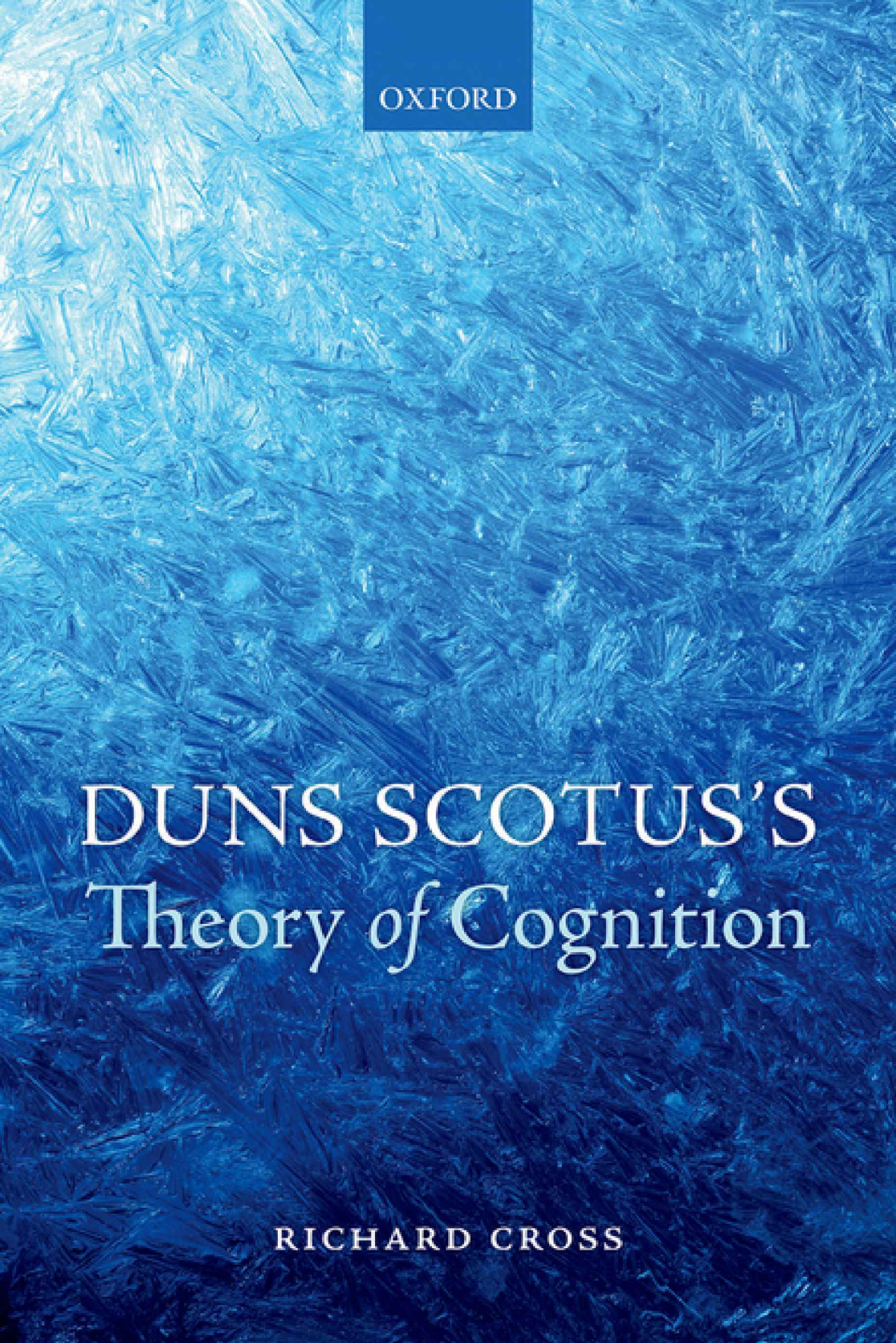
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DUNS SCOTUS'S
Theory of Cognition
RICHARD CROSS

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For Timothy Rhys Jones

Preface

The genesis of this book was something of an accident. Moving from Oxford to Notre Dame in 2007, and from a Theology department to a Philosophy one, I felt it rather incumbent upon myself to write a book that was purely philosophical, rather than one occupying the penumbral space between the two disciplines, where much (though not all) of my previous work had been. Since I had already done some work on Scotus's theory of mind and knowledge by 2007, and since there is in English—and arguably in any other language—no comprehensive account of the subject, I decided to devote a few years to an attempt to provide such a thing. By a curious twist, I discovered by chance, a couple of years after I had immersed myself in what was proving to be an almost intractable project, that the post I occupy at Notre Dame was established to support work in the philosophy of religion, broadly speaking—and thus that I could have remained in my own penumbral comfort zone without any pangs of conscience. What you have here is the result of this accident. I cannot say that it has been easy: the material is difficult, and spread out through rather obscure *loci* in Scotus's work. He provided no truly systematic discussion of the whole area; his views on the topics I examine were to some extent in a state of flux; and he never managed to synthesize his various attempts at systematization into one consistent whole. I attempt here to note something of the development in Scotus's thinking on the matter, and also to present what I believe is a synthetic overview that represents, more or less accurately, Scotus's thinking at the time of his death.

Many people have helped me by talking about aspects of the project with me, or by reading drafts of certain chapters: Susan Brower-Toland, Therese Scarpelli Cory, Stephen Dumont, Thomas Feeney, Eric Hagedorn, Peter Hartman, Peter King, Adam Morton, JT Paasch, Giorgio Pini, Christopher Shields, Jeff Speaks, Martin Tweedale, John van den Bercken, and the referees for Oxford University Press. Mistakes, of course, are wholly my own.

Contents

List of Abbreviations

Ancient and Medieval Works

Aquinas

De ver.	*De veritate*
ScG	*Summa contra gentiles*
ST	*Summa theologiae*

Aristotle

An. post.	*Analytica posteriora*
Cat.	*Categoriae*
De an.	*De anima*
De gen.	*De generatione et corruptione*
De mem.	*De memoria et reminiscentia*
De sensu	*De sensu et sensato*
Eth. Nic.	*Ethica Nicomachea*
Metaph.	*Metaphysica*
Phys.	*Physica*

Augustine

De trin.	*De trinitate*

Averroes

In de an.	*Commentarium magnum in Aristotelis De anima libros*
In phys.	*Commentarium magnum in Aristotelis Physicorum libros*

Avicenna

De an.	*De anima*
Metaph.	*Liber de philosophia prima sive scientia divina [Metaphysica]*

Bonventure

In sent.	*Commentaria in libros Sententiarum*

Duns Scotus

Coll. Par.	*Collationes parisienses*
DPP	*De primo principio*
In de an.	*Quaestiones super libros de anima*
In metaph.	*Quaestiones super libros metaphysicorm*
In periherm. (I)	*Quaestiones in primum librum Perihermeneias*
Lect.	*Lectura*
Ord.	*Ordinatio*
Quod.	*Quodlibetum*
Rep.	*Reportatio*
Th.	*Theoremata*

Giles of Rom

Quod.	*Quaestiones quodlibetales*

Godfrey of Fontaines

Quod.	*Quaestiones quodlibetales*

Henry of Ghent

Paris	*Quodlibeta* (Paris, 1518)
Quod.	*Quaestiones quodlibetales*
SQ	*Summa quaestionum ordinariarum*

James of Metz

In sent.	*In sententias*

James of Viterbo

Quod.	*Quodlibeta*

Olivi

In sent.	*Quaestiones in secundum librum sententiarum*

Porphyry

Isag.	*Isagoge*

Thomas of Sutton

Qu. ord.	*Quaestiones ordinariae*

William of Ockham

In periherm.	*Expositio in librum Perihermenias Aristotelis*
Ord.	*Ordinatio*
Rep.	*Reportatio*

William of Ware

In sent.	*In sententias*

Series, Editions, and Translations

Busse	*Porphyrii Isagoge et in Aristotelis Categorias commentaria*, ed. A. Busse, CAG, IV/1 (Berlin: Reimer, 1887)
CCSL	Corpus christianorum series Latina
Leuven	Henry of Ghent, *Opera omnia*, ed. R. Macken and others, Ancient and Medieval Philosophy, De Wulf-Mansion Centre, Series 2 (Leuven: Leuven University Press; Leiden: Brill, 1979–)
OP	Duns Scotus, *Opera philosophica*, ed. Girard J. Etzkorn and others, 5 vols (St Bonaventure, NY: Franciscan Institute, 1997–2006)
OPh	William of Ockham, *Opera philosophica*, ed. Iuvenalis Lalor and others, 7 vols (St Bonaventure, NY: 1974–88)
OT	William of Ockham, *Opera theologica*, ed. Iuvenalis Lalor and others, 10 vols (St Bonaventure, NY: St Bonaventure University Press, 1967–86)
PB	Les Philosophes belges
Spade	Paul Vincent Spade (ed. and tr.), *Five Texts on the Mediaeval Problem of Universals: Porphyry, Boethius,*

	Abelard, Duns Scotus, Ockham (Indianapolis and Cambridge: Hackett, 1994)
STGM	Studien und Texte zur Geistesgeschichte des Mittelalters
Vatican	Duns Scotus, *Opera omnia*, ed. C. Balić and others, 20 vols (Vatican City: Vatican Press, 1950–2013)
Wadding	Duns Scotus, *Opera omnia*, ed. L. Wadding, 12 vols (Lyons, 1639)
Wolter	Duns Scotus, *A Treatise on God as First Principle* (Chicago, IL: Franciscan Herald Press, 1982)
Wolter and Bychkov	Duns Scotus, *Reportatio I-A*, 2 vols, ed. and tr. Allan B. Wolter and Oleg V. Bychkov (St Bonaventure, NY: Franciscan Institute, 2004–8)

Manuscript Sigla

B	Oxford, Balliol College, MS 205
M	Oxford, Merton College, MS 61
O	Oxford, Merton College, MS 194
V	Worcester Cathedral, MS F.3
W	Worcester Cathedral, MS F.60

Introduction

1. The Works of Duns Scotus

Duns Scotus (*c.*1266–1308) was arguably the most important philosopher between Aquinas (1224/5–74) and William of Ockham (*c.*1287–1347). Of the three thinkers, however, he is the least well known, and certainly (in thought and style) the most obscure—hence his medieval nickname, *Doctor subtilis*, the Subtle Doctor. And of the three, we know the least about his life. We know that he was a Franciscan friar; that he studied arts (i.e. philosophy) and then theology at Oxford, probably starting sometime during the 1280s; that he left for Paris in the first couple of years of the fourteenth century—probably 1302—to repeat his theological training at what was then (though not for much longer) the finer of the two pre-eminent European universities (Oxford and Paris); that he spent part of 1303–04 somewhere outside of Paris; that he became Doctor (i.e. Professor) of Theology at Paris in 1305; that he left Paris for the Franciscan study house in Cologne during the summer of 1307; and that he died there in 1308 (the date of his death being traditionally held to be 8 November).

During his short life, he produced a number of works, none of which was ever completed. In addition to various minor works, there are questions on some works of Aristotle: the *Categories, On Interpretation* (two sets of questions), the *Sophistical Refutations, On the Soul*, and *Metaphysics* I–IX, which are (with the exception of the last four books of the *Metaphysics* questions) thought to be early—i.e. before 1300. During 1298–99 Scotus lectured on the first half (i.e. the first two books) of Peter Lombard's *Sentences* at Oxford (the so-called *Lectura*), part of the regular course required to qualify for the doctorate in theology. He began to revise this work almost immediately—to *order* it in preparation for publication, hence *Ordinatio*. There is reason to think that he had more or less finished the first book of the *Ordinatio* by the end of 1300, and presumably went on immediately to revise the second book. On his arrival at Paris, he began to lecture again on the *Sentences*, probably in the order book I, book IV, book II, book III, and presumably by 1303

had finished lecturing on all four books of Lombard's work—the *Reportatio*, surviving on the basis of students' *reports* (i.e. their lecture notes). Sometime during this period, he completed writing books III and IV of the *Ordinatio*—I suspect later than the Paris versions, at least for book IV (something that is important for my discussion of Scotus's shifting views on memory and intuitive cognition in later chapters). We have, in addition, an apparently distinct version of book III too (sometimes labelled the *Lectura completa*). But I make only passing use of this work in what follows, and offer no comment on it here. Based on (and thus post-dating) some questions at the opening of the *Ordinatio* is the short *De primo principio*, a treatise devoted to a systematic proof of God's existence. Perhaps the most important single work for my purposes is the *Quodlibet*, a set of twenty-one disputed questions Scotus held at Paris while he was professor of theology there, either in Advent 1306 or Lent 1307—the latest work that we have from him, as far as we know.[1] (So I speak of 'earlier' and 'later', and 'early' and 'late', here and in what follows; but—remarkably, given the achievements—the entire timescale is really barely more than a decade.)

I said too that none of Scotus's works is complete. Even more or less clean revisions of texts are riddled with later additions and annotations, and we assume that Scotus continued the revision process right up to the end of his life. And we have no surviving autograph of Scotus's, or indeed definitive manuscript version. Notoriously, different traditions of manuscripts have different sets of additions and corrections. So it is fair to say that the text is in a state of considerable flux. With the exception of the questions *On the Soul*, the modern editions do not reliably sort out the various difficulties, albeit that they represent improvements on the old Renaissance editions. We have modern editions for the Aristotelian questions, the *Lectura* and *Ordinatio*, and a transcription of a more or less reliable manuscript for book I of the *Reportatio*. Other than that, I rely on older editions, just occasionally supplementing with readings from what I take to be reasonably reliable manuscripts—variations which sometimes turn out to be crucial, but which must

[1] I rely at times on Scotus's questions on Aristotle's *On the Soul* (e.g. for much of the discussion of sensation, which has no parallel elsewhere in Scotus's works). The authenticity of the work has long been contested. The editors of the modern critical edition argue strongly for its authenticity, though it would be hard to describe their arguments as absolutely decisive. But more recently Stephen Dumont has told me, in conversation, about connections between the *Reportatio* and the *De anima* questions that the editors of the forthcoming critical edition of the *Reportatio* have noted (Dumont himself, Kent Emery, Bernd Goehring, Timothy Noone, and Stephen Metzger); these connections, which will be outlined in the preliminary matter in the *Reportatio* edition, seem to put the authenticity of the *De anima* questions beyond doubt. So I use the work freely here, and without caveat. (It is worth noting too Dumont's opinion, again communicated to me in conversation, that the *De anima* questions, since they use material that seems integral to the *Lectura*, probably date from around the time of that work—i.e. 1298–99.)

be taken as provisional in the absence of critical editions. (These affect book II of the *Reportatio* and the *Quodlibet*.)

Scotus's intellectual significance was immense. He combined a remarkably critical mind with huge creative originality. Even when he did not simply invent theories of his own, he transformed the existing theories beyond recognition. And he often retained Aristotelian terminology while radically changing the substance of the Aristotelian analyses. He was the springboard for much of the thought of Ockham (who, of course, profoundly disagreed with him while holding him in the highest respect as the philosopher who 'surpasses all others in the subtlety of his judgment').[2]

Scotus makes a number of highly novel contributions to the theory of cognition: an original account of intuitive cognition (roughly, the intellectual or conceptual cognition of singulars); a new theory of mental content; a novel account of the ontological status of mental dispositions and acts; an original account of consciousness. But he is almost as significant for the philosophical pressure he put on the theories of his predecessors, remorselessly exposing weaknesses, incoherence, and explanatory vacuity. In what follows, I hope to give a reasonably complete account of all of these things. Scotus's positions are sometimes rather fluid, and at the same time not always as clear as they might be. So I offer this work as a first step, not pretending to have reached the finishing line, as it were. And I purposely set up the discussions in a way that both allows Scotus to be highly original, and that represents in itself an original interpretation or set of interpretations of Scotus's views on the matters discussed.

2. Medieval Cognitive Psychology

The cognitive psychology of the high scholastic period (say, from 1250 to 1350) was voracious and rather promiscuous in its use of sources. Certain key ideas—notably in relation to sensation and the notion of mental content—derived from Arabic philosophy, and especially Avicenna and Alhazen. Others—particularly in relation to the kind of unconscious processing that the mind undertakes in forming conceptual from merely sensory content—derived from Aristotle's *On the Soul*.[3] And yet a third set of concepts—to do with recollection and the processes involved in actual conscious thought—derived from Augustine. In a sense, the medievals simply used what they needed. They saw clearly enough that none of these thinkers

[2] Ockham, *Ord.* 1.2.6, n. 6 (OT ii. 161; Spade, 153).

[3] When I talk of 'mind', I generally mean the power or agent responsible for conceptual thought—the intellect or soul, in medieval parlance.

had provided a complete theory of cognition; but they saw too that combining the sources in the ways that they did would allow such a theory or theories to be developed. The basic structures, then, are not hugely original. But the combination is; and while there was some agreement on the overall pattern, there was great disagreement about the details.

The central idea in theories of sensation lies in medieval optical theories of the so-called 'Perspectivists', traceable back to Alhazen and Avicenna, and finds its most complete expression in the West in Roger Bacon (*c.*1214/20–*c.*1292). Katherine H. Tachau summarizes:

> According to this theory . . . a visible object generates, or 'multiplies' species of light and color in the adjacent medium. These species, which Bacon also calls 'virtues' or powers, 'forms', 'images', 'similitudes', 'phantasms', and 'intentions', generate further species in the medium contiguous to them, which results in a continuous multiplication of species along rays proceeding in all unobstructed directions from all points on the object's surface. These visible species covey the object's accidents through the intervening medium, which serves as their substance, to the eye of the viewer, upon which they are, broadly speaking, 'impressed'. . . . Once received in the sense organ, each species continues to be multiplied along the optic nerves into the cavities of the brain housing the internal senses. As all objects in the universe multiply species, clearly the processes of the other external senses . . . can, *mutatis mutandis*, be understood in the same way.[4]

These various kinds of species—the species in the medium (*species in medio*) and the species in the sense organs—are *causal intermediaries* between the extramental object and the cognitive act; and in addition to this they clearly convey some kind of *informational* content. Some thinkers thought that this was all that was needed for sensation—the inherence of the right kind of species in a sense organ is what it is to sense. Some thinkers imagined the process in some sense carried on into the soul: conceptual thought consists again in the inherence of the right kind of species in the soul. (I return in later chapters to the medieval view that sensation is somehow pre-conceptual or non-conceptual—a view later defended in Kant, but not at all uncontroversial in recent philosophy of mind.)

But what is the 'right kind' of species? The medievals found a preliminary answer in Aristotle: sensation consists in the cognizer's somehow taking on the forms—the structural or organizing principles—of the external objects of such acts. To understand this, we need some notion of hylomorphism: the view that a material object—such as a human being—is a composite of matter and form. The basic idea, taken from Aristotle, is that natural changes require a persisting subject undergoing what

[4] Katherine H. Tachau, *Vision and Certitude in the Age of Ockham: Optics, Epistemology and the Foundations of Semantics 1250–1345* (Leiden: Brill, 1988), 8.

we might think of as structural alteration. And such alterations fall into two general categories: accidental change, in which a persisting substance changes in contingent properties or (as Aristotelians put it, *forms*: for example, my changing colour or weight), and substantial change, in which a substance is destroyed (for example, my dying). To explain the latter of these two cases, Aristotle posited some underlying *matter*, and later Aristotelians suggested that this underlying material should be thought of as *prime* matter, understood either as a pure capacity to receive forms, or as some kind of real being prior to any natural substance-kind.[5] And the relevant forms in cases of substantial change are known as substantial forms. This gives us a systematic distinction between substance and substance-forms, on the one hand, and accidental forms on the other, generally construed along the lines of the division of reality posited in Aristotle's *Categories* (as usually interpreted): substance, on the one hand, and the nine accidental categories on the other: quantity, quality, relation, place, time, posture, vesture, action, passion.[6]

In all of these cases, the subject is made to be an instance of the form: someone gaining whiteness is said to become white, and (roughly) some matter gaining human nature is said to become human. Cognition is explained along similar lines—the reception of a form—but with a crucial difference: in cognition, the form is not received in such a way as to make the recipient an instance of the relevant form. Thus, Aristotle claims,

> a sense is . . . what has the power of receiving into itself the sensible forms of things without the matter. This must be conceived of as taking place in the way in which a piece of wax takes on the impress of a signet-ring without the iron or gold.[7]

The idea is that the perceiver receives the form of an object of a given kind without itself being made to be an instance of the relevant kind. On this view, we might say that the act is about such-and-such an object because it shares the same form as the object—albeit received in a different way (intentionally, not really, in medieval jargon, to which I return in Chapter 1). The immaterial reception of a form is, on this sort of view, what it is for the mind to have informational content. The Muslim philosophers talked of this content as an *intention* (*intentio*, in the Latin translation of the relevant Arabic term, *ma'nā*), and it is this that underlies our modern notion of *intentionality*, of *being about* something—a feature characteristic of both sensation and conceptual thinking.[8]

[5] See e.g. Aristotle, *De gen.* 1.3 (319b2–3); *De gen.* 2.1 (329a24–33).

[6] Aristotle, *Cat.* 4 (1b25–7). [7] Aristotle, *De an.* 2.12 (424a18–20).

[8] The most recent account of the Muslim philosophers is Deborah L. Black, 'Intentionality in Medieval Arabic Philosophy', *Quaestio*, 10 (2010), 65–81. The Latin translation doubtless reflects Augustine's use of 'intentio' to talk about the mind's attention, its tending towards its object (see Augustine, *De trin.* 11.2.2, ll. 6–8 (ed. W. J. Mountain, 2 vols, *CCSL* 50 (Turnhout: Brepols, 1968), i. 334).

I have suggested that one might consider conceptual thought in terms of the multiplication of species from the senses and on into the immaterial intellect. But most medievals did not think of the matter in quite this way. They held that the mind itself has to perform some kind of operation, deriving conceptual content from sensory content—standardly, on Aristotelian models, cognition of *universals* (intellectual cognition) from cognition of *particulars* (sensation: though, as we shall see, Scotus characterizes the conceptual/non-conceptual distinction in a rather different way). This operation is initially unconscious and automatic: the mind or its active power (the 'agent intellect') abstracts conceptual and universal content from the particular content of a sense perception. The origin here is Aristotle, who thinks of the intellect as having a power 'of making all things'[9]—that is to say (in the medieval interpretation) of forming concepts of all things. Such conceptual content can be stored (as habitual or dispositional cognitions, sometimes labelled 'intelligible species'); and it can be called to mind as occurrent or actual cognition. And the relevant power in these cases is the 'possible' (or passive) intellect: the mind's being 'what it is by virtue of becoming all things', as Aristotle rather laconically expresses it.[10]

The transition from dispositional to occurrent cognition was usually analysed in my thinkers using materials deriving from their third source, Augustine. According to Augustine, the mind has a power responsible for storing conceptual content, and another power that is the subject of occurrent cognition—the memory and the intelligence, respectively, usually mapped on to the Aristotelian analysis as parts of the possible intellect. As Augustine sees it, objects of cognition are stored in the memory, and when calling these objects to mind, an additional item, labelled a 'mental word', is generated in the intelligence, from the object in the memory.[11] Augustine identifies the mental word as knowledge (*notitia*),[12] and claims that this is what is generated when we think.[13] Some medieval thinkers, as we shall see, believe that occurrent cognition—an *act* of cognition[14]—is simply

[9] Aristotle, *De an.* 3.5 (430a15–16). [10] Aristotle, *De an.* 3.5 (430a14–15).

[11] Augustine, *De trin.* 15.21.40, ll. 9–14 (*CCSL* 50A, 517–18).

[12] Augustine, *De trin.* 9.10.15, ll. 1–2 (*CCSL* 50, 306).

[13] Augustine, *De trin.* 9.12.17, ll. 2–3 (*CCSL* 50, 308); *De trin.* 9.12.18, ll. 30–80 (*CCSL* 50, 309–10).

[14] The notion of a mental act was reintroduced into modern Anglo-American philosophy by Peter Geach, arguing against the view, prevalent in certain circles in the 1950s, that all talk of mental states should be construed as hypothetical statements about overt behaviour—ways in which people might or would act (say or do) in certain circumstances. As Geach puts it, distinguishing his view from that of his contemporaries, 'In historical or fictional narrative there occur reports, not only of what human beings overtly said and did, but also of what they thought, how they felt, what they saw and heard, and so on; I shall call the latter kind of reports "reports of mental acts" ': *Mental Acts: Their Contents and their Objects* (London: Routledge & Kegan Paul; New York: Humanities Press, 1957). I take it that this is no longer controversial.

the actualization of an intelligible species; others—including Scotus—believe that it is an additional cognitive item, over and above the dispositional cognition or intelligible species. But almost everyone denies that species or dispositions are the *objects* of our cognition. The objects are real things: standardly the extramental items themselves.

Thinkers who think of dispositional cognitions as intelligible species do so because they believe that such species act as causal intermediaries between an extramental object of thought and an act of cognition—in line with the causal role of sensible species, as already outlined. As we shall see in later chapters, some thinkers denied the need for specifically intellectual species: all that is required are species in the senses, or stored pre-conceptual content in the imagination (a kind of species known as a 'phantasm'), along with the processing activity of the intellect generating a cognitive act. But Scotus disagrees, since he rejects such cognitive dependence of the intellect on the sense faculties for anything other than the very first abstractive act (as we shall see in Chapter 4).

I have suggested that the exercise of a human being's capacity to think involves the mind's having a cognitive act, an occurrent cognition. There are two relevant aspects to such an act. First, it is something *real*; and, secondly, it is *about* something: it has *intentionality*. On the second of these features, understanding what Scotus asserts in criticizing what his opponents have to say about cognitive acts requires grasping the distinction between an act's *content* and its *object*. All cognitive acts have semantic or conceptual *content*. Today, we would naturally think of the content as something propositional—that x is F, that (for example) centaurs have horns[15]—but the medievals are happy to countenance too contents with simple (i.e. non-propositional) semantic values, simple intensions: *centaur*, for example, or *human being*. And (in contrast to many modern accounts) the medievals would not typically think of these things as mind-independent. They are, in other words, nominalists on the question of both propositions and intensions: a *predication* (their equivalent to our proposition) is a mental item that represents the world in a particular way; and a simple intension is just a representation of a simple item such as an essence. And, furthermore, while cognitive acts must have contents, they do not have to have real objects, things that they are about, or are directed at: there are no centaurs, and my thought that centaurs have horns (my predicating 'has horns' of a centaur), or even my thought *centaurs*, lacks any object. As we shall see, thinkers who seem sensitive to this issue talk of *objects* in both contexts—encompassing both aboutness and content—but I think we need to be careful to disambiguate the

[15] I take the example from Gail Fine, *On Ideas: Aristotle's Criticism of Plato's Theory of Forms* (Oxford: Clarendon Press, 1993), 123.

notion of object here, and to ascribe the issue to terminological poverty, or at any rate a different usage from one customary with us.

