SCOTISM ABOUT POSSIBLE NATURES

By Thomas M. Ward

I motivate and develop a view, found in John Duns Scotus, concerning God's explanatory role in the possibility of possible natures. A possible nature is a nature which can be instanced. The view is that possible natures have their possibility due to the coherence of their simple parts, but the simples which make up natures are themselves ex nihilo productions of divine intellect.

Keywords: modality, possibility, impossibility, God, realism, nature.

One venerable way to explain similarity is through sameness: where there are some similar things, for example some humans, there is something they share in common, humanity, and this is their essence or nature. A view which grants the thing held in common any sort of extramental ontological status is some flavour of realism.[1] Following traditional usage, I'll call the thing held in common a *common nature*, or *nature* for short.

Similars are perhaps the easiest way to motivate a realist ontology. But the realist will be quick to point out that the existence of a common nature does not depend on there being multiple instances of a nature. If all humans died but one, the realist would not be tempted to revise his ontology of common natures.

Less intuitively, the realist would not be tempted to revise his ontology of common natures even if that last human pegged out. And this is because, while we might need encounters with instances to get on to natures, once we're on to them, we can see that they are prior to and independent of their instances. We can see their independence by reflecting that the sort of thing which can cease to exist is the sort of thing subject to change and decay, and as far as we're aware only material things are of this sort. But natures are not material things. So the death of all the humans would not change humanity one bit.[2]

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[1] A version of this view may be found in Scotus, *Ordinatio* II, d.3, p.1, q.1, nn.30-32 (Vat. VII, 402-403), trans. by Paul Vincent Spade (1994: 63-4).

[2] Consider: alas, there are no more dodos. But we can still get in touch with dodo nature by reading about the dodo and looking at pictures of dodos.

We can see their priority by reflecting on what explains what. Again, instances might be what we need to know a nature, but there being instances does not explain why there is the nature. Instead, somehow the nature explains the instances—what they are, if not how they come about.

The realm of natures, and not the realm of their instances, is the focus of this essay. Specifically, I want to focus on the modality of natures. Some who countenance natures would hold that they're necessary beings, and some would hold they're contingent. But I don't want to focus on this particular issue of the modality of natures. So, more specifically, I want to focus on the modality of natures which is at play in talk of a nature's being possible. A nature's being possible in this context means that there can be instances of it, or that it can be actualized. The guide here will be the medieval Franciscan friar, John Duns Scotus (d.1308).[3] Is this merely a historical project? That's a hard question which I won't answer. I prefer to think of the project as developing a view inspired by some of the relevant, but neglected, literature—in this case literature that is a few centuries instead of a few years old.

I want to work with Scotus on developing a view about God's place in a good explanation of the possibility of possible natures. The view is that natures—natures which have a certain sort of complexity, anyway—have their possibility due to the coherence of their simple parts, but the simples which make up natures are themselves *ex nihilo* productions of divine intellect. God thinks simples into being, simples permute in logical space, some permutations are coherent and some incoherent, God knows all the permutations, their coherence or incoherence, and hence their possibility or impossibility, and in knowing them knows that the possible natures can be instanced in a created world.

The plan for the essay is, at first, to work out a view which minimizes scholarly discussion in favour of just getting the philosophical picture on the table (Part 1: The View). Then I'll turn to some of the relevant scholarship, and focus a bit more on texts, in order to tie up some loose ends (Part 2: The Scholarship). I would like to show the great extent to which the view here is in fact Scotus'.

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[3] I use the following abbreviations of Scotus' texts: *Ord.* = *Ordinatio*, in vols. I-XV of Scotus (1950) *Opera Omnia*, XXI vols., ed. The Scotistic Commission. Vatican City: Typis Vaticanis. *Lect.* = *Lectura*, in vols. XVI-XXI of Scotus (1950) *Opera Omnia*, XXI vols., ed. The Scotistic Commission. Vatican City: Typis Vaticanis. *Rep.* = *Reportata Parisiensia*, in vol. XI (divided into XI.1 and XI.2) of Scotus (1639) *Opera Omnia*, XI vols., ed. Luke Wadding. Lyon. (Reprinted by Georg Olms, 1969; also in Scotus (2004–2008) *The Report of the Paris Lecture:* Reportatio *I-A*, 2 vols., ed. Allan B. Wolter and Oleg V. Bychkov. St. Bonaventure, NY: The Franciscan Institute. *QMet.* = *Quaestiones super libros* Metaphysicorum *Aristotelis*, in vols. III and IV of Scotus (1997–2006) *Opera Philosophica*, V vols., ed. The Franciscan Institute. St. Bonaventure, NY: The Franciscan Institute. *DPP* = *De Primo Principio*, in Scotus (1966), *A Treatise on the First Principle*, trans. & ed. by Allan B. Wolter. Chicago: Franciscan Herald Press.

