DUNS SCOTUS ON METAPHYSICS

This chapter discusses Scotus's metaphysics under six headings: the nature of metaphysics itself as a discipline (§1); identity and distinctness (§2); the extent and scope of the aristotelian categories (§3); causality and essential orders (§4); matter, form, and the composite of matter and form (§5); and a brief return to the nature of metaphysics (§6). Some metaphysical topics are not treated here but in other chapters of this volume: space and time (Lewis), universals and individuation (Noone), and modality (Normore). Scotus's proof of God's existence, discussed in §4, is examined in the chapter on natural theology (Ross and Bates).

1. Metaphysics as the Science of Being

1.1 Theoretical Science

Scotus holds that there are exactly three real theoretical sciences, pursued for their own sake, that are open to us in our present life: metaphysics, mathematics, and physics (*In Metaph.* 6 q. 1 nn. 43–46). Each qualification is important. The requirement that such sciences be "real"—that is, concerned with things in the world rather than our concepts of them—excludes logic, which is the normative science of how we are to think about things, and thus concerned with concepts. The requirement that such sciences be pursued for their own sake excludes ethics, whose primary goal is to direct and regulate the will. The requirement that we can attain such knowledge in the condition of our present life, where we can only know things through sense-perception and hence have no direct epistemic access to principles or to immaterial beings, rules out theology in the strict sense as well as a properly axiomatic metaphysics; we can however construct a 'natural' theology and metaphysics within our limitations.[1] Mathematics and physics are defined in terms of material substance. Mathematics deals with material substances in their material aspect, namely in terms of their purely quantitative features (which they have in virtue of their matter), and whatever is consequent upon those features. Physics on the other hand deals with material substances in their formal aspect, since form is the source

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[1] See *In Metaph.* 6 q. 1 nn. 55–56 and *In Metaph.* prol. nn.26–27. See also *Lect.* prol. p.4 qq. 1-2 and *Ord.* prol. p.4 qq. 1-2 for the sense in which theology can be a science (though a practical rather than a speculative science: *Ord.* prol. p. 5 qq. 1–2). God, of course, has such perfect knowledge, although Scotus is reluctant to call it 'science' since God's knowledge is non-discursive (*In Metaph.* 1 q. 1 n. 135).

of their specific operations as well as motion, rest, and other attributes open to sense-perception.[2] Other theoretical sciences dealing with material substance, *e. g.* astronomy, optics, music (as the theory of harmonic proportions), biology, and the like, will be subordinate to them.

Metaphysics, however, is not defined in terms of immaterial substance. Instead, Scotus identifies the subject of metaphysics as being *qua* being.[3] This is partly due to our lack of direct access to immaterial substance, as noted previoiusly (*In Metaph.* 6 q. 1 n. 56). But there are other reasons to reject the claim that metaphysics is properly about God or about substance, the traditional alternatives.[4] Strictly speaking, the object of metaphysical study should be reality in general, which includes God and substance but other things in addition (creatures and accidents respectively). Scotus makes this line of argument precise with the notion of a 'primary object,' which in its turn requires the notion of a '*per se* object.'

1.2 The Primary Object of a Science

The *per se* object of something is that to which it applies by its nature. For example, when Jones sees a black sheep, his power of vision is actualized by the particular blackness of the sheep's wool, which is therefore the *per se* object of his seeing; the sheep itself is "seen" only accidentally or incidentally. Likewise, the *per se* object of building is the house that is built; the builder may also become strong through his physical labor, but health is not what building is about by definition, even if it is a result of construction. Hence *per se* objects are particular items in the world: the blackness of the sheep's wool, the newly-built house.

The primary object of something is the most general nonrelational feature, or set of features, in virtue of which its *per se* object counts as its *per se* object.[5] The primary object must be nonrelational, since otherwise it risks being empty. For to say that Jones's vision is actualized by anything

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[2]   See *In Metaph.* 6 q. 1 nn. 52–53, nn. 62–63, nn. 73–84. Scotus therefore rejects the traditional claims that mathematics is primarily about quantity and physics about the mobile.

[3]   See especially *In Metaph.* 6 q. 4 nn. 10–12 and *Rep.* 1 A prol. q. 3 art. 1 (text in Wolter [1987]). The formula is traditional: see Aristotle, *Metaph.* 6.1 1026^{a}30–32. See further Honnefelder [1979] and Boulnois [1988].

[4]   The immaterial substances are God and angels, but, since angels are clearly dependent upon God, this alternative is usually given for God alone.

[5]   Scotus's definition is inspired by Aristotle's discussion of 'commensurate subjects' in *Post. an.* 1.4 73^{b}32–74^{a}3. See *Ord.* 1 d. 3 p. 1 qq. 1-2 n. 49. Scotus often talks about primary objects in terms of potencies, as he does in his introduction of the notion in *Ord.* prol. p. 3 qq. 1-3 n. 142, but the notion is more general. See King [1994] 234–235.

visible is true but trivial, since 'visible' is a relational term that means "able to actualize the faculty of vision." The primary object must equally be general: to say that Jones sees the blackness of the sheep's wool in virtue of its blackness is also true and also trivial; we can sense green things as well as black ones.[6] Yet we cannot see everything in the category of Quality. Hence the most informative characterization of what can be seen is *color*, the primary object of sight. Analogously, the primary object of geometry is *figure* rather than (say) *triangle*.

Scotus holds, then, that the primary object of metaphysics is *being*—that the human intellect in its present condition is able to have knowledge of being as such.[7] Hence the primary object of the human intellect is *being*, an alternative formulation Scotus discusses at some length.[8] We are, in a sense, natural metaphysicians. Not that such knowledge comes to us easily! Yet we are naturally suited to have it: a view Scotus finds implicit in the opening remark of Aristotle's *Metaphysics* that all men desire by nature to know (980^a21).[9]

Scotus rejects the traditional claims about the subject of metaphysics. For the primary object must, by definition, be truly predicable of anything falling under it as a *per se* object.[10] Thus if substance were its primary object, metaphysics would not deal with accidents at all, since accidents are not substances (even if existentially dependent upon them). But this is clearly false. Likewise, God cannot be the primary object of metaphysics, for not everything is God. However, there is a straightforward sense in which anything capable of real existence is a being. In *Quod.* 3.06 Scotus distinguishes several senses of 'being' or 'thing', the broadest of which is: whatever does not include a contradiction. He explicitly says that being thus broadly conceived is the proper subject of metaphysics (*Quod.* 3.09). God, angels, and substances are all considered in metaphysics to the extent that

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[6] In a later annotation to *Ord.* 1 d. 3 p. 1 qq. 1–2 n. 24, Scotus remarks: "The *per se* object is clear from the acts of the potency; the primary object, however, is derived from many *per se* objects, since it is adequate."

[7] These claims are equivalent under two generally held assumptions: (*i*) metaphysics is knowledge attainable in this life: (*ii*) metaphysics is not subordinate to any other science.

[8] See *Lect.* 1 d. 3 p. 1 qq. 1-2; *Ord.* 1 d. 3 p. 1 q. 3; *Quod.* 14.38–73. Scotus also deals with the issue briefly in *In Metaph.* 2 qq. 2-3 nn. 32–33.

[9] See *In Metaph.* 2 qq. 1–3, *Ord.* 1 d. 3 p. 1 q. 3 nn. 185–188, and *Quod.* 14.39.

[10] Scotus states a version of this claim with respect to cognitive potencies in *Ord.* 1 d. 3 p. 1 q. 3 n. 118: "Whatever is known *per se* by a cognitive potency is either its primary object or is contained under its primary object."

they are beings, but they are no more the primary object of metaphysics than triangles are of geometry.

Scotus admits that God and substance are special to metaphysics in another sense, however. For substance is more of a being than accident, and God is more complete and perfect—the words are the same in Latin—than any other being. *Qua* beings they are treated alike, but there is an ascending scale of completeness that makes the study of substance more fruitful for metaphysics than the study of accidents, and so much the more for God.[11] Again, metaphysics investigates the way beings are related to one another, and, since everything depends on God, in some sense God could be called the main subject of metaphysics.[12] But neither of these proposals are to be confused with Scotus's fundamental thesis that the primary object of metaphysics is *being*.

1.3 The Univocity of 'Being'

To defend his thesis, Scotus has to show that there is a uniform non-trivial sense in which everything considered by metaphysics can be said to be a being, and that the human intellect is equipped to know being as such. He addresses both by defending the univocity of 'being'.[13] There is, Scotus maintains, a single unified notion of being[14] that applies equally to substance and accident (and generally to all ten categories), as well as to God and creatures, which serves to ground metaphysics as a science. The two arguments he seems to have found the most compelling are as follows.

First, we can be certain of one concept while doubting another. We

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[11] Scotus calls this the 'order of perfection' in *Ord.* 1 d. 3 p. 1 qq. 1-2 nn. 95–98. This view, too, has an Aristotelian patrimony (see Morrison [1987]) and is a forerunner of the 'Great Chain of Being'.

[12] See *In Metaph.* 1 q. 1 nn. 130–136 and the discussion of essential orders in §4.

[13] In his *In Praed.*4.37–38, Scotus holds that 'being' is an analogous notion and thereby logically equivocal; a similar view is, arguably, given at the end of *In Metaph.* 1 q. 1 n. 96 (but see the conclusion of §4.2 for an alternative way to read this passage). Scotus defends the univocity of 'being' at length elsewhere: *In De an.* q. 21 nn. 7–8; *In Metaph.* 6 q. 1 nn. 47–48 and q. 4 n. 11; *Lect.* 1 d. 3 p. 1 qq. 1-2 nn. 97–113; *Coll.* 13 nn. 3–5; *Coll.* q. 3 (Harris) 372–373; *Ord.* 1 d. 3 p. 1 qq. 1-2 nn. 26–55 and q. 3 nn. 131–166. The issue is complicated by the fact that Scotus thinks that analogy and univocity may be compatible: see *Ord.* 1 d. 8 p. 1 q. 3 n. 83 and Boulnois [1988].

[14] *Ord.* 1 d. 3 p. 1 qq. 1-2 n. 26: "I call that concept 'univocal' which is so unified that its unity is enough for a contradiction in affirming and denying it of the same subject; it also is enough to play the part of a middle term in a syllogism, so that the extreme terms are united as one in the middle so that their unity with one another can be deduced without a fallacy of equivocation." See *In Soph. el.* qq. 15–16 for how analogous terms produce fallacies.

can, for example, be certain that God is a being but doubt whether God is finite or infinite, or even material or immaterial. This shows that the notion of being is different from that of finite and infinite being, of which it is predicated, and hence is univocal to both.[15]

Second, Scotus argues that in our present condition all our knowledge derives from sense-perception, and this leads only to simple concepts that have a content in common with that which inspires them. Hence there is no basis for forming simple analogous concepts. Furthermore, we do possess a simple concept of being, since otherwise we would have no conception of substance. Since it is not sensed directly, substance would be entirely unknown and not even a 'something I know not what' unless there were a simple concept common to it and accidents (which are sensed directly).[16] But the only concept that could serve this purpose is the concept of being. A similar line of reasoning can be applied to God and creatures. Hence we either have to admit that God and substance are entirely unknown, or grant that 'being' is univocal. Since the former is clearly unacceptable, the latter must hold.

These arguments establish that we have a univocal concept of being. However, they do not show that it is the primary object of our intellect, since it has yet to be established that this concept covers everything: that it is 'adequate' in the sense that it is univocally predicable *in quid* of whatever the intellect can grasp.[17] Here some care is required, for Scotus thinks that, strictly speaking, no concept is adequate in the sense called for, although our concept of being comes closest.[18] It turns out that 'being' is not univocally predicable *in quid* of either ultimate differentiae or of the proper attributes of being (*passiones entis*), though it is predicable of each of them *in quale* (n. 151). Let's look at his reasoning.

A differentia is *ultimate* if it does not itself have a differentia. Most familiar examples of differentiae are composite: substances are differentiated into animate and inanimate by 'living', for example, which itself can be resolved into the different kinds of living—life characterized by nutritive and reproductive functions only; life characterized by the further powers of loco-

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[15] See the references in note 13. Scotus's contemporaries called this the 'Achilles' of his arguments for univocity (Dumont [1998] 308).

[16] Substance is knowable in itself, although not by us in our present condition: *In Metaph.* 7 q. 3 n. 16.

[17] To be predicated *in quid* of something is to say what the thing is, to describe its essence. Similarly, to be predicated *in quale* is to say how something is, to describe the way it is.

[18] *Lect.* 1 d. 3 p. 1 qq. 1-2 nn. 97–104; *Ord.* 1 d. 3 p. 1 q. 3 n. 129.

motion; and so on. Only when we reach differentiae that are not themselves
further decomposable will we have reached the ultimate differentiae, which
are therefore purely qualitative. Scotus, however, leaves open the identifica-
tion of which differentiae are ultimate.[19] Now Scotus offers two proofs that
'being' is not univocally predicated *in quid* of ultimate differentiae. First,
if 'being' is univocally predicable of two distinct differentiae, these differen-
tiae must be beings that are themselves distinguished from one another by
proper differentiating features, which, in their turn, are distinct differentiae
(since the original pair were distinct). If these latter differentiae include
being quidditatively, the same line of reasoning applies to them. Therefore,
to avoid an infinite regress, there must be some indecomposable differentiae
that do not include being quidditatively, that is, differentiae of which 'be-
ing' is not predicated *in quid* (n. 132).[20] Second, just as a composite being
is composed of act and potency, so too a composite concept is composed of
an actual and potential concept, that is, a determinable and a determining
concept. Since every concept not irreducibly simple is resolvable into irre-
ducibly simple concepts, we only need to consider the latter. They must
likewise be composed of determinable and determining elements. But since
they are irreducibly simple, neither component can be further decomposed.
Hence an irreducibly simple concept must consist of two indecomposable
concepts. One is purely determinable, with nothing determining it, namely
being; the other has nothing determinable in it but purely determining,
namely an ultimate differentia. By definition, 'being' cannot be predicated
in quid of the latter (n.133).