3. The Metaphysical Context

I cannot here sketch out the whole of Scotus's philosophical system. But I will try to make some suggestions as to the role his account of cognition plays in the wider context of his philosophy. I have elsewhere offered in-depth descriptions and analyses of the views of Scotus's relevant to the discussion in this book, and here I offer only the briefest of summaries.[16]

I begin with some distinctive claims that Scotus made about hylomorphism. He argues that matter, if it is to satisfy the Aristotelian constraint of persisting through substantial change, must count as a thing in its own right, with certain determinate properties—with its own *actuality*, as Scotus puts it.[17] And substantial form, since it is supposed to explain the structure of a composite substance, must likewise count as a thing in its own right.[18] This view is very different from one such as that of Thomas Aquinas, according to which the only thing 'in its own right' is the composite substance, and matter and form perform their explanatory functions while yet failing to count as things as fully real as the substances they compose.[19] On Aquinas's view, unity is a feature merely of fully real things, and is *explained* by substantial form. So he holds the view that there can only be one substantial form in a composite substance: as soon as there is a form in matter, there is a substance.[20] Scotus agrees that unity is a feature of real things, but his more generous account of reality requires some further explanation of the unity of a composite substance. I return to this in a moment. But a further consequence of his view is that the presence of more than one substantial form in a composite substance raises no further difficulties for the unity of such a substance. And, in line with standard medieval

[16] There is an important theological context too, since much of the discussion is connected with Scotus's account of the doctrine of the Trinity, arguing on the basis of Augustine's famous analogy between the Trinity and the human mind and its cognitive and appetitive activities. For example, quite a lot of the material I discuss in this book is taken from an exploration of the way in which the human mind is made in the image of God. But I believe that Scotus's philosophical and theological project is motivated by the attempt to isolate theories of maximal generality—i.e. theories that can be generalized to cover both divine and human cases. Given this, the two domains should not, as it were, trespass upon each other: the philosophy and the theology should simply yield the same results, though from different starting points. In line with this, the theological context makes, as far as I can see, no difference to the content of Scotus's philosophical analysis, so I ignore it here.

[17] See e.g. Scotus, *Lect.* 2.12.un., n. 37 (Vatican, xix. 82). For Scotus on matter, see my *The Physics of Duns Scotus: The Scientific Context of a Theological Vision* (Oxford: Clarendon Press, 1998), ch. 2.

[18] See my *Physics of Duns Scotus*, ch. 3.

[19] See e.g. Aquinas, *ST* 1.45.4 c (ed. P. Caramello, 3 vols (Turin and Rome: Marietti, 1952–6), i. 230a).

[20] See e.g. Aquinas, *ST* 1.76.3 c (i. 362a–3a) and 1.76.4 c (i. 354a–b).

views, Scotus accepts the 'pluralist' view that there are other substantial forms in a human being too: a bodily form, for example, responsible for simple bodily structure, along with the soul, responsible for structuring that body into a *living* body. After all, at first glance it looks as though a body once alive and then dead is the same *body* (even if not the same plant or animal), and this can be secured only if the body has a form of its own independent of the soul.[21] The reifying account of forms extends to accidental forms too. Scotus holds that whatever it is that is responsible for distinguishing individuals in a given category from other individuals in that category cannot be something belonging to a different category. Thus any item in any category counts in some sense as an individual in its own right.[22]

Scotus extends this analysis even to relations between things. As he sees it, relations must count as things, otherwise relational changes would amount to no more than changes in the abstract features of a thing: and there are no such changes. He makes the argument against Henry of Ghent (*c.*1217–93), his favourite opponent. According to Henry, a relation is an (abstract) *mode* of its ground: Socrates's similarity in whiteness to Plato, for example, is a mode of Socrates's whiteness.[23] Scotus objects: in that case, if Socrates remains white but ceases to be similar to Plato, there is in Socrates nothing more than a modal change, a change in *abstract* constituents; and there are no such changes.[24] So relations are analogous to one-place predicates or monadic properties—they are real, concrete accidents, inherent in their subjects—and changes in the abstract features of a thing are parasitic on changes in its concrete constituents: here, its relations.

Now, Scotus does not believe that all relational predications have to be grounded in such relational properties, and he uses an Aristotelian distinction to allow him to discern when such properties need to be posited. In *Metaphysics* 5.15, Aristotle differentiates between three kinds of relation: those based on quantity (for example, *bigger than, smaller than*), those based on active and passive powers (for example, *heating, being heated*), and those whose possession by an item is based on the fact that some *other* item is related to the first in a certain way:[25] Aristotle's examples are *being known*—the idea is that the relation of being known results from the inherence of something in the knower, not something in the object—and *being measured*—the idea is that the relation of being measured obtains 'because something else involves a reference to'[26] the measured item. As we just saw, Scotus posits that at least some relations are real accidents, inherent in their subjects (and

[21] See my *Physics of Duns Scotus*, ch. 4.
[22] See my *Physics of Duns Scotus*, 95–100.
[23] See e.g. Henry, *SQ* 55.6 (2 vols (Paris, 1520), ii, fo. 110^{v}N).
[24] See e.g. Scotus, *Lect.* 2.1.5, n. 214 (Vatican, xviii. 71).
[25] Aristotle, *Metaph.* 5.15 (1020b26–1021b12).
[26] Aristotle, *Metaph.* 5.15 (1021a31).

sometimes inherent in their subjects in virtue of the subjects' possessing further, non-relational properties). And as Scotus understands the third kind of relation, it involves something like the following scenario: a real relation inheres in one of the *relata*, with no corresponding inherent real relation in the other. The second term is said to have a merely 'rational' relation to the first. Thus, a rational relation in x, to some real item y, requires that 'xRy' is true, but 'xRy' is not made true by any real relational property inherent in x. What make it true are the relevant non-relational properties of x and y, along with a real relational property, inherent in y, directed to x. Real relations, on this account, are things really distinct from, and inherent in, the items that have them ('really distinct' since the relevant items can exist even in the absence of the relation).[27]

The upshot of this brief discussion of aspects of Scotus's metaphysics is that material substances are composites of matter and substantial form. As I just hinted, the medievals generally identify (one of) the substantial form(s) of a human being as that being's *soul*, and they generally ascribe to the soul not merely the kind of structure-explaining role that forms standardly play, but also being the subject of intellectual or conceptual *cognition*. The soul, then, is not merely a substantial form of a human being but the immaterial agent responsible for conceptual thought. I do not comment on this seemingly incongruous double of function, but I note it for what follows. In terms of cognitive theory, Scotus argues (as we shall see) that sensation is a function of a living body, and is thus inherent in the composite of body and soul; intellectual cognition is a function merely of the soul, and thus inherent merely in the soul. I think Scotus believes the first of these claims to be obvious—he presupposes it for the purposes of other arguments, as I show in a moment. In favour of the view that intellectual cognition inheres in the soul, Scotus argues that abstract content—universal content, immaterial in the sense of being abstracted from particularizing material conditions—requires an immaterial subject.

The argument relies on a disambiguation of the senses in which a cognitive act might be immaterial:

> The word 'immaterial' is frequently used by the Philosopher in this context, but it seems to be ambiguous. For it could be understood in this context in three ways: either [the act] is immaterial because it is incorporeal, in this way, because it is not [had] through a corporeal and organic part . . . ; or in another way [the act is] immaterial because it is not extended in any way, and in this case ['immaterial'] implies more than 'non-organic' does, because even if everything organic is extended (since it is received in something extended), it is not the

[27] On this, see Mark G. Henninger, *Relations: Medieval Theories 1250–1325* (Oxford: Clarendon Press, 1989), 68–78, 85–97.

case that only [the organic is extended], because if it were primarily received in the whole composite, then, since that [composite] is extended, the operation too would be extended. In a third way its immateriality can be understood in comparison to the object, namely that it is related to an object under immaterial conditions—that is, to the extent that it is abstracted from the here and now, and such-like, which are called material conditions.[28]

In the first sense, an intellectual cognitive act is immaterial in the sense of not being the act of an organ, or an act inherent in an organ. In the second sense, it is immaterial in the sense of not inhering in something extended. As Scotus notes, anything immaterial in this sense is immaterial in the first sense too, but not vice versa: something could inhere in a whole substance without inhering merely in one or more of that substance's organs. In the third sense, an act is immaterial in the sense of having contents abstracted from the material conditions of the object of the act: abstracted from 'the here and now, and such-like'—having *universal* contents.

Scotus asserts, without much apparent argumentation, that the fact that a cognitive act is immaterial in the third sense entails that it is immaterial in the second. And, given this, he claims that its subject must be immaterial too:

The proper recipient [of a cognitive act is] not something extended, whether that be an organic part or the whole composite, because then the operation would be extended, and neither could it be of the sort spoken about, related to objects of the sort spoken about. Therefore it must be in us in virtue of something non-extended.[29]

But, reasoning by introspection, Scotus claims that our immaterial cognitive acts are clearly 'in us', and that the only candidate for such an immaterial entity—one *in us*—is the human soul:

Because [the act] is formally in us, the [relevant non-extended thing] cannot be other than the intellective soul, because every other form is extended.[30]

The proper subject, then—the 'proper recipient', as Scotus puts it—of intellectual cognition is the human soul.

Sense cognition is different from this. As Scotus sees it, acts of sensation are organic, and thus extended, and must inhere in the body.[31] There is thus a very strong caesura between sensory cognition and intellectual cognition. And Scotus's claim that sensation is bodily provides the opportunity for a very significant bit of metaphysics that is worth noting, at least in passing. I have mentioned that Scotus's

[28] Scotus, *Ord.* 4.43.2, n. 71 (Vatican, xiv. 21–2).
[29] Scotus, *Ord.* 4.43.2, n. 90 (Vatican, xiv. 25).
[30] Scotus, *Ord.* 4.43.2, n. 90 (Vatican, xiv. 25).
[31] See e.g. Scotus, *Ord.* 4.43.2, n. 71 (Vatican, xiv. 22).

pluralist position on substantial forms—and, indeed, his general reification of both matter and form—means that he is less well placed than Aquinas to deal with question of the *unity* of a material substance. Basically, Scotus holds that a material substance is something that is *constituted* by its various parts (matter, substantial form(s)) without being *identical* with them. Thus, a whole material substance 'is a certain third being, different from each of its parts, and from both together or separately'.[32] So a substance is non-identical with the aggregate of its parts. The reason for this is that, if it were not the case,

> there would be no being in which proper passion and proper operation would be, or any proper accident, because these inhere in the species, and not in matter or form, or in both together, other than as they are one in some *per se* whole.[33] . . . Neither does a proper passion or a proper operation or any other non-relational accident follow the whole precisely as relational.[34]

Proper passion and proper operation here are (respectively) powers and activities that could belong neither to any one of the constituents separately, nor to a simple aggregate of the two; nor could it belong to the relation between the constituents, or to the whole thing considered as a conglomeration of matter, form, and the relation (the whole 'precisely as relational'). In an animal such as a human being, sensory powers and acts would be paradigm examples of such things. Sensation, on this view, is not merely a function of the body or merely a function of the soul; and neither is it something that inheres merely in body and soul aggregated together. It is intrinsically something psycho-physical: intrinsically such that it involves both physical or physiological processes, on the one hand, and psychological or phenomenal processes on the other. It is bodily; but it conveys information to a cognizer, and has a certain internal feel all of its own. I return to this in Chapter 1.

One way of distinguishing sensation from intellectual cognition in standard Aristotelian accounts of the matter is to claim that the senses have the particular as their object, and the intellect the universal. Scotus does not exactly agree with this distinction, but his analysis of the matter (which I discuss in Chapters 1, 2, and 3) nevertheless requires some understanding of his account of universals and individuation, so I discuss this matter very briefly here, by way of contextualizing the psychological issues that I discuss in the main body of the book. Central to Scotus's view is the claim of Avicenna that a universal is 'what can be predicated of many';

[32] Scotus, *Ord.* 3.2.2, n. 85 (Vatican, ix. 154–5). I deal with these issues in ch. 5 of my *Physics of Duns Scotus*, and in more detail in 'Duns Scotus's Anti-Reductionistic Account of Material Substance', *Vivarium*, 33 (1995), 137–70. See too s. 6 of my 'Duns Scotus on Universals, Sameness, and Identity', in Gabriele Galluzzo (ed.), *Universals in the Thirteenth Century* (Pisa: Scuola Normale, forthcoming).

[33] Scotus, *Ord.* 3.2.2, n. 77 (Vatican, ix. 150).

[34] Scotus, *Ord.* 3.2.2, n. 79 (Vatican, ix. 151).

as such, it includes neither its existence in a singular, nor its existence as a concept. Avicenna illustrates this with an example that was famous in the later Middle Ages: horseness, the nature of horse.

> In itself, [horseness] is nothing at all except horseness; for, in itself, it is neither one nor many, and exists neither in concrete things nor in the soul, existing in none of these things either in potency or in act, such that [these] are included in horseness. Rather, in terms of itself, it is only horseness. Rather, oneness is an attribute that conjoins with horseness, whereby horseness with this attribute becomes one. Similarly, in addition to this attribute, horseness has many other attributes that enter it. Thus, horseness—on the condition that, in its definition, it corresponds to many things—becomes general.[35]

The idea is that horseness, as such, is simply the essential properties of horses; it exists in horses provided that there are horses, and it exists in the soul, as a concept, provided that someone is thinking of it. But in itself it does not include either of these kinds of existence. Neither does horseness, as such, include any kind of unity or multiplicity. Provided that there is one horse it is one, and provided that there is more than one horse it is many—as many as there are horses.

Scotus adopts Avicenna's position, but with significant differences. He believes that what he labels the 'common nature'—an example of which would be horseness—is supposed to perform some kind of explanatory function: it is supposed to explain the fact that two particulars of the same kind are exactly similar to each other in certain respects. So, he reasons, it must have some kind of being or entity in itself: 'In the thing [viz. in extramental reality] the nature according to [its primary] entity has true real being outside the soul.'[36] And this entity is Avicenna's nature as such, which the Latin writers often referred to as an 'essence' or 'quiddity', the 'what (*quid*)-the-thing-is':

> 'Horseness is only horseness.' . . . The what-the-thing-is is the *per se* object of the intellect and is *per se*, as such, considered by the metaphysician and expressed by the definition.[37]

(Note the identification of this item as 'the *per se* object of the intellect': something that I return to at the beginning of Chapters 1 and 2.)

The nature, with its real entity, is supposed to be subject to the accidental modification of existing as this or that particular, and it is not possible for the subject of a real modification not itself to be real:

[35] Avicenna, *Metaph.* 5.1 (ed. and tr. Michael E. Marmura (Provo, UT: Brigham Young University Press, 2005), 149; for the Latin, see Avicenna, *Liber de philosophia prima sive scientia divina*, ed. S. van Riet (Louvain: Peeters; Leiden: Brill, 1977–83), ii. 228–9).

[36] Scotus, *Ord.* 2.3.1.1, n. 34 (Vatican, vii. 404; Spade, 64–5).

[37] Scotus, *Ord.* 2.3.1.1, nn. 31–2 (Vatican, vii. 402–3; Spade, 63).

Although it [the nature] is never without some one of these features [viz. being in extramental particulars or being thought of], yet it is not any of them of itself, but is naturally prior to all of them.[38]

Given the medieval assumption that anything that has some kind of reality has some kind of unity, Scotus argues that the common nature, since it has some kind of entity, must also have some kind of unity: 'According to that [primary] entity, it has a unity [viz. less-than-numerical-unity] in proportion to it.'[39] If the common nature had numerical unity, then, Scotus reasons, it would be a determinate particular. If a nature does not include 'determinate singularity' in its *ratio*, then it cannot be numerically one:

Whatever from its own notion (*ratione*) is in something *per se* is in it in every instance; therefore, if the nature of the stone were of itself a 'this' then whatever the nature of stone were in, that nature would be 'this stone'. The consequent is nonsense.[40]

Since (for example) *being human* does not include *being Socrates*, then *being human* must lack real numerical unity. The notion of non-numerical unity is supposed to allow the 'same' nature to be in different particulars. But since the nature as it actually exists is always instantiated, the non-numerical unity is a feature of the nature merely as 'potential'.[41]

So, what is it for the nature to exist as a particular? Scotus accounts for this by introducing a further component into his ontology: a haecceity or thisness, an individuating feature. The haecceity somehow combines with the nature to form an individual substance. The haecceity is what Scotus calls 'primarily diverse' from anything to which it is not joined: its diversity is not explained by anything other than itself. It is something like a bare particular, something whose particularity is a primitive feature of it. In virtue of its possession of a haecceity, a complete particular is *per se* diverse from anything else: its being diverse from anything else is explained by its internal features. The nature gains its particularity in virtue of its union with the haecceity:

Whatever is in this stone is numerically one, either primarily or *per se* or denominatively. Primarily, say, as that through which such a unity belongs to this composite. *Per se*, the stone itself, of which what is primarily one with this unity is a *per se* part. Only denominatively, what is potential and is perfected by the actual and is so to speak denominatively related to its actuality.[42]

[38] Scotus, *Ord.* 2.3.1.1, n. 32 (Vatican, vii. 203; Spade, 63).
[39] Scotus, *Ord.* 2.3.1.1, n. 34 (Vatican, vii. 404; Spade, 64–5).
[40] Scotus, *Ord.* 2.3.1.1, n. 3 (Vatican, vii. 392; Spade, 38).
[41] Scotus, *Ord.* 2.3.1.5–6, n. 173 (Vatican, vii. 477; Spade, 103).
[42] Scotus, *Ord.* 2.3.1.5–6, n. 175 (Vatican, vii. 477–8; Spade, 103).

This gives us an abstract particularized nature ('denominatively' or extrinsically one) and an abstract haecceity (primarily one) as the 'components', as it were, of a concrete substance (the item that is *per se* one: that includes its individuator). On this picture, the haecceity is extrinsic to the particularized nature, but not to the whole substance that includes both. The item that is denominatively one, the particularized nature, turns out to be extremely important in this picture. Scotus sometimes labels such entities 'distinctive (*propria*) individuals'.[43] Distinctive individuals are abstract particulars—items that Scotus sometimes labels not (concrete) things (*res*) or forms (*formae*), but (abstract) thing-nesses (*realitates*) or formalities (form-nesses, *formalitates*)—and to see why they are needed we need to look a little more closely at Scotus's account of sameness and distinction. Basically, a substance and its nature are supposed to be in some sense the same: and to be the same, they must, according to Scotus, be inseparable. And if the substance and the common nature were inseparable, then the substance would not be accidental to the common nature. Equally, if they were separable, the substance would not be one simple concrete object.

Scotus puts these abstract particulars, these formalities, to further use, too. As far as I can see, he holds that all concrete particular forms—accidents, relations, or substances—are somehow composed of simple abstract particulars. His example is a human being (or perhaps the distinctive individual humanity), which he claims is composed of the abstract properties *animality* (genus) and *rationality* (specific difference):

> In creatures . . . if we abstract those realities that are in the same thing (e.g. the reality of genus and of difference), and consider them very precisely, each is finite, and neither is perfectly the same as the other. For they are not the same as each other in any way other than on account of a third thing with which they are the same. Therefore, if they are abstracted from the third, the cause of their sameness does not remain, and therefore neither does the cause of the truth of a proposition uniting the extremes. Therefore this is false, 'animality is rationality', and vice versa. . . . This quiddity, [taken] precisely, is potential to that quiddity, and it is not the same as it other than on account of the sameness with a third from which they are both abstracted. Therefore this abstraction destroys the cause of the affirmative [proposition] uniting them.[44]

The realities that Scotus is talking about are abstract particulars, constituting a whole concrete object (or, perhaps, distinctive individual). But creaturely properties lack any intrinsic reason for their unity with each other. So their unity needs some further explanation, extrinsic to them: in this case, their unity in the third thing that they constitute.

[43] Scotus, *Ord.* 1.8.1.3, n. 148 (Vatican, iv. 226).
[44] Scotus, *Ord.* 1.8.1.4, n. 219 (Vatican, iv. 275).

I do not comment on the ways in which this metaphysical analysis can or cannot be made coherent with the rather more physical analysis of material substances into matter and form. What is important for my purposes is that Scotus seems to think that forms themselves can be thus complex (an example that he sometimes gives in this context is the human soul). And this is significant, in turn, because, as we shall see, it provides a way of giving accidents some kind of real structure, and thus—as I outline in Chapter 8—it gives cognitive acts a way of having real structure such that they can, merely in virtue of their intrinsic or internal features, represent objects in the world.

4. On What Follows

In what follows, I first trace Scotus's views on the processes of cognition (Chapters 1 to 6), beginning in the opening chapter with sensation. In the course of this discussion, I provide some kind of analysis of a medieval distinction about which there has been in modern time some controversy in in its application to sensation, but that pervades what Scotus has to say on cognition generally: that between the real and the intentional. Chapter 2 examines Scotus's views on intuitive intellectual cognition: conceptual cognition of objects really present to the cognizer. The next two chapters focus on abstractive cognition: first, the nature of abstractive cognition (Chapter 3), and then the existence, nature, and production, of dispositional cognitions (stored conceptual contents), labelled by Scotus and others of the medieval thinkers 'intelligible species' (Chapter 4). In Chapters 5 and 6, I examine, respectively, the nature and then the production of acts of cognition. Chapter 7 stands alone as an account of the causal powers responsible for these various mechanisms (sensation, abstraction, occurrent cognition). Chapters 1 to 7 deal with the level of the *real*; the remaining three chapters examine issues surrounding *intentionality* and conceptual content: its grounds (Chapter 8), nature (Chapter 9), and ontological status (Chapter 10). Some brief concluding remarks situate Scotus in the context of what follows him, and give some kind of summary of the interpretative novelties I shall have proposed in the course of the book.

A brief note on method. As I have indicated, Scotus offers no systematic treatment of these issues, and his remarks are scattered far and wide throughout his rather extensive philosophical and theological output. Neither are many of the texts translated from Latin into English. For this reason, I have provided generous translated quotations from Scotus. Had I not done so, the reader would have required, in order to follow the argument properly, knowledge of scholastic Latin, access to a first-rate scholarly library, and (given the sheer physical size of the various Scotus editions) a very large desk. But I have not written the

book in such a way that the reader can simply skip all of the quotations. In cases in which Scotus's meaning is reasonably clear and in which there is nothing obviously controversial, I have tended to provide only cursory comments. In other cases, where the text is complicated, or the reading controversial, I have offered very extensive exegesis. It is easy to complain about what a work does not include. But I have tried to write a rather concise book, and have not wanted to belabour issues that appear to be obvious.

1

Sensation

Scotus is a good Aristotelian, in the sense that he believes that cognition always has an empirical starting point—it requires, in our current embodied state, *perception* of the material world: we have no cognition that does not derive from such perception. I begin with sensation, with a view to tracing Scotus's account following the causal sequence that standard cases of cognition themselves exhibit. That said, it is nevertheless the case that Scotus is not much interested in sensation as such, and he never discusses it systematically. But it is possible to gather components of an account from scattered *loci* in his works, and I do my best in what follows. I begin with a discussion of the object of sensation. In my second section, I give Scotus's account of the mechanisms of sensation. In section 3, I explain why Scotus thought sensible species to be necessary (dealing too with the nature of sense memory and hallucinations). In section 4, I discuss the materiality and intentionality of sensation, including consideration of sensible species and the *species in medio*. Section 5 considers the grounds of the intentionality. In the final section, I discuss some brief hints that Scotus offers as to the nature of phenomenal consciousness: what it *feels* like to be in certain cognitive states, something that Scotus, and indeed the medievals in general, as far as I know, deal with only in the case of sensation.

1. The Object of Perception

As we saw in the Introduction, a standard Aristotelian account of cognition has it that the object of sensation is the particular, and the object of intellectual cognition the universal. In some ways, Scotus disagrees with both of these claims. He holds that both cognitive processes have the same object—namely, the nature apart from any determinate individuating condition. (Thus, as we saw in the Introduction, Scotus identifies the common nature as the *per se* object of the intellect.) And he maintains that both kinds of cognition include a perceptual component—*intuitive cognition*, in Scotus's jargon; and both kinds include some kind of *abstractive*

process, decoupling certain kinds of cognition from the presence of their objects. On the first of these points—the objects of cognition in general—Scotus maintains that haecceities cannot be known by the post-lapsarian human mind.[1] This means, as Peter King has pointed out, that, whether or not we have cognition of particulars, we do not have *de re* cognition of particulars—cognition not just of an individual 'as an individual', but cognition that is necessarily of such-and-such an individual: of an individual 'as the very individual that it is'[2]—whether abstractively or intuitively. Scotus states the matter definitively in a late portion of the *Metaphysics* questions:

> A power that in itself cognizes some object under a certain description will cognize the object in itself, even if everything else is removed. But this is the case neither for the intellect nor for the sense in relation to the singular; therefore [neither the intellect nor the sense cognize the singular in itself]. Proof of the first part of the minor: the most distinct intellection of a singular seems to be of some intention that the intellect cognizes distinctly; but if we posit that precisely, remove any difference of time, and remove any degrees of the intention and any accidents of the intention, it does not seem that the intellect would know how to distinguish or discern [this intention] from any other singular intention of the same species. Therefore [it is not the case that the intellect cognizes the object in itself]. Proof of the second part of the minor by the same [argument]. Let this whiteness be posited to be in the same place as that whiteness, such that this one remains this one, and that one that one (since it is not in virtue of this kind of being [viz. being in a place] that this one is this one). Can it really be the case that the sense discerns that there are numerically two whitenesses in the same place, if they are equally intense? No. And how does the sight discern the diversity between the sun's rays, which are nevertheless (according to some) continually varied?[3]

The idea is that we cannot have *de re* cognition of the singular, since if we could we could distinguish between two otherwise indiscernible instances of a kind—two things the same in 'time', 'degree', 'accidents', and represented by concepts ('intentions') with the same content; or two indiscernible sensory objects occupying the same place. And, Scotus maintains, we cannot—something he attempts to prove here both for intellectual cognition (the 'first part' of the minor premise) and sense perception (the 'second part' of the minor premise). Such instances result in the same concept, and result in the same sensory experiences. So neither the intellect nor the senses can have *de re* cognition of the singular. In this way, Scotus radically

[1] For our failure to cognize haecceities, see e.g. Scotus, *Ord.* 2.3.1.5–6, n. 191 (Vatican, vii. 486); *Ord.* 2.3.2.1, n. 294 (Vatican, vii. 539–40).

[2] Peter King, 'Thinking about Things: Singular Thought in the Middle Ages', in Gyula Klima (ed.), *Intentionality, Cognition, and Mental Representation in Medieval Philosophy* (New York: Fordham University Press, forthcoming), 114.

[3] Scotus, *In metaph.* 7.15, n. 20 (OP iv. 301).

abandons the Aristotelian distinction between intellection and sensation in terms of the universality or particularity of its object.