I. THE VIEW

If a nature is possible such that there can be instances of it, then its being possible is prior to its instances. There arising an instance does not bring it about that the nature is possible; an instance's arising presupposes the nature's being possible.

What would be a good explanation of the nature's possibility? One plausible view is the coherence of the parts of the nature. We could say that a nature is possible if its parts are coherent and impossible if incoherent.[4] And this is the right sort of explanation: the possibility of a nature is *because* of its coherence. A nature stands ready to be instanced (it is available to the relevant sort of causal power) just in case it is coherent. In Scotus' lingo, logical possibility (*potentia logica*)—coherence—is a necessary precondition of real possibility (*potentia realis*)—possibility.[5]

I will be using 'coherence' and its variants in a technical sense, as a gloss on Scotus' notion of *non-repugnance*.[6] Non-repugnance is a relation which obtains between two or more things (things in the broadest possible sense) just in case they can compose some genuine unity. Heaps and sums can be composed of repugnant parts, but substances, unities of substance and accident, and natures, can be composed only of non-repugnant parts. Non-repugnance is very similar to our everyday notion of coherence but adds this feature: whereas the grammar of coherence in everyday use does not rule out its being a reflexive relation (such that a simple could be coherent with itself), non-repugnance is ir-reflexive. Hereafter, by 'coherence' I mean 'non-repugnance' unless otherwise specified.

This explanation of possibility through coherence makes use of a notion of parthood which can be applied to natures.[7] I will have more to say about this below, but I need to say a little bit now. We understand a nature through a def-inition, and definitions are conceptually and linguistically complex. Whatever in a nature corresponds to a conceptual part of a definition is a candidate to be a part of the nature.

Parts of a complex may themselves be complex. A full resolution of the parts of a nature would get us to the simples.[8] Suppose there are n simples, where n is greater than 1. Then we could write a long formula which would let us figure out the number of all the permutations of k members of n, for every value of k greater than 1 and equal to or less than n. All the coherent permutations are all the possible natures, and all the incoherent permutations are 'impossible natures'—though it would be closer to Scotus to say that the incoherent

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[4] *Ord.* I, d.36, q.un, nn.60-61 (Vat. VI, 296).
[5] *QMet* IX, qq.1-2, n.18 (Bonaventure 4, 514).
[6] *QMet* IX, qq.1-2, n.18 (Bonaventure 4, 514); *Ord.* I, d.7, q.1, n.27 (Vat. IV, 118).
[7] *Ord.* I, d.43, q.un, n.16 (Vat. VI, 359-360).
[8] *Ord.* I, d.3, p.1, q.3, n.133 (Vat. III, 82).

permutations fail to be natures. Scotus seems to have thought that 'impossible' is an *alienans* adjective when it modifies 'nature'—an impossible nature is not just impossible but not a nature at all.[9] 'Square circle' is a permutation (not of simples but ignore this for the sake of the familiar example), but a square circle is incoherent. This does not mean that there is a square circle nature which cannot be instanced. It means there is no such nature. 'Rational animal' too is a permutation (again, not of simples but ignore this), and it is coherent. So human is a genuine nature—a possible nature, a nature which can be instanced.

Is there any explanation of the coherence of *these* permutations and the incoherence of *those*? No.[10] This just happens by magic, I mean logic. Given the simples, logical space just maxes out—a plenitude of permutations.

This appeal to magic or logic is mysterious, but I can make it somewhat less mystifying. There are two issues to distinguish here. First, there is the issue of what makes it the case that given n simples there are exactly the number of permutations of k members of n there are. Eventually, we would get to the primitive principle of number theory—e.g. Hume's Principle—and logical space would include whatever this primitive principle amounts to. The primitive principle explains what happens, combinatorially, to the numbered simples, *qua* numerable. But nothing explains the principle. This principle (whatever it turns out to be) and whatever is provable from it (ultimately, the whole of combinatorics) make up part of the purely formal structure of logical space. Not even God is responsible for its being the case that if you have an apple, an orange, and a banana, then there are six ways to order the trio and six ways to order these in pairs.

The second issue concerns what it is that makes it the case that k members of n simples are repugnant or not. Scotus' examples of repugnance are 'white and black' and 'non-rational and human'.[11] What explains these repugnances? One might hold out hope that the only primitive truth we need here is the principle of non-contradiction. For example, define human as rational animal. From 'human = $_{def}$ rational animal' and 'human is non-rational', we could derive a contradiction. Then whatever the principle of non-contradiction amounts to would also be part of the purely formal structure of logical space. Not even God is responsible for its being the case that a rational animal can't be non-rational.