A proper attribute is a feature that includes its subject in its definition,
though not conversely.[21] For instance, *odd* is a proper attribute of number,
since in explaining what 'odd' means we need to speak of number, but we
can explain 'number' without speaking of odd or even (despite the fact
that every number is necessarily odd or even). Hence a proper attribute
does not belong to the essence of its subject, even if it is conjoined to it
necessarily, as the property *risible* is necessarily present in all human beings.

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[19] Scotus seems to admit two kinds of ultimate differentia. First, there are the individ-
ual differentiae, one for each distinct individual, by which (say) Socrates and Plato
are diverse from one another: see *In Metaph.* 7 q. 13 n. 123; *Lect.* 2 d. 3 p. 1 qq. 5-6
n. 172; *Ord.* 2 d. 3 p. 1 qq. 5-6 n. 186. Second, there are the irreducibly simple specific
differentiae. Scotus does not say which specific differentiae are irreducibly simple.

[20] Scotus gives a similar regress-argument in his *In Metaph.* 7 q. 13 n. 121 and q. 17 n. 19.

[21] Technically, this is expressed by saying that proper attributes are predicable *per se
secundo modo* of their subjects. The notion comes from Aristotle, *Post. an.* 1.4 73^a37–
73^b5.

Scotus identifies three proper attributes of being: *one*, *true*, and *good*. These features are coextensive with being, but each adds something distinctive to the notion of a being, something apart from being itself. What each one is, then, involves something other than being itself, and so 'being' cannot be predicated *in quid* of its proper attributes (n. 134).[22]

Scotus concludes that we can say that being is the primary object of the intellect and the proper subject of metaphysics only with the qualification that ultimate differentiae and the proper attributes of being are included not quidditatively but in a derivative fashion. Indeed, 'being' is predicable *in quale* of them. Furthermore, since ultimate differentiae are constituents of beings (though purely qualitative in themselves), and the proper attributes of being characterize all beings as such, Scotus says that they are 'virtually' contained under being.[23] Hence the primary object of metaphysics is *being*, which is predicable, essentially or denominatively, of all there is.

There remains a serious challenge to Scotus's account of metaphysics. Two things are *different* when there is some real common factor that is combined in each item with a real distinguishing element. Such is the case with coördinate species under their proximate genus: they share the genus as a real common factor, but each is set apart from the other by the presence of a differentia which, in combination with the genus, produces each species. Two things are *diverse* when there is no real common factor, and hence no foundation for a distinguishing element. Such is, traditionally, the case with the ten categories: they are diverse from one another, since they do not share any real common factor. Their diversity is the result of the ontological gaps between them. Equally, God and creatures were thought to be diverse, since there was no reality common to them; the distance between the finite and the infinite seemed unbridgeable.

Now Scotus's account of metaphysics seems to replace the ontological diversity among the ten categories, and between God and creature, with mere difference. On the one hand, if 'being' is univocally predicable *in quid* of the ten categories, then it seems as though it will be the supreme genus

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[22] This is an instance of a general theorem: No subject is quidditatively predicable of its proper attributes. Scotus takes the list of proper attributes of being from Aristotle, *Metaph.* 4.2 1003^{b}23–36.

[23] Scotus writes: "I say that being is the primary object of our intellect, for a double primacy concurs in it, namely a primacy of commonness and a primacy of virtuality, for anything intelligible *per se* either essentially includes the notion of being or is virtually contained in something that does" (n. 137). He makes the same point in *Quod.* 5.26–29.

above them all.[24] But Aristotle and Porphyry were taken to offer cogent arguments against there being a single category for all of reality.[25] On the other hand, if God and creatures are merely different and not diverse, then there is some real factor common to God and creatures. This undermines God's transcendence. Furthermore, it would mean that God could not be simple, but a real composition of common and differentiating factors.

The challenge facing Scotus, then, is to explain how his account of metaphysics can avoid these unwelcome consequences. His response involves many of the distinctive features of his metaphysics: the formal and modal distinctions, the transcendentals, the account of the structure of composite beings. We'll return to the nature of metaphysics by way of conclusion in §6, after examining some of the technical aspects of Scotus's metaphysics in the following sections.

2. Identity and Distinctness

2.1 Real Distinction and Distinction of Reason

Scotus holds that two items are *really distinct* from one another if and only if they are separable: one can exist without the other, at least by divine power.[26] More precisely, they are said to be "distinct as one thing (*res*) and another" if and only if they are separable. This applies to actually separated things as well as to things and their potentially separated parts, whether the parts be physical or metaphysical. Such a real distinction holds between Socrates and Plato, Socrates and his hand, prime matter and substantial form, items belonging to different categories, and so on; there is no further requirement that the items so distinguished be 'things' in a full-blooded sense. Conversely, Scotus maintains that items are *really identical* if and only if they are not really distinct, that is, if and only if neither can exist

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[24] Avoiding this conclusion seems to have been the motivation for Aristotle's claim that 'being' is said in many ways that are, at best, only analogous to one another, though perhaps related to a single focal meaning: *Metaph.* 4.2 1003^a31–1003^b19. Most mediæval and modern commentators on Aristotle have therefore held that 'being' is not univocal across the categories.

[25] Aristotle, *Metaph.* 3.3 998^b22–27; Porphyry, *Isag.* 2 (Busse, *CAG* 4.1 6.5–11; Minio-Paluello, *Ar. lat.* 1.6-7 11.20–12.6).

[26] See *Ord.* 2 d. 2 p. 1 q. 2 nn. 92–94, where Scotus adds that two items can be really distinct if they are proportionately analogous to separable things, as in the case of the parts of a definition; I'll ignore this refinement in what follows. The separability criterion for real distinctness derives from Aristotle, *Top.* 7.1 152^b34–35; see the chapter on modality in this volume for the connection between divine power and possibility.

without the other, even by divine power.[27]

Yet real identity does not entail complete sameness. For, as we shall see, Scotus holds that really identical items can nevertheless have distinct properties—in modern terms, that the Indiscernibility of Identicals fails—in virtue of their being formally or modally distinct. The latter can also be called 'real' distinctions in a broad sense, not to be confused with the distinction of one thing from another described in the preceding paragraph. For the formal and the modal distinctions mark out differences that exist independently of any activity on the part of the intellect.[28] On that score they are to be contrasted with a *distinction of reason*, or conceptual distinction, which is at least partially mind-made: today may be thought of as yesterday's tomorrow or tomorrow's yesterday, for instance, or Venus conceived of as the Morning Star and as the Evening Star. In technical terms, the intellect is a total or a partial cause of the conceptual distinction. Furthermore, there may be some ground in reality for the mind's drawing a conceptual distinction, a ground that may even cause the mind to do so.[29] But even if there is, what makes a distinction conceptual, rather than real in the broad sense, is not whether there is some objective ground in reality for the distinction (which is irrelevant) but whether the distinction is the product of some sort of mental activity. The formal and modal distinctions, however, mark out genuine differences in the world that would be present even if there were no minds at all.

2.2 Formal Distinction

The core intuition behind Scotus's formal distinction is, roughly, that existential inseparability does not entail identity in definition, backed up by the conviction that this is a fact about the way things are rather than how we conceive of them.[30] Since formally distinct items are existentially inseparable, they are really identical, in the sense just defined. Hence the formal

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[27] See *Ord.* 2 d. 1 qq. 4-5 nn. 200–202 for Scotus's claim that inseparability is necessary for real identity, and *Quod.* 3.46 for its sufficiency.

[28] For example, Scotus writes that the divine perfections are distinct "by an otherness that is neither caused by the intellect nor yet so great as we have in mind when we speak of diverse things (*res*), but is a lesser real difference, if every difference not caused by the intellect were called 'real'" (*In Metaph.* 4 q. 2 n. 143).

[29] Such a distinction is sometimes called a *distinctio rationis a parte rei* (a 'real conceptual distinction'). If there is no real distinction in the object, but the object nevertheless causes the intellect to conceive it in different ways, Scotus sometimes says there is a *virtual* or *potential* distinction in the object; see for instance *Lect.* 1 d. 2 p. 2 qq. 1-4 n. 271.

[30] Scotus discusses the formal distinction *ex professo* in his *Lect.* 1 d. 8 p. 1 q. 4 nn. 172–188; *Ord.* 1 d. 2 p. 2 qq. 1–4 nn. 388–410 and d. 8 p. 1 q. 4 nn. 191–217; and several

distinction only applies to a single real thing. In Scotus's terminology, it is 'less' than a distinction of one thing from another. Now some really identical items may differ in their definitions. More precisely, they may differ in *ratio*, which is a generalization of the strict notion of aristotelian 'definition' or account: a *ratio*, like a definition, picks out the feature or set of features that make something to be what it is, though it need not do so by genus and specific differentia. All definitions are *rationes* but not conversely: there are items that lack definitions yet do have a set of features that make them what they are: the highest genera, potencies, the four causes, accidental unities, and so on. Thus items that are formally distinct have non-identical definitions or *rationes*, that is, the *ratio* of one does not include that of the other. For example, the psychological faculties of intellect and will are really identical with the soul, but formally distinct from one another, since what it is to be an intellect does not include the will, and what it is to be a will does not include the intellect.[31] Furthermore, both real identity and definitional non-identity are independent of any activity of the intellect. We discover *rationes* through the intellect but do not create them.[32] Hence the distinction between formally distinct items seems to be present in the world, not even partially caused by the intellect. It is therefore 'real' in the broad sense.

The formal distinction is central to Scotus's metaphysics. He holds, for example, that there is a formal distinction between each of the following (within an individual thing): the genus and specific differentia; the essence and its proper attributes; the faculties of the soul, and the soul itself; the Persons of the Trinity, and the divine essence; the uncontracted common nature and the individual differentia—and this list is not exhaustive.[33] The

Parisian lectures, mostly surviving only in student transcriptions (*reportationes*). These treatments differ in their terminology and, arguably, in the doctrine they present: see Grajewski [1944], Gelber [1974], and Jordan [1984] for further discussion. I'll concentrate on Scotus's presentation in his *Ordinatio*.

[31] See *Op. Ox.* 2 d. 16 q. unica n. 17.

[32] Scotus makes this point explicitly in *Ord.* 1 d. 8 p. 1 q. 4 n. 193: "Furthermore, the definition indicates not only an aspect that is caused by the mind, but the quiddity of a thing; formal non-identity is therefore *ex parte rei*." See also d. 25 q. unica n. 10 and *In Metaph.* 7 q. 13 nn. 90–91.

[33] For the genus and specific differentia, see *In Metaph.* 7 q. 19 nn. 20–21 and n. 43; *Lect.* 1 d. 8 p. 1 q. 3 nn. 100–105; *Ord.* 1 d. 8 p. 1 q. 3 nn. 101–107 and 2 d. 3 p. 1 qq. 5-6 nn. 189–190. For the uncontracted common nature and the individual differentia, see *Lect.* 2 d. 3 p. 1 qq. 5–6 n. 171, *Ord.* 2 d. 3 p. 1 qq. 5–6 n. 188, and King [1992]. It is often said that Scotus postulates a formal distinction between the essence and the existence of something, but there is little textual evidence for this claim: see O'Brien

presence of formally distinct items within a thing provides a real basis for our deployment of different concepts regarding that thing, which are thereby anchored in reality. For, by definition, formally distinct items exhibit different properties, and these can serve as the real basis for our distinct concepts. Without multiplying the number of things we can draw finer distinctions in the world. Yet even if we do not multiply things, we seem to have multiplied something. What are the items distinguished by the formal distinction? More exactly, to what are we ontologically committed by using the formal distinction?

Scotus offers a parallel in *Op. Ox.* 4 d. 46 q. 3 n. 3: just as a real distinction in the strict sense distinguishes one thing (*res*) from another, so too the formal distinction distinguishes one 'thinglet' (*realitas*: the diminutive of *res*) or 'formality' from another. He elsewhere calls them beingnesses, formal objects, intentions, real *rationes*, and formal *rationes*. The variety of his terminology suggests that Scotus didn't think a great deal depended on it; after all, formally distinct items are still really identical. More important are his explicit statements about how to express the formal distinction, since here Scotus does seem concerned precisely with ontological commitment.[34] For example, Scotus carefully distinguishes "A is not formally the same as B" from "A and B are not formally the same" on the grounds that the latter might be taken to imply plurality through its conjunctive subject (n. 2). He likewise rejects "The formality A is distinct from the formality B" since it seems to be committed to the existence of formalities, and indeed to a plurality of them (n. 10 343b); the latter problem is bypassed in "The formality A is formally distinct from the formality B," which involves only formal distinctness and not distinctness *simpliciter* (n. 13). In general, Scotus seems to prefer taking 'formally' as a modal operator: "A is not formally B" (n. 4).[35] This formulation minimizes the ontological commitments of the formal distinction, since, on its face, it does not require the existence of multiple property-bearers within one and the same subject, but merely asserts that a particular relation does not hold among two 'ways' (A and B) that a thing can be. These ways are real in the broad sense, of course,

[1964] and §5.3.

[34] Scotus's most extensive analysis of the logic of the formal distinction is in the *collatio* printed as *Quaest. misc. de form.* q. 1 (the only authentic part of that collection), also known as the *logica Scoti*, discussed in what follows.

