up a notion of quantification. To ensure parallel treatment, we focus on the view according to which the fundamental naturalness notion is also comparative: *x is at least as natural as y*. But from this notion it is not at all clear how one can define up either monadic or polyadic quantification in terms of it. Of course, if we help ourselves to quantification, we can use it plus naturalness to define a comparative notion of being, as was discussed earlier. But in order to establish ideological parity, we need to be able to define either absolute or polyadic quantification in terms of *naturalness alone* — that is, *without the aid of any other quantificational notions*.

The difficulty of this task should not be obscured by the fact that *being* and *naturalness* are both, in a sense, "properties of properties". But perhaps this fact provides a clue to how we can define up being in terms of naturalness. If we embrace the purported connection between being and quantification, then, to say that there is an F amounts to attributing to F the property of "having an instance". With this in mind, let us consider one way of attempting to account for quantification in terms of naturalness. Suppose we say that there is a P just in case P is at least as natural as P — that is, $\text{Ex } (x \text{ has } P)$ if and only if $\text{N}(\text{P},\text{P})$, where 'N' is the predicate for comparative naturalness. (In general, say that an open formula is satisfied by something just in case the property or relation that corresponds to it stands in the comparative naturalness relation to itself.) If this is a successful way of defining up being in terms of naturalness, ideological parity will be restored.

It is obvious that this way of defining up being in terms of naturalness presupposes that *every* property and relation is instantiated. Many embrace this presupposition, but it is metaphysically contentious, and I am inclined to think it is false. When we frame the assumption in terms of degrees of being, it is this: a property exists to some extent

to proving this is the case, although I have no conclusive proof that this is not the case. And I unfortunately lack the space to explore this question further.

or other only if some instance of it exists to some extent or other. The friend who takes a comparative notion of being as her primitive notion needn't accept this claim, though she needn't reject it either. But it is not clear to me that one can define up being without this assumption, although, as the kids say, it is hard to prove a negative. Insofar as we are cautious about the existence of uninstantiated properties, we should be cautious about this way to establish ideological parsimony.

But let us provisionally grant this assumption. Then ideological parity will have been restored. In both cases, there is one primitive comparative notion. On this view, the notion of naturalness has straightforward existential implications, and not only in the trivial way in which if something has a property, then it is something. (Of course, if a property is natural, it follows that the property is something, just as it follows from the claim that my dog is hungry, that my dog is something.) *An assertion of the naturalness of a property straightforwardly implies the existence of a thing beyond the property itself.* In short, the fundamental notion of naturalness is an existentially loaded notion. One ought to conclude that those who speak of naturalness speak of *gradations of being*, albeit under a different guise.

Either the NVH is true or it is false because *naturalness* ought to be understood in terms of *degrees of being*.

8. Concluding Remarks

If my arguments are sound, then contemporary metaphysicians have much more in common with their historical predecessors than they initially thought, and accordingly ought to treat the historical doctrine that there are gradations of being with the respect it is due rather than with the derision it is commonly met with. For those who truck with naturalness either truck with gradations of being under a different guise, or are taking as primitive a notion that demands analysis in terms of gradations of being. Either way, the self-conception of these metaphysicians must change.

There are philosophers who elevate failing to understand the primitive notions of their interlocutors into a form of performance art.

When they hear terms like 'grounding', or 'structure', or 'naturalness', they leap up with excitement and emphatically deny their very intelligibility. They claim to have no idea what could possibly be meant by such expressions. But no philosopher can sincerely deny that they understand 'being', which is not to say that there aren't interesting philosophical puzzles about being. *Everyone has sufficient grasp of the notion of being to entertain interesting philosophical claims about it.* Those who claim to deny this are merely frothing with words. To these philosophers, I say that you understand my primitive and you understand the thesis that this primitive stands for a quantitative aspect. Investigate the arguments for this thesis! And to the friends of naturalness who have been frothed upon, note that if my arguments are sound, you have the same response available to you. This is more than sufficient compensation, if any is needed, for embracing degrees of being.

Appendix: Degrees of Being and Grounding

We now turn to the notion of *grounding*. I will argue here that there is no need to postulate a primitive relation of metaphysical grounding, since talk of grounding can be replaced with talk of degrees of being plus other interesting metaphysical relations.

According to Jonathan Schaffer (2009), the fundamental task of metaphysics is not to determine what kinds of things exist but rather to determine which kinds of things are fundamental. An entity is *fundamental* just in case nothing grounds it; an entity is *derivative* just in case something grounds it.²³ On Schaffer's view, the relation of *grounding* is an asymmetric and transitive relation. According to Schaffer, grounding is a primitive relation.