On this view, the connection between sensation and thought, on the one hand, and object, on the other, is contingent: as it happens, the thought is about such-and-such an object, but were the object to be replaced by a different but indiscernible object, the same thought would be of a different object. Giorgio Pini has argued that Scotus holds something stronger than this: that the direct object of the senses is not the particular at all, but rather the *common nature* (in the particular)—the *replicable* features of a particular. According to Pini, the fact that we cannot cognize the haecceity means that 'the individual differentia is not part of the content of our acts', and, Pini claims, it follows that we know 'by argument, not merely by focusing on the content of our acts', that 'the nature we are grasping is part of an individual'.[4] I suspect, however, that King is right about this. For one thing, Scotus, as we shall see on numerous occasions in what follows, frequently speaks of the particular as the object of sense or of intellectual cognition—and charity perhaps suggests finding an interpretation of the technical discussions appealed to by Pini that is consistent with this. Secondly, an alternative interpretation is readily available. Consider this typical passage, mentioned by Pini:[5]

> For one action of one power there is one object, according to some real unity. But not numerical unity. Therefore there is some other real unity than numerical unity.
>
> Proof of the minor: The power that cognizes the object in this way—that is, insofar as the object is one by this unity—cognizes it insofar as it is distinct from whatever is not one by that unity. But sense does not cognize the object insofar as it is distinct from whatever is not one by that *numerical* unity. This is apparent because no sense distinguishes this ray of the sun as differing from that ray, even though they *are* nevertheless [numerically] diverse because of the motion of the sun. If all the common sensibles—for example, diversity of place and orientation—are disregarded, and if two quanta were posited as existing simultaneously by divine power, and they were entirely similar and equal in whiteness, then vision would not distinguish that there were two white things there. But if it cognized one of them insofar as it is one by *numerical* unity, it would cognize it insofar as it is a *distinct* one by numerical unity.[6]

The context here is an argument in favour of the existence of common natures in some sense distinct (i.e. formally distinct) from the particulars that instantiate them. The aim is to show that the common nature cannot in itself have real unity. The argument is that sensation has an object; but that object cannot be the individual as this individual (the object 'insofar as it is one by [numerical] unity'), since

[4] Giorgio Pini, 'Scotus on the Objects of Cognitive Acts', *Franciscan Studies*, 66 (2008), 306.

[5] Pini, 'Scotus on the Objects of Cognitive Acts', n. 25.

[6] Scotus, *Ord.* 2.3.1.1, nn. 20–1 (Vatican, vii. 399–400; Spade, 61–2); see too Scotus, *In metaph.* 1.6, n. 22 (OP iii. 140–1); *Rep.* 2.11.2, n. 13 (Wadding, xi. 314b); *Rep.* 3.14.un., nn. 9–10 (Wadding, xi. 476a).

then the relevant power would be able to distinguish between two instances of the same kind—and it cannot. Scotus gives two examples: the rays of the sun, continuously flowing out from it but indiscernible from each other; and a hypothetical case in which two otherwise indiscernible extended items occupy the same place. If we cannot distinguish them from each other, then we cannot know them precisely as the individuals they are (precisely 'insofar as [they are] distinct . . . by numerical' difference). Here I do not think that Scotus denies that the individual is cognized. What he denies is that it is in virtue of (cognition of) the haecceity that the individual is cognized: it is not the case that the individual is cognized 'insofar as it is one by [numerical] unity'. Rather, a particular is sensed or cognized in virtue of (and only in virtue of) those features that it has in common with other particulars of the same kind. The argument seems to assume that both of the two indiscernible items are cognized—and not just the common nature.[7]

Elsewhere, Scotus seems to make the point more explicitly:

> No one singular is the first object of the power, but some one thing in many singulars. . . . But although any sensation is only about the singular, nevertheless it is not about it as its first object, but about that one object as it exists in the singular. . . . But it is not about that one object other than under singularity, just as colour cannot be seen other than in quantity.[8]

The 'one object' is the common nature, perceptible only as it exists in the particular: it is not sensed apart from its particularity. And, if we take the analogy of colour and quantity seriously, the passage suggests that the particular too is perceptible—just as quantity is (it is an assumption of Aristotelian theories of sensation that size can be sensed, if not by the eyes then by some other, internal, sense, as I show in Chapter 7). This is not supposed to entail that we have *de re* perception of the singular, of course.

And perhaps the following text is decisive:

> Intuitive cognition, in so far as it is intuitive cognition, is not merely of the singular, but is essentially of the existent nature, as existent, because being belongs to the nature before it exists as this, or as singular, since the essence is of the same kind in all singulars, whereas

[7] Pini appeals too to the following rather obscure passage: 'Whiteness alone is sensed, whatever it is conjoined to. Therefore it is not repugnant for it, as known in this way, to be said of many, just as it is not [repugnant for it to be said of many] as it is understood. Therefore the universal is sensed, just as it is understood': *In metaph.* 7.13, n. 172 (OP iv. 277), quoted by Pini, 'Scotus on the Objects of Cognitive Acts', n. 38. This is, I think, problematic, since it suggests that the *universal* is sensed. Scotus's usual line on the universal is that it is indeed simply the content of an abstract mental concept, and not at all the kind of thing that can be sensed. Scotus unequivocally asserts something like the view King ascribes to him in the case of intellectual cognition too, at *In de an.* 22, n. 34 (OP v. 236–7). But sadly this text, as has often been observed, lacks parallels elsewhere in Scotus's *œuvre*.

[8] Scotus, *In metaph.* 1.6, n. 46 (OP iii. 146–7).

singularity is not of the same kind in all, but different in each singular of the same essence. From this it follows that essence can be known, but not its singularity.[9]

We cognize *not merely* the singular but also the common nature; but just as the common nature does not exist without singularity, so too we do not intuitively cognize the nature, existent and present, without singularity. What we cannot know, of course, is the haecceity—no surprise, given Scotus's assumptions. (I return to the question of intuitive cognition in Chapter 2.)

2. The Mechanisms of Sensation

As I noted in the Introduction, the medievals standardly accept two kinds of mental items: acts, and species or habits. And according to Scotus, sensation involves both such items, with (at least some kinds of) species as a necessary condition for acts. (I defer until section 3 Scotus's defence of this two-fold pattern.) Sensation is standardly a case of *perception* (what Scotus calls 'intuitive cognition'), and has a real extramental object. In terms of mechanism, then, we can consider the causal relation between the object and the species, and the causal relation between the object and the act. Scotus's basic line is that both species and act are effects of the object. But there is an ordering here: the species is an effect that is prior to the act. Scotus's most illuminating discussion of the issue considers the relation between an act of sensation, on the one hand, and any prior species on the other—be they sensible species inherent in the organ, or species *in medio*:

> A visual (*visibilis*) species and [the act of] seeing are ordered effects of the same object (e.g colour), such that the species is naturally generated prior to seeing (as a first act before a second act), and the species *in medio* or in an organ closer [to the object] is generated before one *in medio* or in an organ more distant, just as, universally, a form of the same kind is generated in something closer before [one in] something more distant.[10]

The idea is that the object of sensation (in this case, of seeing) causes a series of ordered effects: one (or more) species, and an act. Species in the medium closer to the object are caused prior to species in the medium further away from the object; and there is a similar ordering in the production of species in the sense organs.

Clearly, then, while the role of the species is not itself strictly speaking causal—they are not causes of the act—this does not mean that there is no kind of dependence relation between the act and the species. The kind of order that Scotus has in mind is one in which the production of one effect necessarily presupposes the production of some

[9] Scotus, *Rep.* 4.45.3, n. 13 (Wadding, xi. 873b).
[10] Scotus, *Ord.* 2.9.1–2, n. 61 (Vatican, viii. 163).

prior effect. In his exhaustive classification of the types of dependence-orderings in the *De primo principio*, Scotus highlights the following case:

> If there are two effects of the same cause, of which one is naturally caused by the cause firstly and more immediately, and the other not [caused at all] unless the more immediate one is already caused, I say that the second is caused later with respect to the same cause, and the more immediate one caused first.[11]

Here we have a non-causal dependence-ordering between two items that are such that each one is totally caused by some other, third, thing, though they are such that the causation of one is necessary for the causation of the other. Elsewhere, Scotus gives an example: 'Quantity is more proximately caused than quality, but it is not a cause [of quality].'[12] The inherence of a bodily quality presupposes (depends on) extension: but it is not *caused* by the body's extension. So the species (and the act) is generated by the object, the species wholly so, and the act partly so (as I show in just a moment).[13] But (since physical objects do not operate at a distance) the act can be generated by the object only if there are prior species, intermediate between the object and the act. The idea is that the species are necessary parts of a causal process without themselves being causes of the effect, or part of a sequence or order of causes. The final couple of lines of the quotation about sight make it clear that the same kind of essential ordering obtains between the *species in medio* and the sensible species: sensible species are generated by the object only if there are *species in medio*, just as (veridical) acts of sensation are generated only if there are both *species in medio* and sensible species.

One might be tempted to think that these various species and the associated act are all the same kind of thing—and thus, for example, that it is the nature of the receptor that determines whether or not the relevant reception of form results in sensation or not. But Scotus insists that, while all sensory species (*in medio*, in the organ) may be of the same kind, the *act* is something altogether different:

> The intuitive cognition which belongs to sight (*visus*) is not of the same kind in the medium as that which is in the organ; and if an action is brought about in the organ different in kind from that which is in the medium, seeing (*visio*) is accidental to sight in so far as [seeing] is an effect of what is visible, since the visible naturally generates both a species and seeing as two ordered effects. Therefore this remote receptor [viz. the organ] receives something of which nothing of the same kind is received in the medium; rather, something of a different kind is received in the medium: and this occurs because [what is received in the medium] is

[11] Scotus, *DPP* 1.10 (ed. Allan B. Wolter, 2nd edn (Chicago, IL: Franciscan Herald Press, 1982), 6).

[12] Scotus, *DPP* 2.36 (p. 28). Recall the penultimate passage in the first section: 'Colour cannot be seen other than in quantity.'

[13] See e.g. Scotus, *Ord.* 1.3.1.4, n. 241 (Vatican, iii. 147).

not the cause of what is received in the end term, but, in relation to the same cause, is like a prior effect to [what is received in the end term].[14]

The 'action brought about in the organ different in kind from that which is in the medium' is just the act of seeing; the rest of the passage reiterates the causal sequence that I have just been discussing: the species *in medio* and the act of seeing are two different kinds of thing, and the species and the act are generated sequentially by the object in the way described. (Puzzlingly, Scotus seems here to talk about the species *in medio* as a kind of intuitive cognition; but this must be a slip, especially when considered in the light of the next passage I quote.)

But why accept this account of the causal relations? One reason is that Scotus does not believe that the inherence of a species in the sense organ is sufficient for sensation. He takes his view against Thomas of Sutton (*c.*1250–after 1315), a more-or-less close follower of Thomas Aquinas. Sutton believes that 'sensing is nothing other than having a sensible species'.[15] One plausible motivation for this kind of view is the Perspectivist view on species that I outlined in the Introduction: perception, and even intellectual or conceptual cognition, simply consists in the reception of species emanated from their objects: occurrent cognitions and sensations amount to the inherence of the relevant species in the right kind of subject—a *cognitive* one. Scotus rejects this view in relation to both intellectual cognition and sensation. But he most emphatically does not reject the basic patterns of the species theory: he simply denies that the inherence of a species (in the presence of an object) could ever be *all* that is required for sensation or cognition.

His objection to Sutton's view is this: if, given the presence of an object, the inherence of a species could be sufficient for such-and-such an occurrent cognition, then what would stop it from being sufficient *in every case*? For example, there are species in the medium (*in medio*) between the physical object and someone sensing that object—but no one would say that the medium—the air (for example)—can see.[16] And, Scotus avers, the fact of the different natures of the recipients is not itself sufficient to explain how some of the recipients are cognitive (an animal's senses) and some (the medium) are not: the species is the same in both cases, and if possession of that species is sufficient for some kind of cognitive act (as Sutton's view might suggest), then the nature of the recipient makes no difference:

If you say that the species *in medio* differs from the species in the eye on account of the diversity of the recipients: this is nothing, because just as whiteness is of the same kind in

[14] Scotus, *Ord.* 2.9.1–2, n. 62 (Vatican, viii. 162–3).

[15] Sutton, *Qu. ord.* 34, ll. 721–2 (ed. Johannes Schneider (Munich: Bayerischen Akademie der Wissenschaften, 1977), 118).

[16] Scotus, *Ord.* 1.3.3.2, n. 471 (Vatican, iii. 283).

a horse and a stone—and for this reason each is formally white according to the same kind of white—so if that quality which is called a species is of the same kind in the eye and in the medium, and if that is of itself formally *seeing*, then *seeing* will be formally in each; and in whatever thing there formally is *seeing*, that thing formally sees.[17]

Here, the idea is that, if the species *in medio* and the sensible species in the eye are the same type of thing, then, if the one is sufficient for sensation (viz. the species in the eye), then the other is too—simply in virtue of their being the kind of thing they are. And, of course, no one would say that the medium *senses* things. (This, then, is how to read the last but one passage quoted.) Scotus's view, of course, is that species are one kind of thing and *acts* another: here he tries to make the further inference that if a species in the eye were sufficient for sensation, then a species in the medium would be too.

It might be thought that the *reductio* from specific sameness (in the medium and in an eye) is not sufficient to refute Sutton's view: surely, Sutton might reply, the difference in the kind of recipient is indeed crucial to the idea that eyes see while air (a medium here) does not? And surely, he might also reply, his view presupposes the kind of formal sameness that is asserted in the Aristotelian theories? But Scotus has more to say on the matter, since in any case, he argues, irrespective of questions of formal sameness, there are clear cases in which species are caused in a cognitive power, and yet in which there is no cognition:

A species is caused in a blind eye, one which is composed just as others are; likewise, [one is caused] in the eye of someone asleep, otherwise he would not be woken up in the presence of some bright visible thing; neither otherwise would he be woken up in the presence of some loud sound, unless [a species] was first in his ear. But there is no vision [or hearing] in these cases.[18]

The eyes of blind people, and of sleeping people, receive species (evidence of the latter: a bright light can wake someone up), even though the person does not consciously see the light; and the ears receive auditory species for like reason.

The same is true, for that matter, of the intellect itself:

[17] Scotus, *Ord.* 1.3.3.2, n. 472 (Vatican, iii. 283). See too Scotus, *In de an.* 12, nn. 16–20 (OP v. 102–3). At one point, Scotus offers the following observation: 'Sense is not disposed to receive the species or form of an object of sense in the same way as prime matter is, and for this reason receives its species without prime matter, that is, without the disposition of matter': Scotus, *In de an.* 5, n. 6 (OP v. 37). The idea is that the kind of recipient certainly does determine whether or not a form is received really or merely in an animal way; in the text I discuss here, his claim is that the non-real or animal reception of form is the same in its various instances (in the air; in the organ of sight; in the intellect), and that the mere animal reception of the form is not sufficient for a cognitive act.

[18] Scotus, *Ord.* 1.3.3.2, n. 473 (Vatican, iii. 283–3).

[There is a case in which] a person speaks to someone distracted by study: someone in whose ear the species of sound is received, but who nevertheless does not hear (that is, does not conceive it distinctly as a sign (*non conciperet illud distincte sub ratione signi*)), and does not have any understanding of what is expressed; rather, the species of sound generates in the memory or imagination merely some persistent species, and [the person] can, when emerging from the distraction, consider the thing of which it was a sign; and in this case the earlier speaking was an occasion for understanding the thing, even though [the person] did not distinctly hear anything through [the earlier speaking].[19]

The intellectual case is relevant in the dialectic here, because the context of Scotus's refutation of Sutton is specifically intellectual cognition—but the same points hold, *mutatis mutandis*, for sensation too. On Scotus's view, in the kind of case he considers (someone intellectually focused on a particular task) there is an inherent species, but no occurrent cognition at all, be it sensory or intellectual: we are aware neither of an act nor of an external object. The relevant activity is entirely *unconscious*. But, of course, there must have been some activity, because we can as often as not recall what we unconsciously encountered.

Now, Scotus's position is that in *no* case is the inherence of a species sufficient for cognition. The argument he presents against Sutton's view seems less than decisive. Sutton holds that a species is sufficient for occurrent cognition only in certain circumstances—namely, in the absence of any block placed on an occurrent cognition. The relevant possible blocks are 'preoccupation, or weakness, or the will',[20] preventing the object from causing an occurrent cognition, and Scotus's objection—that there are clear cases in which the inherence of a species is not sufficient—does not touch Sutton's claim. In fact, Sutton's claim is that the inherence of a species is sufficient only in the absence of any blocks on occurrent cognition, and the kinds of case Scotus considers in the passage just quoted are precisely the kinds of case in which there *are* blocks: sleep, distraction, and so on. So perhaps the arguments that Scotus offers in favour of his view are less than fully persuasive. But still, Sutton owes us more of an account than he offers.

Thus far, I have examined Scotus's views on the production of species and act by the object. But the situation in relation to acts is rather more complex than this, since Scotus holds that, in addition, the sense power must thus far have some kind of causal role in the production of the act (not of the species). The picture would be, in other words, that the object causes the species; the production of the species is a necessary precondition for the production of the acts; and the object and sense power jointly cause the act of sensation:

[19] Scotus, *Ord.* 2.9.1–2, n. 74 (Vatican, viii. 168–9).
[20] Sutton, *Qu. ord.* 15, ll. 676–7 (p. 445).

An act is elicited by the same thing as that by which it is intensified, *Ethics* II:[21] a habit is generated by the same thing as that by which it is increased—namely, by an act. But an act of cognizing is intensified merely by the power, because given that the organ, species, medium and object remain in the same disposition in one act of cognizing as in another, a more intense act of cognizing follows merely from the power bringing itself to bear on the cognition of an object more intensely, and withdrawing itself from other applications.[22]

The argument is that the relevant sense powers must be the partial causes of acts of sensation, since we know that the intensity of an act can be increased by a power; from which we can infer that acts have powers as partial causes. One possible way for an act to be intensified is for the power to focus more closely on a certain object: we see more if we look more carefully, for example; the more experienced wine taster really tastes more than the novice, and does so by increased focus.

3. The Necessity for Species

Scotus believes, then, that the production of sensible species is a necessary condition for the production of acts of sensation. The necessity for species seems clear enough in the case of the relation between the species *in medio* and an act: we need information-conveying intermediaries (in some sense) to get from the object of sensation to the subject of sensation. But why suppose that, in addition to cognitive acts, we need sensible species, *internal* to the sensing subject? One simple reason, the most important one, is this: not all sensation occurs 'on the surface'. Scotus believes, for example, that the organ of sight is the optic nerve: and the relevant information needs to be conveyed through the body to the organ. And the conveying of content is part of what sensible species do—just as the *species in medio* does.

So the mechanisms of perception require sensible species. But Scotus holds that we have a number of sense operations that are not in fact perceptual: particularly, memory and imagination; and we have some dysfunctional sense operations too, such as hallucination. And, Scotus maintains, all of these require species. First of all, he holds that we need sensible species in order to account for sense memory: not in this case our memory specifically of past sensations, but our memory of the *objects* of such sensations. According to Scotus, such memory requires the so-called *internal* senses (which I discuss in Chapter 7). Scotus's account of such senses is not all that well developed, but at one point he describes what he takes to be the relevant mechanism, or part of it, in cases of sense memory. The context is

[21] Aristotle, *Eth. Nic.* 2.1 (1103b21–2); see *Auctoritates Aristotelis (Un florilège médiéval): Étude historique et édition critque*, ed Jacqueline Hamesse (Louvain: Publications universitaires; Paris: Béatrice-Nauwelaerts, 1974), 234.

[22] Scotus, *In de an.* 12, n. 11 (OP v. 100).

an argument in favour of the existence of the so-called common sense, and having given various reasons from Aristotle, Scotus goes on to consider two reasons from Avicenna. The first runs as follows (I examine the second, and the Aristotelian reasons, in Chapter 7):

> 'Nature does not lack in what is necessary';[23] but for perfect animal life there is necessarily required the preservation of sensible species, even in their absence, because otherwise [animals] could not move progressively to a sensible object that is distant and absent. And the apprehension of the absent sensible object by some sensitive power is by the mediation of the species so preserved. But [it is not done] through a particular [sense], because such a thing senses only when the sensible object is present. Therefore the [power that apprehends an absent sensible object] is the common sense, or at least presupposes it, as the imaginative and memorative [powers do].[24]

The idea is that we can recall absent objects, and that to do this we need a way of storing the relevant content—and this way is the sensible species. These cannot be the species that inhere in the external senses, since such species are episodic and (other than in some cases of illusion) dependent on the presence of their objects. So the species must be preserved in some other sense power, and the acts that gain their contents from such species must also inhere in some sense power other than the external senses. Scotus does not here determine just which sense does this, whether it be the common sense, the imagination, or the (sense) memory. But the important thing is that Scotus believes that our ability to recall sense data requires the existence of sensible species.

The point is reinforced if we think of the arguments against the sufficiency of species considered in section 2: we can have unconscious sensory awareness of our environment—since we can sometimes recall things that we were not aware of at the time. And this seems to be an argument not merely in favour of stored sensible species, but of sensible species more generally: we need some kind of mechanism to account for unconscious awareness, and species seem to be the appropriate kind of item.

Secondly, stored species are also necessary for another kind of memory that Scotus posits: our memory of the past *as past*. Scotus believes that, whatever else it does, the sense memory is responsible for remembering past sensations, and the objects of those sensations, as past. Scotus maintains that in this kind of recall the cognizer has the past act as her immediate object and the (sensory) object of that act as her remote object. So we have memory of the past as past by having memory

[23] Aristotle, *De an.* 3.9 (432b22).

[24] Scotus, *In de an.* 9, n. 11 (OP v. 74–5), referring to Avicenna, *De an.* 4.1 (ed. S. van Riet, 2 vols (Louvain: Editions Orientalistes; Leiden: Brill, 1968–72), ii. 2).

of past acts of sensation. Scotus holds that there must be a species impressed by the past sensory act (to make the act relevantly, but of course not really, present to the subject).[25] Scotus spends some time considering just how there could be this kind of sense memory, and raises three objections to the possibility of sense memory of the past as past. In particular, he worries that sense powers cannot have their own past acts as objects, since this requires *introspective* power:

> It is necessary for someone who recollects to perceive his act while it is present. But a sensitive [power] cannot perceive the act of sensing while it is present, at least not universally, for the act of the highest sensitive [power] cannot be perceived by any sense, neither by a lower nor a higher, as is clear; neither by itself, because that power is not reflective (*conversiva*) upon itself or upon its act. And nevertheless there can be recollection of any sensation in us, as we experience. Therefore, generally, that recollection does not belong to any sensitive [power].[26]

Introspecting a sense act requires a power that can introspect such acts. Higher powers, Scotus assumes, cannot be introspected by lower powers. And no sense power can introspect itself, because (Scotus holds, following the *Liber de causis*) the only things able to access themselves as a whole (as it were) must be immaterial: material powers have parts that act, and parts that are acted upon.[27] So there can be no introspective sensory cognition of sense acts, present or past.

Secondly, according to Aristotle, 'Time is the number of motion according to before and after.'[28] So perceiving the passage of time, on this definition, requires the capacity to organize data systematically, grasping things sequentially and in an ordered way. And (so it seems) no sense power can do this.[29] And thirdly, according to Aristotle sense only perceives sensible qualities, and sensations are not themselves sensible qualities (recall Scotus's requirement that the past act—here, the sensation—be the primary object of recollection in this case).[30]

In book IV of the *Reportatio* Scotus seems to accept these objections, and thus seems hesitant to affirm that we have any non-intellectual memory of past acts of sensation.[31] But in the *Ordinatio* he drops this hesitation, and replies to the

[25] Scotus, *Ord.* 4.45.3, n. 93 (Vatican, xiv. 167). On all of these, see my 'Aristotle and Augustine: Two Philosophical Ancestors of Duns Scotus's Cognitive Psychology', in Alessandro Musco (ed.), *Universalità della ragione: Pluralità delle filosofie nel Medioevo. XII Congresso internazionale di filosofia medievale, Palermo, 17–22 settembre 2007*, 3 vols (Palermo: Officina di studi medievali, 2012), i. 47–72 (s. 3).

[26] Scotus, *Ord.* 4.45.3, n. 99 (Vatican, xiv. 168–9); see *Rep.* 4.45.3, n. 5 (Wadding, xi. 871a–b).

[27] Scotus, *Ord.* 4.45.3, n. 97 (Vatican, xiv. 168); see *Liber de causis*, prop. 13 (ed. Adriaan Pattin, *Tijdschrift voor Filosofie*, 28 (1966), 162–3).

[28] Aristotle, *Phys.* 4.11 (219b1–2).

[29] Scotus, *Rep.* 4.45.3, n. 5 (Wadding, xi. 871a); *Ord.* 4.45.3, n. 98 (Vatican, xiv. 168).

[30] Scotus, *Ord.* 4.45.3, n. 100 (Vatican, xiv. 169), referring to Aristotle, *De an.* 3.2 (425b17–20).

[31] I deal with all of this material in detail, including Scotus's vacillations on the question, in my 'Aristotle and Augustine', s. 3.

three objections just given. He maintains, against the first worry, that higher sense powers can recollect the past acts of lower sense powers, such that at the very least the highest sensory power (the common sense—on which see Chapter 7) can recollect the past acts of all other senses, even if not its own acts.[32] On the second argument, Scotus comes to agree with Aristotle that it is possible for the sense powers to perceive the passage of time:

> Aristotle conceded [that sense powers can perceive time], saying that we perceive time by the first sensitive [power: i.e. the common sense], by which we also perceive magnitude. Neither is it an objection that time is successive, because motion is successive and nevertheless motion is of itself sensible, from *De Anima* II;[33] and neither is it an objection that it is said to be a number, because number is of itself sensible, according to the same text.[34]

The idea is that the common sense perceives the passage of time; the sense memory stores past contents and recalls them as past. Both time and motion are successives: extended items that fail to have all their parts at once. The objection that Scotus has in mind is that we cannot perceive things that fail to have all their parts at once—perhaps we can never perceive more than a part of it. But Scotus takes it to be evident that we can sense motion, and thus that being successive is no bar to being sensed—and this, of course, requires sense memory.

And in reply to the third argument, Scotus holds that it is not true that all senses have as their objects merely sensible qualities, and as evidence for this he appeals to aspects of general animal behaviour:

> Although it is probable that the acts of brute animals can be preserved even if we do not posit in them memory properly speaking, but merely an imaginative power cognitive of an object that is past, though not as past, nevertheless the things that we see in their acts can more easily be preserved if we posit memory in [animals].[35]

On this view, then, animals not only know things, and learn them, but have some sense of the passage of time, and some sense of *having learned* something.[36]

So sense memory of past as past is possible, and requires stored sensible species. Thirdly, stored species are necessary for imagination too:

> A particular sense cognizes an object in a way different from that in which the imagination does. For a particular sense has as its object something that is *per se* and existent in itself. The imagination cognizes the same thing as it is present in a species, and this species is of

[32] Scotus, *Ord.* 4.45.3, n. 114 (Vatican, xiv. 173).
[33] Aristotle, *De an.* 2.6 (418a17).
[34] Scotus, *Ord.* 4.45.3, n. 112 (Vatican, xiv. 173).
[35] Scotus, *Ord.* 4.45.3, n. 116 (Vatican, xiv. 174).
[36] The discussion is a little messy, since Scotus seems to deny these claims in *Ord.* 4.45.3, nn. 101–110 (Vatican, xiv. 169–72). Again, on this, see my 'Aristotle and Augustine', s. 3.

the object even though [the object] is not existent or present, such that imaginative cognition (*cognitio phantastica*) is abstractive in relation to a particular sense.[37]

So there is a kind of sense cognition that is non-perceptual, and the phantasm is the relevant habit or species that allows for this kind of cognition. There is nothing surprising about this, since no one holds that imagination requires the presence of its objects, or that it is perceptual. The imagination is such that it can have acts whose contents are fixed by the phantasms:

The phantasm . . . represents with its whole power the object as singular to the imagination (*virtuti phantasticae*), for there is then an actual imagination of that object in the singular.[38]

(As far as I know Scotus says nothing on the causal mechanisms in such cases, but it is easy to imagine that he would think of the imagination and the phantasms as joint causes of such acts. Imagining, after all, seems to be some kind of active process. This would make the causal mechanisms involved in occurrently imagining something exactly parallel to those for sensation, already outlined, and for that matter entirely parallel to those for intellectual cognition too: the power and the object/species are joint causes in all such cases.)