[35] Scotus makes the same point in *Ord.* 1 d. 2 p. 2 qq. 1–4 n. 404: "Should we then allow that there is some distinction? It is better to use the negative formulation 'This is not formally the same as that' rather than 'These things are formally distinct.'" See also the discussion in Gelber [1974].

but need not be understood on the model of things.[36]

Now even if Scotus avoids multiplying entities in things through the formal distinction (a highly contested point), another difficulty remains. Given that the formal distinction is real in the broad sense, must there not then be some degree of complexity in its subject? The formal distinction holds in reality prior to the operation of the intellect. Even if there are not distinct thing-like property bearers in a subject, then, it nevertheless seems as though no thing to which a formal distinction applies can be simple. This would rule out any formal distinction in God.

Scotus argues that the reality of the formal distinction is compatible with God's simplicity. Real composition, for Scotus, is a matter of one item being in potency to and perfected by the activity of another item: the genus is in potency to the (formally distinct) differentia, for example, which actualizes it as the species.[37] But there is no potency in God at all. God's essence is not in potency to the Persons of the Trinity, nor are the Persons in potency to one another. Hence the formal distinctions among the Persons and between each Person and God's essence do not introduce any real composition in God, and so divine simplicity can be maintained. Scotus says that the formally distinct elements in God are contained in such a way as to make up a unity (they are contained 'unitively'), but not through real composition.[38]

2.3 Modal Distinction

Scotus introduces and describes the modal distinction in *Ord.* 1 d. 8 p. 1 q. 3 nn. 138–140. It is meant to be an even lesser distinction than the formal distinction, but nevertheless real in the broad sense. The core intuition behind Scotus's modal distinction is, roughly, that some natures come in a range of degrees which are inseparably a part of what they are, and that this is a fact about the way things are rather than about how we conceive of them.[39] For instance, take an accidental form that admits of qualitative

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[36] One drawback to the modal approach is that it seems to license the inference from A's being φ to its subject being φ; if B then has a property ψ incompatible with φ, then the thing in question has the incompatible properties φ and ψ. Rejecting the inference, however, seems to treat the ways something is as quasi-things in their own right, and we are back to the nonmodal versions of the formal distinction. The extent to which Scotus adopts the modal approach, as well as the success of that approach, has been controversial since the fourteenth century.

[37] See further the discussion in §5.3 and §6.

[38] Scotus lists several grades of unity in *Ord.* 1 d. 2 p. 2 qq. 1–4 n. 403. This is a fundamental theme, exploited to good effect, in Cross [1998].

[39] The modal distinction seems to be Scotus's generalization of the notion of qualitative

variation, say "whiteness in the tenth degree of intensity." The degree of intensity of the whiteness is not a differentia of the color: the particular whiteness is the color it is whether it is more or less bright; no formal or essential element in that shade of whiteness is altered by the different amounts of intensity it may have. Instead, the degree of brightness is what Scotus calls an *intrinsic mode* of the given nature, for it spells out how the nature exists: in this case, how intense the whiteness is.

Furthermore, the nature will be inseparable from the degree in which it occurs. While we can conceive whiteness apart from this particular degree of intensity, our concept is not adequate to the reality of the white thing before us, which, after all, actually does have that degree of intensity. Nor can the mode be conceived apart from the nature. It makes no sense to speak of degrees without saying of what they are the degrees. Hence the intrinsic mode is not formally distinct from its nature, since the mode can only be (adequately) grasped through the *ratio* or definition of the nature.[40] Finally, it is clear that the modal distinction is real in the broad sense, since the nature and its intrinsic mode are really conjoined in the thing, prior to any activity of the intellect; something really has a given degree of brightness, whether anyone thinks so or not.

Scotus uses the modal distinction in cases of the intensification and remission of forms (discussed in §3.2.3), where some qualitative feature admits continuous variation along a given range: the intensity of color, the amount of heat, the strength of desire, and the like. But Scotus's most important metaphysical application of the modal distinction is found in his account of infinite and finite being, to which we now turn.

3. The Structure of Reality

3.1 Being and the Transcendentals

Being is common to the ten categories, and so is not contained under any of them: it is *transcendental* (*Ord.* 1 d. 8 p. 1 q. 3 n. 114). The proper attributes of being are likewise transcendental, for otherwise they could not be proper attributes. Scotus identifies two further kinds of items that are

variability, discusssed further in §3.2.3.

[40] A nature is separable from any given degree if it allows a range of variation; why do we not have then a real distinction between the nature and its intrinsic mode? For the same reason there is not a real distinction between the uncontracted and the contracted common nature: because *this* particular thing cannot be without its given mode without thereby ceasing to exemplify that intrinsic mode of the nature: see King [1992].

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not contained under any category: (a) the 'disjunctive attributes'; (b) pure perfections.

Items included under (a) are coextensive with being and are immediately predicated of it, dividing it by a disjunction of properties, such as 'infinite or finite', 'necessary or possible', 'act or potency', 'prior or posterior', and the like in limitless number (*Ord.* 1 d. 38 p. 2 and d. 39 qq. 1-5 n. 13).[41] These are, it seems, primarily logical or conceptual constructions from simpler real attributes; Scotus never gives any sign that he holds there to be a single attribute that has an internal disjunctive structure. Hence they add nothing to his ontology. Nevertheless, they can be said to divide being completely, and thereby qualify as transcendentals.

Scotus understands a 'pure perfection' to be a property which, roughly, it is better to have than not.[42] This formula needs to be made precise in two ways. First, we should not take the contrast implicit in 'than not' as pointing to the absence of the perfection, since any positive being is better than mere nonexistence, but rather as compared to any other positive being with which it is incompatible. Second, the perfection must make its possessor better absolutely speaking: wisdom, for instance, makes its possessor better no matter what kind of thing its possessor might be, even if wisdom were contrary to its nature. Dogs cannot be wise and still remain dogs. Yet it would be better for the dog to cease being a dog and to become wise, than not. In short, pure perfections are not relative to kinds. Some of their more important properties are as follows: all pure perfections are by definition compossible (*Quod.* 5.20); each pure perfection is irreducibly simple (*Quod.* 1.8–12) and compatible with infinity (*Quod.* 5.23); they are all equally perfect (*Ord.* 1 d. 8 q. 1);[43] and no pure perfection is formally unshareable (*incommunicabilis*), an important result for the Trinity (*Quod.* 5.32). They are transcendentals, by definition, since they apply to things regardless of their kind. Unlike the other transcendentals, they are

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[41] See Wolter [1946]. Typically one of the disjuncts will properly apply only to God and the other to the rest of creation, *e. g.* 'necessary' to God and '(merely) possible' to any creature; Scotus indicates that in general one ought to be able to conclude the existence of something the more perfect disjunct applies to from the existence of something the less perfect disjunct applies to. Note that some of the disjunctive attributes also carve out relations among creatures: different orders of priority and posteriority, or relations of act and potency, for example.

[42] Scotus derives this rough characterization of the pure perfections from Anselm, *Monologion* 15; his gloss on it is found in *Quod.* 5.31.

[43] All pure perfections are equally perfect since they are formally infinite, but otherwise they can be ordered. For example, since one must be alive to be wise, life (as a pure perfection) is prior to wisdom (as a pure perfection).

not simply coextensive with being; dogs are beings but not wise. Nor are they simply proper to God alone, since dogs have life as God does, albeit limited life. Rather, their extension may vary.

Since the transcendentals are not contained under any category, they can only be the subject of a science that investigates items outside the categories: metaphysics, which Scotus etymologically explains as "the transcending science, that is, the science of transcendentals" (*In Metaph.* prol. n. 18). This description of metaphysics does not exclude anything, since being is one of the transcendentals, but it gives a particular direction and focus to Scotus's investigations. One salient problem is how the transcendentals are related to 'non-transcendentals', namely the ten categories. Scotus offers the following account:[44] Being, "the first of the transcendentals," is quantified into infinite and finite, the latter of which is immediately divided into the ten categories. Now the sense in which being is 'quantified' requires some explanation, since it has nothing to do with the category of Quantity. Scotus tells us in *Quod.* 6.18 that there is a transcendental sense of 'quantity' that is more properly called 'magnitude' that measures the greatness or intrinsic excellence of what a thing is.[45] (This must be transcendental since greatness is at least in part a function of the pure perfections.) Very roughly, then, magnitude measures excellence among beings or their natures, and this can be of either infinite or some finite degree. The scale of excellence defines a range along which beings can be placed, since their natures exhibit varying degrees of excellence. Quantified being is, in short, an intrinsic mode of being.

Scotus's account of the structure of reality thus has at its foundation a modal distinction between being and its infinite and finite manifestations. Just as a given quality, such as whiteness, can be present in distinct intensive quantities while still remaining whiteness completely, so too can being be present in infinite and finite excellence while still remaining being completely. Being, therefore, appears in two modes: infinite and finite. Finite being divides immediately into the ten categories.

With this claim, Scotus has the first part of his solution to the difficulty posed at the end of §1.3. (Worries about real composition will be addressed later.) For, as we saw in the discussion of the modal distinction in §2.3, a modal distinction is less than a formal distinction, for differences in modes do not affect the formal content of that of which they are the modes. Hence

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[44] See *Lect.* 1 d. 8 p. 1 q. 3 n. 107; *Ord.* 1 d. 8 p. 1 q. 3 n. 113; *Quod.* 5.58.

[45] In *Quod.* 5.58 Scotus tells us that magnitude can be used to construct an essential order among natures, presumably in the order of eminence: see §4.1.

modal distinctions cannot function as differentiae, and so are not related
to their subjects as to genera. This conclusion seems correct. Different
intensities of whiteness are not different in kind, but merely different in
degree. In the present case, Scotus infers that *being* cannot be a genus,
since its distinguishing features are modes rather than differentiae. (Nor
is *finite being* a genus above the categories, since there is no mediating
factor for the division.) Being is 'above' the categories, but not in such
a way as to be a genus. The univocity of being does not lead to a single
highest genus. Hence the categories can still be the highest genera of things;
there are just more things than can be contained under genera—namely, the
transcendentals.

3.2 The Categories

Scotus holds that the division of finite being into the ten categories is
immediate and sufficient: that there must be precisely these ten categories
and no others.[46] The distinction is not merely logical, but "taken from
essences themselves" (*In Praed.* q. 11 n. 26). Since there is no higher genus
over the ten categories, however, the only way to clarify the nature of each
category is to consider it independently of the others and see what its defin-
ing characteristics are—to look at the essences themselves. Scotus follows
Aristotle in devoting the bulk of his attention to the first four categories:
Substance, Quantity, Quality, and Relation. A few words about each are in
order.

3.2.1 Substance

There must be objects capable of independent existence, Scotus reasons
in *In Metaph.* 7 q. 2 n. 24, since otherwise there would be an infinite regress
of purely dependent beings. These self-sufficient objects, the underlying
subjects of predication, are substances. Now substances are beings primarily
and *per se* (*Quod.* 3.13). They are also unities, in a sense to be explored
in §5.3, and hence *per se* one. More exactly, Scotus holds that a substance
is really identical with its essence though formally distinct from it.[47] The
essential parts that make up a primary substance, namely matter and form,
combine to produce a unified whole. Other features of substance, such as

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[46] See *In Praed.* q. 11 n. 26 and *In Metaph.* 5 qq. 5–6 n. 81. The last part of this claim
may need to be qualified, for in a later addition to the text given in *In Metaph.* 5 qq. 5–
6 nn. 73–80 Scotus points out that the arguments used to establish the sufficiency of
the division are fallacious.

[47] See *In Praed.* q. 15 n. 10, *In Metaph.* 7 q. 7 nn. 22–25 and q. 16 n. 26, *Ord.* 2 d. 3 p. 1
q. 1 n. 32, *Op. Ox.* 3 d. 22 q. unica n. 11.

its ability to remain numerically one while receptive of contraries, flow from its existential independence and unity.

These are several of the ways in which substance is distinguished from elements of the remaining nine categories, that is, from accident. Scotus is a realist about accidents. He holds that they have some being of their own that is not simply reducible to the being of the substances in which they naturally are present, and indeed that this was Aristotle's view (*In Metaph.* 7 q. 4 n. 17). Yet from a metaphysical point of view, there seems to be a fundamental distinction between the category of Substance on the one hand, and the nine accidental categories on the other hand: the former includes items that are capable of self-sufficient existence, whereas none of the latter do. This division between substances and accidents seems no less immediate than that into ten diverse categories—if anything, it seems more fundamental, since the nine accidental categories could be diversified after the fundamental distinction of substance and accident; it is plausible to take them as subspecies, as kinds of accidents. After all, as one common mediæval catch-phrase had it, what it is to be an accident is to inhere in something: *esse accidentis est inesse*.

Scotus argues that this line of reasoning badly misconstrues the nature of accidents, and that properly understood accidents do not essentially involve inherence (*In Metaph.* 7 q. 1). He begins by distinguishing the actual union of an existent accident with its existent subject from the dependence an accident may have of its nature on a substance of its nature. The latter needs proof in a way in which the former does not (n. 9).[48] Furthermore, by 'of its nature' Scotus means what is included *per se* in the quidditative concept of an accident, as opposed to whatever might be really identical with it or a necessary concomitant of it (n. 14). Proper attributes, for example, fall outside the strict quidditative definitions of their subjects, as we have seen in §1.3. They are nevertheless really identical with their subjects.

Once these distinctions have been drawn, Scotus declares that inherence characterizes accidents much the way proper attributes do their subjects: the inherence is really identical with the given accident and a necessary concomitant (barring divine power), but falls outside the essence of the accident properly speaking (n. 15). Otherwise, there would not be a single unified sense of 'being' that applies to substances and to accidents (n. 16);

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[48] A distinction was traditionally drawn at this point: accidents, it was said, either actually inhere in a subject or have an aptitude to so inhere, and the latter is the defining characteristic of accidentality. Scotus, however, finds that aptitudinal dependence isn't as strong as the essential dependence he has in mind here (n. 10). He sometimes appeals to the notion when less precision is called for: see *In Metaph.* 7 q. 4 n. 17.

indeed, accidents are beings just as much as substances are, despite the fact that substances have priority over accidents in a variety of ways (n. 30). Therefore, the contrast between substance and accidents, though real, is not quidditative.