Notoriously, however, it is hard to see how the repugnance of white and black can be explained through the principle of non-contradiction. To bag this quarry we'd need an analysis or definition of 'white' and 'black' which lays bare a contradiction. Despair that such an analysis is in the offing is why

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[9] *Rep.* IA, d.43, q.1, n.25 (Wolter and Bychkov 2, 528).
[10] *Ord.* I, d.36, q.un, n.60 (Vat. VI, 296).
[11] *Rep.* IA, d.43, q.1, n.23 (Wolter and Bychkov 2, 527).

we have concepts like 'broadly logical' or 'metaphysical' modality—concepts meant to capture the not-logical yet absolute character of the thought that, say, in no possible world is a thing black and white. If we can't carry out such an analysis, then the repugnance of black and white must be explained, if it is explainable, in some other way.

Suppose we don't want to work very hard and just assert that it's primitive that white and black are repugnant. Then the repugnance of white and black would not be due to any *formal* features of logical space, but instead to its *content*.[12] On this picture, God thinks up the simples, and *once* he does so, *then* they occupy logical space. So if white and black are repugnant primitively, then, since each of these is either a simple or composed of simples, their repugnance is not due to the form of logical space, but its content—in this case, white and black themselves.

It is important to be clear about what God does and does not do in a Scotistic account of (im-)possible natures. God is not responsible for making white and black repugnant; he is responsible for making up white and black.[13] Given the divine input of simples, their organization into permutations and into relations of repugnance and non-repugnance proceeds without divine assistance. As Scotus puts it, the repugnance or non-repugnance of simples is from the simples themselves (*ex seipsis*).[14] *Given* these very simples, you get all their relations of repugnance or non-repugnance magically—God plays no role here. The role of God instead is to *give* these very simples. This is why Scotus says that complex natures are 'principiatively' from God and 'formally' from themselves.

Thus, logical space from a Scotistic point of view includes both formal structure (e.g. Hume's Principle, the principle of non-contradiction) and content (e.g. the simples). Simples get counted when all permutations of the simples are counted, and they and whatever permutations they enter into are subject to purely formal logical structure. For example, it has nothing to do with what white and black are, and everything to do with the formal structure of logical space, that if a thing is white then it is white or black, or that if a thing is white then not all things are non-white. All of this is on the side of formal logical

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[12] That Scotistic 'logical space' includes not only formal structure but also content is clear from *QMet* IX, q.1-2, n.18 (Bonaventure 4, 514), where Scotus describes 'logical possibility' (*potentia logica*) as a property of a proposition the terms of which are non-repugnant. As we have seen from Scotus' examples, repugnance can obtain between terms due to purely formal features or to content-specific features. For example, the repugnance of 'irrational' and 'rational animal' is (presumably) just due to the fact that 'ir-' is the negation of 'rational'. We could replace the 'rational' part of each of these terms with anything (e.g. pink, candied, audacious) and still have repugnance and for exactly the same reason. But the repugnance of 'white' and 'black' cannot be explained in this purely formal way—everything but white is not-white, for example, and some not-white things are non-repugnant with white while others are repugnant.

[13] *Rep.* IA, d.43, q.1, n.24 (Wolter and Bychkov 2, 527).

[14] *Rep.* IA, d.43, q.1, n.23 (Wolter and Bychkov 2, 527).

structure. On the side of content are all the primitive repugnance and non-repugnance relations, which obtain only given these simples. There would not be a repugnance relation between white and black if there had not been white and black. And the Scotistic idea is that divine intellect, not formal logical structure, ultimately explains why white and black, are available to enter into a repugnance relation with each other and into other relations of repugnance and non-repugnance with other simples.

Thus far, modal statuses of natures have been analysed in terms of coherence or incoherence (repugnance or non-repugnance). These are relations which obtain among two or more terms. But what about the modal status of the simples themselves? Are the simples (once they're there, so to speak), possible? And surely they are. Either simples are prior to their complexes or they are not. If they are not, that is, if the complexes are prior to the simples (if the whole is prior to its parts), then the possibility of the simples is fully explained by the possibility of the complex. If they are, that is, if the simples are prior to their complexes (if the parts are prior to the whole) then coherence explains the simples' possibility just in case simples are the sort of things which can be coherent, the sort of thing to which coherence can apply. But the technical sense of coherence used here rules this out.

From the armchair, the priority of simples to complexes seems like the right way to go, but this is a controversial view in Scotus scholarship. I'll let the armchair guide for now but return to the controversy in the next part.

So, assuming the priority of simples to complexes, either there is some explanation of the simples' possibility other than coherence or there is no explanation at all—their possibility is brute. But what is it for a simple to be possible? Here, the main idea is ability to compose complexes. If there can be a concrete instance of a genuine simple, then ability to be instanced would also be part of the modal profile of whatever simples have this second ability. I am inclined to think their possibility is brute. Their coming together in coherent ways explains the possibility of complexes, but their possibility can't be explained.

But from their possibility needing no explanation it does not follow that their being available to permute needs no explanation. So, whence the simples?