On Schaffer's view, the questions of whether, *e.g.*, numbers, meanings, wholes or holes exist, are uninteresting: they obviously do. (Schaffer notes that there are many true, affirmative propositions

23. Schaffer (2009: 373).

that imply the reality of such entities.) The interesting questions are whether these entities are fundamental entities or derivative entities. One of the metaphysical questions currently driving Schaffer is whether wholes are prior to their parts. On Schaffer's (2010) *monistic* view, the universe is an *integrated whole*, where the notion of an integrated whole is defined by him as follows:

x is an integrated whole =df. x grounds each of x 's proper parts.

(We can contrast the notion of an integrated whole with that of a mere aggregate, which is a whole that is grounded by its proper parts.)

The notion of grounding and the notion of naturalness perform similar jobs in the respective metaphysics of Schaffer and Sider. For that reason, it will be worthwhile to determine whether we can *define up* the notion of grounding from the notion of a degree of being.

The grounding relation is not identical with the relation *x is at least as real as y* , as the latter relation is reflexive and hence not asymmetric. A better candidate for the grounding relation is *x is more real than y* , which is asymmetric.²⁴ This latter notion can play many of the same roles as grounding. Consider the following definitions:

x is *fundamental* =df. nothing is more real than x .

x is *derivative* =df. something is more real than x .

As I mentioned, Schaffer argues that the fundamental task of metaphysics is to determine which things are fundamental and which things are derivative. I agree. Schaffer (2009) also argues that this was understood to be the fundamental task of metaphysicians by many of the great figures in the history of metaphysics, such as Plato, Aristotle, Spinoza, Leibniz, and Kant. Perhaps he is correct — but

24. We can easily define this notion in terms of *x is at least as real as y* as follows: *x is more real than y* =df. x is at least as real as y and it is not the case that y is at least as real as x .

note that each of these figures also believed that some things were more real than others. That which is prior is that which is more real. The appeal to traditional metaphysical practice tells against taking grounding as a primitive.

In this vein, note also that the semi-mereological notions of an *integrated whole* and a *mere aggregate* can be defined in terms of degrees of being: an integrated whole is more real than its proper parts, whereas a mere aggregate is less real than its proper parts. (Intermediate cases are possible: perhaps artifacts are more real than their arbitrary undetached parts but less real than their constituent particles.)

One might worry that the notion of grounding cannot be analyzed in terms of the notion of *being more real than*, since there might be metaphysics in which the grounding relation imposes more structure than the *being more real than* relation. A specific example might be helpful. Consider a metaphysic according to which there are concrete particulars and their modes, which are particularized and dependent attributes. Suppose there are two concrete particulars, one of which enjoys a mode of blueness whilst the other enjoys a mode of redness. Intuitively, the mode of redness is grounded solely by the red substance, whereas the mode of blueness is grounded solely by the blue substance. Intuitively, both substances are equally real, whereas both modes are equally real, and both substances are more real than both modes. And so information about the *particular* connection between the mode of redness and the red substance is lost if we identify the grounding relation with the *being more real than* relation.

There are a couple of ways to respond to this worry. One obvious response is to account for the particular connection in terms of the instantiation relation itself. The appearance that there is more to the grounding-structure arises because there is a further relation in play.

A second response is similar to the first: Instead of directly defining *x grounds y* in terms of *x is more real than y* , identify the grounding relation with the disjunction of conjunctions consisting of *x is more real than y* and some other connective relation. For example, in an ontology that consists of modes, events, and substances, one might accept the

following: x grounds y if and only if x is more real than y and either (i) x instantiates y or (ii) y is an event involving x .

A third response is (?) to deny that x is at least as real as y is comparable in the sense defined in section 6. If x is at least as real as y is not comparable, and we want to capture the connection between a thing and its modes wholly in terms of the grounding relation, we can do so. In the case mentioned earlier, one need only deny that the mode of redness is as real as the mode of blueness. (Additionally, neither mode is more real than the other.)

I suggest that whatever work the notion of grounding is called to do, the notion of degree of being can do just as well. We therefore have a choice between two systems, one of which takes the notion x is at least as real as y as basic and defines existence simpliciter and grounding in terms of it, and another system that takes both the notion of existence and the notion of grounding as basic.²⁵ I suggest that the first system scores better with respect to ideological parsimony, and since it can do the same work as the second, it is to be preferred.

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25. As I noted earlier, Schaffer (2009: 374) explicitly denies that *existence* can be defined in terms of grounding.

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