3.2.2 Quantity

The category of Quantity is made up of items of which 'more' and 'less' can be predicated, and Aristotle suggests that it is divided into two kinds: (*i*) discrete quantities, such as numbers and utterances; (*ii*) continuous quantities, such as time, geometric surfaces, and places.[49] But these claims about Quantity are not sufficient to give it a unitary character. The predicability of 'more' and 'less' of any quantity may be a feature, and even a necessary feature, of quantities, but it cannot be a defining one; the essence of Quantity explains why 'more' and 'less' are predicable, not vice-versa. Worse yet, the distinction between (*i*) and (*ii*) just points up the problem: why think there is a single category at all, instead of the two distinct categories of discrete items and continuous items?

Scotus argues that there is a single feature that unifies Quantity: *homœomerous divisibility*, that is, divisibility into parts of the same sort.[50] This is more important than *measure*, since all quantities are defined through whether their parts are joined or disjoined, but only discrete quantities immediately have a unit that can be used as a measure. (These remarks do not apply to the transcendental quantity described in §3.1.) Quantities admit of more and less precisely because they have distinct parts, which allow for comparison. Thus Quantity is a single unified category.

Homœomerous divisibility applied to the two species of Quantity yields different results. Discrete quantities have parts that are of the same sort (the parts of numbers are numbers), and they are compared to one another by reference to the unit magnitude they naturally have *qua* discrete. But when applied to continuous quantities, Scotus thinks that homœomerous divisibity entails a position known as 'divisibilism': any continuous quantity is potentially (though not actually) infinitely divisible. For each part of a continuous quantity is itself continuous, and so capable of further division into divisible parts, and so on (*Ord.* 2 d. 2 p. 2 q. 5 nn. 332–353). Scotus is at pains to argue that the infinite divisibility of continuous quantities also

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[49] Aristotle, *Cat.* 6 4^{b}20–5^{a}14 and *Metaph.* 5.13 1020^{a}10–11.

[50] See *In Praed.* qq. 16-17 nn. 13–16 and *In Metaph.* 5 q. 9 nn. 17–32. Scotus points out in nn. 30–31 of the latter that homœomerous divisibility is, strictly speaking, the primary proper attribute of Quantity rather than its essence or part of its essence: we can't isolate the essence of Quantity, since it is an immediate division of finite being. See also *In Metaph.* 7 q. 13 n. 98 for the divisibility of particular quantities.

has a further consequence, namely that such quantities are not composed of indivisible elements ('atoms'), though they may consist in them.[51] The distinction may be explained as follows. Scotus allows that continuous quantities may include indivisibles: a line segment, for example, incorporates two indivisibles as its limit-points. Furthermore, the potentially infinite divisibility of a continuous quantity suggests that there is a potentially infinite number of such indivisibles existing 'in' the quantity. (More precisely: they *potentially* exist in a continuous quantity.) But it is quite another step to say that the continuous quantity is made out of such elements, even if there is a potentially infinite number of them.[52] Hence although there may be indivisibles in a continuous magnitude, this does not entail that it is composed of them. Scotus provides two reasons to reject the claim. First, it would amount to a category-mistake, since then continuous quantities would ultimately be composed of discrete indivisibles, *i. e.* continuous quantities would ultimately turn out to be discrete quantities. Second, Scotus argues that indivisibles such as points, which have literally no extension, cannot be finitely 'added up' to produce any finite magnitude—and since only a finite number of such indivisibles are actual, they cannot constitute a continuous quantity (*Lect.* 2 d.2 p. 2 qq. 5-6 nn. 355–358). The upshot, then, is that continuous quantities may consist in but not be composed of indivisibles.

3.2.3 Quality

The category of Quality is made up of items having 'like' and 'unlike' predicated of them. The same question that arose for Quantity appears again in Quality, namely, whether there is anything that unifies the category. Aristotle lists four types of qualities: (*i*) habits and dispositions, and so mental events generally; (*ii*) natural capacities and incapacities; (*iii*) passible qualities and affections, such as bitterness and color; and (*iv*) the shapes and figures of things. Scotus, remarkably, seems not to have made up his mind about the categorical status of this division. In his early work *In Praed.* qq. 30-36 he takes the unusual step of presenting two possible ways of addressing the unity of Quality. First, he proposes that Aristotle is not listing species but simply different 'modes' of qualities, that is, accidental differentiae of various sorts of qualities (nn. 35–36).[53] After replying

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[51] Whether Scotus's arguments are successful is another question: see Cross [1998] 118–133.

[52] In contemporary mathematics this is the job of a measure function.

[53] Scotus proposes the same account in *Op. Ox.* 4 d. 6 q. 10 n. 14, although there again he provides an alternative explanation to the question at hand (what kind of quality the theological virtues are).

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to the several questions that had been raised about Aristotle's list, though, Scotus proposes a second response: that Aristotle was indeed enumerating the species of Quality and not mere modes, but that he made use of these accidental differentiae because the real differentiae of (i)–(iv) are unknown (n. 65). Later, in discussing whether the categories are really distinct, Scotus remarks that two of the divisions of Quality are contained under (i) as a species, though he does not say which two (*In Metaph.* 5 qq. 5-6 n. 113). No simple account of the unity of Quality is forthcoming.

Qualities all admit of the more and the less. Some qualities admit a range of continuous variation, as for instance the brightness of a shade of color, the intensity of a desire, the degree of temperature. If we think of starting at a given basepoint, the quality may be said to be intensified or remitted over the given range: *intensio et remissio formarum*. Yet if a quality is a simple form, how can it become more or less? Scotus argues that several initially plausible answers to this question have to be rejected. First, we cannot identify the different intensities with different species of the quality, so that different grades of temperature are literally different kinds of temperature, for there is no ready way to identify the atomic differentiae of an infinite number of determinables.[54] In light of Scotus's modal distinction, discussed above, this should seem especially plausible, since two different degrees of heat seem to differ not in kind but in degree, and, as Scotus argued previously, modal differences do not constitute formal differences.

A different strategy tries to explain the underlying metaphysics by appealing to the differential realization of the quality, either because the individual quality participates in its Form to a greater or lesser degree or because the quality is more or less actualized in the individual instance. Scotus rejects this strategy on several grounds, not least of which is that it is non-explanatory. Differences in qualitative intensity reflect the differing extent to which a quality is somehow realized in a subject, but then these 'differing extents' need as much explanation (and the same kind of explanation) as the qualitative variability they were supposed to explain.[55] Therefore, a different approach to the problem of qualitative variation is in order.

Scotus holds that qualities vary in degree by the presence of *parts* of the quality in question. That is, the correct explanation of more or less

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[54] See *Lect.* 1 d. 17 p. 2 q. 1 nn. 142–143; *Ord.* 1 d. 17 p. 2 q. 1 nn. 202–224 and q. 2 n. 255. Scotus's discussion here is more complex than I have indicated here: see Cross [1998] 173–180.

[55] See *Ord.* 1 d. 17 p. 2 qq. 1-2 nn. 241–248 for the first version of the proposal and *Lect.* 1 d. 17 p. 2 q. 3 nn. 188–196 for the second.

of a given qualitative intensity is through the presence or absence of homogeneous parts of that quality.[56] The brightness of light is measured in 'candlepower' (the amount of light shed by a single candle). To produce a brighter light, add another lit candle, which becomes a new part of the overall light. Furthermore, it is the same sort of part: each part (lit candle) adds exactly the same thing to the whole (the light), but causes a change in the intensive quality of the light (brightness). And as with the brightness of light, so too with other intensive qualities—strength in horsepower, for example. Scotus argues that his theory will even work on more recalcitrant cases. For example, differences in color-shades aren't clearly the product of amalgamating more of the same parts of the color; deeper blue doesn't seem to be made by adding more 'blue'-parts (each equally blue as the next) to a given shade. But the model works here as well, Scotus maintains; we are misled by thinking of such parts as spatial parts.[57] The additional 'blue'-parts are not next to the already-existent ones, but, as it were, drawn on top of them, and anyone familiar with young children and crayons knows that this does produce a deeper shade of blue. Cases of qualitative variation are therefore reducible to quantitative differences in 'parts' of the qualities.

3.2.4 Relation

Scotus distinguishes beings into *absolute* and *non-absolute*, where the latter "expresses a condition of one thing in respect of another" (*Quod.* 3.12). The distinction serves to set apart items that involve some kind of reference to something else from those that do not. The categories of absolute being are the first three: Substance, Quantity, and Quality. The remaining seven categories, and paradigmatically the category of Relation, are non-absolute in that an item belonging to each depends for its being on something that is neither it nor its subject. However, this distinction does not capture what is unique to the category of Relation; if anything, it suggests that the non-absolute categories could be amalgamated. Thus Scotus is led to draw another distinction among the non-absolute categories: each involves a relation in its own fashion, but the relations may be *intrinsically* or *extrinsically* advenient.[58] The sense of this distinction is as follows: the category of Relation is the only category that is completely defined by the 'reference to something else' (*i. e.* the relation) mentioned previously. In

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[56] See *Lect.* 1 d. 17 p. 2 q. 4 nn. 206–239 and *Ord.* 1 d. 17 p. 2 q. 2 n. 249.

[57] *Lect.* 1 d. 17 p. 2 q. 4 n. 241, argued for degrees of heat.

[58] See *Op. Ox.* 3 d. 1 q. 1 n. 15, 4 d. 6 q. 10 nn. 3–4, 4 d. 13 q. 1 nn. 9–11. Technically, intrinsically advenient relations obtain given their extremes and the foundations; extrinsically advenient relations do not.

the remaining six categories, apart from the intrinsically advenient relation that defines their nature there must be a further extrinsically advenient relation, one that forms a condition for the categorial item to be present (*In Metaph.* 5 qq. 5-6 nn. 93–103). For example, the category of Action includes items such as *heating*, which by its nature involves a relation to something heated. But it is not sufficient for heating to exist that there be something with the active potency to heat, or indeed that there be something with the passive potency to be heated; there must also be an external factor that actualizes the active potency. That which actualizes the active potency is extrinsically related to the action of heating; it is a condition of there being any heating at all. Similarly for the category of Passion. The remaining categories require other external circumstances: Place is a distinct kind of relative thing with its foundation in the thing located and the terminus in the place; Time replaces and is replaced by other items of the same sort in succession; Position is a relative thing which exists in the whole or the parts of a substance; State (*habitus*) is a relative thing which inheres in a body that is around or contained in another. Therefore, the category of Relation is uniquely definable as the category including all and only intrinsically advenient relations.

Scotus is a realist about relations: they are accidents that characterize individual subjects (*In Metaph.* 5 q. 11 n. 47), and at least some are really distinct from their subjects and from other accidents.[59] All relations, no matter what kind they are, have the distinctive feature that while they are in one subject they are directed 'toward' another (nn. 62–63).[60] Suppose, for example, that Socrates is taller than Plato. In this case Socrates has a particular accident, namely his height, and Plato likewise has his particular height; these are really distinct individual accidents, since they inhere in really distinct individual substances. Each is also really distinct from the substance in which it inheres, since Socrates or Plato could change in quantity and nevertheless remain in existence. Now if Socrates's height is greater than Plato's height, then a particular accident also exists in Socrates, namely his tallness (relative to Plato). Socrates's height is called the *foundation* of the relation. Scotus argues that in general a relation is not the same as its foundation (n. 50): the inherence of Socrates's particular height in Socrates is a necessary but not sufficient condition for this relation to exist, since Socrates could remain the same height while Plato gradually grew

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[59] See Henninger [1989] Chapter 5 for Scotus's theory of relations.

[60] Scotus argues that a relation is primarily directed only 'toward' a single thing (*In Metaph.* 5 q. 11 n. 65), or, in modern terms, that polyadic relations are reducible to dyadic relations. I'll simply assume that result in the discussion here.

taller than him.[61] Likewise Plato's particular height is necessary but not sufficient, since Socrates could shrink with age. Plato's height is called the *terminus* of the relation, and is what the relation of tallness in Socrates is 'toward'.[62] The relation itself inheres in Socrates, not in Socrates's height; accidents do not inhere in accidents. Socrates is thus the *subject* of the relation. The relation relates its subject to the thing that is the terminus: tallness is a relation that holds between Socrates and Plato, not between their accidents, although it only exists given the foundation in one and the terminus in the other. Socrates and Plato are what the relation relates.[63]

The relation of tallness in Socrates is itself a particular accident, really distinct from its foundation and its subject, since the latter could exist without the former if Plato were to grow. Now the preceding discussion does not address the ontological question whether the tallness that inheres in Socrates is correctly analyzed as tallness-toward-Plato that inheres in Socrates—or, in a simpler and perhaps more appealing formulation, whether the relation in Socrates is the particular accident 'taller-than-Plato'.[64] There are two reasons to hold that it is not. First, if it were taller-than-Plato, then its proper genus in the category of Relation would not be tallness but rather tallness-toward-Plato, and there would be at least as many species as there are individual cases of tallness. Second, individuals cannot appear in Aristotelian definitions; if we take the individuality of the accident to permit inclusion of the individual as part of the formula of the accident, then the individual will differ in essence from its species, which cannot happen. For these two reasons, then, Scotus concludes that an individual relation does not incorporate an essential reference to the very thing to which it is related. Yet a problem remains: what distinguishes Socrates's being taller

[61] See *Lect.* 2 d. 1 q. 5 n. 184 and *Ord.* 2 d. 1 q. 5 nn. 200–204. Scotus offers several other arguments for this conclusion.

[62] Scotus points out that a relation can have as its terminus something absolute (*In Metaph.* 5 q. 11 n. 66): it is an artifact of this example that the terminus of Socrates's tallness is an accident inhering in Plato. (This will be important for third-mode relations: see §3.2.4.)