The Scotistic answer pursued here makes God the origin of the simples. God thinks them up.[15] Had God not thought them up, there would be no sense at all in which they were on the scene.

Prior to thinking up the simples, God couldn't have known what he was about to think up.[16] We're to imagine this thinking up in a logically ordered but

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[15] *Ord.* I, d.43, q.un, n.14 (Vat. VI, 358-359).

[16] A thought well explored by Brian Leftow. The analogue to God's thinking up the simples in Leftow's system is what he calls, 'The Bang: God thinks up states of affairs involving determinate non-deities' (2012: 362). Later: 'It is God's nature to think up creatures: that is, He did it due to

timeless state.[17] There was never a time before God's thinking up the simples. And there never was deliberation about whether to think up simples. God has always been thinking the simples (along with all the complexes). There is no question of his only putting some of his effort into thinking up, and so no question about whether God could think up more or less. He does not one day choose to think up simples. He does not pick the simples which will be thought up. His willing is not involved in the production of simples except *post facto*, loving as he always does anything real.[18] There is no sense at all in there being anything God could have thought up but didn't, or couldn't have thought up, and this because there is nothing to be or not be thought until it is thought up by God (except God himself).

God's thinking up the simples is a genuine *intellectus ex nihilo*, more truly from nothing than the comparatively ho-hum *creatio ex nihilo*.

Interlude. The motivation for this theistic answer to the *whence the simples?* question comes by way of analogy, by the desirability of simple theories, and by the reasonableness of accepting explainability rather than unexplainability where explainability can be offered without great cost. The analogical motivation is that simples seem like the sort of thing which should be explainable, and an infinite intellect, which is like ours in our creativity but not like ours in the dependence of our creativity on raw materials, resonates as the right sort of explanation. The simple theories motivation is that while to posit God is to posit an additional entity beyond the simples in order to explain them, God explains them all in a unified way—he thinks them up—and this is simpler than offering explanations of this simple, and that one, and that one, etc. Finally, with regard to the reasonableness of accepting explainability: positing an infinite intellect as the creative origin of the simples is explanatorily more satisfying than positing this unexplainable simple, and that one, and that one, etc. So I take it the Scotist theistic answer here is well-motivated, and I move on.

There are vexing questions about the correct metaphysical account of the picture of logical space I've sketched here. Given a picture of logical space as purely formal, one might be tempted to think that logic can do its thing apart from metaphysics, and this is in fact the view Simo Knuuttila attributes to Duns Scotus—a nature is what it is, and is possible, independent of any causal power. Or, as Knuuttila puts it, 'An infinite power can realize what is realizable, and what is realizable can be decided without any reference

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what he is [. . .] In first forming his creature-concepts, God cannot fully pre-describe what He is to get [. . .] [C]onceptual creativity [. . .] involves a sort of spontaneous imagination which when looked at one way cannot be fully intentionally controlled. One can perhaps intend to be creative, but intending to be creative of the concept of an F is a contradiction in terms if what is meant is that the resulting concept be *just* the concept of an F' (2012: 457–9).

[17] *Ord.* I, d.43, n.14 (Vat. VI, 358-359); *DPP* I.8 (Wolter, 4).

[18] *Ord.* III, d.32, q.un, n.8 (Vat. X, 130-131).

to the power' (1993: 140).[19] But attending to God's thinking up the simples shows that Knuuttila can't be quite right here. Consider: given the simples, formal logical space will be populated with all the complex natures by magic; but formal logical space doesn't give us the simples. These come from divine intellect. As Gandalf says, you can't do magic if you have nothing to work on (Tolkien 2004: 291). And God's role in 'principiating' or thinking up the simples suggests some metaphysics—either mental items of divine psychology or a sort of proto-creation of extra-(divine)-mental possibilia.

We can remain agnostic for now about which of these metaphysically baroque options to take. Let it suffice (for the purposes of this paper) that if God exists, then God knows all simples, all permutations of the simples, and knows for each permutation whether it is coherent or not. God's thinking the coherent permutations is enough to grant them some sort of existence—an existence which Scotus calls *esse intelligibile*.[20,21]

As soon as God thinks up the simples they both have *esse intelligibile* and occupy logical space. God doesn't do anything to get them into logical space. Nor does he do anything to get them to permute in logical space. Given the simples, logic takes over. Thus, God is responsible for the content and *esse intelligibile* of the simples (what they are and that they are) but logic is responsible for permuting simples into natures. A logical intervention is prior to both God's knowledge of complexes and complexes' *esse intelligibile*. This can be summarized in the following ordering of logical instants (or 'instants of nature' as Scotus calls them),[22] L1-L6:

L1. God thinks up simples.
L2. Simples have *esse intelligibile*.
L3. Simples permute in logical space (by magic).
L4. God thinks all the permutations.
L5. Coherent permutations have *esse intelligible*.
L6. Coherent permutations (viz., natures), are possible.