Fourthly, Scotus also uses sensible species to account for certain kinds of hallucination:

Although there is no certitude that I see a white thing external to me, whether in such a subject or at such a distance (because an illusion can be brought about in the medium or in the organ, and in many other ways), nevertheless there is certainty that I see, even if the illusion is in the organ (which would seem maximally to be an illusion: for example, when an act of a kind naturally brought about by a present object is brought about in the organ by something other than an object present), and thus if a power had its action in such a case, there would truly be there that thing which is called vision, whether it is action, or passion, or both.

But if the illusion is brought about not in the organ but in something close to it, which seems to be an organ—just as if the illusion is not brought about in the combination of nerves [which is the organ of sight], but rather the impression of a species of a kind naturally brought about by a white object is brought about in the eye—then in this case sight sees, because such a species, or what is naturally seen in it, is seen, because it has sufficient distance from the organ of sight which is in the combination of these nerves: as is clear from Augustine, *De trinitate* IX, chapter 2:[39] the remnants of things seen remaining in the eye, when the eyes are shut, are seen, and from the Philosopher, *De sensu et sensato*:[40] the fire which is generated from the violent elevation of the eye, and multiplied up to the closed eyelid, is seen. These are real visions, even though not most perfect, because in these cases there are sufficient distances between the species and the principal organ of sight.[41]

[37] Scotus, *Ord.* 2.3.2.2, n. 323 (Vatican, vii. 554).
[38] Scotus, *Ord.* 1.3.3.1, n. 357 (Vatican, iii. 215–16).
[39] Augustine, *De trin.* 11.2.4 (*CCSL* 50, 337).
[40] Aristotle, *De sensu* 2 (437a23–6).
[41] Scotus, *Ord.* 1.3.1.4, n. 239 (Vatican, iii. 145–6).

Scotus here considers two kinds of hallucination. In the first, discussed in the first paragraph, an act is brought about in the relevant organ in the absence of an object. Scotus (oddly) counts this as a case of seeing: though not seeing anything—non-veridical sensation.

In the second, discussed in the second paragraph, the idea is that the hallucination is caused by some internal representation—a sensible species—that functions as an internally accessible object of perception. The examples are various kinds of after-image, which Scotus imagines to be the result of species placed sufficiently far distant from the organ—though still within the whole organism—that they can be seen.

There is no parallel to this in any of the discussion thus far, since it is a feature of Scotus's general species-theory that such species are *not* so accessible, and are not (I assume) to be understood iconically or pictorially: they do not represent by being picture-like. Whether or not it is plausible to suppose that the relevant item is correctly categorized as a sensible species seems to me moot: on the one hand, species are not standardly seen, and do not function as internally accessible objects of sensation; on the other, there seems no reason in principle why they could not so function under certain circumstances, so perhaps parsimony would tend to support Scotus's theory here.

4. The Materiality and Intentionality of Sensation

In my Introduction, I discussed the Aristotelian view that sensation, and cognition more generally, involves the cognizer's somehow taking on the forms of the external objects of such acts. One appeal of this sort of view is that, on the face of it, it provides a way of rejecting idealism. For whether or not we think of the forms in the mind as representational intermediaries, they are nevertheless in some sense the *same* form as the extramental form that is the primary object of cognition.

Of course, this view raises a number of questions. How, for example, is the form supposed to inhere in the cognizer without making the cognizer an instance of the form? And—more importantly—in what sense is it the *same* form in the two cases? I think Scotus accepts the Aristotelian way of talking; but, as we shall see in Chapter 8, the sense of 'sameness' he adopts, at least in the case of intellectual cognition, is highly attenuated: the form is the same merely in the sense of being some kind of likeness or representation of the object. So he probably rejects the Aristotelian model while using its language. But I do not want to assert this flatly, since, while I think Scotus's view is clear enough, it is ultimately not clear to me what sense of 'sameness' is intended by those who adopt theories of the intentional reception of form. (I return to this in Chapter 8.)

Aquinas is a good example of the Aristotelian tradition. He holds that all sensation involves some kind of 'spiritual' change: the spiritual reception of a form in the relevant sense organ. But it is a long-contested issue in Aquinas scholarship whether Aquinas holds that this spiritual change amounts to, or involves, some kind of corporeal or physical change.[42] On the face of it, the two are contrasted:

> There are two kinds of alteration: one natural, and the other spiritual. The natural one obtains in so far as the form of the changer is received according to its natural being in the thing changed; the spiritual one in so far as the form of the changer is received according to spiritual being in the thing changed: as the form of colour in the pupil, which is not made to be coloured by the reception. But for the operation of the sense, there is required a spiritual alteration, through which the form of the sensible object is brought about in the sense; otherwise, if a natural change alone sufficed from sensation, all natural bodies would sense when they are altered.[43]

As Aquinas understands it, natural changes are those in which a form is received such that the recipient is made to be an instance of the relevant kind: reception of (say) redness such that the recipient is made to be red. This is just a standard Aristotelian account of natural change. Spiritual changes are those in which a form is received in such a way that the recipient fails to be made an instance of the relevant kind: the reception of (say) redness in a sense organ does not make that organ red.[44]

The debate in the Aquinas scholarship precisely concerns this second sort of change. Is it supposed to be somehow bodily or not? Aquinas explicitly claims that it is:

> Sensing, and the consequent operations of the sensory soul, manifestly occur along with some alteration of the body—as, in the case of seeing, the pupil is altered through the species of a colour, and the same is evident for the other [senses].[45]

So here a species is received in a bodily organ, and I take it that this reception is physical: it is not, however, *natural*, in the sense just outlined.

Scotus does not have an opinion on the correct interpretation of Aquinas. But he has a very strong opinion on the substantive issue: all sensation involves physical

[42] Robert Pasnau, *Theories of Cognition in the Later Middle Ages* (Cambridge: Cambridge University Press, 1997), 42–7; see the bibliography at p. 42 n. 20. See most recently, Miles Burnyeat, 'Aquinas on the "Spiritual Change" in Perception', in Dominik Perler (ed.), *Ancient and Medieval Theories of Intentionality* (Leiden, and Boston, MA: Brill, 2001), 129–53(denying any material change);Dominik Perler, *Theorien der Intentionalität im Mittelalter* (Frankfurt am Main: Klostermann, 2002), 42–60(affirming a material change).

[43] Aquinas, *ST* 1.78.3 c (I, 379a–b).

[44] The roots of this view, too, of course, are in Aristotle: see *De an.* 2.5 (418a3–4).

[45] Aquinas, *ST* 1.75.2 c; translation from Pasnau, *Theories of Cognition*, 43.

alteration. Unpacking what he says, however, is rather tricky. I begin with a case of the natural/spiritual contrast that clearly owes much to Aquinas's presentation of the issue:

> There is a twofold change with respect to what can be sensed. One is natural, namely, when the sense is changed by the thing sensed according to the same being, or being such-and-such, or according to the same manner of existing as is in the external object. . . . The other is the spiritual change (*immutatio animalis*), according to which [the sense] is changed spiritually or intentionally. . . .[46]

Here, the natural change is identified, as for Aquinas, with a change that makes the patient to be an instance of the relevant kind. The spiritual change, contrariwise, does not make the patient to be an instance of the relevant kind, for just the reason given by Aquinas:

> Every cognitive power elicits its operation through a certain conformity to the object. And an organic power cannot do this other than through the reception, in the organ, of a species of the object. This species is conformed to the object, and also determines the power to cognize this or that object, in so far as diverse species are imprinted on the organ through diverse changes of the organ by the [diverse] objects. But there are in general two kinds of change: one is natural, and the other spiritual (*animalis*). A natural change is one according to which, or through which, a form, like that which is in the agent, is received in a subject (*in patiente*) according to real being, and according to the disposition of matter. But a spiritual change is one according to which a species of the agent object is received in the animal power according to intentional being. This species, thus received, does not denominate the sense; so sight is not said properly to be coloured in the way that a surface is said to be coloured on the grounds that it receives colour really. But sense is not changed merely naturally by its object, because then inanimate things, which are naturally changed in this way, could sense.[47]

The basic idea is the standard Aristotelian one that we have encountered a number of times already: natural changes involve the recipient of the form becoming an instance of it; spiritual or animal ones do not. As Scotus puts it, the species 'does not denominate sense; so sight is not said properly to be coloured'. (Denomination is standardly a logical relation: the predication of a term signifying an accidental form of a term signifying a substance; here Scotus uses the term to talk about the metaphysical relation of instantiation.)

But is this spiritual change supposed to involve any physical or bodily component? Scotus's position is a clear affirmative, as I shall show: but there is a terminological problem that makes it initially hard to work out what he thinks. Scotus's

[46] Scotus, *In de an.* 4, n. 11 (OP v. 30).

[47] Scotus, *In de an.* 6, n. 7 (OP v 44–5).

preferred term for spiritual being is 'intentional' being (as in the passage just quoted), and this is generally contrasted with real being:

> A subject receptive of a form according to real being is not receptive of the same form according to intentional being (*On the Soul* II); for it is necessary for the recipient of sound, or at least what is regularly receptive of the form in this way, to be without sound, for, especially in the case of material recipients, [such a subject] is not receptive of form in another way. Therefore the organ and the subject of the contrary [form] are not receptive of a form according to the same being, because the one receives intentionally, and the other really, and consequently when an agent acts in a subject (according to *On the Soul* II: 'acts of agents are received in a properly disposed subject'),[48] it follows that the agent does not act in the two subjects with the same kind of action.[49]

The idea is that real and intentional reception of form are distinct kinds of reception, and that they must therefore be the results of distinct kinds of action. On the face of it, this looks like strong evidence that intentional reception cannot be physical: after all, according to this passage it is not even *real*.

But this is misleading, and Scotus persistently equivocates on the senses of 'real' and 'intentional' in these kinds of context, and makes them explicit though desultory attempts to disambiguate them. Clearly, there is one kind of 'real' reception of a form: the natural one, according to which the recipient is made to be an instance of the relevant kind. In this sense, sensation as such does not amount to the real reception of a form. But, it turns out, there is another kind of 'real' reception of a form: the reception of something real that has representational content, or that is directed to something else. So that gives us real_{R}—the natural form ('R' for 'real')—and real_{I}—the representational form ('I' for 'intentional'). And these are two distinct real forms, as in my preferred reading of Aquinas. Now, Scotus sometimes talks of the reception of this real thing as an intentional change. But this second form has representational content, so can also be described as intentional—$\text{intentional}_{\text{R}}$, let us say, the same as real_{I}. But, at least in the context of his theory of intellectual cognition, Scotus also uses the term 'intentional' to pick out merely the representational *content* of the real_{I} item, conceptual or merely sensory as the case may be. I label this '$\text{intentional}_{\text{I}}$', and according to Scotus it should in no sense be counted as something over and above the real_{I} item. (I return to this reductionist claim in Chapter 10.)

So overall the real/intentional pairing gets used in two ways: in the first, real_{R} is paired with $\text{intentional}_{\text{R}}$; in the second, real_{I} is paired with $\text{intentional}_{\text{I}}$. The crucial thing to understand in making this disambiguation is that real_{I} and $\text{intentional}_{\text{R}}$

[48] Aristotle, *De an.* 2.2 (414a11–12).

[49] Scotus, *Ord.* 4.12.2.1, n. 234 (Vatican, xii. 366).

are exactly equivalent: whatever is $real_I$ is $intentional_R$, and vice versa. Now for the evidence.

Consider first of all the $real_I$/$intentional_I$ pairing, in the context of Scotus's discussion of intellectual cognition. Scotus clearly has this in mind in the following passage, discussing the production of an occurrent intellectual cognition from an intelligible species:

> Not only is the intellect really affected by a real object, imprinting . . . a real species, but also it is affected, by an intentional passion, by the object as it shines out (*relucet*) in the species. And this second *being affected* is the reception of an intellection, which is from the intelligible as intelligible, shining out in the intelligible species—and this second *being affected* is actually cognizing (*intelligere*).[50]

The form inherent in the intellect is clearly not $real_R$: a thought of such-and-such does not make the intellect to be such-and-such. But it is certainly $real_I$: a real accident that is in some sense a representation of such-and-such. So it has representational content, and when it comes to inhere in the intellect there is an $intentional_I$ change along with the $real_I$ one. The metaphor, *shining*, is borrowed from Henry of Ghent,[51] as indeed are the different senses of 'intentional'. Michael E. Rombeiro comments helpfully on Henry's usage (and I slip into the quotation the distinctions in my terminology formed on the basis of Scotus's two senses of 'intentional'):

> One must be careful with the term 'intentional' in Henry's cognitive theory. An impressed species is an intention, a likeness of a sensible thing; but it is a form with a natural mode of existence [= $intentional_R$]. For this reason, Henry is led to posit another kind of change and another kind of species that bring the sense powers into the act of sensing, beyond the material reception of an impressed species in the sense organ. With this further change, the form comes to exist objectively as in a knower . . . and informs the cognitive act [= $intentional_I$]. Thus, for Henry the key distinction is not between the natural and the intentional [= $real_R$ vs. $intentional_R$] existence of a form, since intentional existence is a type of natural existence, but between the natural and the objective [= $real_I$ vs. $intentional_I$] existence of a form.[52]

[50] Scotus, *Ord.* 1.3.3.1, n. 386 (Vatican, iii. 235). See too Scotus, *Rep.* 1.3.4, n. 118 (Wolter and Bychkov, i. 218): 'The real presence of an object is the real cause of the species, and the object is present in the species. So in its first presence [viz. its real presence] the object is the efficient cause [of the species]. But in its second presence [viz. its intentional presence] the presence of the species is the formal [cause of a cognitive act]. For the species is of such a nature that the object that can be known is in it not as an efficient cause, or really, but by way of shining out.' Scotus makes similar points at *Ord.* 1.3.3.1, nn. 375 and 382 (Vatican, iii. 228, 232–3); *Ord.* 1.36.un., n. 36 (Vatican, vi. 285); and *Rep.* 1.3.4, nn. 104–5 (Wolter and Bychkov, i. 213).

[51] See Henry, *SQ* 58.2 ad 3 (II, fo. 129^{v}D–130^{r}G).

[52] Michael E. Rombeiro, 'Intelligible Species in the Mature Thought of Henry of Ghent', *Journal of the History of Philosophy*, 49 (2011), 192.

Clearly, Scotus is trying to make sense of a distinction he has inherited from Henry.

What about the real$_R$/intentional$_R$ pairing? I take it that this is the pairing involved in the sensation passages quoted, and (so I argue) it is the only pairing relevant in Scotus's account of sensation—thus making Scotus's account very close to the account that I have been ascribing to Aquinas. (And different from Henry's, since Henry claims that the notion of the *merely* intentional$_I$ is applicable even at the level of sensation, as we just saw. In my terminology, the debate about the correct interpretation of Aquinas on sensation wholly turns on whether, in addition to any real$_R$ change, there is a real$_I$ change, or merely an intentional$_I$ change. I have been arguing for the presence of a real$_I$ change, and it is precisely this that Henry denies.)

Scotus draws implicit attention to the distinction between the two pairings when discussing the question of the *species in medio*:

> Every accident, perhaps, can denominate the subject in which it is, if it were an imposed denominative which signified the denomination appropriate to such a form in relation to such a subject. In this way there is no denominative imposed by the species of colour, because denominative imposed by the colours denominate the subject that has colours according to real being. But if it were an imposed denominative, that denominated that the subject has the form according to intentional being not according to real being, then the medium can well be denominated by the word 'white': this is imposed by light, and perhaps more so than other colours.[53]

The passage is a bit knotty, but the basic idea is this. We need to distinguish colours from the *species in medio* that represent them. Colours inhere in objects, and are real (real$_R$: the inherence of—say—whiteness makes an object white). But we can call the medium 'white' if we mean to pick out merely the fact that something intentional$_R$ inheres in it. So this gives us the real$_R$/intentional$_R$ pairing. And Scotus goes on to make it clear that he understands something's being intentional$_R$ to be compatible with its also being real$_I$. According to medieval optics, light is generated from a source and inheres in a medium (for example, air). Scotus understands light to be an inherent *quality* or species. An objector maintains that light has a real effect, and that a species cannot have such an effect, since (as the objector maintains) the existence of the species is merely intentional$_I$. The reply maintains that light (and species) can have real effects because they are indeed real: real$_I$. But they are, of course, also intentional$_R$, because they have a representational function, or, in the case of light, at least some role in directing one thing to another, or in enabling representation:

[53] Scotus, *Ord.* 2.13.un., n. 37 (Vatican, viii. 240–1).

I concede that [light] is a thing, and can have a real effect: it is not, however, a thing such that it cannot be an intention, because it goes along with the notion of it that it is of itself a ground for tending to an object, and this is sufficient for the notion of an intention.[54]

In an interpolation, Scotus makes the disambiguation a little clearer:

The term 'intention' is equivocal: in one way, it means an act of the will; in another a formal ground in a thing (as the intention of a thing from which a genus is taken differs from the intention from which a difference is taken); in a third way it means concept; in a fourth way it means the ground for tending to an object (as a likeness is said to be the ground for tending to that of which it is [a likeness]).[55]

The first two senses are irrelevant: intending something as in willing it; and the *relata* in a formal distinction. The fourth, it seems to me, is real_{I}; the third $\text{intentional}_{\text{I}}$, or at least an instance of what is $\text{intentional}_{\text{I}}$.

How should we use this material to understand the texts on the nature of sensation? It suggests that the most natural reading is to maintain that the real vs spiritual/intentional claims that Scotus makes should be understood as distinguishing between two kinds of *real* change: one real_{R} (the natural or real change in some cases of sensation—for example, feeling heat, in which the organ of touch really becomes hot), and one real_{I} (the spiritual or intentional change: the real reception of a form with representational content). The real_{I} quality has representational content, and as such it is an $\text{intentional}_{\text{R}}$ quality. This, I take it, is highly analogous to the position of Aquinas as I have outlined it, although Scotus has more to say on the question of what it is to be $\text{intentional}_{\text{I}}$. These matters turn out to be rather deep, and I return to them in Chapters 8 and 10.

I have thus far merely asserted that Scotus believes that sensible species—and indeed species *in medio*—are (real_{I}) qualities. But he claims as much explicitly in a passage already quoted in section 2: 'that quality which is called a species'. On a related issue, Scotus does not, as far as I know, explicitly discuss the question of the ontological status of acts of sensation. But I find it hard to believe that he would not classify them as qualities: they are, after all *acts* (operations), and Scotus's account of such items categorizes them all as qualities, as we shall see in Chapter 5.

So species are real qualities. As the texts I have been discussing presuppose, they are representations too: $\text{intentional}_{\text{R}}$. Here is some explicit evidence. First, Scotus generally uses his (and Henry's) language of 'shining out' to describe the conceptual content of the phantasm: 'sensible objects . . . shine out in the phantasms'.[56] But

[54] Scotus, *Ord.* 2.13.un., n. 39 (Vatican, viii. 241).

[55] Scotus, *Ord.* 2.13.un., *textus interpolatus* (Vatican, viii. 231, ll. 9*–13*) = *Rep.* 2.13.un., n. 4 (Wadding, xi. 334).

[56] Scotus, *Ord.* 3.15.un., n. 37 (Vatican, ix. 492); see too e.g. *Ord.* 1.3.1.1–2, n. 90 (Vatican, iii. 59).

the point of this kind of language is to highlight the *representational* capacity of the phantasm, and Scotus is clear that sensible species are representations of their objects in the same way:

> Any species of white—even in a blind eye—even though it does not represent white as perfectly as it can be represented, nevertheless perfectly represents it in relation to the subsequent act, because it represents it as perfectly as is required for having such a species in relation to an object.[57]

A sensible species, while not a perfect representation of its object, is nevertheless a representation sufficiently good for the purposes of sensation.

The species *in medio* is a representation in just this way too. Arguing against Henry's claim that the phantasm could represent both the particular and the universal, provided that the phantasm is 'illuminated' in different ways, Scotus reasons as follows:

> This representation is something in itself naturally prior to its representing under this sort of light or that sort of light. For it is because it is this sort of species that the light in which it represents one thing and not another is appropriate to it; otherwise it would be posited, or could be posited, that the same species could represent both colour and sound: the species in vibrating air represents sound, and in illuminated air represents colour, and thus there could be shown to be any distinction of representations.[58]

Clearly, Scotus wants to reject the view that the same species *in medio* could represent both colour and sound. But—importantly for my purposes—he here presupposes that a species *in medio* is a representation. This is no surprise, given Scotus's claim that spirituality and intentionality are features of species *in medio*. But, incidentally, it makes it clear that the notion of representation is wider than that of cognition.

It follows from all this, too, that sensible species and acts are *material* items. In fact, we saw as much from the crucial disambiguation of 'immaterial' set out in the Introduction. Sensible species and acts are organic and thus extended. Thus, Scotus has no objection to informational content being conveyed by extended items (the species *in medio* as well as the sensible species).

5. Externalism and the Specification of Sensation Types

Sensations have intentionality, according to this account—they are directed to things in the world. One question that immediately arises is this. Are acts directed

[57] Scotus, *Ord.* 2.3.2.2, n. 334 (Vatican, vii. 562).
[58] Scotus, *Ord.* 1.3.3.1, n. 354 (Vatican, iii. 213).

to different objects acts of the same kind or not? It is evident enough, I would think, that the acts of the five external senses are different in kind from each other (and perhaps this is so obvious that Scotus does not discuss the issue). But what about different acts of sight: acts directed, let us say, respectively to a white object and to a black object? Here, Scotus takes a very distinct externalist line: the acts are both the same in nature. Their intentional or informational content has nothing to do with their internal structure, since they have the same internal structure. The contents are fixed simply by the different objects that they might be related to:

> If I were to have a persistent act of vision such that I now see whiteness and then, when the white thing is removed, I would see something else as black, without any change in the act of vision.[59]

Here, the acts are not merely *specifically* the same; they are *numerically* the same. So even though acts of sensation may be by their nature intentional, their being such that they have this or that object is wholly a matter of the features external to the act. Scotus does not argue for this; he presumably thinks that it is obvious. He uses the discussion to illustrate the externalist theory of content that he believes to hold in the case of God's intuitive knowledge of contingent states of affairs, something I return to briefly at the end of Chapter 8. His position on human intellectual intuitive cognition is very different from this, as we shall also see in Chapter 8, since different content in such a case depends not merely on the nature of the object, but on the internal structure of the act itself.

I would guess, too, that Scotus would say something very different about sensible species and phantasms, since these can be had independently of the presence, or even existence, of any external object—as in the cases of memory and hallucination. But it is hard to be sure, since as far as I know Scotus never discusses the issue.

6. Phenomenal Consciousness

In Chapter 2, I discuss Scotus's views on what are sometimes today labelled access and introspective consciousness. Modern theorists often identify a third kind of consciousness: phenomenal consciousness, the *feel* of an experience. Experience here can be quite a broad category: not just emotions (happiness, sadness, fear, and so on) and bodily sensations (pain, an itch), but the whole range of subjectivity: any subjective state of which we might ask 'What is it like?', or 'What does it feel like?'

[59] Scotus, *Lect.* 1.39.1–5, n. 65 (Vatican, xvii. 501); see too *Ord.* 1.39.1-5 (Vatican, vi. 429, ll. 6–14). I am grateful to Martin Tweedale for reminding me (in conversation) of the existence of this passage, and of a parallel one that I discuss in Ch. 8, s. 5.

The medievals have no general account of phenomenal consciousness in this broad sense.[60] But they do think about it in two related contexts: bodily emotions and the feeling of bodily sensations. I do not want to say much about it here. Scotus holds that both are affective, not cognitive states: they are *just* feelings. But the feelings follow on from certain sensory acts, and these acts are in turn grounded on the inherence of a sensible species in the relevant organ. Here is one example, from the discussion of the excruciating everlasting pain suffered by the bodies of the damned:

> Fire, present to a corruptible body animated by a sensitive soul, can have two actions on that body, namely, a real one, which is univocal, and an intentional one, which is equivocal with respect to fire, because a sensible species is not simply of the same kind as the object.[61]

The real, univocal, effect, is simply the heating of the body (so real_R). I take it that the species—presumably received first of all in the surface of the damned body—is somehow responsible not only for conveying in some sense the relevant content (a perception of something hot) but also acts in some way as the cognitive basis for the appetitive response: as Scotus puts it, the object 'moves [a power] intentionally . . . and thus, given the sensation, causes pleasure [or pain] in the sense appetite'.[62]

So there is a cognitive component here: the sensation is necessary for the feeling. But the feeling is not *reducible* to the representational dimension, since it is

[60] I believe that the medievals do not think the feeling-aspect of conscious experience to be of much interest: they thus differ starkly from an important modern view, according to which the phenomenology of conscious experience is the *only* interesting aspect of consciousness: see David J. Chalmers, 'Facing Up to the Problem of Consciousness', *Journal of Consciousness Studies*, 2 (1995), 201: 'The really hard problem of consciousness is the problem of *experience*. When we think and perceive, there is a whir of information-processing, but there is also a subjective aspect. . . *something it is like* to be a conscious organism. . . . If any problem qualifies as *the* problem of consciousness, it is this one.' The medievals show some interest in the *subjective* or first-person aspects of phenomenal consciousness, but the issue does not really arise as a serious philosophical topic until Walter Chatton (1285/90–1343/4): seeMikko Yrjönsuuri, 'The Structure of Self-Consciousness: A Fourteenth-Century Debate', in Sara Heinämaa, Vili Läjeteenmäki, and Pauliina Remes (eds), *Consciousness: From Perception to Reflection in the History of Philosophy* (Dordrecht: Springer, 2010), 141–52, and, in more detail,Susan Brower-Toland, 'Medieval Approaches to Consciousness: Ockham and Chatton', *Philosopher's Imprint*, 12 (2012). I briefly discuss Scotus's views on this, such as they were, in Ch. 2. Peter King has argued that, in any case, it is not legitimate to look for an explanation of phenomenal consciousness in the medieval texts: see his'Why isn't the Mind–Body Problem Medieval?', in Henrik Lagerlund (ed.), *Forming the Mind: Essays on the Internal Senses and the Mind/Body Problem from Avicenna to the Medical Enlightenment* (Dordrecht: Springer, 2007), 187–205. (I am grateful to a referee for OUP for pointing this out to me.) But it seems to me that medieval philosophers did indeed have some account of phenomenal consciousness, even if the problems attaching to it did not seem particularly pressing to them—as I try to show here for Scotus.

[61] Scotus, *Ord.* 4.44.2.2, n. 125 (Vatican, xiv. 126). On all of this, see too Dominik Perler, 'Duns Scotus über Schmerz und Traurigkeit', in Ludger Honnefelder and others (eds), *Johannes Duns Scotus 1308–2008: Die philosophischen Perspektiven seines Werkes*, Archa Verbi, Subsidia 5 (Münster: Aschendorff; St Bonaventure, NY: Franciscan Institute, 2010), 443–62.