[63] Given a relation, it is a straightforward matter to determine its co-relation: transpose the foundation and the terminus, so that the old terminus is the new foundation and the old foundation the new terminus; there will now be a relation in the subject that has the new foundation. Plato's being shorter than Socrates depends on the same particular accidents of height in each, but this time considered from Plato's point of view, as it were. Co-relations are 'simultaneous' with relations in this sense (*In Praed.* q. 27 and *In Metaph.* 5 q. 11 n. 81).

[64] This is the standard modern reduction of dyadic relations to monadic predicates: to 'end-stop' the relation with its relatum.

than Plato from his being taller than Antisthenes?

This last difficulty is an instance of the more general problem of how accidents are individuated. Scotus clearly holds that relations are individualized: he tells us that "there are as many paternities in the one who is the father as there are filiations in the diverse sons" (*In Metaph.* 5 qq. 12-14 n. 28), to cite one instance among many. Scotus is less forthcoming than one might wish on this point, but an answer in line with his discussion of numerically distinct accidents (*In Metaph.* 5 q. 7) is that an individual relation has a double principle of individuation, namely through its foundation and through its terminus. The terminus accounts for the directed character an individual relation has without entering into the formula of its essence, any more than its subject does. Hence the tallness in Socrates is tallness with respect to Plato, but it is not itself a 'tallness-toward-Plato': its feature of being 'toward-Plato' belongs to its essence no more than its being in Socrates.

Scotus considers and rejects the view that all relations are somehow merely conceptual or mind-dependent, that, in the slogan of the British Idealists, "only thought relates."[65] Socrates is really taller than Plato independent of any mental activity. It is the paradigm of what Scotus calls a *real relation*: a relation for which the real existence of its foundation and terminus are jointly sufficient.[66] Nor should the category of Relation be divided into real relations and merely conceptual relations; as Scotus tartly remarks, "*rose* is not divided into real roses and merely conceptual roses, for they are two modes of being of the same thing (*In Metaph.* 5 q. 11 n. 42).[67] Instead, Scotus adopts, with qualifications, Aristotle's list of three modes of relations:[68] (*i*) first-mode relations are numerical relations founded on Quantity, whether they are determinate or not; (*ii*) second-mode relations are between the active and the passive, founded on one of the absolute categories; (*iii*) third-mode relations are of "the measurable to the measure" which may be founded on any category. The last calls for special comment,

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[65] *Lect.* 2 d. 1 q. 5 nn. 204–209; *In Metaph.* 5 q. 11 nn. 13–21; *Ord.* 2 d. 1 q. 5 nn. 223–227.

[66] *Quod.* 6.82. See also *Lect.* 1 d. 31 q. unica. n. 6 and *Ord.* 1 d. 31 q. unica. n. 6.

[67] Scotus's argument for this conclusion depends on his thesis that an object *qua* considered by the intellect has a special ontological status, a lesser kind of being (*esse diminutum*): see n. 44.

[68] Aristotle, *Metaph.* 5.15 1020^b26–32. Scotus discusses each in *In Metaph.* 5 qq. 12–13. He finds the list clearly incomplete, since there is no obvious way to classify spatial relations, temporal relations, semantic relations, and several others; hence the three modes are not the species of Relation themselves but rather at most paradigmatic of the genuine species (*In Metaph.* 5 q. 11 nn. 57–59).

since it plays a key role in Scotus's metaphysics.

Three features set third-mode relations apart from first-mode relations and second-mode relations. First, as Aristotle remarks, in the case of third-mode relations the normal ordering of a relation is inverted: something is relationally characterized as 'the knowable', for example, due to the fact that there can be knowledge with regard to it, not conversely. Second, third-mode relations do not entail the real existence of the corresponding co-relations: something may well be knowable without anyone knowing it (the 'non-mutuality' condition). Third, as traditionally conceived, the non-mutuality condition suggests that third-mode relations serve as a model of how independent and dependent items are related: the knower is dependent on the knowable for his knowledge, but the knowable is what it is independently of there being any actual knowledge.

The second and third features of third-mode relations, namely the non-mutuality condition and the dependence condition, are traditionally taken to define third-mode relations. Yet Scotus holds that this is not the case, and that the traditional reading depends on an improper conflation of mutuality (which is a matter of co-relation) and dependence. Rather, Scotus maintains, the dependence that characterizes at least some third-mode relations is of two distinct types (*In Metaph.* 5 q. 11 n. 60). There is dependence in perfection, which I take to be something of the following sort: knowledge must 'measure up' to the knowable, in the sense that knowledge is judged to be such in virtue of its accuracy in mirroring the knowable. Second, there is existential dependence: knowledge cannot exist without the knowable, but not conversely. As for non-mutuality, Scotus argues that third-mode relations are mutual, but their relata differ as regards act and potency, unlike the case of first-mode relations and second-mode relations (*In Metaph.* 5 qq. 12–14 nn. 100–104). The 'non-mutuality' thesis appears to be only a confused way of getting at the act-potency difference. Of course, Scotus does not mean to undermine the genuine dependencies that such relations involve. Mutuality is a matter of the corresponding co-relation (the correlative). This, after all, must somehow be present in order to serve as a denomination for the independent element: the knowable is only knowable *qua* the potential relation it may stand in to a knower. Nor does mutuality entail mutual dependence.

Scotus makes it clear that he holds the co-relation of a third-mode relation to preserve the direction of dependence. Since a relation may be terminated at something absolute, a third-mode co-relation may simply take the entire absolute being, its subject, as the foundation—since the foundation need not be distinct from the relation, or, in this instance, the co-relation. When

these conditions obtain, the destruction of the co-relation does not produce any change in its foundation, the original relation's terminus. And this is precisely the account Scotus gives of the relation between God the creator and creatures.[69] In short, it is possible for a third-mode co-relation to produce only what has come to be known as a 'Cambridge change', a change that takes place entirely in one of the relata without any ontological shift in the other. This suggests a point that Scotus does not make explicitly but which would, I think, be quite to his taste: a third-mode correlative, under the conditions described in this paragraph, is nothing more than an extrinsic denomination of its subject. (God is not essentially a Creator, though we are essentially creatures.) On this interpretation, Scotus can, quite rightly, deny the traditional view that the co-relation of a real third-mode relation is a relation of reason. God really is correctly described as the Creator, whether there be any minds to think so or not.

Scotus applies his analysis of third-mode relations at many points in his philosophy, perhaps most notably in his technical definitions of intuitive and abstractive cognition (*Quod.* 13.34–47). But one particularly important application in metaphysics is his analysis of the relation between cause and effect as a form of dependence. Let us now turn to this.

4. Causality

4.1 The Causal Order

Being, as we have seen in §4.1, is transcendentally divided by disjunctive attributes. One such attribute is the division 'prior or posterior': beings may be ordered to one another with respect to some kind of priority or posteriority.[70] Instants of time, for example, fall into a single linear order of 'earlier' and 'later'; Scotus calls this the "order of duration." Equally we can rate beings, or perhaps their natures, by how "perfect and noble in essence" they are: this is Scotus's so-called "order of eminence" (*De primo princ.* 1.7).[71] Neither of these instances of priority and posteriority is causal, of course. The items ranked by each are independent of one another with regard to their position in the respective orderings. By contrast, other re-

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[69] *Lect.* 2 d. 1 q. 5 nn. 240–242 and *Ord.* 2 d. 1 q. 5 nn. 261–262; Henninger [1989] 78–85.

[70] Aristotle gives multiple senses of priority and posteriority in *Cat.* 12 and *Metaph.* 5 q. 11. Scotus argues in *In Praed.* q. 43 and *In Metaph.* 5 q. 8 that they all have the root meaning of 'closer to (or farther away from) a source'. See Gorman [1993] for a discussion of Scotus's 'ontological' senses of priority.

[71] Presumably eminence can generate a linear ordering by using magnitude, the transcendental sense of quantity, to rank essences. See §3.1.

lations of priority and posteriority involve (essential) dependence, namely when the prior could be without the posterior, but not conversely (*De primo princ.* 1.8). Accidents depend on substance this way; children likewise depend on their parents in this way, at least for coming into being (though not for their continued existence). Yet Scotus construes dependence as more than just necessary connection, explaining it as follows: "Even if the prior were necessarily to cause the posterior, and hence not be able to be without it, this is not because it requires the posterior for its being, but conversely" (*ibidem.*). There is a distinction to be drawn between (*a*) what is requisite for the being of X, and (*b*) what follows from postulating the being of X, even if it follows from the very nature of X.[72] Suppose that A is a necessary cause of B, and that B necessarily causes C. If B exists then both A and C must exist. Yet A and C are not on a par, since B depends on A as its cause, but not on C. Of course, not all causes are necessary causes, but Scotus holds that there can be dependence even when only necessary causes are involved.

The order of dependence, though, is not identical with the causal order; it is more general. First, there can be dependence where we would not ordinarily speak of causality. A substance is not normally the 'cause' of its contingent accidents, nor is a subject the cause of its proper attributes. Second, Scotus specifically introduces a non-causal kind of dependence that plays a key role in his proof of God's existence: his "third division" of the order of dependence (*De primo princ.* 1.11–14), which comes in two varieties. Although non-causal, this dependence relation is induced by causal relations, in particular by the presence of a common cause.

A given cause can have one or several effects, and each of these effects can, in turn, be itself a cause that may have one or several further effects. (These effects-turned-causes can produce their own effects either of themselves or in combination with other partial co-causes, of course.) Thus we have a partial order defined over all the effects of a given cause. Adjacent elements in the partial order are *proximate*, nonadjacent elements *remote*. Now suppose that A is the proximate cause of both B and C, but that A cannot cause C until it has caused B. (It's not that B concurs in causing C; A just has to get B out of its system, so to speak, before causing C.)[73] In this case, says Scotus, C depends on B. The relation is not causal, since neither is the

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[72] The phrase 'being of X' is deliberately ambiguous between X's existence and X's essence (what it is to be X).

[73] The fact that C is therefore produced later in time than B does not make it a 'remote' effect in Scotus's technical sense, which depends on the presence of causal intermediaries.

cause of the other,[74] though they have a common proximate cause. This is Scotus's first kind of non-causal dependence relation.

For the second, suppose that A has the two proximate effects B and C, but further that B causes D. In this case D is the proximate effect of B but the remote effect of A (or equally B is the proximate cause of D and A is the remote cause of D). Here C and D have a common cause, namely A, although the former is a proximate effect of A and the latter a remote effect of A. In such a situation, says Scotus, the remote effect depends on the proximate effect of their common cause—that is, D depends on C. But the relationship of C and D, again, is not itself causal, for neither is the cause of the other. This is Scotus's second kind of non-causal dependence relation.

The causal order is therefore a specific kind of dependence, namely one in which the dependence of the posterior on the prior is direct, having to do with the exercise of powers. This is why causality falls within the province of metaphysics. For the division 'to be why another is' (cause) and 'to be due to another' (effect) classifies beings independently of anything specifically physical, that is, regardless of change or motion.[75]

Scotus's "fourth division" (*De primo princ.* 1.15) is the "well known" classification of the four types of causes and their corresponding effects: formal, final, material, and efficient.[76] Each kind of cause can be given a purely metaphysical interpretation.[77] Furthermore, each produces its own proper result: the formal cause produces what is formed (*formatum*), the material cause what is made material (*materiatum*), the final cause its end (*finitum*), and the efficent cause its effect.[78] These results may coincide in reality, as when the material and formal causes constitute a single thing, for instance the marble and the shape are combined by the sculptor to produce

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[74] This inference holds only if Scotus rejects so-called *sine qua non* causality. He does: see *Ord.* 1 d. 3 p. 3 q. 2 n. 415.

[75] See *In Metaph.* 9 qq. 3-4 n. 16; the same point is made in *In Metaph.* 1 q. 1 n. 83.

[76] Scotus holds there these are all the kinds of causes there are (*Ord.* 1 d. 3 p. 3 q. 2 n. 415). In a cancelled text that originally made up part of n. 414, he cites with approval Averroës's *sufficientia*-proof for the four causes presented in his *In Phys.* 2 com. 30–31.

[77] *In Metaph.* 9 qq. 3–4 nn. 16–18. The point is evident for the first three, but requires some careful handling for the efficient cause. Scotus argues that efficient causality only involves 'imparting existence' rather than the more physical 'bringing something about', even if such existence can only be imparted through physical means (with the notable exception of God's efficient creation of the world out of nothing).

[78] *De primo princ.* 1.15. English lacks a term corresponding to Scotus's precise *causatum* for what a cause causes; I'll use 'effect' in a broad sense for this purpose.

a statue. The material and final causes are intrinsic, whereas the efficient and final causes are typically extrinsic. In this example, the sculptor is the efficient cause and his payment (say) the final cause.

The example of the sculptor, simple as it is, illustrates an important thesis about causality: multiple causes can act concurrently to produce a given effect.[79] Scotus argues that the four causes not only combine to produce a given effect, but that they are *essentially ordered* in their production of one and the same thing (*De primo princ.* 2.29–32), a conclusion explored below. Scotus's notion of an 'essential order' of causes is fundamental to his metaphysics. Causes of the same kind can form an essential order, too, or they can form only an accidental order. But before we can explore this notion we need first to distinguish *per se* from accidental causes.[80] Briefly, a cause is *per se* if its effect is a *per se* object of its causal power (as defined in §1). That is, it brings about the given effect by its very nature. Builders construct houses, and so they are the *per se* cause of buildings; they may also create traffic congestion by blocking roads, but they are only accidental or incidental causes of traffic congestion. More precisely, accidental causes are not immediately related to the content of the power being exercised in the act of causing a given effect, whereas *per se* causes are so related.