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[19] On the same theme, see (Marrone 1996: 179-80).

[20] *Ord.* I, d.35, q.un, n.32 (Vat. VI, 258).

[21] By the same token, shouldn't God's thinking the *incoherent* permutations be enough to grant them some sort of existence? No, according to Scotus, but this is tricky. To be a permutation is to have some sort of unity, it seems. There seems to be a difference between the simples *a* and *b* on the one hand and the permutations *ab* and *ba* on the other, to adapt a venerable example. Suppose *ab* turns out coherent and *ba* turns out incoherent. *ab* gets to be a real nature by dint of its coherence, but *ba* fails to be a nature. Yet magic has brought *a* and *b* together both as *ab* and *ba*. The magic needed something to work on, so to speak, so *a* and *b* are prior to their permutations. What exactly is the difference between *a* and *b* before the permutations, and *ba* after the permutations? There must be some. We can't reduce *ba* to *a* and *b*, since *a* is possible and *b* is possible but *ba* is impossible. It's *a*, *b*, together with the order in virtue of which *ba* is a permutation of *a* and *b*, which all together make for an impossible nature. But as my topic does not depend on having a view about this, I will leave it alone for now.

[22] *Ord.* I, d.43, n.14 (Vat. VI, 358-359).

This is not how Scotus orders logical instants in the production of possible natures. But my L1–L6 is an amplification rather than replacement of Scotus' ordering. Scotus distinguishes just two instants of nature: in the first, God's intellect produces natures in *esse intelligibile* and in the second, natures in themselves have *esse possibile*.[23] The idea here is that while there is a sense in which modal status comes from the nature itself and not from God, God is responsible for there being a nature in the first place, since he thinks up its component simples. We can amplify this idea by applying the Scotist doctrine of the analysability of natures into simples[24] and expanding Scotus' two-step ordering: God produces the simples (L1 and L2), God tracks all the permutations of the simples (L3 and L4), God's tracking the coherent permutations constitutes their *esse intelligibile* (L5), and once there *are* natures (that is, coherent permutations of simples known by God), these are possible (L6).

We started by asking a particular question about the modal status of a nature, namely about its being possible, where the sort of possibility we had in mind is the possibility that it be instanced. The basic response is that a nature has this sort of possibility in virtue of being coherent. The modal status of the simple parts of a nature can't themselves be explained by coherence. It seems to me their modal status can't be explained. But their ontological status can be explained, by reference to divine thinking. And it is good to have explanation. The result is a view about the modality of natures which leaves some things up to God and some things up to magic. Up to God is the thinking up of a nature's simple parts, and its having *esse intelligibile*. Up to magic is the permutation of simples which constitute a nature, and that particular permutation's being coherent.

II. THE SCHOLARSHIP

This symbiotic relationship between God and magic in the founding of natures has been the topic of a lively and enlightening dispute in recent Scotus scholarship. Allan Wolter got the modern discussion going by arguing that there is a divine origin of the possible (1950, 1993). Simo Knuuttila challenged Wolter's view, arguing instead that a nature is possible just in case it is non-repugnant with being (1993, 1996). Calvin Normore nuanced the dispute when he argued that while relations of repugnance and non-repugnance do indeed just happen by magic, there is still a divine origin of the possible since the divine intellect produces the simples from which complexes are composed, and the question of (non-)repugnance just doesn't arise for simples (1996, 2003). Peter King challenged Normore's nuance by arguing that complex natures bear a

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[23] *Ord.* I, d.43, n.14 (Vat. VI: 358-359).
[24] *Ord.* I, d.3, p.1, q.3, n.133 (Vat. III, 82), a text discussed in some detail in the next part.

kind of simplicity in virtue of which their modal status cannot be explained with reference to the non-repugnance of their parts (2001).

Then Fabrizio Mondadori entered the fray with an ultradense paper in which he distinguished three separate statuses of possible natures: their ontological status, formal status, and modal status, arguing that such natures are ontologically dependent on God but modally and formally independent of God (2004).[25] A formal status of a nature is, roughly, its content, or whatever in the nature correlates with the conceptual parts of a real definition of it. So if a nature is formally independent of God, then it is the nature it is independent of God. Richard Cross argued that natures only *happen* to depend for their ontological status on God—there is nothing special about God which suits him for this role. Finite minds or even non-intelligent concrete instances of a nature each suffice for providing the ontological subject of a nature's modal and formal statuses (2005). In the most recent paper in the modern exchange, Tobias Hoffmann takes issue both with Mondadori's claim that the formal status of a nature is independent of God and Cross' claim that God only in fact provides the ontological subject of a nature's modal and formal statuses. For Hoffmann, a nature's formal status, or 'eidetic character' in Hoffmann's lingo, originates from God, and for Hoffmann, God is uniquely suited to originate the ontological and formal statuses of natures (2009).