[62] Scotus, *Ord.* 4.44.2.2, n. 132 (Vatican, xiv. 127–8).

intrinsically something *appetitive*. And the causal chain from the representational to phenomenal is not automatic: the phenomenal and appetitive experiences occur only if we *attend* to the relevant object of sensation. Talking about the sensation presupposed to pleasurable and painful experiences, Scotus notes:

> There is [mere] apprehension when the operation of the sense is imperfect, on account of the distraction of the one who senses, intentionally occupied in the actions of other powers.[63]

The object of apprehension is simply what is sensed—the hot, the visible, and so on[64]—provided that that thing is somehow appropriate or inappropriate to a power's spiritual or intentional receptivity: for example, something beautiful or ugly causing pleasure or pain without necessarily doing any physical harm.[65] And we need to attend to that object in order for the relevant appetitive response to occur. Since Scotus assimilates the phenomenal aspect of this to the appetitive response, the phenomenal component is missing in the absence of the appetitive response: which here Scotus attributes to distraction. Against Henry, Scotus rejects any thought that, in addition to perceiving the object, we need somehow to perceive the object *as harmful* (for example): we cannot sense relations (such as harm), and thus our appetitive response cannot depend on such sensation.[66] (For the rejection of the *vis aestimativa*—the power to sense beyond a thing's categorical properties to its dispositional ones—see Chapter 7.) Scotus says nothing beyond this on the nature of phenomenal consciousness. And it must be admitted that this is not very much. It cannot be generalized to cover, for example, feelings that are neither pleasant nor unpleasant, and so cannot be intended as a general account of phenomenal consciousness.

[63] Scotus, *Ord.* 3.15.un., n. 34 (Vatican, ix. 490).

[64] Scotus, *Ord.* 3.15.un., n. 28 (Vatican, ix. 487).

[65] Scotus, *Ord.* 3.15.un., n. 31 (Vatican, ix. 489). For the point that the object need not (but can) be the kind of thing that causes physical harm, see *Ord.* 4.44.2.2, nn. 128–32 (Vatican, xiv. 127–8).

[66] Scotus, *Ord.* 3.15.un., n. 34 (Vatican, ix. 490–1).

2

Intuitive Cognition

1. Intuitive and Abstractive Cognition, and their Objects

One of the most well-known features of Scotus's theory of cognition is his distinction between intuitive and abstractive intellectual cognition—the former of which I introduced, in a very preliminary kind of way, at the beginning of Chapter 1. Scotus's most extensive account of this runs as follows:

> Speaking of simple apprehension, or of the intellection of a simple object, one [act] can be indifferent in relation to an existent or non-existent object, and also indifferent in relation to an object not really present, just as to one really present. And we often experience this in ourselves, because we understand universals or the quiddities of things equally whether they have real extramental existence (*ex natura rei esse extra*) in some *suppositum* or not; and it is the same for their presence or absence. . . . There is another act of cognizing, which, although we do not experience so evidently in ourselves, is possible. It is precisely of a present object, as present, and of an existent object, as existent. This is proved, because everything that is a perfection of cognition absolutely, and which can pertain to a sensitive cognitive power, can eminently pertain to an intellective cognitive power. But it is a perfection in an act of cognizing, in so far as it is a cognition, to perfectly attain the first thing cognized. But this is not perfectly attained unless it is attained in itself, and not merely in some diminished likeness, derived from [the object]. But a sense power has this perfection in its cognition, because it can attain its object in itself, as existent and as present in real existence, not merely attaining it in a diminished way, in some kind of diminished perfection. Therefore this perfection pertains to an intellective [power] in its cognizing. But it could not pertain to it unless it cognized an existent thing, as present in its proper existence.[1]

Simple objects are particulars or kinds, and the content of the apprehension of any such object is the sort of thing that is not expressed propositionally—it is, as we might say, a simple intension. Here, the idea is that intuitive and abstractive cognition have the same object—I assume, the common nature, setting aside the

[1] Scotus, *Quod.* 6, nn. 7–8 (Wadding, xii. 145).

possibility of singular cognition, *de re* or not—and we can have cognition of this object 'as existent and present', or not so. The former case is intuitive cognition, the latter abstractive.

Scotus takes it as evident that we have abstractive cognition, since 'we experience in ourselves . . . [that] we understand universals or the quiddities of things equally whether they have extramental existence in some *suppositum* or not': a *suppositum* here is just a particular substance. Indirect access is through something with 'diminished' existence: on which see Chapter 10. Abstractive cognition is mediated via other mental entities: intelligible species, which somehow have the relevant intentional content. Scotus does not believe that we can likewise 'evidently' experience intuitive cognition in ourselves. But we can argue in favour of it, on the grounds that having real access to an object is a perfection; since a less perfect power—a sense—evidently does have such access to its objects, it follows that the intellectual power does too.

As Scotus presents the intuitive/abstractive distinction, it has to do with the presence of the object: in intuitive cognition the object is somehow really accessible—it is 'present in its proper existence'; abstractive cognition is indifferent to the presence and/or existence of the object. Given that existence is a necessary condition for real presence, it follows that intuitive cognition necessarily has the existent as its object. And it follows that an abstractive cognition may or may not have an object, depending not on the presence of the object (obviously, since this is the mark of intuitive cognition), but on its *existence*. And the adverbial qualifiers, *as* present, or *as* existent, give us modes of the relation between an object and the cognitive act: the object's presence and existence are intrinsic to intuitive cognitions, but not to abstractive ones.[2] Scotus captures the indifference involved in abstractive cognition by talking of the object not really present, but present 'in some kind of diminished perfection'—present, in other words, in some kind of mental representation. (I return to the question of diminished existence in Chapter 10: suffice

[2] On intuitive cognition in Scotus, see Sebastian J. Day, *Intuitive Cognition: A Key to the Significance of the Later Scholastics* (St Bonaventure, NY: Franciscan Institute, 1947), 39–139; Camille Bérubé, *La Connaissance de l'individuel au moyen âge* (Montreal: Presses de l'université de Montréal; Paris: Presses universitaires de France, 1964), 176–224;Allan B. Wolter, *The Philosophical Theology of John Duns Scotus*, ed. Marilyn McCord Adams (Ithaca, NY, and London: Cornell University Press, 1990), 98–122;Allan B. Wolter, 'Memory and Intuition: A Focal Debate in Fourteenth Century Cognitive Psychology', *Franciscan Studies*, 53 (1993), 175–230; Robert Pasnau, 'Cognition', in Thomas Williams (ed.), *The Cambridge Companion to Duns Scotus* (Cambridge: Cambridge University Press, 2003), 296–300;Michal Chabada, *Cognitio intuitiva et abstractiva: Die ontologischen Implikationen der Erkenntnislehre des Johannes Duns Scotus mit Gegenüberstellung zu Aristoteles und I. Kant* (Mönchengladbach: B. Kühlen, 2005), 64–100. On the notion of presence, see Joël Biard, 'Intention and Presence: The Notion of *Praesentialitas* in the Fourteenth Century', in S. Heinäma, V. Läjeteenmäki, and P. Remes (eds), *Consciousness: From Perception to Reflection in the History of Philosophy*, Studies in the History of Philosophy of Mind, 4 (Dordrecht: Springer, 2010), 123–40.

it to say for now that diminished existence is something like the intentional existence (intentional$_1$) that I discussed in Chapter 1.)

But a further distinction, between intuitive and abstractive cognition, follows from this, and we need to keep it in mind if we are to understand everything that Scotus says on the matter. I noted that the object of both kinds of cognition is the common nature; and I take it that Scotus would allow too the singular in the case of intuitive cognition, albeit falling short of *de re* cognition of the singular—in line with the final passage quoted in section 1 of Chapter 1. But—crucially—the contents of each kind of act are different from each other. Intuitive intellectual cognition *acquaints* the cognizer with the object, though in such a way that the content of such a cognition can figure in syntactic complexes (to use Scotus's example, 'Peter is sitting down'). The content of an abstractive cognition is a universal, a definition: it is a conceptualization of a common nature, sufficient to give some kind of account of such natures, and sufficient to ground the various general predications that we might want to make about kinds of thing.

2. Intuitive Cognition of Extramental Material Objects

There are a number of debates about the precise nature and scope of intuitive cognition in Scotus's view. Is it possible in our current state to have intuitive cognition of extramental objects? And if it is, should such cognition count as a variety of extrasensory perception (ESP), or does it involve in any sense intermediary species? Here, I argue that Scotus, at least in his later work, comes to accept that intuitive cognition of extramental objects is indeed possible, and that it always requires some kind of (sensible) species.

Now, in early texts Scotus denies the possibility of intuitive cognition of extramental objects. (I discuss these in Chapter 4, since the texts are most relevant to the question of the necessity (or not) of phantasms in intellectual cognition.) But in a late text he unequivocally affirms it. He holds that all propositional knowledge is intellectual, and he seems to suppose that the intellect's forming contingent propositions about singulars (not, I take it, propositions about singulars *de re*) requires that all the relevant mental contents inhere in the intellect, not the senses. And some of these contents will, of necessity, be perceptual:

> The intellect not only cognizes universals (which is true of abstractive intellection, about which the Philosopher speaks, because that alone is scientific), but also intuitively cognizes those things which the sense cognizes (because the more perfect and higher cognitive power in the same thing cognizes those things which the lower power does), and also

cognizes sensations: and each of these is proved by this, that it knows contingently true propositions, and syllogizes from them; but forming propositions and syllogizing is proper to the intellect; the truth of those things is about the objects as intuitively cognized, namely, as existent—the same way in which they are known by the sense.[3]

Here, Scotus aims to show two things, using a version of the perfection argument that we have already encountered: first, that the intellect intuitively cognizes those things that the sense does; secondly, that the intellect cognizes sensations. The second seems to be simply a case of our introspection of our own acts, something I will discuss in section 3. The first of these is cognition of the subjects of contingently true propositions (I take it, the singular, though presumably not *de re*)—the same object as the object of *sense*. Scotus argues that either one of these two kinds of intuitive cognition can be proved by the following two facts: the intellect (and only the intellect) can form contingently true propositions; and the intellect (and only the intellect) can syllogize with contingent propositions.

Elsewhere, Scotus gives an example of the kind of thing he has in mind: the intellect can know that Peter is sitting down (*sessio Petri*), on the basis of which, presumably, it can form the contingent proposition 'Peter is sitting down': where the point of the discussion is that the intellect can form (tensed) propositions about 'the present', propositions whose contents are simply current perceptual experiences.[4] (Again, I take it Scotus is being sloppy: Peter, or some individual or individuals indiscernible from Peter.) There are two cases here: forming propositions and syllogizing. The syllogistic requirement is parasitic on the question of forming propositions, so I focus on this in what follows, trying to see how the requirement for intuitive cognition maps onto the claim that the intellect knows what the sense knows. (I take it, though, that the syllogistic requirement establishes unequivocally that the relevant cognitive acts must inhere in the intellect.)

So Scotus's position is that our ability to know contingent propositions requires intuitive intellectual cognition of particulars. On the basis of this kind of claim about intuitive cognition, Dominik Perler has argued that Ockham—who argues similarly about intuitive cognition—makes a strong distinction between the contents of sense perceptions, on the one hand, and intellectual cognition, on the other, claiming that the former are *non-conceptual*.[5] It is not quite clear to me what it means when philosophers claim that contents are non-conceptual (indeed, there does not seem to be much agreement in the literature on this), but if being

[3] Scotus, *Ord.* 4.45.3, n. 137 (Vatican, xiv. 181).

[4] Scotus, *Ord.* 3.14.3, n. 112 (Vatican, ix. 468).

[5] See Dominik Perler, 'Seeing and Judging: Ockham and Wodeham on Sensory Cognition', in Simo Knuuttila and Pekka Kärkkäinen (eds), *Theories of Perception in Medieval and Early Modern Philosophy* (n.pl.: Springer, 2008), 154–61.

conceptual requires being able to figure in thought (forming propositions, syllogizing), then Scotus would agree with the view that Perler ascribes to Ockham.

Ockham holds too that intuitive cognition automatically leads to assent or judgement, and so that an intuitive cognition of (for example) Peter, sitting down, automatically leads to *propositional* assent or judgement that Peter is sitting down.[6] In the passages from Scotus just discussed, it is clear that intuitive cognition is a necessary condition for propositional cognition; but nothing suggests that Scotus believes it to be sufficient.

What accounts for the move from the level of the sensory to the level of the conceptual? Scotus does not say much, but it is possible to put together an account from the few isolated things he says. First of all, he insists in one (rather notorious) passage that the activity of the agent intellect is required:

> The sufficient causes of [intuitive cognition] are the object present in its actual existence, and the agent and possible intellects, all of which can work together (*concurrere*). And so, as it seems, it is proved that it is necessary for the thing itself immediately to suffice for an intellectual cognition to be had of it, because the phantasm alone is not sufficient for intuitive cognition of the object, because the phantasm represents the thing whether existent or not, or present or not, and consequently through it [viz. the phantasm] there cannot be had cognition of the thing as existent' as present in its proper existence. But this cognition, which is called intuitive, can be intellective, otherwise the intellect would not be certain of the existence of any object.[7]

(Note the repetition, in the last sentence, of the general defence of the necessity of intuitive cognition for our cognition of the external world.) Since the usual characterization of the agent intellect is as a power for abstracting intelligible species from phantasms (as I shall show in Chapter 3), this has led some commentators to speculate that intuitive cognition requires intelligible species. I will give reasons for supposing that intelligible species are required only in cases of cognition that fall short of intuitive. In fact, Scotus elsewhere characterizes the primary function of the agent intellect as 'transferring from order to order', which Scotus understands to mean causing some kind of cognitive state in an *immaterial* substance—i.e. in the intellect or soul—and deriving this state from something material (for example, a material object, or some sensory representation).[8] And Scotus immediately goes on to claim that a cognitive act could be caused jointly by a phantasm 'and the agent intellect'.[9] Here, then, Scotus endorses the view that it is the agent intellect, not the possible intellect, that is the relevant mental power partially responsible for

[6] Ockham, *Ord.* prol. 1 (OT i. 22).
[7] Scotus, *Ord.* 4.45.2, n. 65 (Vatican, xiv. 157–8).
[8] Scotus, *Ord.* 1.3.3.1, n. 359 (Vatican, iii. 216–17). I return to this very important claim in Ch. 6.
[9] Scotus, *Ord.* 1.3.3.1, n. 359 (Vatican, iii. 217).

the production of an occurrent cognition—a possibility that I discuss in Chapter 7. It is hard to see how the agent intellect could fail to be a partial cause in this case, since it is the only power that directly processes sensory data to produce conceptual content.

In fact, it was not controversial among the medievals to maintain that knowing contingent propositions requires that the relevant concepts inhere in the intellect. Aquinas holds as much, raising the following objection to his view that the intellect directly understands only universals, and basically concedes all that the objection asserts:

> Whoever cognizes a complex, cognizes the extremes of the complex. But our intellect cognizes this complex, 'Socrates is a man', for it belongs to the intellect to form a proposition. Therefore our intellect cognizes the singular that is Socrates.[10]

The reply simply focuses on the mechanisms that allow such cognition:

> Our intellect . . . can cognize the singular indirectly, and through a certain reflection. For, as was said above, even after it has abstracted intelligible species, it cannot actually cognize in accordance with them without converting itself to phantasms, in which it understands the intelligible species, as is said in *On the Soul* III.[11] Thus, therefore, it directly understands the universal itself, through the intelligible species, and indirectly the singulars of which the phantasms are. And in this way it forms this proposition, 'Socrates is a man'.[12]

So Scotus agrees with Aquinas's view that the relevant concept must inhere in the intellect, but he disagrees about the mechanism involved. He does not address Aquinas's position head on, though he does have views on the necessity of the phantasms in occurrent cognition *pro statu isto*, views which I return to in Chapter 4. Aquinas provides no detail, and I think Scotus is right to be dissatisfied.

Scotus's own position, of course, raises questions. The immediate cognition of extramental objects is held by him to rule out any role for certain kinds of species—intelligible species and phantasms—and this is sometimes taken to mean that the presence of any kind of species—including sensible species—is incompatible with intuitive cognition. Perhaps the most helpful way into the topic is to consider some observations by Robert Pasnau:

> the human intellect can in principle have intuitive cognition: . . . our intellects are capable of a kind of intellectual *vision*. (Of course it would not truly be visual, no more than it would be, say, auditory. But the analogy to sight is irresistible.) . . . [T]o know whether a particular dog (or even any dogs) exist right now, I need the senses. Scotus's surprising claim is that in

[10] Aquinas, *ST* 1.86.1 obj. 1 (I, 425a).
[11] Aristotle, *De an.* 3.7 (431b2–9).
[12] Aquinas, *ST* 1.86.1 c (I, 425a–b).

principle the intellect could have such information without the senses. In effect, Scotus is arguing for the theoretical possibility of some form of extrasensory perception.[13]

This, I suspect, is not quite the right way of thinking of the issue. As Pasnau worries a little later in his account:

> despite [Scotus's] claim that intuitive cognition is direct and unmediated by species, he shows no signs of eliminating sensible species from intuitive sensory cognition. (Does he perhaps think that only certain kinds of species are problematic?)[14]

The answer to the parenthetical question is 'Yes', and understanding this shows why Pasnau's ESP interpretation is probably not correct, for the kinds of species that Scotus wants to reject in the intuitive cognition of extramental material objects (given that he believes it to be possible) are merely those that are not required for *perceptual* cognition: namely, phantasms and intelligible species. As far as I can see, he shows no sign of wanting to eliminate sensible species—and certainly no sign of wanting to eliminate sensory *acts* (something I return to in a moment). And this is understandable. As we saw in Chapter 1, Scotus holds that the presence of sensible species and species *in medio* are necessary conditions for sensation, since he holds that objects cannot act at distance, and can think of no other way of explaining the possibility of intuitive sensory cognition than by appealing to species. In other words, intuitive sensory cognition requires species—suggesting that there is no incompatibility between intuitive cognition and certain kinds of species. What would be incompatible with sensory perception would be the presence of a species in the absence of an object—the presence, in other words, of a phantasm as a part of the mechanism of intuitive cognition. Having sensible species as intermediaries is presupposed for sensitive intuitive cognition, and Scotus never suggests that he does not think of embodied intuitive intellectual cognition of extramental material objects in just the same way: namely, as requiring sensible species. On the contrary, what he says about this kind of intuitive intellectual cognition seems to require it. What this latter kind of cognition clearly cannot require is the presence of an intelligible species in the process, since, like a phantasm, such a species is abstractive.[15] The crucial feature of intuitive cognition is that the object

[13] Pasnau, 'Cognition', 297. This is the position taken by Day, *Intuitive Cognition*, 104–11, though he does not phrase the issue in quite this way. I agree with Day that Scotus affirms the possibility of intuitive cognition of extramental items *pro statu isto*: I return to his account of the mechanism once I have given my own view on the matter.

[14] Pasnau, 'Cognition', 300.

[15] For the incompatibility of intuitive cognition with intelligible species, see e.g. Scotus, *Ord.* 4.45.2, n. 65 (Vatican, xiv. 158), and my discussion in Ch. 4. At *In metaph.* 2.2–3, n. 80 (OP iii. 224), Scotus restricts the sense of 'species' to phantasm: he does not mean to deny that sensation involves sensible species.

is cognized *as present*: and, as I have just argued, sensory cognition of present objects does not take place without (sensible) species. The argument in favour of ESP is ultimately an argument from silence: Scotus maintains that intuitive cognition requires the presence of the object, and phantasms and intelligible species are required in cases in which the object is not present. But this has no bearing on the causal mechanisms required by an embodied cognizer for cognition of extramental material objects.

If this is the correct reading, then it clearly raises a further question: does intuitive intellectual cognition of extramental material objects require, in addition to sensible species, an *act* of sensation, as I have just been assuming? The first text quoted in this section is critical. Scotus suggests that the intellect 'intuitively cognizes those things which the sense cognizes'—which suggests that intuitive intellectual cognition requires sense cognition. Now, Scotus goes on to claim too that the intellect 'also cognizes sensations'. I take it that this is a possibility distinct from merely cognizing those things which the sense cognizes: it is not supposed to provide a mechanism to explain the intuitive cognition of extramental particulars (contrary to some interpreters whose views I consider in a moment). So what mechanism might Scotus propose? He does not say, but it seems to me that there is every reason to suspect that he would want to maintain some kind of mechanism akin to sensation itself: as just noted, the various species involved in sensation are necessary conditions for sensation, albeit that both the relevant species and sensation itself are caused by the object; likewise, we might think, the various sensible species and acts of sensation are necessary conditions for intuitive intellectual cognition, but the cognition itself is caused jointly by the object and the intellect. (I consider in Chapter 6 a series of texts that defend this joint causality in the case of acts of intellectual intuition.)

As I have presented the matter thus far, Scotus comes, late in his life, to accept the possibility of intuitive cognition of extramental objects. But this developmental hypothesis has been an issue of some controversy in the literature, and I should spend some time considering the options that have been proposed, and indicating which ones I agree with and which ones I disagree with, and why: thereby positioning my interpretation relative to rival ones. I start with the statement of an extreme view. Pasnau claims that Scotus's considered opinion in fact does not involve affirming the possibility of intuitive cognition of extramental objects *pro statu isto*. His reason is that in the *Quodlibet* Scotus only ever discusses intuitive cognition conditionally—if there were such cognition, it would function in such-and-such a way—and, according to Pasnau, the *Quodlibet* represents the latest discussion of the issue in Scotus.[16] Now, it is certainly true that we know the *Quodlibet* to be late,

[16] Pasnau, 'Cognition', 299.

and we do not know its date relative to the relevant parts of *Ordinatio* IV, not least because we do not have a firm grasp on the date of *Ordinatio* IV. I have argued that *Ordinatio* IV is late, close to, or perhaps as late as, the *Quodlibet*, though we do not know exactly when it was composed. Allan B. Wolter puts the matter well:

> The questions in distinction 45 of this book we rank with questions six and thirteen of the *Quodlibet* as the most mature expressions of his thought on intuitive cognition.[17]

On this question, *Ordinatio* IV is more decisive than the *Quodlibet*—perhaps suggesting that this part of the *Ordinatio*, near the end of book IV, is later even than the *Quodlibet*. Even if it is not, the purely conditional nature of the *Quodlibet* discussion should not bear too much weight, especially given that Scotus discusses intuitive cognition very extensively in the relevant parts of the *Quodlibet*. (Why make it so central to cognitive theory if he really does not think it possible in fact?) At the opposite extreme, Sebastian Day holds not only that Scotus affirms intuitive cognition, but also that he denies that it can involve species.[18] Unfortunately, Day does not make it clear whether his talk of species is restricted to intelligible species, or whether he intends to exclude all species. If the latter, then, of course, I disagree with him. If the former, then the position he defends is the position I defend. Another view is that what secures intuitive cognition of extramental objects is our being able (directly) to intuit our sensations (our sense *acts*), and these acts themselves directly intuit extramental objects. We can find this reading in John Marenbon's account,[19] and I think Allan B. Wolter wants to suggest something similar too.[20] As we saw, Scotus clearly maintains that it is possible for the intellect intuitively to cognize sensations. But I do not think that he maintains that this is the mechanism by means of which we cognize extramental objects. If he did, he would have to concede that we were necessarily consciously aware of the relevant sensations. And this seems contrary to his claims about the distinction between (in our terminology) access consciousness and introspective consciousness discussed in section 4, according to which we can have acts of whose objects we are aware without being aware of the acts themselves. I see no evidence that Scotus would want to deny that sensation is necessary for intuitive cognition; I merely deny that intuitive intellectual cognition requires our having the sensation as its immediate object.[21] Camille Bérubé affirms the possibility of

[17] Wolter, *Philosophical Theology*, 103. [18] Day, *Intuitive Cognition*, 108–11.

[19] John Marenbon, *Later Medieval Philosophy (1150–1350): An Introduction* (London and New York: Routledge & Kegan Paul, 1987), 168–9.

[20] Wolter, *Philosophical Theology*, 120. The proposal was earlier made by H. Klug: see the discussion in Bérubé, *La Connaissance de l'individuel*, 201.

[21] One consideration against this: if intuitive cognition depends on sensory acts, Scotus's account of sensory illusion—according to which we can have an act of sensation even in cases where the object is

intuitive cognition of extramental objects via the senses. He insists that sensation (with its various species) is in some sense a *causal* intermediary, but insists that, nevertheless, this cognition is direct: the act of sensation is not itself the object of intuition in such cases, and intuitive cognition gives information about objects *as present*.[22] Bérubé seems to me to be exactly right.

3. Introspection and the Objects of Self-Knowledge

Questions of self-knowledge occupy a small but significant place in medieval discussions of the psychology of cognition.[23] Aquinas, for example, holds that we can cognize an occurrent act of cognition, and cognize too that it is ours:[24]

> Socrates or Plato perceives himself to have an intellective soul from the fact that he perceives himself to cognize.[25] . . . That which is first cognized by the human intellect is [the nature of a material thing]. . . . But the act by which the object is cognized is cognized secondarily: and through this act the intellect itself is cognized, the perfection of which is this act of cognition.[26]

There are a couple of things to note here. One is that the acts are distinct from each other. Aquinas contrasts the case of angelic self-knowledge: since (according to Aquinas) angelic cognitive acts have the angel's perfected essence as their proper object, and since these cognitive acts are themselves what perfects the angelic essence, it follows that the act cognizes itself—cognizing the perfected essence involves cognizing too the perfecting cognitive act. An angel is always fully aware of itself and its activity, and no further, reflex, act is required.[27] A second is that Aquinas is clear about indexicality: cognition of the relevant acts somehow brings with it a first-person perspective: we know that the act is ours. The idea seems to be that a person perceives himself to understand (*se intelligere*):[28] he perceives the accidental whole that is himself understanding (rather than, say, perceiving

absent—would introduce a kind of defeasibility into our intellectual intuitive cognition of extramental objects that he seems to want to avoid. But he does not consider this objection, and in any case, as should be evident, the discussion in Scotus is far from decisive in many ways.

[22] Bérubé, *La Connaissance de l'individuel*, 201.

[23] For an extended treatment, see François-Xavier Putallaz, *La Connaissance de soi au XIIIe siècle de Matthieu d'Aquasparta à Thierry de Freiberg* (Paris: J. Vrin, 1991).

[24] For Aquinas on self-knowledge, see most recentlyTherese Scarpelli Cory, *Aquinas on Human Self-Knowledge* (Cambridge: Cambridge University Press, 2013).

[25] Aquinas, *ST* 1.87.1 c (I, 429a–b). [26] Aquinas, *ST* 1.87.3 c (I, 431a).

[27] Aquinas, *ST* 1.87.3 c (I, 431a). In this respect, Aquinas's view on angelic self-knowledge bears some resemblance to the theory of self-knowledge later developed by Chatton: on which, see Brower-Toland, 'Medieval Approaches to Consciousness'.

[28] I am grateful to Therese Scarpelli Cory for this observation about Aquinas, shared with me in conversation.

himself, and separately perceiving his act).[29] Indexicality here seems to be primitive. (The contrast is with angelic self-knowledge, in which case Aquinas is able to provide an explanation of indexicality in terms of the act's self-perception. God might be able to cognize the angel, but he cannot intuit the relevant angelic act in the way that an angel does, because the act cognizes itself, and God's act, non-inherent in the angel, could not do that on the rather elegant scenario that Aquinas proposes.)