Scotus holds that an essential order consists in items that are related by a priority ordering in either a causal line or in the orders of eminence or a variety of non-causal dependencies sketched in the first two paragraphs of this section, where essential orders are set apart from accidental orders by three features:[81] (*a*) the posterior depends *per se* on the prior insofar as the posterior is in its turn a cause; (*b*) the causality of the prior has a distinct character since it is more perfect or complete; (*c*) all members of the series are simultaneous. The key idea at work here is that a cause can not only cause its effect but can also cause the causality of its effect.

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[79] Scotus discusses concurrent causality in *Ord.* 1 d. 3. p. 3 q. 2 nn. 495–496 and in his *Quod.* 15.33–35. Causes may concur equally or unequally. In the former case, each cause exercises the same sort of power, and the two causes operate jointly, as when two people lift a table. In the latter case, the causes are essentially ordered to one another in such a way that the higher cause moves the lower cause and the lower cause does not move without the higher cause. (The relation between the soul and the form of the body may be like this: see §5.2.) Each of these ways has further subdivisions.

[80] A *per se* cause is also called an 'essential cause', which can be misleading: an order of essential causes may not be an essential order of causes, as Scotus notes in 2.33 and 3.10; see also *In Metaph.* 2 qq. 4-6 n. 80 and 5 q. 8 n. 7. A series of colliding billiard balls, or the series of ancestors, are examples of such.

[81] *De primo princ.* 3.11; see also *In Metaph.* 2 qq. 4–6 nn. 80–101, and 8 qq. 2–3 n. 128 for (*b*).

Consider the following example. I hold a stick in my hand, and with it I move a stone; the stick has the power to move the stone, since it does so, but it can only exercise that causal power because of my activity. The stick is the proximate cause of the stone's motion and I am the remote cause of the stone's motion; we could say with equal justice either that the stick moves the stone or that I do. But more importantly, I am the proximate cause of the stick's causality, since the stick only causes the stone's motion through my exercise of my causal power. The stick might have the power to move the stone (the way a soap bubble, say, never could), but the power is inert until I exercise my powers. Thus my power to bring about the stick's causal activity is more perfect and complete than the stick's mere power to do so. Furthermore, it is clear that the stick exercises its causality to move the stone only so long as I am exercising my powers; the stick's causality must be concurrent with my exercise of my causality. Hence they are simultaneous.

The power of Scotus's conception of essential orders may not be immediately evident. I will look at two of the many applications of his theory: the relationship among the four causes, and, in the next subsection, the claim that at least some essential orders must have a first cause.

Scotus holds that the four causes are essentially ordered in their causation of one and the same thing. He argues as follows.[82] The type of order possessed by the four causes is clear from the order exemplified by the end and the efficient cause: the end causes the causality of the efficient cause because the efficient cause only causes (efficiently) in virtue of its pursuit of the end. If the end were not pursued, the efficient cause would not be set into motion. This is an essential ordering, as described previously. Hence the sort of essential dependence that obtains among the four causes is that of one cause depending upon another for its causality. The efficient would not be moved to effecting unless the end moved it (metaphorically) into action. The efficient depends upon the final for its causality.[83] Now if there

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[82] *De primo princ.* 2.25–32; see also *In Metaph.* 5 q. 1 nn. 54–59. Scotus gives a special argument for this conclusion in *De primo princ.* 2.30. If something can be expected to produce something essentially one, and the product flows from a plurality of causes, then the causes are related to one another as act and potency or possess a unity of order. Then he points out that the four causes are not all related as act and potency (only matter and form are). He then adds that the four causes produce something that is essentially one, namely the composite (see §5.3). Therefore, the four causes possess a unity of order in their causing of an effect that is essentially one.

[83] Why doesn't the end depend upon the efficient for its causality, since without the efficient the final cause could not bring about its result? Because the end initiates the sequence of causes by moving the efficient cause to action. So, although it acts

is an essential order between the final and the efficient causes, it cannot be a function of non-causal dependence, since the final and the efficient causes do not have a common cause. Rather, it must fall under Scotus's fourth division as a straightforward order among causes. The final cause need not cause the existence of the efficient cause, of course; the payment does not make the sculptor exist. Rather, the final cause (payment) causes the efficient cause (sculptor) to exercise his efficient powers to produce the effect (the statue). Hence the final cause is prior to the efficient cause *qua* cause, because the final cause (finally) causes the efficient cause to produce the effect.

The efficient cause, of course, does not finally cause the matter, nor does it finally cause the form. Yet it does efficiently cause the causality of the matter as well as efficiently causing the causality of the form. The sculptor combines the matter and form in such a way as to produce a statue. That is, the efficient cause causes the matter to be informed (in the way that it is), and it causes the form to be 'enmattered' (in the way that it is). Hence the efficient (efficiently) causes the causality of both the matter and the form. This means that the efficient is the common cause of the causality of the matter and the causality of the form (2.32). Furthermore, of these two common effects of the efficient cause, the matter is prior since it possesses some being of its own (see §5.1); hence the material cause is prior to the formal cause in Scotus's first variety of non-causal dependence.

Scotus can combine these different sorts of essential ordering together to yield a single unified essential ordering of causes by applying his 'transitivity theorem': if A is prior to B, and B is prior to C, then A is prior to C (*De primo princ.* 2.5)). This theorem does not restrict the priorities to the same sort of dependence.[84] Therefore, the final (*qua* final) is prior to the efficient (*qua* efficient) in virtue of final causality; the efficient (*qua* efficient) is the common (efficient) cause of the material (*qua* material) and the formal (*qua* formal), and hence is prior to both in virtue of efficient causality; the material (*qua* material) is the more proximate result of the same common cause, and hence is prior to the formal (*qua* formal). This is the sense in

through the efficient cause, the final cause is prior since it initiates the motion. The efficient cause in no way moves the final cause into action.

[84] This is slightly inaccurate; one cannot mix eminence and dependence in the transitivity theorem. Proof: Form depends upon matter; hence matter is prior to form. But form is more eminent than matter; hence form is prior to matter. If transitivity could cross Scotus's first division there would be a circle in an essential order. Note that Scotus carefully explicates the transitivity theorem disjunctively in terms of dependence and eminence.

which the four causes can be united in producing one and the same result.

4.2 The Existence of God

Scotus applies the technical apparatus developed in §4.1 in his proof of God's existence.[85] His proof is discussed at length in the chapter on natural theology in this volume. Here I will only look at Scotus's application of his analysis of causality in his argument that an infinity of essentially ordered things is impossible, which runs as follows:[86]

> An infinity of things that are essentially ordered is impossible. . .
> Proof: The totality of caused things that are essentially ordered
> is caused, and so it is caused by some cause that is no part of the
> totality, for then it would be the cause of itself; for the whole totality
> of dependent things is dependent, and not on anything belonging to
> that totality.

This dense and intricate argument—call it the 'Causal Argument'—is the engine of Scotus's entire proof. It is meant to establish the existence of at least one uncaused cause of the totality or series of caused things that constitute an essential order. Scotus states the Causal Argument in its full generality, without referring to the kind of causality at issue: it works for any order of causes where one generates series of causes. Here he applies it to efficient causality; it will later be applied to finality without any modifications (3.29–30). Once Scotus has used the Causal Argument to deduce the existence of uncaused causes in each distinct causal order—there is a completely different proof for the non-causal order of eminence—he then argues that it must be one and the same item that is the first in each, and from there it is a short step to proving that this one first cause has the relevant divine attributes. The Causal Argument, then, supports the rest of Scotus's proof. But what exactly does it prove?

Scotus takes the Causal Argument to rule out the possibility of an infinity of things that are essentially ordered (for some essential order, that is; hereafter I drop the reminder). Something like this point has traditionally

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[85] We have several versions of this proof. See *Lect.* 1 d. 2 p. 1 qq. 1–2; *In Metaph.* 2 qq. 4–6; *Ord.* 1 d. 2 p. 1 qq. 1-2; *Rep.* 1 A d. 2 qq. 1–4 (text in Wolter [1982]); and the whole of the *De primo principio*. There are also several discussions reported in Scotus's Paris lectures. See Cress [1975] for a survey of the literature to that point. Scotus's proof even has its modern imitators: see Loux [1984].

[86] *De primo princ.* 3.12–13: *Infinitas essentialiter ordinatorum est impossibilis. . . tum quia universitas causatorum essentialiter ordinatorum est causata; igitur ab aliqua causa quae nihil est universitatis; tunc enim esset causa sui; tota enim universitas dependentium dependet et a nullo illius universitatis.* The formulation in other versions of the proof is similar.

been the weak point of causal arguments for God's existence, since there seems to be no reason why we could not have a series in which any given element always has a proximate prior cause. Yet even before we unpack Scotus's proof, a quick glance shows that he isn't trying to show that between any pair of elements in the series there must be only a finite number of other elements in the series. That point simply isn't addressed. What he does try to show in the Causal Argument is that any ascending series of essentially ordered things must be bounded by something that is simply first with respect to that order. A moment's reflection on the etymology of 'infinite' confirms this point, since *in-finitum* literally meant unbounded. Hence the Causal Argument is meant to prove that any totality of caused things that are essentially ordered must be bounded, that is, that the series must have some uncaused cause.[87] There is no unbounded totality of essentially ordered things, even if the bound for the totality is infinitely (in the modern cardinal sense) far from any given element of the series where one begins to trace the causal chain.

Scotus begins the Causal Argument with the claim that the totality of caused things that are essentially ordered itself has a cause. He does not offer a proof of this claim, but we can construct one on his behalf. In *De primo princ.* 3.5, Scotus uses the principle that nothing can come into existence unless it is caused (*ex nihilo nihil fit*). But the totality of caused things that are essentially ordered itself comes into being, since otherwise it would not be a totality of such caused things. (Totalities are existing totalities.) Hence the totality is caused. But if something is caused then it must have at least one cause. Therefore, the totality has a cause: call it *C*.

Next, Scotus argues that *C*, the cause of the totality, is not part of the totality. For if it were, it would belong to something of which it is the cause, and this is impossible since nothing can be the cause of itself. Yet although *C* is not part of the totality, the totality is essentially ordered to it: by definition, *C* causes the totality, and so is that by which the totality exists and which it requires. Indeed, it should be clear that *C* must be in the series of essential causes that is correlated with the totality. For the totality in question is a totality of things that are caused—a point that is important in understanding the metaphysical character of Scotus's proof, to be taken up shortly. The correlated series may include most, if not all, of the things in given totality, since many things will be both caused and in their turn causes, but Scotus's argument does not assume this.

[87] More exactly, the Causal Argument proves that any totality of essentially ordered things is bounded by the first cause in the correlated series of causes, as we shall see in the reconstruction of the proof.

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Finally, Scotus reaches the conclusion that C must be first in the correlated series of causes: "the whole totality of dependent things is dependent, and not on anything belonging to that totality." For suppose C were not first in the correlated series of causes. Then C would itself have some cause. But if C has a cause, by definition C is caused. But if C is caused then it must belong to the totality of caused things (which would otherwise not be a totality since it left C out). But, by the argument given in the preceding paragraph, this is impossible. Hence C must be first, and the totality is bounded by it. Therefore, given the totality of essentially ordered caused things, there is some cause that is both the cause of the totality and is not itself caused. It is simply first. Thus there cannot be an unbounded totality of things that are essentially caused: *Q. E. D.*

The Causal Argument, as reconstructed here, depends on distinguishing the totality of caused things from the correlated series of their causes. Understanding why Scotus begins with the totality of caused things rather than causes directly sheds light on the metaphysical character of his proof. For the Causal Argument is a piece of pure metaphysics: it doesn't include any claims about contingent beings in the world.[88] In *De primo princ.* 3.4–6, in the process of setting up the whole of his proof, Scotus is careful to point out that he is proceeding in terms of the possible rather than the actual. Specifically, he begins with the (metaphysically necessary) premiss that some nature is contingent, which is a claim about 'quidditative being' rather than any actual being. Such claims about the possible are necessary, as Scotus says (3.5), and therefore have the modal force needed for metaphysical demonstrations. What is more, they clearly do not involve any change or motion, and hence are not part of physics. The Causal Argument reflects Scotus's commitment to metaphysical investigation by beginning with merely possible effects (namely causable natures) and deducing the existence of an actual first cause of them, while appealing only to axioms about essential orders of causes.

Apart from reaching his ultimate conclusion that there is a perfect and infinite personal being, creator and goal of all there is, the Causal Argument also illustrates a conception of metaphysics that is typical of Scotus. For in it Scotus explores the nature of being through the ways in which beings are related to one another. It turns out that the causal structure of the world has an underlying order, laid bare by metaphysical inquiry, that shows how different kinds of things depend on one another. In that sense, metaphysics is concerned with all things insofar as they are "attributed to God" (*In*

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[88] Scotus characterizes the whole of the *De primo principio* as metaphysics: see 4.86.

Metaph. 1 q. 1 n. 96).

4.3 Self-Change

There are causal aspects of the physical world that bear metaphysical investigation, even without reference to God. One example is provided by Scotus's doctrine that self-change is possible—indeed, that it is a widespread feature of the physical world. By 'self-change' Scotus has in mind cases of change where the agent and the patient involved are really identical.[89] In a broad sense, 'change' refers to any case in which non-being is prior to being, but for most purposes a strict sense of 'change' was thought to be more useful, captured in the view that change involves "a movement toward form" (*Phys.* 6.5 235^b6–7). Three principles are involved: the subject of the change, which is the persisting substratum; a form φ; and the initial privation of φ in the subject, so that the subject is not φ (but is in potency to φ). A change begins with the subject being merely in potency to φ and ends with the subject actually informed by φ; the movement 'between' these two poles is the change proper, where the subject's potency for φ is progressively actualized.[90] Furthermore, since change essentially involves the actualization of a potency, a fourth factor must be added to this analysis: the cause, or more generally the *principle*, of the potency's actualization. This calls for some comment.