I do not intend to wade into every relevant interpretive issue raised in the recent literature. Instead, I want to focus on Normore's thesis that the key to understanding Scotus on God's relation to possibility is to see that logical relations like coherence and repugnance can explain possibility only for complexes, leaving the simples dependent for their origin on God. Defending Normore's thesis against King's criticisms will shed some light into other corners of the scholarly debates.

To locate my own reading of Scotus on this topic relative to the literature, I'd say that Normore's emphasis on the relational character of the possible and impossible is fundamentally correct, and when the implications of this view are fully ramified, we can see that, for Scotus, complex natures really are analysable into absolute simples (*pace* King); logical relations obtain by magic (permutations in logical space) but (*pace* Knuuttila) only given divinely created content (the simples); no other being but God could in principle have the right sort of priority to give logical space its content (*pace* Cross); given the simples, all complex natures are constituted not directly by a divine act of intellect, but rather automatically through the permutation process (*pace* Hoffmann); and finally, while Mondadori is basically correct that natures have their formal and modal statuses of themselves and don't get them from God, this sort of statement is liable to mislead unless it's qualified: God supplies the

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[25] Mondadori's is a truly impressive essay, if tortuous. Richard Cross calls it "the definitive treatment" of Scotus on the possibles (Cross 2010: 670).

simple ingredients without which there would be no formal statuses and hence no modal statuses. Thus, God's role in modality (*pace* Mondadori, Cross, and Knuuttila) is more than just to be a supplier of being for possible natures—he is also a supplier of content.

I turn now to the dispute between Normore and King over the analysability of natures into simples. According to Normore, a nature's being possible can be explained in terms of the coherence of its parts (1996: 165). According to King, however, 'For Scotus, things that have essences, strictly speaking, are such that their essences are metaphysically simple, despite the apparent "composite" nature of their definitions. . . ' (2001: 194). ('Nature' and 'essence' are equivalent for present purposes.) Thus, there can be no explanation of the possibility of a nature in terms of the coherence of its parts. So how does King explain a nature's possibility? He doesn't, because he thinks Scotus doesn't. Here King cites a text in which Scotus explains that human nature is possible and chimaera nature is impossible because 'this is this and that is that'.[26] As King glosses it: 'the difference between the possible and the impossible is a brute metaphysical fact, incapable of further explanation' (2001: 193).

So for Normore, natures are complex and thus their being possible can be explained in terms of coherence; whereas for King, natures are simple and thus their being possible cannot be thus explained.

King is aware that Scotus thinks natures can be defined in terms of genus and specific difference, and he recognizes that definability implies complexity. Nevertheless, King thinks that there is a relevant sense of simplicity which does apply to such natures, namely the sense in which natures 'form unities that are indecomposable without destruction of the things whose essence it is' (2001: 194). King's idea here seems to be that since you couldn't break apart a nature (such as humanity) into its components (say, animal and rational) without destroying humanity, humanity is simple.

The first thing to note in reply is that this is a genuine sense of simplicity recognized by Scotus. So even if it seems odd to say that something with parts is simple, well, Scotus himself says this. But the second thing to note in reply is that this sort of simplicity is too weak for it to serve the purpose King wants it to serve.

King wants to let the simplicity of the nature stand as evidence for his conclusion, 'Hence, there is no explanation of the possibility of a possible composite substance in terms of its real constituent features, since, for all metaphysical purposes, such essences are internally simple' (2001: 194). But the simplicity of the nature as defined by King doesn't entail this conclusion, or even suggest it. That a nature is 'indecomposable' is consistent with its having 'real constituent features' the logical relations of which explain or partially explain the modal status of the nature.

[26] *Ord.* I, d.36, q.un, n.60 (Vat. VI, 296).

This criticism of King does not directly support Normore's thesis that the possibility of a nature is explained by the coherence of its parts; it just fends off a challenge to Normore's thesis. Now I would like to make a direct defence of Normore, which relies on Scotus' distinction between two types of simple concepts.

These types of simple concepts are absolutely simple (*simpliciter simplex*) and not absolutely simple (*non simpliciter simplex*). An absolutely simple concept is one which 'cannot be resolved into several other concepts—for example, the concept of being or of ultimate difference'. A not absolutely simple concept is one which can be conceived as a genuine unity, but also 'could be resolved into several, separately conceivable concepts'.[27] Scotus offers 'man' as an example of a not absolutely simple concept.[28] Not absolutely simple concepts may be analysed down to absolutely simple concepts. The difference between a not absolutely simple concept and a not simple (*non simplex*) concept (Scotus offers 'white man' as an example of a not simple concept) is the greater degree of unity the not absolutely simple concept has, relative to the not simple concept. Man is more a unity than white man, since white is accidental to man. But this greater degree of unity (per se unity, in Scotus' lingo) does not involve non-complexity, as Scotus makes clear.[29]

But, you might be preparing to object, Scotus is here distinguishing between types of simple *concepts*. How does this weigh against King's thesis that a *nature* such as humanity is simple?