Thirdly, Aquinas does not say whether human beings could fail to have *any* such reflex acts, at least in standard cases where the act cognized has an extra-mental thing as its object. Aquinas clearly holds that we *could* fail to cognize the reflex act: as he notes, there is a potential infinite regress of reflex cognitions, and while he does not object to this possibility, it is clearly implausible to suppose that human cognitive functioning consists simply in endless reflection. So Aquinas must be committed to the view that, in cases where there is no infinite regress (i.e. I take it, all standard cases), at least one reflex act factually fails to be cognized (i.e. the top-most one in any given sequence).[30] Finally, although Aquinas does not have the terminology, it looks as though this is a case of what Scotus would label 'intuitive cognition'. And it is clear too that in this case the object of intellectual cognition is something *singular*: admittedly in opposition to Aquinas's standard account of intellectual cognition (which has the universal as its object).

Scotus agrees with much of this, though he is much more explicit about the possibilities of failing to introspect.[31] He develops an account of different sorts of what we (though not he) would label consciousness, and this is the subject of the rest of this section and all of the next. First the general framework, much as in Aquinas, first set out in a very late text:

> We experience that we cognize that act by which we cognize these things [viz. the universal, being, relations between objects that cannot be sensed, the distinction between sensory and non-sensory objects, and second intentions], and do so inasmuch as this act is in us: which is by a reflexive act directed to the direct act, and that receives it [viz. the direct act]. . . . By a certain sense (*sensu*), that is, by interior perception (*perceptione interiori*), we experience these acts in ourselves.[32]

[29] I assume that *se intelligere* is not a state of affairs, since the 13th-century scholastics do not have such; hence, my claim that what is perceived is an accidental whole, *himself-understanding*. As we shall see, Scotus's account is slightly different.

[30] See Aquinas, *ST* 1.87.3 ad 2 (I, 431a–b).

[31] Though note that, like Aquinas, he is not troubled by the possibility of an infinite regress of reflex cognitions: see *Quod.* 14, n. 26 (Wadding, xii. 406): 'the fact that an infinite regress seems to follow is not a difficulty'.

[32] Scotus, *Ord.* 4.43.2, nn. 79, 83 (Vatican, xiv. 23). See too e.g. *Quod.* 14, n. 25 (Wadding, xii. 405).

It is not clear to me why Scotus holds that the reflex act is 'receptive' of the direct act: we might expect the intellect itself to be receptive of the act. Perhaps the suggestion is that the reflex act is an additional act that includes the first (as one complex act), such that the reflex act makes the direct act conscious. But perhaps this is to read too much into a passage that is at least to be taken to entail that Scotus believes consciousness to involve some distinct second-order cognition. Although Scotus is here talking about direct acts that have other concepts as their objects, it is clear (from a passage that I quote in a moment) that he holds the same view about acts that have extramental objects. Scotus too is explicit about indexicality: 'we experience these acts *in ourselves*'—we experience that they are our acts, or we experience them as ours.

I commented that Aquinas's theory does not seem to provide an account of how indexicality is secured. One way would be to claim that the soul has an immediate intuitive cognition of itself—its own unique first-person perspective, independent, as it were, of any prior conscious act. Scotus's views on this matter shift. In his early treatments of the issue, Scotus denies any such possibility in this life: the soul's cognition of itself is inferential, or at least indirect:

> I concede that there is not now had a cognition of the soul, or of any of its powers, that is so distinct from it that it could be cognized that some such intelligible object corresponds to it. But from the act which we experience we infer that both the power and the nature to which the act belongs are directed to it [viz. the object] as the object that we perceive to be attained by the act, such that we do not infer the object of the power from the cognition of the power in itself, but from the cognition of the act which we experience.[33]

The idea here is that we perceive the act, from which we infer that the soul is such that it can have acts of such-and-such a kind—namely, cognitive acts.

And, in his earlier discussions, Scotus is clear as to the reason for this limitation. He makes his point in reply to the following objection, to the effect that not even angels can have immediate self-knowledge:

> [If an angel can know its own essence, then] this can only be because its essence is intelligible and present to its intellect. But our soul is intelligible and actually present to itself, according to Augustine in many places; therefore it is the basis for cognizing itself in relation to itself. But this is against Aristotle, *On the Soul* III.[34]

Scotus's reply accepts the Aristotelian position, against Augustine, for the following reason:

[33] Scotus, *Ord.* prol.1.un., n. 38 (Vatican, i. 21–2); see too *Ord.* prol.1.un., n. 28 (Vatican, i. 17).

[34] Scotus, *Ord.* 2.3.2.1, n. 256 (Vatican, vii. 517–18), referring to Aristotle, *De an.* 3.4 (429a5–10, 21–4, 26–9). For Augustine, see my 'Aristotle and Augustine', s. 2.

I agree that the soul is, of itself, actually intelligible and present to itself, and from this it would follow that it could understand itself if it were not impeded. . . .[35]

But why does this total first act [viz. the soul being actually intelligible and present to itself] not result in a second act [viz. its actually cognizing itself], since it is of itself a sufficient principle of eliciting the second act? I reply that it is because it is impeded, and that it cannot overcome this impediment, just as however greatly a perfect natural cause is posited, it cannot act if there is a sufficient impediment.

But what is this impediment [in this case]? I reply: our intellect, in the current state, cannot cause or be made to cause [a cognitive act] unless it is first moved by something that can be imagined, or something external that can be sensed.

And why is this? Perhaps on account of sin. . . . Or perhaps the cause is natural, as our nature is instituted in this way (though not absolutely natural)—for example, if the order of powers . . . necessarily requires that whenever the intellect cognizes a universal it is necessary that it actually imagines a singular of the same kind. But this is not from its nature (and neither is this reason entirely natural), but results from sin—and not only from sin, but from the nature of the powers in the current state, whatever Augustine says.[36]

Here any intellectual cognition requires a more or less direct relation to phantasms, and thus to the imagination, a bodily faculty: but (Scotus here claims) no intellectual act can be such that it is not occasioned by an act of imagination, and (presumably) the content of the act of imagination must be relevantly linked to the content of the intellectual act. The soul cannot be *imagined* in the strict sense of being *pictured*. Scotus does not offer an explanatory argument for this view: he seems to take it as a datum of experience, and ascribes it either to the presence of sin or simply to arbitrary divine decision, tying the operation of the soul rather closely to the operation of the body.

Now, the claim that we require phantasms for all intellectual cognition undermines not merely the intuitive cognition of the soul itself, but also its introspective perception of its acts. This suggests that the early Scotus has not really thought through what he wants to say about the introspective cognition of mental acts—since, as a passage just quoted makes clear, the early Scotus accepts the introspective cognition of acts while yet maintaining that all cognition, *pro statu isto*, requires an object that can be represented in a phantasm. It seems to me that Scotus later abandons this claim, and explicitly comes to accept not merely that we can introspect our mental acts, but that we can introspect the soul directly too. Here is some evidence. In book VII of the *Metaphysics* questions, usually thought to post-date book I of the *Ordinatio*, Scotus seems to suggest that we cannot be mistaken about the identity of our own soul (and perhaps its acts):

[35] Scotus, *Ord.* 2.3.2.1, n. 286 (Vatican, vii. 534).
[36] Scotus, *Ord.* 2.3.2.1, nn. 288–90 (Vatican, vii. 535–7).

It is false [that we can have *de re* cognition of a particular] other than merely in the case of a soul cognizing itself, and perhaps [cognizing] its act, from which one might say it differs however similar the things shown to it are.[37]

He says much the same thing in the late *Quodlibet* too: 'Both a soul and an angel . . . can cognize itself with respect to the absolute thing that it itself is.'[38] And the commitment to indexicality is very strong, at least in respect to angelic self-knowledge: '[An angel] cognizes itself as existing, and as existing as the same as itself'.[39]

So there is no doubt that Scotus's thoughts on intuitive cognition are unstable, and that his views shifted as he got older. As we have seen, Scotus comes explicitly to maintain that intuitive cognition of extramental objects (as well as of the soul's acts) is possible in this life. So he must have come to abandon the claim that phantasms are necessary for human cognition, and this necessity is the only reason he explicitly offers for the impossibility of immediate self-knowledge.

Indexicality seems to be a primitive feature of the soul's self-knowledge. If it is not a basic feature of the soul's knowledge of its acts, then we need to be able to introspect the relation between the soul and the act (and thereby know that the act is ours: tied to an item the cognition of which is primitively indexical);[40] or perhaps indexicality is a basic feature both of our acts of self-cognition, and of our reflex acts (acts with other acts as their object). Again, the issue does not seem to have crossed Scotus's mind in his pre-Parisian writings. Consider the following discussion of angelic self-knowledge, in book II of the *Ordinatio*:

Every partial cause which is in a perfect act proper to itself, as such a cause, can cause an effect by a causality proper to itself, and when it is united in its act to another partial cause, it can perfectly cause with that [other cause]; but the essence of an angel is of itself in first act corresponding to an object, because it is of itself actually intelligible, and it is of itself united to the intellect with the conjunction of both partial causes. Therefore it can, with the other united partial cause, immediately have a perfect act of intellection with respect to its essence.[41]

[37] Scotus, *In metaph.* 7.13, n. 158 (OPh iv. 271). The case of the body, incidentally, is very different: as Scotus makes clear in the same passage, someone could certainly be mistaken about that, 'if perhaps God should suddenly annihilate his body and unite another [body] to his soul, while the soul remains in the same uninterrupted cognition'.

[38] Scotus, *Quod.* 14, n. 22 (Wadding, xii. 401).

[39] Scotus, *Quod.* 6, n. 8 (Wadding, xii. 145).

[40] A different scenario from that proposed by Aquinas: we cannot introspect accidental wholes without distinctly introspecting the substance, the accident (the mental act), and the inherence relation between the two.

[41] Scotus, *Ord.* 2.3.2.1, n. 270 (Vatican, vii. 525).

An angelic essence—an angel—is actually intelligible, and is a partial cause, along with the angelic intellect, of an angel's intuitive cognition of itself. There are no further causal conditions required for angelic self-knowledge, and no barriers to such knowledge. So an angel has direct knowledge of its substance. But the account is problematic, since Scotus holds that an angel—from one of the higher choirs, perhaps—can have intuitive cognition of the essence of another—from one of the lower choirs—as well as of itself, and one angel's intuitively cognizing another will clearly lack indexicality, despite on the face of it having the same informational content.[42]

At any rate, whatever the status of Scotus's thinking before Paris, there is no doubt that he becomes convinced of our introspective consciousness both of our own mental acts and of our souls: after all, it must be a first-person perspective that secures *de re* cognition in the passages just quoted. The only other possibility would be knowledge of our own haecceity, and this we cannot know. (A similar account of a first-person perspective can be found in the discussion of hallucination that I considered in Chapter 1. Scotus claims, as we saw, that I can be certain that I see even in a case of illusion. Nothing could give this certainty other than a first-person perspective—it certainly cannot be explained by anything external, since in the case Scotus is considering, there is nothing external.)

4. Two Kinds of Consciousness

As I have noted, Aquinas is not clear that we could fail to introspect our own acts, and thus be aware of them. He does not even make this clear in the trivial case—that of a top-most reflex act—though what he says on the possibility of an infinite reflexive sequence suggests that, in this context, he has not given the matter much thought. It might be possible to suggest an account on his behalf, since he is clearly aware of the possibility of someone's being distracted, as we have already seen. But Scotus considers the issue head on:

> There are simultaneously, a single cognition, in act, that is perfect and perceived, and many, in act, that are imperfect and not perceived: just as, in seeing a point at the centre, perfectly and perceptibly, nevertheless many points are actually seen, but by an act that is imperfect and not perceived.[43]

[42] Scotus, *Ord.* 2.9.1–2, n. 65 (Vatican, viii. 164).

[43] 'Simul est in actu unica cogitatio perfecta et percepta et multae in actu imperfectae et non perceptae, sicut videndo punctum in centro perfecte et percepte, et tamen multa puncta videntur actu, actu tamen imperfecto et impercepto': Scotus, *Rep.* 2.42.1–3 (MS M, fo. 218^{v}). Note that the account in the Wadding text misses the claim that what is at stake is whether or not the *acts* are perceived: see *Rep.* 2.42.4, n. 15 (Wadding, xi. 413a).

So Scotus believes that we can simultaneously have more than one act at once. The contrast is with standard Aristotelian accounts of the issue, which are rather less liberal on what we can cognize at once. Thus Aquinas:

> It is impossible for the same subject to be simultaneously perfected by many forms of the same genus and different species, just as it is impossible that the same body is, in the same respect, coloured by diverse colours, or structured by diverse structures. But all intelligible species are of one genus, since they are perfections of one intellective power (even though the things which they are species of are of diverse genera). Therefore it is impossible for the same intellect to be simultaneously perfected by diverse intelligible species for the purpose of actually understanding diverse things.[44]

The idea is that we cognize by means of dispositional cognitions (intelligible species), such that intelligible species can exist in the soul in two different ways—I quote a relevant passage in my discussion of Aquinas in Chapter 5. According to this view, cognitive acts are accidents all of the same category, and on standard Aristotelian principles no more than one accident of the same category can inhere in a substance at any one time.

Scotus uses his account to explain the contrast between being aware of an act's *object*, and being aware of the *act* itself. We can have acts of whose objects we are aware without being aware of the acts themselves. The visual example Scotus appeals to in the following passage relies on an assumption, made in medieval optics, that the visual field extends from the eye in a conical structure, such that what is most clearly seen is the point exactly perpendicular to the apex of the cone (the 'centre' in this passage). The context makes it clear, I think, that Scotus posits many inherent acts just to account for our ability to control our thoughts, something I return to in Chapter 6. But it is certainly in line with Scotus's account of our conscious awareness of our own cognitive states, something which occurs in virtue of an *additional* cognitive act, one that is necessary for such conscious awareness. Following his more liberal account of our cognitive capacities, Scotus envisages the control by our somehow focusing on *acts* of which, though real enough, we are nevertheless not intially aware:

> I say, therefore, that there is one cogitation in perfect act, and simultaneously there are other cogitations actually imperfect and not perceived (unless that one which is in perfect act is so intense that it excludes all other actual [cogitations]: and, as is conceded, there is no such in act). Secondly, the will can take pleasure in that actual consideration [of the act], and, thirdly, from this the actual cogitation is intensified, when the will wills it distinctly: just as, for example, that natural point which is now perceived imperfectly and in an incomplete act, remains in the same disposition, and can be perceived in a complete act by the attention of the will.[45]

[44] Aquinas, *ST* 1.85.4 c (I, 421b).

[45] 'Dico ergo quod una est cogitatio in actu perfecto, et simul aliae sunt cogitationes actu imperfectae et imperceptae, nisi illa una quae est in actu perfecto sit ita intensa quod excludat omnes alias

The passage is not entirely clear, since it initially seems that Scotus is talking about focusing on the occurrent act which we *do* perceive. But the discussion of the visual example makes it clear that this is not what he has in mind: we can focus on the point which we previously sensed without awareness, and this kind of sensation and cognition is sufficient for the will's attention, since it gives us information about objects.

Note that this discussion is distinct from the question of the *unconscious*. Scotus clearly supposes that some mental events are unconscious. Abstraction is the obvious example, as I show in Chapter 3. In fact, it looks as though all cases in which merely a species is received count as unconscious. As we have seen, Scotus holds that someone can be distracted in such a way that she is not aware of things around her. In such a case, a species is received without any consequent act. Evidence of the reception of the species is the fact that the person can sometimes recall what someone said to her (for example) even though she was simply not aware of the fact that anyone was speaking to her, or even of what was said, and thus had no occurrent act of hearing.

The discussion is closely parallel to a distinction that modern philosophers sometimes make between perceptual or access consciousness, on the one hand, and introspective consciousness, on the other. The first gives us awareness of an object such that we can act purposively in relation to it; the second adds awareness of attending to the object.[46] The classic modern example of the first alone (without the second) is the case of driving a truck 'without being aware of what one is doing', and of the second of 'being aware' that one is driving the truck: in Scotus's way of thinking of the issue, the difference is between perceiving the object and perceiving the object and the act.[47] Clearly, the first case requires some sort of (conscious) perception: one is successfully driving the truck, after all, and it would be hard to do so while asleep (for example), or entirely unconscious. The case contrasts with that considered in the previous paragraph: the phenomenon that Scotus highlights in that case seems to be something that is genuinely unconscious, lacking both access and introspective consciousness.

5. Introspection and Intellectual Memory

As we have seen, Scotus holds that there is a kind of sense memory—memory of past events as past—that requires that the past sensation is the immediate object of

actuales. Tamen ut conceditur non est aliqua talis in actu. Secundo potest voluntas complacere in illa actuali consideratione, et tertio ex hoc intenditur illa cogitatio in actu cum voluntas vult illam distincte, sicut esto quod stet in eadem dispositione ille punctus naturalis qui nunc percipitur imperfecte et actu incompleto, per attentionem voluntatis potest actu completo percipi': Scotus, *Rep.* 2.42.1–3 (MS M, fo. 218^{v}).

[46] David M. Armstrong, *The Nature of Mind and Other Essays* (Ithaca, NY: Cornell University Press, 1981), 58–61.

[47] Armstrong, *Nature of Mind*, 59.

recollection. He maintains a parallel account of intellectual memory of the past as past, and he seems to believe that this kind of memory requires our having intuitive cognition of our past intellectual acts:

> Briefly, [the intellect] can recall (*recordari*) any object which the sensitive memory can recall, because it can intuitively know that act which is the proximate object of [cognition] when it is, and thus recall it after it is over; and it can also recall many proximate objects which the sensitive [memory] cannot recall: for example, every past intellection and volition. That a human being can recall such things is proved, because otherwise he could not repent of his bad volitions, neither could he convey (*conferre*) his past intellection, as past, to the future, and neither, consequently, could he order himself, from the fact that he has speculated about these things, to speculate about other things from these; and briefly, everything would be destroyed if we did not recall past intellections and volitions.
>
> But no sense can recall these things, because they do not fall under the object of any sense. Therefore this recalling is proper to the intellect, and this in virtue of the proximate object. For there is another proper [recalling], not only of the proximate object, but also of the remote one, such as the recalling which tends to the necessary, as necessary, as to a remote object, such as the recalling that has as its remote object that a triangle has three sides—for the proximate object of the recalling, namely the act tending to this object, cannot be anything other than an act of the intellective part.[48]

The kind of recollection Scotus has in mind is of events *as past*: Scotus gives a definition that is all his own: '"Recollection" (*recordatio*) is the cognition or cogitation of some past act, qua past, of the one who recollects',[49] and he cites Aristotle in his support:

> The power to recollect (*recordativa potentia*) has an act after time, otherwise it would not be of the past as past. And Aristotle's saying in that book [viz. *De memoria*], that memory has its act after time should be understood *per se*, such that the act of recollecting is *per se* later than the thing remembered: and these are his words: 'All memory is after a time'.[50]

The idea in the long passage quoted at the beginning this section is that intellectual memory of the past as past requires the following kind of mechanism: we have, at time t, a cognitive act of which we are intuitively aware; at time t_1 we are able to recall this act, and this gives us cognition of the past as past. The initial cognitive act, since it is an intellectual act, cannot be the object of any kind of sense cognition or intuition, since no sense is able to perceive an intellectual act. In virtue of our recalling the past act, we can also recall its contents.

Note that the issue here is quite distinct from our power to call to mind abstract mental contents: the kind of thing that Scotus's account of abstractive cognition

[48] Scotus, *Ord.* 4.45.3, nn. 138–9 (Vatican, xiv. 181–2).
[49] Scotus, *Ord.* 4.45.3, n. 88 (Vatican, xiv. 166); see *Rep.* 4.45.3, n. 3 (Wadding, xi. 870b).
[50] Scotus, *Ord.* 4.45.3, n. 90 (Vatican, xiv. 166), exactly quoting Aristotle, *De mem.* 1 (449b28).

is intended to guarantee. Rather, the account is intended to secure our recollection of past events that we ourselves perceived, or of acts that we consciously experienced. The act must be ours, and not cognitively accessible to any other person.[51] And, as Scotus notes, even if someone knows that she was born, we do not call that recollection, since she had no perception of the event of her birth.[52] (Scotus's account of our knowledge of events based on the testimony of others is an issue in epistemology that is distinct from this, and not directly relevant to my psychological concerns here.[53]) Presumably I can have abstractive cognition of past events—even of events that I perceived—without recalling my perception of those events. But in this case the cognition is composed of species gained by abstraction from the components of the relevant events: properties and their relations to each other.[54] Equally, just as in sense memory, it is the past cognition that is the relevant immediate object of intuitive cognition. And, as the second paragraph of the quotation makes clear, the past cognition could itself have as its content either something intuitively cognized or something abstractively cognized. The point is that the immediate object is the past act, whatever its own immediate object, and that to have such a past act as an object requires Scotus's account of our intuitive cognition of our own mental acts. Scotus takes as one paradigm case of recollection our memory of having learned some abstract and necessary fact, such as that a triangle has three angles equal to two right angles. But the past act could also be one of intuitive cognition, in this account. It is the past act, not its contents, that is the immediate object of cognition: the remote object is the external object.[55]

Scotus is not claiming that we have present intuitive cognition of a past act. So he needs some account of how it is that this past act is cognitively accessible in the present. His proposal is that there is some kind of habitual or dispositional cognition, caused by the external object, in virtue of which the intuitive cognition, once introspected, can be recalled:

If it is objected that from a thing present [to the power] there is not left any species other than an intelligible species impressed on the intellect, and an imaginable species (*species imaginibilis*) on the sensitive part (as on the imaginative power (*virtute phantastica*)): this is false, because there is not only left, by the thing present [to the power] an intelligible species in the intellect, by which it is cognized without any temporal differentiation, but [there

[51] Scotus, *Ord.* 4.45.3, n. 96 (Vatican, xiv. 168).

[52] Scotus, *Rep.* 4.45.3, n. 2 (Wadding, xi. 870b).

[53] On this, see my *Duns Scotus on God*, Ashgate Studies in the History of Philosophical Theology (Aldershot, and Burlington, VT: Ashgate, 2005), 6–7.

[54] See the distinction Scotus makes between the abstractive memory and memory of the past as past at *Ord.* 3.14.3, nn. 108 and 115 (Vatican, ix. 465–6 and 469).

[55] Scotus, *Ord.* 4.45.3, nn. 94, 121, 130 (Vatican, xiv. 167, 175–6, 179).

is also another species left] in the memorative power. And these powers cognize the object in different ways (*sub alia et alia ratione*): one cognizes the object as it exists in the present, the other cognizes it as apprehended in the past, such that the apprehension of the past is the immediate object of memory, and the immediate object of that past apprehension is the mediate object of recollection.[56]

According to this passage, a necessary condition for such cognition of the past as past is that the object (partially) causes not only an intelligible species, but also species of the object involved in the past cognition or apprehension. If this latter species exists, then the mind is able to recall its own past cognitive act, and by means of this recall the past object.[57] Scotus maintains that the relevant species is perhaps better thought of as a 'habitual intuitive cognition'[58]—presumably to distinguish it from an intelligible species in the technical sense. It may be, I suppose, that this 'other' species has, just like the intelligible species, the agent intellect as a partial cause. In any case, the species or habitual intuitive cognition is not the object of cognition; it conserves the conceptual content of the past cognition and makes the really absent object cognitively present in recollection.[59] Neither could the species be a phantasm, since the context is intellectual memory.[60] Given that the species inheres in the power of recollection, it follows that the same power must be the subject of the initial act,[61] and Scotus makes it clear that the relevant power—the memorative power—is the intellectual memory.[62] The passage also makes it clear that intuitive cognition and abstractive cognition can function in parallel: the object of intuitive cognition (along, I assume, with the agent intellect) causes the intelligible species, which is a precondition for subsequent abstractive cognition. But I take it, too, that abstractive cognition does not require such an intuitive cognition (in contrast to Ockham's views on the matter).[63] (I return to these matters in Chapter 4.)

Confusingly, Scotus sometimes talks of 'imperfect intuitive cognition' in some of these cases. Specifically, he reserves this terminology for those instances of recollection that have acts of intuitive cognition (not abstractive cognition) as the introspected acts.[64] Thus, in such cases the relevant habitual cognition is caused by the object as present and existent.[65] Excluded, then, are cases in which

[56] Scotus, *Ord.* 3.14.3, n. 116 (Vatican, ix. 469–70); see too *Ord.* 4.45.3, nn. 94–5 (Vatican, xiv. 167).

[57] Scotus seems to suggest that the possibility of time-indexing requires intuitive cognition at *Ord.* 3.14.3, nn. 113–16 (Vatican, ix. 468–70). This may simply be a mistake.

[58] Scotus, *Ord.* 3.14.3, n. 117 (Vatican, ix. 470).

[59] Scotus, *Ord.* 4.45.3, nn. 93–4 (Vatican, xiv. 167).

[60] Scotus, *Ord.* 4.45.3, n. 119 (Vatican, xiv. 175)—on habits and species, see Ch. 4.

[61] Scotus, *Ord.* 4.45.3, n. 95 (Vatican, xiv. 167).

[62] Scotus, *Ord.* 3.14.3, n. 117 (Vatican, ix. 470).

[63] See Ockham, *Rep.* 2.12–13 (OT v. 304).

[64] Scotus, *Ord.* 3.14.3, nn. 111 and 115 (Vatican, ix. 467 and 469).

[65] Scotus, *Ord.* 3.14.3, n. 117 (Vatican, ix. 470).

the recollected act is an act of abstractive, not intuitive, cognition—such as the case Scotus appeals to of recollecting the act of learning that a triangle has three angles equal to two right angles. Imperfect intuitive cognition involves two past intuitions: of the object, and of the act. But these two intuitions are both temporally prior to the recollection itself, which is formed on the basis of the relevant habitual cognition.

3

Abstractive Cognition (1): Abstraction and Concept Formation

As we saw in section 1 of Chapter 2, abstractive cognition is cognition that abstracts from the presence and existence of its object. Scotus takes a paradigm case of such abstraction to be cognition of essences—of *universals*, since universals are precisely general concepts that represent any and all existent particulars, and thus *abstract* from all particularizing conditions. In this chapter, I consider general questions concerning *acts* of abstractive cognition: those acts had in the absence of an external object. So in section 1 I consider the content of such cognitions (paradigmatically universals), and briefly look at the unconscious causal processes that go into bringing them about. In the remaining sections, I examine the conscious processing that allows us to refine these concepts (section 2), to gain some kind of abstractive cognition of particulars and of substance-kinds (section 3), and to engage in deductive and inductive reasoning (section 4). In Chapter 4, I turn more fully to the mechanisms of abstraction, and the kinds of mental entity that—according to Scotus—it requires.

1. Abstraction and Universals

Intuitive cognition has as its object something existent and present—the singular and its nature, the nature joined to its individuator. The object of abstractive cognition is (standardly) the common nature, but abstraction precludes existence and presence, and in so doing (it seems) basically *excludes* the individuating feature. Abstraction enables us to grasp the common features of a kind:

> The universal, as universal, is not included among the things that exist, but exists merely in something that represents it under such a description [viz. as universal]. . . . The agent

intellect makes something that is representative of a universal, out of something that was representative of the singular.[1]

The universal concept thus formed is such that the concept is predicable of each instance of the nature—is such that it equally represents each such instance:

> Nothing in reality . . . is such that . . . it is in proximate potency to each *suppositum* by a predication that says 'This is this'. For although it is not incompatible with something existing in reality for it to be in another singularity than the one it is in, nevertheless it cannot be truly said of each of its inferiors that each one is it. This is possible only for an object, the same in number, actually considered by the intellect. This object as understood has also the numerical unity of an object, according to which it itself, the very same, is predicable of every singular by saying 'this is this'.[2]

A predication is a way of representing the world as being in a particular way, and the idea is that we use universal concepts to represent things as being of given kinds, or as having given accidental features (since the features we want to pick out are in principle the same in any number of particulars). Since the universal is just a concept, it can be 'one thing' without its unity entailing that it is this or that particular instance of itself: contrast the common nature, a real thing that (according to Scotus) lacks numerical unity on the grounds that possessing numerical unity would render it identical with just one instance—as we saw in the Introduction.