Scotus couches his discussion of change at an abstract level, speaking

[89] Scotus discusses the general possibility of self-change definitively in *In Metaph.* 9 q. 14. He takes up the case of local motion, and in particular the movement of light and heavy bodies, in *Ord.* 2 d. 2 p. 2 q. 6. Quantitative self-change in the case of augmentation and diminution is taken up in *Rep.* 4 d. 44 q. 1, and in the case of condensation and rarefaction in *Op. Ox.* 4 d. 12 q. 4. Qualitative self-change in the activity of seeds and semen is taken up in *Op. Ox.* 2 d. 18 q. unica and 3 d. 4 q. unica. Self-change in the will is discussed extensively in *In Metaph.* 9 q. 15 and in *Op. Ox.* 2 d. 25 q. unica.; self-change in the intellect, *Ord.* 1 d. 3 p. 3 q. 2 nn. 486-494 and 2 d. 3 p. 2 q. 1 as well as *In De an.* q. 13 (this work is considered by some to be spurious). There are frequently parallel discussions in the *Lectura* as well. See King [1994]. There is an argument in Sylwanowicz [1996] Ch.6 that Scotus developed the formal distinction from reflections on self-motion.

[90] Scotus, like most mediæval philosophers, took Aristotle's remark that "motion or change" is "the actualization of a potency *qua* potency" (*Phys.* 3.1 201^a11–12) as the real definition of change, where the clause '*qua* potency' was understood to refer to all the states of the subject intermediate between each terminus of the change. Cases of change that qualify as motions were more precisely defined in *Phys.* 3.1 201^a28–29 as "the actualization of the mobile *qua* mobile": the persisting substratum is a substance, and the form in question belongs to one of the categories Quantity, Quality, or Place. Scotus's account applies to self-changers in general, and thereby to the more particular case of self-movers.

of principles instead of causes. Now principles stand to causes as genus to species: causes are only one kind of principle (*Metaph.* 5.1 1013^{a}17). Roughly, insofar as principles are taken as metaphysical constituents of beings, a principle, as a metaphysical constituent of something, is the source of some feature or property the thing possesses. Form and matter are principles of a material substance in this sense, and so too potency and act. Distinctions parallel to those drawn in the case of causation apply to principles as well, for which Scotus coins an artificial vocabulary. The more general version of causation is called 'principiation' (*principiatio*), and the activity corresponding to it is called 'principiating' (*principiare*). The result of principiative activity is what is 'principiated' (parallel to the effect in a case of causation). Yet unlike a strictly causal effect, the result of principiative activity need not be some thing that is distinct: it may be the principiating activity itself, as in the case of potencies generally called 'operations' (potencies whose acts are internal to and perfective of the agent: see *Quod.* 13.47.). Thus causal explanation is only one variety of principiative explanation; like causal explanation, a principiative explanation of a particular change will cite some thing as the principle responsible for the change, where the change is the result of principiative activity. For the most part, Scotus will interpret the principles involved in cases of self-change as active or passive potencies.[91]

The actualization of a potency, as described, is a case of change. The existence of the form in the subject depends on principles that are logically, if not temporally, prior, which account for the powers it can exercise, whether active or passive. Scotus argues first that self-change is possible in general, and thereafter considers the reality of self-change in particular cases. His argument for the possibility of self-change, given in *In Metaph.* 9 q. 14 n. 24, is as follows. The primary object of a potency for φ, whether active or passive, must be general in character. But as we have seen in §1, whatever is contained under the primary object of a potency must be a *per se* object of that same potency. Now if it is possible for one and the same thing to have an active potency for φ and a passive potency for φ, then one and the same thing can, at least in principle, be the passive *per se* object of its own active causal potency.

Apart from its technical details, the intent of Scotus's argument should be clear: potencies are generally directed toward kinds of individuals, and there is no reason why an individual with a given potency should not fall under the

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[91] The distinction between active and passive potencies corresponds roughly to our ordinary modal notions of abilities and capacities, respectively; see the chapter on modality in this volume.

general kind toward which the potency is directed, and so possibly be the recipient of its own causal activity. For such a case to be more than possible, though, a particular kind of causal activity is required. Causation is *univocal* when the induced form is specifically the same as a form contained in the cause, and *equivocal* otherwise.[92] Scotus argues that self-change is only possible in cases of equivocal causality, since for any change to occur the subject must initially be deprived of the form—but, by definition, a univocal cause already possesses the given form, and hence is not deprived of it (*Ord.* 1 d. 3 p.3 q. 2 n. 514).

According to Scotus, then, self-change is possible when one and the same thing has a form φ that grounds the active causal potency to cause equivocally another form ψ, and is also in passive potency to receive ψ. In the language of principles: one and the same thing has an active principle to produce a form it currently lacks and a passive principle of receiving such a form, and these two principles jointly bring about (or 'principiate') the result (*In Metaph.* 9 q. 14 nn. 84–85). An example might clarify Scotus's thesis. A stone is informed by the form *heaviness*. Hence it is active with respect to heaviness, or, in plain English, the stone is actually heavy. Now it is a fact that a stone has the passive principiative potency to being moved downward. Stones can be moved downward, after all! Hence the stone is in potency to downward motion, and it is passive as regards downward motion. Now suppose that the form *heaviness* produces an active principiative potency in the stone. What might this active principiative potency be a potency for? It seems clear that the heaviness of a body is closely linked to its moving downward. Suppose that the active principiative potency engendered in the stone by its heaviness serves to actualize the stone's passive principiative potency for being moved downward, so that the pair of principiative potencies jointly produce the form *moving downward* in the stone as a result. Hence the stone is active with respect to moving downward in virtue of its active principiative potency, even if it is not actually moving downward. Therefore, the stone is passively able to be moved downward, and is active with respect to the form *moving downward*. In other words, it is a self-mover.

On Scotus's analysis, there is a full-blooded sense in which it is one and the same thing that changes itself, despite the fact that it does so through the operation of internal principles that may be really distinct. It is the

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[92] This is not the same as the distinction between *per se* and accidental causality, since something might of its nature equivocally produce a given effect. There are particular difficulties in the case where the cause 'eminently contains' the form of the effect: see *Quod.* 5.23–24.

sculptor, not his hands or his ability to chisel marble, that is the cause of the statue, even if he can only be the cause through the exercise of his abilities with his hands. So too with active and passive principiative potencies (*In Metaph.* 9 qq.3-4 nn. 19–20). Whether something has all the requisite principles needed for self-motion is a piece of physics, not metaphysics; it all depends on whether the appropriate principiative modalities are realized appropriately in the subject. For example, an animal's power of locomotion is due to the relevant potencies being localized in distinct constituent parts of the animal: the soul has the active principiative potency to move the body, and the body has the passive principiative potency to be moved, the combination of which may result in locomotion. Whether it actually does so is not a matter for the metaphysician.

5. Particulars

5.1 Matter

Scotus, notoriously, argues for the existence of prime matter.[93] He begins with Aristotle's account of substantial change, which he says is "more effective than other arguments (even though some reject it)": Every natural agent requires something passive on which it acts, which is changed from one opposite to another; but one opposite is not itself changed into the other (whiteness doesn't become blackness); hence, just as in accidental change, there must in substantial generation or corruption be something that remains the same underlying the change from one opposed form to the other—and this is *matter*.[94] Unless there were a pre-existent substrate persisting through substantial change, there would literally be no change in the technical sense: one substance would pop into non-being and another into being, but there would be no becoming. Substantial 'change' would occur only on the model of divine creation or transubstantiation.[95] Sco-

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[93] See *In Metaph.* 7 q. 5 and *Lect.* 2 d. 12 q. unica. The subject is also discussed in *Op. Ox.* 2 d. 12 qq. 1–2, but there are textual problems that make this a less reliable source. I will give references, but the following account is based on the first two works.

[94] *In Metaph.* 7 q. 5 n. 7 and *Lect.* 2 d. 12 q. unica n. 11 (the quoted remark comes from here); cfr. *Op. Ox.* 2 d. 12 q. 1 n. 10. Scotus alludes to the argument in *Ord.* 2 d. 1 qq. 4–5 n. 204. See Aristotle, *Phys.* 1.7 190^a14–21, *De gen. et corr.* 1.4 319^b6–320^a7, *Metaph.* 12.1-2 1069^b3–9 and 12.2-3 1069^b32–1070^a2.

[95] Scotus's argument faces the objection that it effectively turns substantial change into accidental change. To rebut this charge, Scotus argues that substantial unities that are composites of matter and form have a being not merely reducible to that of their constituent metaphysical parts: see §5.3.

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tus concludes that, in any case of substantial change, there must be some matter. What sort of a being is it?

To resolve this question, Scotus draws a distinction between *objective* and *subjective* modal potency.[96] Very roughly, something is in objective modal potency if the whole of it is merely possible, whereas it is in subjective modal potency if the subject already exists although its terminus—what the potency is a potency for (usually some form)—does not. For example, the non-existent twin brother of Socrates is in objective modal potency, whereas Socrates himself is in subjective modal potency to some accidental change, such as becoming white. Since all cases of change involve a persisting substratum, the substratum must be in subjective modal potency, not objective modal potency. For if it were in objective modal potency, it would not exist but only be possible, "and then simply be a non-being" (*Lect.* 2 d. 12 q. unica n. 32). As we saw in the last paragraph, this is inadequate for substantial change. Furthermore, Scotus argues that matter cannot be simply identified with subjective modal potency, for the matter remains once the subjective modal potency has been actualized (*In Metaph.* 9 qq. 1–2 n. 49). Hence matter is some positive being in which subjective modal potency resides (q. 5 n. 19). Scotus therefore rejects the simple alignment of the relation between matter and form with the relation between potency and act. Thus matter is a being that itself is the "cause and principle" of beings, one that underlies substantial change (*Lect.* 2 d. 12 q. unica n. 29).

Scotus, however, wants to derive a stronger conclusion than this. For he holds that it is one and the same stuff that underlies every substantial change: not only does matter exist, but prime matter exists—that is, matter in potency not just to any form but to all form (*Lect.* 2 d. 12 q. unica n. 37). On the face of it, the inference seems unwarranted. Scotus provides several reasons for it. First, Scotus argues that since God created matter and form immediately (*i. e.* without any intervening cause) and did not create them together, God could also conserve matter without form. But that just is to admit that prime matter could exist, that it is a being in its own right.[97] Second, Scotus offers a variety of arguments each trading on the principle that form is not essential to matter in any given combination or composite, and therefore cannot be essential to matter at all.[98] Whether

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[96] *In Metaph.* 7 q. 5 n. 17 and *Lect.* 2 d. 12 q. unica n. 30 for matter, and *In Metaph.* 9 qq. 1–2 nn. 40–48 for the distinction in its own right.

[97] See *Op. Ox.* 2 d. 12 q. 2 n. 4 and *Rep.* 2 d. 12 q. 2 n. 6. Hence Scotus rejects the claim that material beings must be hylemorphic composites.

[98] *Ibid.* Massobrio [1991] 240 and Cross [1998] 23–24 criticize Scotus's move from 'not essential in any' to simply 'not essential' as fallacious.

matter is essential to form is another question (discussed in §5.2.) Thus, Scotus concludes, prime matter is a being. Hence there is a real distinction between matter and form in a composite, and any given composite of matter and form will be a composite of two really distinct items. How the composite can then be a unity requires some delicate argument on Scotus's part. But first we have to consider how many forms can inhere in the matter of something.

5.2 Form

The substantial form of something makes it *what* it is, locating it in the category of Substance. Now the substantial forms of individuals are themselves individual: Scotus argues that if form were instead something abstract, then, first, since matter is all the same kind of thing (namely prime matter), form would be too; second, created forms such as the human intellective soul, in virtue of their non-material origin, do not have the same essence as matter.[99] Scotus draws the conclusion that substantial forms must be individuals, and indeed individuals with essences distinct from the essence of matter. Forms play two distinct roles in the constitution of material particulars: on the one hand, they inform matter; on the other hand, they are essential parts of the whole composite. But these are not intrinsic features of form, Scotus holds, since we can see that form lacks these 'imperfections' in the case of the divine (*Ord.* 1 d. 8 p. 1 q. 4 n. 213). Form can therefore be self-sustaining: it is prior to matter, and prior to the composite as well, since each is in act through the form and not conversely (*In Metaph.* 7 q. 6 n. 9), and thus has some being of its own (n. 12). But if form need not inform matter and has being of its own, then it is possible for a bodily form to exist independently of matter—a conclusion Scotus draws explicitly.[100] As a result, we can sensibly ask about how the substantial form exists in a given concrete individual (*suppositum*). And here, Scotus argues, we can say that although substantial forms are all the same in their

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[99] *Lect.* 2 d. 12 q. unica nn. 56–57. See also the text of *Op. Ox.* 2 d. 12 q. unica., given in Stella [1955] 309–310. Scotus makes a similar point in *In Metaph.* 7 q. 16 n. 45. See Wood [1996] for a discussion of Scotus on individual forms.

[100] *Rep.* 2 d. 12 q. 2 n. 12: "Hence, since [matter and form] are each an absolute being, I grant that each can exist without the other; but the bodily form is not thereby immaterial, since, despite the fact that it is separate, perfecting matter is nevertheless compatible with it." See *Lect.* 2 d. 12 q. unica n. 55 for Scotus's argument that substantial forms do not have an essential relation to matter. This position gets rid of any need to postulate Bonaventurean 'spiritual matter', and indeed Scotus does not postulate it. See Massobrio [1991] Chapter 4 on Scotus's repudiation of universal hylemorphism.

nature, one concrete individual may exemplify the nature or essence of the substantial form more perfectly than another (*In Metaph.* 8 qq. 2–3 n. 37), although this admission does not force us to postulate actual degrees among distinct individuals of the same kind (n. 38).