The answer is that Scotus puts this distinction between types of simple concepts to work in a context in which he draws a very tight parallel between concept and reality. In an intensely exciting question on the division of being, Scotus says this:

> Just as a real composite being (*ens compositum*) is composed of act and potentiality, so a composite concept that is *per se* one is composed of a potential concept and an actual concept or of a determinable concept and a determining one. The analysis of composite beings ultimately comes to an end with absolutely simple things—namely, the ultimate act and the ultimate potentiality that are fundamentally different in such a way that nothing of the one includes anything of the other [. . .] The same must hold for concepts. Every concept that is not absolutely simple, although it has a unity *per se*, is to be analyzed in a determinable concept and a determining one, so that the analysis comes to an end with absolutely simple concepts [. . .][30]

There are a few difficult and interesting issues here, but the point I wish to draw from the passage is simply this: the order of reality parallels the order of cognition in this context. Just as our not absolutely simple concepts may

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[27] *Ord.* I, d.3, p.1, q.1-2, n.71 (Vat. III, 49), trans. John van den Bercken in (Scotus 2016).
[28] *Lect.* I, d.3, p.1, q.1-2, n.68 (Vat. XVI, 250).
[29] *Lect.* I, d.3, p.1, q.1-2, n.68 (Vat. XVI, 250).
[30] *Ord.* I, d.3, p.1, q.3, n.133 (Vat. III, 82), trans. van den Bercken (Scotus 2016: 90–91).

be analysed into absolutely simple concepts, so composite beings (even those which are per se unities) may be analysed into absolute simples—being and its ultimate differences. The decomposability of (not simply) simple natures is reinforced in another passage in which Scotus says that a real definition involves a distinct cognition of the essential parts of the thing defined.[31]

Returning to King, then, we can say that while a nature such as humanity may indeed have a type of simplicity, corresponding to the not absolute simplicity of its simple concept, this simplicity still leaves the nature analysable into absolute simples.

There is therefore more to be said, by way of explanation of a nature's modal status, than 'this is this'. As Normore says, passages of the 'this is this' flavour 'underdetermine' Scotus' own view (1996: 163).[32] Scotus does indeed explain that being is repugnant to chimaera and not repugnant to man because 'this is this and that is that'.[33] But the whole point of this passage is to divorce logical possibility from divine (causal) power, that is, to make it as clear as possible that humanity is possible not because God can make humans (although he can), but primarily because humanity is non-repugnant with being—God's being able to make humans is itself partly explained by humanity's non-repugnance with being.[34] That this is the point is clear from the paragraph (n.61) which immediately follows the paragraph from which the quotation is taken (n.60). In n.61, Scotus says that logical possibility (non-repugnance) explains why a man has potential existence and logical impossibility (repugnance) explains why the chimaera does not. But this line of thought gives us no reason to deny the Normore picture on which humanity is analysable into simples and humanity's possibility (its non-repugnance with being) is explained by the coherence of these simples. In fact, it supports it. No relations to anything outside humanity explain humanity's possibility; only what is intrinsic to humanity (ultimately, its component simples) explains humanity's possibility. As Scotus puts it elsewhere, God is the cause of possibility and impossibility precisely in the sense that he is the cause of the (simple) parts of complex possibles and impossibles.[35]

Still, King may be unmoved. He grants that even if (as Normore thinks) a complex essence may be analysed into simples, 'we would eventually have to have recourse to the primitive possibility of the primitive features that make

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[31] *Ord.* I, d.36, q.un, n.49 (Vat. VI, 290).

[32] Another text which I read as underdetermining Scotus' official view is *Rep.* IIA, d.1, q.1, n.16 (Wadding XI.1, 246), in which Scotus just says that being from the divine intellect is the reason why humanity is a possible nature. On my view, this and any similar texts need to be read as shorthand for the fuller view, which is that (e.g.) humanity is from the divine intellect insofar as its simple ingredients are. Thanks go to an anonymous referee for drawing my attention to this text.

[33] *Ord.* I, d.36, q.un, n.60 (Vat. VI, 296).

[34] *Ord.* I, d.36, q.un, n.61 (Vat. VI, 296).

[35] *Rep.* IA, d.43, q.1, n.26 (Wolter and Bychkov 2, 528). For the same point, see also *Rep.* IIA, d.1, q.2, n.16 (Wadding XI.1, 246).

up a composite essence, as well as their joint compossibility [i.e., coherence]'
(2001: 194).