The *content* of the universal concept is, of course, just the common nature: it does not include *universality*, the feature of *being universal*:

> The nature itself . . . does not primarily of itself have universality even when it does have being in the intellect. For even though it is understood under universality (as under the mode of understanding), nevertheless universality is not a part of its primary concept, since it is not a part of the metaphysical concept, but of the logical concept. . . . Although universality is the mode of understanding what is understood, that mode is not itself understood.[3]

It is important to be clear on what Scotus means. *Being a universal* is not part of the content of a universal concept—it is not 'part of the metaphysical concept'. But the universal concept equally represents many, and can be predicated of them—and this predicability is what Scotus calls a feature of the 'logical' concept: a feature of the universal that it has precisely in virtue of being a concept.

Just as in the case of intuitive cognition, the relevant item is *conceptual* (not just sensory), and figures in propositional knowledge (it can be 'said of all the singulars in which it is found'):

[1] Scotus, *Ord.* 1.3.3.1, n. 360 (Vatican, iii. 218).
[2] Scotus, *Ord.* 2.3.1.1, n. 37 (Vatican, vii. 406–7; Spade, 65–6).
[3] Scotus, *Ord.* 2.3.1.1, n. 33 (Vatican, vii. 403–4; Spade, 64).

The actual universal is cognized under such an indifference that what is known in this way can be said of all the singulars in which it is found. But the senses do not cognize in this way.[4]

The object of sensation is not like this: the senses cognize the common nature in the particular; the intellect cognizes it additionally in abstraction from the particular.

How should we understand the end result of intellectual abstraction? Scotus clearly believes that the mark of abstractive intellectual cognition, in contrast to any kind of intuition and any kind of sense cognition, is that it gives (or can give) knowledge of essences and definitions:

The sense senses the thing that is heat; the intellect cognizes the quiddity, but defining it and attributing the definition to the thing defined, by saying that this is a such-and-such, and so seems to know the quiddity, not just the thing (*quiditatem, non tantum quid*).[5]

As I noted in Chapter 2, intuitive cognition acquaints us with essences; abstractive cognition allows us to conceptualize them, to give some kind of *account* of them: ultimately, as I show in the next section, to *define* them.

We might wonder just how abstraction is supposed to work—how is it supposed to give us knowledge of essences and definitions? How does the agent intellect produce a universal of the 'right' kind? A tempting solution is proposed by Godfrey of Fontaines (*c.*1250–1306/9): the relevant conceptual content is already included in the phantasm, and so does not need to be produced or formed by the agent intellect. According to Godfrey, phantasms represent particulars, and they do so by including a representation of a quiddity and of a collection of particularizing accidents. Abstraction just consists in mentally stripping away the accidents: what is left is the representation of the quiddity—the *universal*. And while quiddities concealed by particularizing accidents are not immediately intelligible, a quiddity stripped bare is thus intelligible.[6] Scotus objects:

Either the essence (*quid*) as in the phantasm has sufficient active power to bring it about that the possible [intellect] cognizes the universal—in which case it follows that the universal is not the end term of the action of the agent intellect—or not, such that there is required another agent, properly speaking, acting in the way in which the essence lacks its active power, properly speaking.[7]

The argument is odd, because it seems to suggest that simply removing some block on cognition (here, the presence of the particularizing conditions—Scotus does

[4] Scotus, *Ord.* 4.43.2, n. 84 (Vatican, xiv. 23–4).

[5] Scotus, *In metaph.* 1.6, n. 44 (OP iii. 145–6).

[6] Godfrey, *Quod.* 5.10 (ed. M. de Wulf and J. Hoffmans, PB 3 (Louvain: Institut supérieur de philosophie de l'Université, 1914), 37–8).

[7] Scotus, *Ord.* 1.3.3.1, n. 361 (Vatican, iii. 219).

not specify that these conditions are accidents) could not be sufficient in itself to render the essence intelligible, and it is hard to see why this should be the case.[8] Scotus's argument against Godfrey is *ad hominem*: Godfrey holds that abstraction is necessary for universal cognition, and Scotus's argument is designed to show that Godfrey's view of the phantasm in fact renders abstraction otiose.

It is not clear that this is the case. Godfrey's view is what has in the recent literature come to be known as 'abstractionism', the view that 'a concept is acquired by a process of singling out in attention some one feature given in direct experience—*abstracting* it—and ignoring the other features simultaneously given—*abstracting from* them'.[9] What is philosophically objectionable about abstractionism is that selective attention to just the universal features allegedly given in direct experience is not possible unless those features are *already* known. Abstractionism, in other words, seems to posit some kind of mysterious power that is pre-programmed with the relevant semantic information—or else the whole abstractive process is permanently underdetermined.

Scotus's line is that the universal has to be produced by the agent intellect. He makes it clear that he does not have a clear account of the mechanism: when discussing the way in which the agent intellect produces the species 'from' the phantasm, he simply notes that '"from" might be understood materially or virtually':[10] the first sense ('materially') is just that the agent intellect uses the phantasm as a passive substrate out of which it forms the universal; the second sense ('virtually') is less clear: Scotus might mean that the phantasm contains the universal potentially, not really, and that this potentiality is somehow actualized by the agent intellect by some unspecified mechanism; or he might mean that the phantasm has an active causal role to play in abstraction (it has a power (*virtus*) that has such a role), something that he explicitly affirms elsewhere, as we shall see.

[8] In terms of the inner coherence of Scotus's overall position, there is a further problem with the argument. For his discussion of abstraction in the context of his *ex professo* account of the universal seems to suggest that abstraction is indeed a case of stripping away the particularizing conditions: 'The agent intellect strips the what-the-thing-is existing in the phantasm. For wherever it is before it has objective being in the possible intellect, whether in reality or in the phantasm, whether it has certain being or being that is derived by reasoning (and so not by any [divine] light), it is always such a nature of itself that it is not incompatible with it to be in something else': Scotus, *Ord.* 2.3.1.1, n. 38 (Vatican, vii. 407; Spade 66). The idea here is that the nature is always such that it can be repeated. But in any case the discussion of Godfrey's position that I consider here, from book I of the *Ordinatio*, is an interpolated text, and most likely later than the book II discussion of abstraction. I know of no way of making the two accounts compatible. The book II discussion is reflected in *Th.* 1, prop. 4, n. 8 (OP ii. 594). But the chronological relation of the *Theoremata* to Scotus's other works remains unknown. I will comment later on the parenthetical remark about divine light.

[9] Geach, *Mental Acts*, 18. For a useful discussion seeRobert Pasnau, *Thomas Aquinas on Human Nature: A Philosophical Study of* Summa theologiae *Ia 75–89* (Cambridge: Cambridge University Press, 2002), 315–18.

[10] Scotus, *Ord.* 1.3.3.1, n. 360 (Vatican, iii. 218).

In any case, perhaps Scotus does not need to give an explanation for how abstraction is possible; or, at least, perhaps, it does not matter that he does not have an explanation: we need accurate universal representations to function in the world, and in any case God—Scotus would allege—has made the relevant powers to function by and large reliably. Scotus makes the second point explicitly. According to some medieval abstractionist accounts, what underwrites the abstractive process is our cognizing things 'by participation in the eternal ideas',[11] such that the agent intellect is somehow created in such a way that it has an innate capacity to spot salient similarities between things, resulting in the presence of dispositional and occurrent mental items with the relevant universal semantic content directly accessible. At one point, Scotus himself affirms that the process of abstraction needs to be underwritten by some extrinsic feature: 'The quiddity of a thing is known in virtue of the agent intellect, which is a participation of the uncreated light, shining on the phantasm.'[12] The point is merely that what allows the phantasm to have the role that it does is some special role played by the agent intellect, and, crucially, that God has made the agent intellect to function reliably in this kind of way, such that it can generate universal content from phantasms—conceptual from non-conceptual.

I will make two final comments. First, the abstractive process is automatic and unconscious:

> If [the intellect] can have an object present without its being present to a lower power [i.e. without the object's being really present], it follows that it has it. The consequence is proved, because the agents of this kind of presence of the object, namely, the phantasm and the agent intellect, are sufficiently present to the possible intellect, and they act through the manner of nature, and so cause necessarily in [the possible intellect] that thing of which it is receptive.[13]

The idea here is that the phantasm and the agent intellect 'necessarily cause' whatever it is—act or disposition—that they produce in the possible intellect. The reason for this is that they 'act in the manner of nature'—they act automatically in

[11] Aquinas, *ST* 1.84.5 c (I, 412a–b). For Aquinas's abstractionism, see my 'The Mental Word in Duns Scotus and Some of his Contemporaries', in T. Shimizu and C. Burnett (eds), *The Word in Medieval Logic, Theology and Psychology: Acts of the XIIIth International Colloquium of the Société Internationale pour l'Etude de la Philosophie Médiévale, Kyoto, 27 September–1 October 2005* (Turnhout: Brepols, 2009), 301–42 n. 113.

[12] Scotus, *Ord.* 1.3.1.4, *text. int.* (Vatican, iii. 172, ll. 2–4). I am grateful to Thomas Feeney for discussion on this issue, and for showing me that Scotus does not have a wholly naturalistic account of abstractive cognition. So I disagree with Pasnau's assessment of Scotus's originality on this point, much as I might wish that Pasnau was right: 'This marks a turning point in the history of philosophy, the first great victory for naturalism as a research strategy in the philosophy of mind' (Pasnau, *Cognition*, 303). At one point, Scotus contrasts the need for divine light to underwrite abstraction but *not* ratiocination—which, presumably, functions wholly naturalistically: see *Ord.* 2.3.1.1, n. 38 (Vatican, vii. 407).

[13] Scotus, *Ord.* 1.3.3.1, n. 366 (Vatican, iii. 223).

appropriate circumstances—and that they find themselves in such appropriate circumstances when a phantasm occurs in the imagination. Elsewhere, Scotus claims that the agents of abstraction act 'in the manner of nature' (securing automaticity), and that abstraction is 'naturally prior to' occurrent cognition—that is to say, it is an unconscious process, even if the end result of it is not a disposition but an act.[14]

Secondly, as this passage also makes clear, the agent intellect and the phantasm are *joint causes* of whatever it is that they produce in the possible intellect, here identified as the (intelligible) species. And Scotus specifies:

> There is a twofold act of the intellect in relation to objects which are not present in themselves (of which kind are all the things that we now naturally understand): the first act is the species, by which the object is present as an object that is actually intelligible; the second act is the actual intellection. To each act the intellect acts, not moved by that which is, with it, the partial cause cooperating in the action (even though one of the intellect's acts precedes its motion to the other). But to the first act the agent intellect acts with the phantasm, and the two together are one total cause in relation to the intelligible species. To the second act the intellective part (whether the agent or possible intellect, I do not now care) and the intelligible species are two partial causes, and in this case the intellective part acts without being moved by the species, but as the first mover, that is (as it were) as an agent such that the species causes along with it. . . . In each action, the object is a secondary mover, even though it is not moved.[15]

As we shall see in Chapter 6, Scotus holds that the intellect and the species are (in standard cases) joint causes of a cognitive act, and most of this passage is about this case. One of Scotus's reasons for this is that this kind of causal activity is required to explain how it is that the right kind of act is produced. Likewise here, Scotus holds that the phantasm is required in standard cases to explain how it is that a species with such-and-such contents is caused: the species is somehow 'assimilated' to the phantasm. As we shall see in Chapter 6, Scotus maintains that the intellect is the principal cause in the production of a cognitive act, and the species some kind of subordinate cause. Likewise, here, the intellect is the principal cause of the intelligible species, and the phantasm the secondary cause. I assume the reasons for this view are similar to those offered for the priority of intellect in the production of a cognitive act, which I outline in the later chapter.

2. Abstraction and Conceptual Analysis

Thus far, I have followed Scotus's usual practice, thinking of the abstracted concept as a definition of a given kind. But, of course, a concept of the 'right' kind—one

[14] Scotus, *Ord.* 1.3.3.1, n. 349 (Vatican, iii. 210).
[15] Scotus, *Ord.* 1.3.3.3, nn. 563–4 (Vatican, iii. 335).

that represents all (or even all and only) particulars of a given kind—need not be a *definition*. And Scotus in fact holds that our initial, unconscious, abstractive processes yield no such thing. He rightly holds that forming definitions of kinds requires a great deal of conscious intellectual work. At the heart of this lie two processes: abstraction and division. Abstraction allows the formation of more general concepts from more specific or particular ones—beginning from such a concept produced from the phantasm (from a representation of particulars)—and division then reconstructs the more specific concepts by adding specific differences to the general concepts to form *definitions* of kinds.[16] What is distinctive about Scotus's account is the claim that we always begin the process with some general understanding of a *specific* kind (derived by abstraction from particulars); then—by further abstraction—produce more general concepts; and then—by division—form a real definition of the specific kind from which we began the investigation. This two-fold analysis is distinctive to Scotus. Aquinas, for example, accounts for concept formation entirely in terms of the division of more general concepts by means of the addition of specific differences, such that what is first known is the generic concept: when we encounter two coloured things, for example, we first of all abstract the notion of colour, and then proceed to form concepts of particular colours by the addition of specific differences.[17] Scotus finds this unsatisfactory, because it gives no account of how we might get to know the more general concept in the first place. After all, it looks as though we know more general concepts by abstraction from more specific concepts, and this seems to suggest that we should have some notion of the more specific concept to get the whole process under way.

Scotus's solution builds on a crucial distinction between cognizing a species or kind by means of a definition—i.e. a real definition, in terms of genus and difference—and cognizing it 'as it is expressed by a name'—I take it, in such a way that we can correctly name the species under some general description,[18] but without knowing the definition of the species. But what we first know is a species, and it is this that gets the process of concept formation under way in the first place. In Scotus's technical medieval jargon, we know the species confusedly:

> Something is conceived confusedly when it is conceived as it is expressed by a name [viz. of a natural kind], and distinctly when it is expressed by a definition.[19]

[16] Scotus, *Ord.* 1.3.1.1–2, n. 80 (Vatican, iii. 55); *In de an.* 16, n. 19 (OP v. 152).

[17] See e.g. Aquinas, *ST* 1.85.3 c (I, 419b–20a).

[18] 'In suo universali': Scotus, *In de an.* 16, nn. 8 and 19 (OP v. 147 and 152).

[19] Scotus, *Ord.* 1.3.1.1–2, n. 72 (Vatican, iii. 50). For detailed discussion of some of the issues I deal with in this chapter, see Timothy B. Noone, 'Scotus on Mind and Being: Transcendental and Developmental Psychology', *Acta Philosophica*, 18 (2009), 249–82.

Conceiving something 'confusedly' is 'as it were a mid-point between ignorance and distinctly cognizing' something—cognizing it as expressed through a definition.[20] Standard Aristotelian accounts of definitions involve isolating a genus and a specific difference: for example, human being is a rational animal (genus: *animal*; differentiating feature proper just to human animals: *rational*). This kind of analysis can be iterated to yield ever more general genera (the so-called 'tree of Porphyry'):

> In each category, some things are most general and again other most specific, and yet other are between the most general and the most specific. The most general is that above which there is no other genus that transcends it. The most specific is that after which there is no other, subordinate, species. What are between the most general and the most specific are all the others. These, the same things, are both genera and species, taken in relation to one another.[21]

This pattern was held to obtain for every category, be it substance or one of the nine accidental categories. Porphyry exemplifies the structure for the case of substance:

> Let us clarify the above statement for just one category. Substance is itself a genus. Under this is body, and under body animate body, under which animal, under animal rational animal, under which man. . . . Of these, substance is the most general and the one that is only a genus. Man is the most specific, and the one that is only a species. Body is a species of substance but a genus of animate body. Animate body is a species of body but a genus of animal. Again, animal is a species of animal but a genus of man. Now man is a species of rational animal, but no longer a genus—of particular men. Instead it is a species only.[22]

(Porphyry rather curiously makes man a species of rational animal, since he believed there to be other rational animals too. But the medievals would simply define 'human being' as 'rational animal'.)

Scotus holds that our initial conceptualization of an object's nature is of the nature cognized merely as it is expressed by a name: 'What is first actually cognized confusedly is the most special species, a singular instance of which very efficaciously and forcefully moves the sense.'[23] As we have just seen, the 'most special species' is the Aristotelian species: a species that admits of no further specific distinction. But the crucial thought is that we do not start with knowledge of the definition of this most special species (in terms of genus and difference); we start merely with cognition of it 'as it is expressed by a name'.

[20] Scotus, *Ord.* 1.3.1.1–2, n. 86 (Vatican, iii. 57–8).
[21] Porphyry, *Isag.*, n. 4 (Busse, 4; Spade, 4).
[22] Porphyry, *Isag.*, n. 4 (Busse, 4–5; Spade, 4).
[23] Scotus, *Ord.* 1.3.1.1–2, n. 73 (Vatican, iii. 50).

The contrasting case—the one that Scotus wishes to reject—is that the first conceptualization of an object might be of something more general than the object's species:

> All the things that co-operate to produce the first act of the intellect are merely natural causes, because they precede the act of the will. And they are not impeded, as is clear: therefore they produce first the most perfect concept that they can. But this is nothing other than the concept of the produced most special species. And if some other [concept]—for example, the concept of something more common—were the most perfect concept which they can produce, then—since a more common concept is less perfect than the concept of a most specific species (like a part is less perfect than a whole)—it would follow that they could not act on a concept of that species, and thus would never cause that concept.[24]

The assumption is that natural causes, unless the causal process has somehow gone awry, 'produce the most perfect concept that they can'—and in standard cases this concept is the concept of a species, not the concept of a genus. And, furthermore, if this were not the case, there would be no explanation of our capacity to form species concepts. This might seem unduly optimistic, but Scotus is careful to go on to point out that he is talking 'in principle': about sensation and abstraction under ideal circumstances, cases in which the object is 'present in the required proportion to the sense'.[25] Clearly, this leaves the way open for confused cognition of something that, for reasons external to it, fails to produce a concept even corresponding merely to a name. But in such a case, presumably, further empirical investigation is required (for example, examining the object more closely—getting it present in the required proportion to the sense).[26]

Scotus holds that we form more general concepts by a process of abstraction: for example, we abstract the concept of colour from our concepts of this or that colour:

> Whiteness is actually conceived before colour is, in the order of confused cognition, because colour, under the notion of colour, is not cognized other than under the notion of greater abstraction than the abstraction of whiteness from this whiteness. And this greater abstraction is harder, because it is from things that are less similar.[27]

Thus, we abstract genus concepts from species concepts. This, incidentally, is Scotus's main argument against Aquinas's view: it really is not the case that we have a concept of colour before a concept of whiteness, however loose, because it is white things that we encounter in the world, and white things are coloured (in the

[24] Scotus, *Ord.* 1.3.1.1–2, n. 76 (Vatican, iii. 52–3).
[25] Scotus, *Ord.* 1.3.1.1–2, n. 73 (Vatican, iii. 50).
[26] See Scotus, *Ord.* 1.3.1.1–2, nn. 74–5 (Vatican, iii. 51).
[27] Scotus, *Ord.* 1.3.1.1–2, n. 86 (Vatican, iii. 58).

medieval view of things) only in virtue of having this or that specific colour (viz. whiteness, in this example). So Scotus's objection to Aquinas amounts to this: it is not the case that we first of all know the concept of *colour*, and then know the concepts of particular colours, since the former concept must derive from the latter. Note too that Scotus restricts himself to accidents. As I show in section 3, Scotus does not believe that we can form real definitions of substance-kinds; though we can cognize substances in a way sufficient to allow us to name them.

From the concept of the most specific species, cognized such that we can name the species, more general concepts can be abstracted. This abstractive process eventually yields a most general concept, one that can only be known distinctly: namely, *being*: 'Being cannot be conceived other than distinctly, because it has a simply simple concept.'[28] The idea is that cognizing something distinctly is cognizing its definition. But in Scotus's thought, *being* is something akin to a supreme genus—and since it is one simple concept, cognizing it at all means cognizing it distinctly. Given a concept that can be conceived only distinctly, we then form further definitions by division:

> Knowing distinctly is given by [knowing] a definition, which is enquired after by the way of division, beginning from being, up to the concept of what is defined. In division, however, prior concepts occur first (e.g. genus and difference), in which more common concepts are conceived distinctly.[29]

Division or analysis consists in the formation of ever less general concepts by iteratively identifying pairs of contradictory specific differences, or sets of contrary differences, as in Porphyry's tree. (I present a vivid example of how this might work, in the case of *propria*, in section 3.) The process of division eventually leads to cognition of a definition—cognition of *every* concept that comprises the kind, all the hierarchically ordered genera and differences right up to the most general of all concepts, *being*.

In the whole process, the motion is from names of species to definitions of the most general concepts, by abstraction, and then from these definitions to definitions of specific kinds, by division. It follows from this that concept formation is always from what is cognized confusedly to what is cognized distinctly:

> Comparing the order of conceiving confusedly and the order of conceiving distinctly, I say that the whole order of conceiving confusedly is prior, and therefore what is first in that order is first simply speaking.[30]

[28] Scotus, *Ord.* 1.3.3.1–2, n. 80 (Vatican, iii. 54–5).
[29] Scotus, *Ord.* 1.3.3.1–2, n. 80 (Vatican, iii. 55).
[30] Scotus, *Ord.* 1.3.1.1–2, n. 82 (Vatican, iii. 56).

Scotus puts the point very forcefully in the *De anima* questions:

> The species is first cognized indistinctly—namely, in knowing what is meant by its name . . . ; but once the universal is known distinctly, then by its division and contraction—by the addition of a difference—there is a return to cognizing the species distinctly.[31]

Now, part of Scotus's diagnosis of Aquinas's mistake (as he sees it) is a failure to distinguish talk of knowing something confusedly and distinctly—talk about the way in which some object is known—from talk of the nature of the object itself. Scotus believes that more general objects are in some way 'confused': they represent more, they are less specific.[32] And he believes that Aquinas's analysis starts (rightly) from the view that what we first cognize is somehow merely a confused starting point. But he believes that Aquinas (wrongly) simply assumes that the only progression from confusion to clarity is a progression from more general to less general—as though the model for the development of knowledge were an object coming into focus from a distance (that might start as a mere blob, and then gain legs, and then humanity). Certainly, Scotus concedes, there are occasions in sense cognition in which the situation is like this; but it seems that intellectual cognition is not standardly impeded by distance in this kind of way.[33] And this seems right, and to represent a genuine advance over Aquinas's account.

3. Abstractive Cognition of Singulars and Substance-Kinds

Unlike the case of sense cognition, Scotus proposes some way for the intellect to conceptualize the particular—not the particular as *present*, which is the object of intuitive cognition, but rather the particular cognized abstractively: 'By [abstractive] cognition both a nature as prior to singularity and a nature as *this* can be known.'[34] Not *de re* cognition of the singular, but nevertheless cognition of the singular:

> In the imagination the substance is confused with accidents, or there are many accidents tied to each other. The intellect, in cognizing the universal, abstracts each of these [accidents]. But in cognizing so that it cognizes the singular (namely, the nature which is this, not as this, but with the accidents proper to it), the intellect composes the subject with its

[31] Scotus, *In de an.* 16, n. 19 (OP v. 152).

[32] Scotus, *Ord.* 1.3.3.1–2, n. 72 (Vatican, iii. 49–50). I quote this passage later.

[33] Scotus, *Ord.* 1.3.1.1–2, nn. 73–5 (Vatican, iii. 50–1).

[34] Scotus, *Ord.* 3.14.3, n. 107 (Vatican, ix. 465). (This text is about a special case: Christ's cognitive powers. But, as we shall see, Scotus holds that some version of this claim is true for standard cases too.) See too Scotus, *Quod.* 13, n. 8 (Wadding, xii. 309).

accidents. And in this way the beginning and end point of reflection is something confused, and in between there is something distinct. . . . Therefore the nature is cognized as determined by these, and is a concept that is not simply simple (like *being*), nor quidditatively simple (like *man*), but merely as it were accidentally [one], like *white man*, even though it is not accidentally [one]. And this is the most determinate concept to which we come in this life. For we do not come to anything to which (according to the notion of it that we conceive) it is contradictorily repugnant to be in something else. And without such a concept the singular is never conceived distinctly.[35]

Here, the common nature is the first object of abstraction. But by further cognitive processing we can get to some kind of cognition of the particular. In the passage, something to which it is 'contradictorily repugnant to be in something else' is a haecceity: the haecceity cannot be cognized. But we can start off with a complex phantasm, an imagistic representation of a collection of accidents, or of accidents along with the idea that they have a bearer. Labelling the cognition 'confused' is a way of noting that the phantasm is a complex representation of many accidents:

The confused is the same as the indistinct. And just as there are two kinds of distinguishability . . . namely, of the essential whole into essential parts and of the universal whole into subjective parts, so there are two kinds of non-distinction, of the two aforementioned wholes into their parts.[36]

The complex (the 'composed' item, as the long quotation that I am discussing here puts it) is a whole—something like an essential whole, a whole composed of matter and form (and here, accidents)—and conceiving the whole thing together is to conceive it without distinguishing its parts. I noted that, among confused concepts, we should include general (rather than specific) concepts. As Scotus sees it, confused concepts are concepts that admit of further distinction. General concepts can be distinguished into species—as we have seen. But concepts of wholes can be distinguished into the concepts of their parts, and that is the idea that Scotus has here: the whole is cognized, but none of its parts—the accidents, in this case—as such.

The intellect can thence form universal concepts of these various accidents (and of the substance), each one of which is a simple representation of a common nature

[35] Scotus, *In metaph.* 7.15, n. 32 (OPh iv. 305–6). For the representational content of the phantasm as a kind of mental picture, see Scotus, *Ord.* 1.3.3.1, n. 357 (Vatican, iii. 215–16); see too *Ord.* 1.3.3.1, *text. int.* (Vatican, iii. 363, ll. 17–19) = *Rep.* 1.3.4, n. 106 (Wolter and Bychkov, i. 213). I do not mean, of course, that the real accident is like a picture or has a picture-like real structure, but that its content is: we form mental pictures on the basis of phantasms. I assume that this is not true of all species involved in sensation: the species *in medio*, presumably is not, though it is clearly some kind of representation in the sense of being an information-conveyor.

[36] Scotus, *Ord.* 1.3.1.1–2, n. 72 (Vatican, iii. 49–50).

(and hence, in the jargon, something distinct). And abstractive intellectual cognition of the singular—though not *de re* cognition of the singular, since the haecceity is not cognized—consists in assembling these universal concepts into one complex concept: an assemblage of universal substance-kind and universal accident-kinds (and, since complex, again something 'confused').