None of these properties of substantial forms, however, settle the question how many substantial forms a given concrete object may have. (The same thing may be located more exactly in the category of Substance by its different substantial forms.) The answer will vary depending on the kind of object in question, of course, but Scotus clearly argues that in the most complex case—living beings—more than one substantial form must be present. Apart from theological motives, he has two philosophical arguments based on the nature of substantial change for this conclusion.[101]

Scotus's first argument is based on cases of substantial corruption, which indicates that there is a distinction between the animating soul and the 'form of the body' (*forma corporeitatis*), where the latter is, roughly, the form that structures the organic body as a whole. He reasons as follows: When a living being dies, its body remains, in the absence of its vivifying soul; hence the form by which its body is the body it is must differ from its soul (*Op. Ox.* 4 d. 11 q. 3 n. 54). The body of Socrates before drinking the hemlock and the corpse afterwards are numerically the same, and since by definition death is the separation of the soul from the body, this sameness cannot be explained by appeal to the soul, and so there must be another substantial form, one that preserves the body as the body, before and after death.

This line of reasoning depends on the plausibility of identifying Socrates's corpse with his (previously) living body, to be sure, but the burden of proof is on those who would want to deny this. Scotus offers another reason in support of his claim, though, based on the regularity of substantial corruption. When living things die, they regularly turn into corpses of certain types: dying men are never replaced by moonbeams or elephants, but always by material bodies (corpses) which have a remarkable resemblance to the composite. Nor are living things reduced immediately to the four elements. The corpse, rather, has to undergo a process of decomposition. The explanation, once a plurality of substantial forms is postulated, is obvious and intuitive: the composite has merely lost its 'topmost' substantial form; the form of the body remains to account for the identity and resilience of the corpse (n. 38).

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[101] See also Richard Cross's contribution to this volume, where Scotus's first philosophical argument for the plurality of substantial forms is discussed against its historical and theological context.

The second argument Scotus offers is based on substantial generation, and in particular human generation: if God—and not the parents—provides the soul in generation, the parents seem left with contributing only the matter to their progeny, which seems to underestimate their role. Scotus's solution is to propose that human parents contibute a substantial form, namely the form of the body, which is further informed by the human soul (*Op. Ox.* 3 d. 2 q. 3 n. 5) contributed by God. However, the matter is not first organized by the form of the body and then by the human soul at different times, but both inform the matter at once (*ibid.*). This claim suggests that the form of the body isn't quite 'strong' enough to organize the organic body on its own, but needs the concurrent causality of the soul to do so. There is some evidence that this is Scotus's view, for he explains that human corpses decompose because of the weakness of the form of the body (*Op. Ox.* 4 d. 11 q. 3 n. 55).[102]

These arguments furnish grounds for distinguishing the soul from the form of the body in living beings. Scotus rejects any attempt to further split up souls into separate forms (vegetative, sensitive, intellective): the soul and its clusters of powers are not really but only formally distinct from each other, whether in plants, brute animals, or humans, so that only one soul is the substantial form of a living being.[103] If we insist that the form of the body can only exercise its causality concurrently with the soul, then Scotus's position begins to look very much like that espoused by defenders of the unicity of substantial form. This similarity is all the more striking in light of a passage in which Scotus remarks that in the natural course of events it is impossible for the same matter to be under two substantial forms at once.[104] But there are other substantial forms at work besides the form of the body. For Scotus also finds it plausible that different bodily organs are different in kind through the presence of distinct substantial forms (n. 46). Otherwise, he reasons, we could not explain the different local unities found in different organs: the physical structures of the heart, the lungs, the kidneys, and so on (*In Metaph.* 7 q. 20 n. 38). Exactly how far Scotus is willing to carry this line of thought isn't clear, since in the end it

[102]It's not clear whether for Scotus the soul and the form of the body are equal concurrent causes, much as one man might hold up a heavy weight for a short time but two hold it up indefinitely, or whether the form of the body is essentially ordered to the soul in the exercise of its causality: see §4.1 and note 79.

[103]See *Ord.* 2 d. 1 q. 6 n. 321; *Op. Ox.* 2 d. 16 q. unica nn. 17–18; *Op. Ox.* 4 d. 11 q. 3 n. 27 and n. 37; *Rep.* 2 d. 3 q. 2 n. 12 and q. 8 n. 8.

[104]The passage is *Op. Ox.* 4 d. 10 q. 2 n. 4: *Impossibile est eamdem materiam esse simul sub duabus formis substantialibus.*

would seem to leave the form of the body with nothing to do, but he clearly thinks that the form and function of (say) the heart cannot be explained by the same principles that explain the form and function of the kidneys. The forms of bodily organs are actual with regard to the underlying prime matter and potential with regard to the form of the body, which, it will be remembered, is the form of the body as a whole.

Scotus rejects the extension of this logic to mixtures of the four elements (earth, air, fire, water), even in the case of inanimate substances. That is, Scotus denies that we need to postulate substantial forms of the four elements in mixtures of these elements. His main argument seems to be that if we really have mixtures, then by definition the forms of the chemical elements do not structure the mixture or even parts of the mixture: in modern terminology, mixtures do not merely supervene on their chemical components but are emergent features (*Lect.* 2 d. 15 q. unica nn. 38–43). Of course, non-mixtures will preserve the forms of the elements, but in such cases we aren't tempted to think there are additional substantial forms.

5.3 Composite Substances

For Scotus, then, a particular living being includes prime matter, the form of the body, local forms of bodily organs, and the soul. Each of these has some claim to be treated as a being in its own right. How can all these disparate beings constitute a unified object that has some claim to be treated as ontologically basic? The answer to this question is complex, and it will take some delicate handling to untangle the various strands of Scotus's reply.

Scotus is careful to distinguish the existence (*esse*) that each component element of a particular living being has. For example, the soul has existence *per se*, and this existence is separate from the existence of the composite of which the soul is a constituent element, even though when combined with the body the soul has existence through the composite (*In Metaph.* 7 q. 6 nn. 12–13). The point here is subtle. Scotus is maintaining that although the constituent elements of a unified whole have their own individual existences, the whole, nevertheless, may have only one existence, and the existences of the constituent elements be somehow dependent upon the existence of the whole. In replying to an argument that tries to infer the uniqueness of substantial form from the fact that the composite is a single existence, Scotus writes (*Op. Ox.* 4 d. 11 q. 3 n. 46):

> I grant the first claim, that there is only one existence that belongs to one being. But the second proposition, that one existence requires exactly one form, should be denied... For just as 'being' and 'one' are divided into simple and composite, so too are 'existence' and

> 'one existence'. Therefore, existence that is essentially one is not precisely restricted to simple existence, just as nothing divided is precisely restricted to one of the divisions that divide it. In this way there is one existence of the whole composite, which nevertheless includes many partial existences, just as the whole is one being and nevertheless contains many partial beingnesses. For I know nothing about this fiction that the existence supervening on the essence is not composite if the essence is composite. The existence of the whole composite includes the existence of all the parts in this way, and it includes many partial existences belonging to the many parts or forms, just as the whole being made up of many forms includes those partial actualities.

The existences of the consituent parts of the composite are not simply added or aggregated; they have instead an essential order to one another, and overall an essential order to the 'topmost' substantial form that gives existence to the whole composite, as Scotus goes on to say. In this way the whole composite can be divided into act and potency, namely the final 'completive' form and the remainder of the composite. And as with existences, so with the beings themselves: the unity of the composite is to be found in the union of its constituent elements through an internal essential order. The beings that are the matter and the form are distinct (*In Metaph.* 8 q. 4 n. 41) but essentially ordered to one another (nn. 31–33).

Scotus takes the ordering of forms to be pervasive, and the inability of certain forms to be so ordered is a distinctive feature of *per se* beings. In *Quod.* 9.7, Scotus distinguishes three types of *per se* beings: (*i*) beings existing in isolation, or apart from a subject; (*ii*) beings that neither actually inhere in others nor have any aptitude to so inhere; (*iii*) beings with ultimate actuality such that they cannot be ordered *per se* to any further act. An example of (*i*) is whiteness considered apart from any subject. In (*ii*) Scotus seems to be talking about substantial form, which informs its subject *per se* and makes it what it is. But (*iii*) is the crucial sort: these are the beings that are ontologically basic, the fully actual concrete particulars. Being unable to be *per se* ordered to any further act is the mark of the concrete. That is why the individual has a privileged place in Scotus's ontology.

The essential ordering of the constituent parts of a composite substance is a description of the unity of the composite. Note well: it describes the unity, but does not explain it, since the principle of the essential ordering has to do with the act-potency relations among these elements, and Scotus

thinks that these are given immediately.[105] Scotus is thus well aware of the limits of his account.

The essence of the composite is something distinct from any of its constituent elements: it is a composite of form as such and matter as such. It cannot be identified simply with the substantial form, since that is only one of the constituents of the composite and has its own proper essence and existence, as we have seen. However, the substantial form does give further actuality to the remainder of the elements that make up the composite, and, on this score, it can be called the 'partial form' of the composite (*Op. Ox.* 3 d. 2 q. 2 nn. 9–10). It should not be confused with the 'form of the whole' (*viz.* the whole composite), which is "not an informing form" but rather that in virtue of which the composite as a whole has a nature or quiddity.[106] In short, the essence of the composite is something over and above the parts of the composite, not reducible to them. What it is to be this composite (or this kind of composite) is an emergent feature.

The essence of the composite, then, is tightly linked to all of the constituent elements of the composite, as they are essentially ordered to one another. Indeed, it seems as though an individual composite can have an essence only if all its constituents are properly aligned. Such seems to be the reasoning underlying Scotus's rejection of any real distinction between essence and existence: "Existence is really the same as essence."[107] The *what* of a thing is that it is put together that way, which just is what it *is*. Essence and existence are inseparable within the concrete individual.[108] Scotus even suggests that, in creatures, essence and existence "are like quiddity and its mode," although in God existence is a formal part of the divine essence (*Quod.* 1.11 addition).

Scotus holds that the essence of a composite in general, as opposed to an individual composite, is itself composite, since the genus and differentia that jointly constitute the specific nature of the essence must be at least

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[105]Scotus explicitly denies that his account provides an explanation: *In Metaph.* 8 q. 4 n. 11 and n. 54; *Lect.* 2 d. 12 q. unica n. 50; *Op. Ox.* 2 d. 12 q. unica n. 16 and 3 d. 2 q. 2 n. 10. See Cross [1995] and [1998]. The further inexplicability of act-potency relations is a consequence of the fact that they transcendentally divide being, and hence there is nothing higher in terms of which an explanation could be provided.

[106]*Ibid.* See Cross [1998] 87 as well as his contribution to this volume.

[107]*Op. Ox.* 2 d. 16 q. 1 n. 10, where Scotus declares that existence is not related to essence as act to potency. See also *Op. Ox.* 4 d. 13 q. 1 n. 38: "It is simply false that existence is something different from essence." See further O'Brien [1964], Hoerer [1965], and Wolter [1990] Ch.12.

[108]The problem of the non-actual individual is a difficulty for generalizing this account, but of course non-actual objects don't have essences in the first place: see Boler [1996].

formally distinct.[109] On the one hand, if either the genus or the differentia were taken away, the specific nature would be destroyed; hence they are really inseparable. But equally, the genus and the differentia are formally distinct, since otherwise the differentia could not contribute any formal differentiating feature to the genus—it would just 'repeat' the content of the genus. Furthermore, since the formal distinction holds *a parte rei*, there must be some real complexity or composition in any specific nature. Hence the quiddity of all creatures must be complex in at least this sense. The same does not hold of God, however. To see why this should be so, we need to return to the last question posed at the end of §1 to see how Scotus avoids any real commonness between God and the creature.

6. Conclusion

Recall the problem: if God and creatures are merely different and not diverse, then there would be some real factor common to God and creatures, thereby undermining divine transcendence. But it seemed as though God and creatures were only different, since *being* is univocal to both.[110] Scotus's response to this difficulty in *Ord.* 1 d. 8 p. 1 q. 3 has three parts. First, although formal distinctions may introduce real complexity, they only introduce real composition when they are combined as genus and differentia. In this case, there are elements united as potency (genus) and act (differentia), making up a composite. But unless distinct elements are so related, they will not produce composition in the relevant sense, and so there need be no composition introduced by the formal distinction.[111] Second, the modal distinction between finite and infinite being does not provide a real basis for composition. The modal distinction reflects a reality with a given intrinsic mode, and there is no conception of the mode apart from the reality of which it is a mode (see §2.3). Hence the modal degree of being does not point to a real factor different from being itself that could be the foundation of composition in God. Thus God's simplicity is preserved. Third, the concepts of a nature with and without its intrinsic mode are related as more or less perfect concepts of one and the same thing. Applied to the case at hand, Scotus's claim is that the univocal notion of being is an imperfect concept, though determinable to a perfect concept of either an infinite reality (God)

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[109]*Lect.* 1 d. 8 p. 1 q. 3 nn. 100–105; *Ord.* 1 d. 8 p. 1 q. 3 nn. 101–107 and 2 d. 3 p. 1 qq. 5–6 nn. 189–190; see also *In Metaph.* 7 q. 19 nn. 20–21 and n. 43.

[110]The question whether there is a single genus of all things was dealt with at the end of §3.1. See Dumont [1998] for the solution sketched here.

[111]See also *Coll.* 36 n. 9 for this point.

or finite reality (creatures). Hence it does not entail a real commonness between God and creatures, since in itself it is only determinable to either. Thus God's transcendence is preserved.

The complex factors that enter into Scotus's discussion of the nature of metaphysics as an enterprise can serve as a model for the complexity of the Subtle Doctor's thought. There is still disagreement over many of his doctrines, on points large and small. The reader is advised to take all surveys of Scotus's metaphysics—even this one!—with a grain of salt, and to turn to the texts themselves for more enlightenment.

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