This push-back can be absorbed on the Normore view, provided we make
a distinction. The primitive features (or simples) really do have a primitive
(or unexplainable) possibility, because coherence turns out to be the concept
which explains possibility but coherence does not apply to simples. Never-
theless, as noted, the existence of the simples—their being on the scene to
be permuted—does require explanation and here we are exploring a theistic
explanation of their existence. So while the modal status of these simples may
be unexplainable (as King recognizes), their ontological status is explainable,
in terms of spontaneous divine intellectual activity—God's thinking up the
simples.

But, and now returning to Normore, acknowledging the divine origin of the
(ontological status of) simples gives God quite an important role in modality,
after all: 'an activity of the divine intellect is presupposed by any discussion of
possibility and is in some sense prior to issues about possibility' (1996: 166). To
repeat an earlier point: given the simples, logical space will fill up by magic;
but logical space doesn't give us the simples. These come from divine intellect.

Cross floats a very interesting suggestion that there is nothing special about
God which gives him a necessarily unique role in the foundation of possibility
and impossibility. Cross says, 'any mind could cause modalities', and, more
radically, a world with only finite non-rational beings (no minds at all) would
be intelligible and this is enough, Cross thinks, to explain the possibility of
possible natures in such a world (2005: 75–7).

I'm not so sure. Cross claims that a mindless, godless world is intelligible.
Surely Scotus disagrees. For surely he thinks that any finite thing by its nature
is producible, and anything producible, if it exists, is produced.[36] In a godless
world, whether or not it contained finite minds, there would be no first cause,
which by Scotus' lights is impossible in the strongest of senses. Yes, Scotus
does sometimes entertain the thought of a godless world in order to clarify
his notion of *potentia logica*, but these texts are all plausibly explained simply
as a heuristic for getting his audience to distinguish *potentia logica* from modal
notions wrapped up with causal power.

Yet this alone does not offer a deep enough response to Cross. Scotus also
says, and Cross quotes him as saying, that being 'is not incompatible with man,
and it is incompatible with chimera [. . .] because this is this and that that and
this is the case whatever intellect conceives [*of them*]'.[37] Cross thinks this text 'makes
it sufficiently clear that the activity of any mind would be sufficient for the
existence of the modalities'. I think a correct first response to this quotation
and Cross' gloss on it is the same response given in the preceding paragraph:

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[36] *DPP* III.4-5 (Wolter, 42).
[37] *Ord.* I, d.36, q.un, n.60 (Vat. VI, 296), quoted and translated in (Cross 2005: 75).

there couldn't be finite minds without God. But to say more, if chimaera and human have their modal statuses no matter who conceives them, then while we could conclude that God's conceiving them does not grant them their modal statuses, we could not conclude that there could be such natures without God.[38] By Scotus' lights, God alone is (if nothing else) early enough on the scene to produce the intelligible content of those natures which are possible and therefore actualizable.

Hoffmann is sensitive to Scotus' position that the formal or 'eidetic' character of natures comes from the divine intellect (2009: 377). But I think Hoffmann misses a step in the process by which natures are constituted. If simples are prior to complexes and if coherence and repugnance are primitive relations which obtain by magic, then God's intellect does not directly produce complex natures. Instead, it produces the simples, which permute in logical space, and return to God as the natures they are. Thus, there is a sense both in which Mondadori is correct to make the formal status of natures independent of God, and in which Hoffmann is correct to make the eidetic character of natures dependent on God (where formal status and eidetic character are synonymous). And likewise there is a sense in which they're both incorrect. The simple contents of a nature come from God (*pace* Mondadori), but the nature-constituting coherent permutation of the simples comes from magic (*pace* Hoffman).

I hope to have shown that The View presented here tracks Scotus' own texts closely, and can be defended against some powerful alternative readings. For those sympathetic with theistic explanations of modality, Scotus is worth taking seriously. Something about The View bothers me, though. It seems to be a desirable feature of theistic modal theories to get as much modal explanation from God as possible. Scotus' theory clearly gets a whole lot from God— all the positive content of natures traces back to the eternal spontaneous springing forth from the divine intellect. Nevertheless, the logical relations of coherence and repugnance are utterly independent of God, and whatever formal procedure there is for combining the simples into all their permutations, is independent of God as well. Scotus offers no attempt to get these from God, and offers no reasons why they can't be got from God. He seems content to let them be some extra-divine magic. But things would be tidier if we could either get these from God or know why we can't. I leave this for future work.[39]

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[38] Hoffmann makes this point well in his discussion of texts in which Scotus brackets God for the sake of argument (2009: 373-6). See also Normore's discussion in (2003: 145–54).

[39] I started thinking about this paper in 2006, so probably I have accumulated more debts of gratitude than I can recall. Among others, I am grateful to Richard Cross, Peter King, Andrew LaZella, Calvin Normore, David Sanson, an audience at the 2018 Morris Colloquium in Medieval Philosophy at the University of Colorado, Boulder, and to anonymous referees, for various helpful questions, suggestions, and criticism.

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