I take it that this kind of process underlies Scotus's general account of predication. In his very early questions on book I of Aristotle's *On Interpretation*, Scotus makes the possibility of our abstractive cognition of particulars a cornerstone of the syntax of singular propositions:

> In 'Caesar is a man', the existent is not predicated of the non-existent, but human nature conceived as predicable of many [is predicated] of human nature conceived as this.[37]

Human nature 'conceived as this' must, at least in Scotus's mature account, mean the human nature united to a (non-conceived) haecceity. The representation in the phantasm cannot be the subject or predicate in this kind of predication: as we have seen, Scotus holds that propositional knowledge is an entirely intellectual matter, and the components of propositions must all inhere in the intellect.

There is one further, unexpected, feature of Scotus's account of abstractive cognition that we should at least keep in mind—not because it is central to his account of cognition as such, but because a full picture of this account cannot neglect the issue—and it is this. Scotus believes that the immediate objects of cognition are (the natures of) *accidents*, and that substances can be known only inferentially:

> Just as it was argued that God cannot be cognized by us naturally unless being is univocal to created and uncreated, so it can be argued about substance and accident. For if substance does not immediately move our intellect to some intellection of it, but rather only sensible accident [does this], it follows that we will be able to have no quidditative concept of [substance] unless some such can be abstracted from the concept of accident. But there is no such quidditative [concept] that can be abstracted from the concept of accident other than the concept of being.
>
> What is presupposed about substance, that it does not immediately move our intellect to an act in relation to it, is proved, because whatever present object moves the intellect, its absence can be naturally cognized by the intellect when it is not moved. . . . Therefore, if the intellect were naturally moved immediately by a substance to some act directed to it, it would follow that, when the substance is not present, it can naturally be known not to be present, and so it could naturally be known that the substance of the bread is not present in the consecrated host of the altar, which is manifestly false.[38]

[37] Scotus, *In periherm.* (*I*) 5–8, n. 51 (OP ii. 85–6).

[38] Scotus, *Ord.* 1.3.1.3, nn. 139–40 (Vatican, iii. 87–8). In what follows, I follow closely the discussion in Giorgio Pini, 'Scotus on Knowing and Naming Natural Kinds', *History of Philosophy Quarterly*, 26 (2009), 255–72.

The idea is that the best concept we can have of a substance is that it is a being. We abstract the most general concept *being* from the variety of accident-kinds that we encounter, and we can ascribe this concept to whatever it is that underlies the various collections of accidents that are the objects of our empirical cognition. And we know that there are such underlying substances for theological reasons (transubstantiation, appealed to here). Perhaps the claim made in this passage, that the only concept of a substance we can have is the concept of being, is stated a little too strongly: elsewhere, Scotus notes that we can distinguish different kinds of substantial being in terms of their capacity to support different collections of accidents: and this seems to be a little more than just the concept of being. But it still gives one no better idea of the *essence* of the substance.[39] So, in fact, Scotus's position is that there is no strictly abstractive cognition of substance-kinds; such kinds are known merely inferentially.

The basic reason for our not having abstractive cognition of substance-kinds is simply the Aristotelian insight that only sensible accidents are the immediate objects of sensation—something that leads Aquinas to just the same conclusion (namely, that substances can be known only inferentially).[40] Scotus puts the matter particularly bleakly:

> The quiddity of an accident has being more really in the intellect, through a species, than the quiddity of a substance does, because the substance is perhaps not understood through a proper species, since it does not cause a proper species in the intellect, just as it does not in the sense.[41]

Scotus holds that this gives us scant knowledge of the essences of substance-kinds. We can infer different substance-kinds from different congeries of accidents, and we can know of such substances that they are beings (something that, according to Scotus, requires his theory of the univocity of being),[42] substances, and bodies.[43] This has some semantic consequences, incidentally. One obvious one is that we can only ever give nominal definitions of substance-kinds. Another, however, is less obvious: we can still *refer* to the relevant kinds, but we can do so merely under a nominal definition, not a real one.[44]

[39] Scotus, *Ord.* 1.22.un., n. 7 (Vatican, v. 344–5).

[40] See Scotus, *In metaph.* 2.2–3, nn. 76, 77, 83, 114, 115 (OP iii. 223–5, 232–3); see Aquinas, *ST* 1.29.1 ad 3 (I, 156a); 1.77.1 ad 7 (I, 370a). See Aristotle, *Cat.* 8 (9a35–b7); *De gen.* 2.2 (329b19).

[41] Scotus, *Coll. Par.* 4 (MS O, fo. 66^{v}a, quoted in Vatican, iii. 225–6). This is printed as *Collatio* 7 in Wadding; for the correct numbering of the *Collationes*, seeFranz Pelster, 'Handschriftliches zur Überlieferung der *Quaestiones super Metaphysicorum* und der *Collationes* des Duns Scotus', *Philosophisches Jahrbuch*, 44 (1931), 84–7.

[42] Scotus, *Ord.* 1.22.un., n. 7 (Vatican, v. 344–5); see too the text cited in n. 38.

[43] Scotus, *Rep.* 1.22.un., n. 25 (Wolter and Bychkov, ii. 9).

[44] On this, see Dominik Perler, 'Duns Scotus's Philosophy of Language', in Williams (ed.), *The Cambridge Companion to Duns Scotus*, 178–82.

4. Inductive and Deductive Reasoning

Scotus distinguishes between the intellectual functions of cognizing simple and complex concepts, and using them in argumentation.[45] In this final section, again for the sake of completeness, I discuss some of the things he has to say about argumentation.

He holds that certain very general principles are self-evident.[46] Among these Scotus would include essential definitions ('Man is a rational animal'—or at least some real definition of an accident-kind)—in line with standard Aristotelian essentialism. Following Aquinas and Simon of Faversham (prob. 1240s–1306)[47] (and, perhaps, Aristotle himself) he holds that a key goal of scientific reasoning is to discover truths about a thing's *necessary accidents*: its *propria*, necessary features that are grounded in its essence but that do not strictly speaking count as part of its essence or definition—a capacity to smile, in human beings, to take the classic example.[48] But the claim that a human being has a capacity to smile is, according to this theory, not self-evident: it needs to be discovered. And it is discovered syllogistically, by means of an additional premise—in the standard example it would be something like 'every rational animal has a capacity to smile'.[49] In this section, I try to examine what Scotus has to say about how such a premise might be discovered. So I am not concerned with the formal features of deductive reasoning, or with questions of syllogistic validity, or with what validity might consist in. I am merely interested in the psychology of discovery, as it were: how we go about reasoning through problems, inductively and deductively.

For example, the relevant premises required for discovering truths about *propria* could be self-evident; or they could be discovered empirically—by observing rational animals and seeing that they have a capacity for smiling. Essences are supposed to explain *propria*, and Scotus describes the search for causes (of any given effect) as a case of division:

> How might we come to the knowledge of a cause from a sensible effect? Answer: by dividing, in the following way. In *a* there are *b, c*, and *d*. If you want to know which is the cause of *d*—whether it is *b* or *c*, separate them. Where you find *b* without *c*, if *d* follows *b* and not

[45] See e.g. Scotus, *In metaph.* 1.4, n. 12 (OP iii. 99).

[46] See Scotus, *In metaph.* 1.4, n. 44 (OP iii. 108); *Ord.* 1.3.1.4, nn. 230–4 (Vatican, iii. 138–41). Note that the claim of self-evidence here is 'to give them a certain epistemic status', such that 'our a priori knowledge is foolproof because of certain psychological facts. . . . One immediately grasps that the terms are related in such a way that the proposition must be true': Pasnau, 'Cognition', 302.

[47] See Dominique Demange, *Jean Duns Scot: La Théorie du savoir* (Paris: Vrin, 2007), 90–6.

[48] This view of science rests on a (plausible) interpretation of Aristotle, *An. post.* 1.7 (75a40–2).

[49] For the discussion, though not the example, see Scotus, *In metaph.* 1.4, nn. 44–5 (OP iii. 108–9); also Scotus, *Ord.* 1.2.1.1–2, n. 17 (Vatican, ii. 132).

c, then, in *a*, *b* was the cause of *d*. In this way it is possible to know the cause, when many things are joined.[50]

By 'follows' here, Scotus means that there is some kind of intrinsic connection between *b* and *d*, and no such connection between *b* and *c*. If there is no connection between *c* and *d*, then *b* is the cause of *d*.

Scotus is aware that this method is not infallible, at least with respect to real causes, and he immediately mentions some objections to the effect that this kind of division cannot be guaranteed to get real causes (as opposed to contingent or necessary conjunctions of properties),[51] but he nevertheless insists that it is good as a conceptual method for finding the relevant middle terms of syllogisms that yield the desired conclusions, even if not in an explanatory way:

[The objections] are about real causes, and it is difficult to prove about them which is [the cause] of what; nevertheless [they do] not [hold] about the principle of knowing [a conclusion]. For by dividing the many predicates said of the subject in a non-immediate proposition that is to be proved, there will be found one that mediates between [the subject] and the predicate that is to be demonstrated about it. Whether this one is in the subject mediately or immediately will be clear from the nature of the terms, and likewise whether the predicate that is to be demonstrated about it is immediately in it or not.[52]

A non-immediate proposition is one that is not evident from its terms—in my example, the claim that human beings have a capacity to smile—and the argument is that we can find relevant predicates of 'human being' that allow us to infer the conclusion: in my example, 'rational animal'.

The example is perhaps not all that plausible as a case of conceptual division—I chose it for its classical status and for its simplicity—but Scotus himself offers a more complex example that might nevertheless give us a better handle on what is going on, and why it might have some plausibility:

When an experience of the conclusion is accepted—for example, that the moon is sometimes eclipsed—and we suppose that the conclusion is true, we look for the cause of the conclusion by the way of division. And when we arrive, from the experienced conclusion, to principles known from their terms, then the conclusion can be known more certainly

[50] Scotus, *In metaph.* 1.4, n. 70 (OP iii. 116).

[51] Scotus, *In metaph.* 1.4, nn. 71–6 (OP iii. 116–17).

[52] Scotus, *In metaph.* 1.4, n. 82 (OP iii. 119–20). Note that the translation by Girard J. Etzkorn and Allan B. Wolter mistakenly misses the crucial point, made in the first sentence here, that Scotus does not take the objections to be counterexamples to the process of conceptual division, but merely to the process of identifying real causes in the world: 'I reply to the objections: although these [effects] proceed from a real cause, it is difficult to prove what sort it is; for it is not a principle of knowing': Scotus, *Questions on the Metaphysics of Aristotle*, tr. Etzkorn and Wolter, 2 vols (St Bonaventure, NY: Franciscan Institute, 1997), i. 104.

(namely, in the first genus of knowledge, because deduced from a principle that is known *per se*) when derived from the principle known from its terms. For example, this is known *per se*: an opaque body, interposed between a visible object and a light source, prevents the multiplication of light to the visible object. And if it were found by division that the earth is such a body, interposed between the sun and the moon, then [the conclusion] will be known by a *propter quid* demonstration (because through the cause), and not merely by experience (as the conclusion was known before the discovery of the principle).[53]

The idea is that we go through relevant predicates of 'the earth' until we find a property that is sufficient to explain the conclusion—the eclipse of the moon—and this gives us reason to think that our experiential cognition of the moon's being eclipsed is more epistemically probable than it would be absent such an explanation. The relevant property or pair of properties, discovered by division, is that the earth is opaque, and that it is sometimes interposed between the sun and the moon. A *propter quid* demonstration is one in which the premises genuinely *explain* the conclusion:[54] the method is indeed supposed to provide us with scientific explanations, *via* explanatory hypotheses. As an admittedly elementary description of the hypothetico-deductive methodology of empirical science, this seems exactly right, and probably in line with Scotus's agnosticism about our ability to identify such causes infallibly.[55]

[53] Scotus, *Ord.* 1.3.1.4, n. 236 (Vatican, iii. 143). [54] Aristotle, *An. post.* 2.24 (78b1–3).

[55] See Demange, *Jean Duns Scot*, 94–6, and Peter C. Vier, *Evidence and its Function According to John Duns Scotus* (St Bonaventure, NY: Franciscan Institute, 1951), 136–52, esp. 150–2, for discussion of the whole thing; for Scotus's innovatory role, see A. C. Crombie, *Robert Grosseteste and the Origins of Experimental Science 1100–1700* (Oxford: Clarendon Press, 1953), 167–71. A worry is that the method requires us to know *every* instance of a particular substance or phenomenon—something that is clearly not satisfiable in our current cognitive situation. Scotus famously adds a principle that he takes to be self-evident in order to undercut this requirement: 'Whatever occurs frequently from some non-free cause is the natural effect of that cause': Scotus, *Ord.* 1.3.1.4, n. 235 (Vatican, iii. 142). But this requirement is an epistemic one that is not relevant to my purposes here, since my aim is simply to outline the processes of reasoning that Scotus believes to be operative in our acquisition of knowledge.

4

Abstractive Cognition (2): Intelligible Species

As I showed in Chapter 1, there was considerable debate as to the ontological status of sensible species and *species in medio*: in particular, whether they should be thought of as having some kind of material being or real being, or whether their existence is merely spiritual or intentional. It is possible to raise analogous questions about intelligible species too: are they real accidents, or do they have merely some more ghostly, intentional, kind of existence? Henry of Ghent, for example, rejects intelligible species on the grounds that, whatever the cause of such species, all impressed species are real accidents, inherent in a subject, and he does not see how universal representations could be such real inherent accidents (inherent accidents are particulars, universal representations universal). What motivates him here is the claim that there is nothing real_{I} inherent in the intellect. He believes rather that there is some kind of intentional being, $\text{intentional}_{\text{I}}$—the being of the knower in the known, quite distinct from the inherence of a real_{I} form or accident—that is relevant for the case of cognition.[1] Henry's view, in short, is that there cannot be real content-bearing accidents in the intellect, and hence can be no intelligible species. This might suggest that Henry would equate the immaterial with the intentional (a pair that, in Scotus's view, are as it were orthogonal to each other, since material things can be intentional, and immaterial things can be real, as outlined). In fact, this is not quite right. According to Henry, as we saw in Chapter 1, there are real content-bearing accidents (thus, real_{I}) inherent in the sense organs (for example, the phantasm, impressed on the imagination by the external object). And there are real accidents in the intellect—cognitive dispositions to believe certain things, and to argue in certain ways: scientific habits, as Henry labels them. In effect, Henry accepts that every occurrent abstractive cognition begins with abstraction from phantasm; once that process is under way, cognitive dispositions

[1] Rombeiro, 'Intelligible Species', 185–95. I discussed the issue briefly in Ch. 1.

incline the cognizer to generate further mental content inferentially. And, furthermore, as Henry sees it, the process of abstraction consists not in the production of any new real accident, but merely in the agent intellect's making the phantasm represent the universal (as well as the particular).

Scotus does not believe any part of this account. He defends intelligible species basically on two grounds: first, that occurrent abstractive cognition does not in every case involve abstraction from phantasms; and secondly that abstraction cannot in any case consist in making the phantasm represent the universal. In the second and third sections of this chapter, I examine the defence of intelligible species (on the grounds that the phantasm cannot be made to represent the universal) and the relation between species and cognitive habits. Since Scotus agrees that all cases of abstractive cognition involve phantasms in some way or another, I discuss in section 4 what Scotus has to say about the role of phantasms in any case of abstractive cognition (including Scotus's denial that every occurrent abstractive cognition includes abstraction by the agent intellect). In the final section, I discuss the causal function of intelligible species and their ontological status as real qualities. But I begin by considering the question of the possibility and nature of causal interactions between the material and the immaterial, since this issue lurks behind a number of topics that I discuss in this chapter and the following two.

1. Interaction between the Material and the Immaterial

As I noted in the Introduction, talk of species derives from medieval optical theories: the impression of likenesses/representations in the medium between an object and the sensor, and in the sensor's sense organs. But medieval thinkers, as we have seen, also talk about species in the context of intellectual cognition. Katherine Tachau takes this as evidence that 'scholars held that the process of multiplication did indeed continue into the intellect, via the conversion of phantasms into intelligible species'.[2]

But this is not quite right. The Perspectivists' talk of the multiplication of species is supposed to highlight one or more *effects* of the object, whereas most of those who accept intelligible species believe that such species are the effects not of the object, or not merely of the object, but also of the intellect itself: specifically, of the agent intellect, the power of the intellect responsible for abstracting universal content. Talk of the agent intellect adds a distinctively Aristotelian component

[2] Tachau, *Vision and Certitude*, 31.

to the medieval theories. Leen Spruit's assessment seems right: using 'impressed species' to signal a real (hence 'impressed') representation ($real_I$) caused by the object in the cognizer, he notes in reference to Aquinas's account that it has neither the terminology nor the theory (at least at the intellectual level) of impressed species, since Aquinas does not believe that the intelligible species is caused by the object.[3] And in relation even to Bacon, Tachau's example (see the discussion in the Introduction), Spruit argues that

> the species—a general explanatory principle within the domain of efficient causality—is also operative in the intellectual realm. This does not entail, however, that the process of multiplication of the species continues at the intellectual level, and exerts influence upon conceptualization.[4]

The correct interpretation of Bacon is not germane to my purposes: I mention these issues simply so that we are aware that there is some controversy here, and aware enough of its nature as to be able to come to some kind of conclusion as to the position of Scotus in it.

But one feature of this debate is worth dwelling on now, since it turns out to be of considerable importance for understanding the mechanisms of abstraction. As I showed in Chapter 3, Scotus disagrees with Godfrey that abstraction consists simply in the stripping away of accidents to reveal the common essence. He claims instead that the agent intellect 'makes' the universal by causing conceptual content, in this case an intelligible species, to inhere in the (possible) intellect. One reason thinkers had for positing an agent intellect at all was to explain the production of an act with immaterial contents, inherent in an immaterial substance, on the assumption that nothing material (such as a phantasm) could cause an immaterial effect (such as a cognitive act). We find this argument in Aquinas, and it is related to one from Olivi that I report in section 1 of Chapter 6.[5]

Early in his life, Scotus seems to accept this assumption. For example, in the questions *On the Soul*, he supports the thirteenth-century orthodoxy that 'the purely corporeal cannot act directly on the purely spiritual, since agents are more perfect than patients'.[6] But Scotus changed his mind on the matter. In book II of the *Ordinatio* he claims:

> I concede . . . that a body cannot be the total cause of some action on a spirit, but it can be a partial cause, since a patient can exceed in nobility a partial agent cause.[7]

[3] Leen Spruit, Species Intelligibilis: *From Perception to Knowledge* (Leiden: Brill, 1994), 207.

[4] Spruit, Species Intelligibilis, 154, referring to Bacon, *Opus maius* 4.2.1 (ed. John Henry Bridges, 2 vols (Oxford: Clarendon Press, 1897), i. 111).

[5] See e.g. Aquinas, *ST* 1.84.6 c (I, 413b).

[6] Scotus, *In de an.* 11, n. 10 (OP v. 92).

[7] Scotus, *Ord.* 2.9.1–2, n. 120 (Vatican, ix. 193).

Evidently, Scotus realizes that his own account of abstraction—which posits that the phantasm is a partial cause of the intelligible species—requires rejecting Aquinas's view. And his account of intuitive cognition certainly has the consequence that (in standard cases) a material object is a partial cause of an immaterial act—something I return to in Chapter 6. Scotus even holds that the phantasm could have a direct causal role in the production of an intellectual cognitive act.[8] As we shall see, Henry of Ghent maintains a direct link between phantasm and cognitive act: but he does so on the assumption that the phantasm is in this context something *immaterial*, and on the assumption that the link is not really a causal one; so his view should not be taken as signalling a denial of the immateriality principle.

2. Phantasms and Intelligible Species: Against Henry of Ghent (1)

Scotus takes from Henry's account the view that, in order to think of something, I must either be in its presence or have a dispositional cognition of the object, conveying the relevant semantic content. The relevant representation, since it has some explanatory function to perform, needs to be *prior* to the cognitive act. The idea is that abstractive cognition is cognition in the absence of a real object, and that unless I *already* have, in some kind of disposition, the appropriate conceptual content, I will not be able to form a relevant occurrent cognition.

Scotus and Henry agree on this. But they disagree on the nature of the necessary prior disposition. For Scotus, the disposition must be something real in the soul; for Henry, it need not be, and could instead be something that is merely intentional (intentional$_I$). As Henry sees it, the phantasm—a real accident inherent in the imagination—performs two distinct functions. First, it is a real accident that unites the object to the sense power, eliciting an act of imagination whose content is an expressed species—something that is, according to Henry, merely intentional$_I$—representing the *particular*. Secondly, it is a real accident that unites the intellect to the object, such that the agent intellect produces from the phantasm an expressed species (intentional$_I$) representing the *universal*:

> The material intellect indeed receives no impressed species from the object, but only expressed, by which one who understands potentially comes to understand actually; for it must be according to some likeness that the intellect is related to intelligibles, just as the sense is related to sensibles.[9]

[8] Scotus, *Ord.* 1.3.3.1, n. 359 (Vatican, iii. 217).

[9] Henry, *Quod.* 4.21 (Paris, 1518), fo. 136ᵛH; translation from Rombeiro, 'Intelligible Species', 201–2; for the whole discussion, see Rombeiro, 'Intelligible Species', 201–3.

In Henry's terminology, here derived from Averroes, the material intellect is the possible intellect, and the idea is that in abstraction no real accident ($real_I$) comes to inhere in the possible intellect. Phantasms and impressed species (if there were any such) are (or would be) real accidents ($real_I$/$intentional_R$); expressed species are merely $intentional_I$.

Scotus disagrees with both of the crucial claims in Henry's account. On the first, he does not believe that the same real item—a phantasm—could represent both the particular and the universal. On the second, in line with this, he believes that a $real_I$ accident with universal contents (and therefore distinct from the phantasm) must inhere in the intellect prior to the act of cognition.[10]

First, then, the argument about the nature of the phantasm's representational capacity:

> The same species, of the same kind, does not of itself represent an object under opposed representational kinds (*sub oppositis rationibus repraesentabilibus*). But the notion of singular and the notion of universal are opposed cognizable and representational kinds. Therefore no one species, of one kind, can represent some object under the description of being universal and singular. The species in the phantasm represents a singular object under the description of 'singular'. Therefore it cannot represent the object under the description of 'universal'. The major premise is proved, because the species under the description under which it represents an object is measured by the object. But the same thing cannot be measured by two opposed measures, or *vice versa*. . . . Therefore the same species cannot represent two opposed objects, or the same [object] under two opposed objective kinds.[11]

The argument here takes issue specifically with Henry's notion of abstraction, as consisting in the intellect's making the phantasm represent the universal. The idea is that the phantasm represents the particular, and that such a representation cannot be a representation of a universal—of the common nature considered in abstraction from any kind of particularity.

In reply to an objection, Scotus argues similarly: representations of the common nature united to particularity and abstracted from such particularity are *different kinds* of representation, as different (Scotus alleges) as a visual representation and an auditory representation. The final passage quoted in section 4 of Chapter 1 makes the point: it continues as follows:

> Thus in the prior item [i.e. the single representation] it would be necessary to understand both the unity of the [representational] species in itself, and [the unity] of the representation

[10] For an outline of his overall argumentative strategy, see Scotus, *Ord.* 1.3.3.1, nn. 349–51 (Vatican, iii. 210–11).

[11] Scotus, *Rep.* 1.3.4, n. 97 (Wolter and Bychkov, i. 210–11) = *Ord.* 1.3.3.1, *text. int.* (Vatican, iii. 212, ll. 9–20). Scotus has a second argument at *Ord.* 1.3.3.1, n. 357 (Vatican, iii. 215–16) that seems very similar to this first one.

and of the object that can be represented through it, in so far as it is represented in it or through it. So something which is the same in the prior item cannot have a different kind of representing, or represent it [viz. the object] under different kinds of representability.[12]

The passage is not fully perspicuous: what Scotus means is that the real unity of the species (something with 'unity . . . in itself') must correspond to unity of representation, or to the unity of the represented object. One species cannot represent both colour and sound; representing the particular and the universal likewise requires two different kinds of species. The one representation is sensory, imagistic, and non-conceptual; the other is linguistic and conceptual, whose content is a *definition*.

Why suppose that the universal object needs to be made accessible *prior* to the act of cognition—something that all of these arguments assume? After all, it might be thought that the presence of a phantasm is sufficient, without any prior intelligible species, and that the agent intellect could simply abstract afresh on each occasion of occurrent cognition, abstracting the content act directly from the phantasm, as Henry supposes. Scotus's first argument is that the nature of cognitive powers is to include their own dispositional cognitions: they cannot borrow these, as it were, from another power:

Other cognitive powers have an object present to them not merely secondarily (namely, because they are present to other lower powers), but by proper presence, as the common sense has colour present to it not only as present to sight, but also because it has its species present in the organ of the common sense. Therefore, because it is a perfection in a cognitive power to be able to have it on the basis of its being the object of such a power, it follows not only that [the intellect] can have an object present to it on the grounds that it is present to the imaginative power, but also [that it can have it present] by proper presence, in so far as it shines out to the intellect through something that is in the intellect.[13]

The species 'present in the organ of common sense' is a representation that allows the common sense to perform its functions independently of actual sensation (for example, distinguishing colours from sounds—on the function of the common sense, see Chapter 7). This kind of independence is a perfection in any cognitive power; thus, since it belongs to a lower power (the common sense) it should belong to a higher one too. But this does not seem a powerful consideration: why suppose that the intellect has to exhibit this particular perfection?

Scotus adds a further argument: that the intellect's operation cannot depend on something to which it is only contingently joined:

[12] Scotus, *Ord.* 1.3.3.1, n. 354 (Vatican, iii. 213).
[13] Scotus, *Ord.* 1.3.3.1, n. 367 (Vatican, iii. 223–4).

A power that can have an act only in relation to an object that is present to it, if it cannot have the object present other than through a power contingently joined to it, depends in its operation on such a power contingently joined to it, and is thus imperfect. But the intellect can have an act only in relation to an object present to it, and, according to you [viz. Henry of Ghent], it can have the object present only in the imagination. But the imagination is contingently joined to the intellect in so far as it is a power. Therefore the intellect depends, in its operation, on another power to which it is contingently joined, and thus this posits an imperfection of a cognitive power in it. But no imperfection should be posited in any nature unless necessity for this should appear in such a nature. Therefore such imperfection is not to be posited in the intellect. [Therefore the intellect has the object present through its own power—viz. in an intelligible species.][14]

This is another version of the independence argument: functioning independently of other powers is a perfection in a cognitive power. Dependence on the imagination for any occurrent cognition would thus be an imperfection; and coupling this with a perfection principle—that imperfection in a kind of thing should be posited only if 'necessity for this should appear in such a nature'—it follows that, in the absence of any reason for the necessary dependence of the intellect on the imagination, there is no such dependence. The argument is, again, a rare case of Scotus arguing for a philosophical conclusion on the basis of considerations of perfection. Aquinas would disagree: the separated soul cannot process new information in any natural way precisely because it does depend on a power to which it is contingently joined (i.e. the imagination).[15] I do not see that Scotus has a good answer to this: not least given his view—that I examine in Chapter 8—that the semantic and representational content of a mental act is sufficiently secured simply by its real internal structure.

What we learn from this is that abstractive cognition occurs only in the case that the conceptual content of the act is somehow dependent on an intelligible species: not that the species fixes the content of the act, but that as a matter of contingent fact occurrently cognizing something that we dispositionally cognize involves some explanatory relation running from the disposition to the occurrent cognition.

It is tempting to infer from this that abstractive cognition always presupposes (present or past) intellectual intuitive cognition: the occurrent perceptual cognition of an object that is really present. But in fact we standardly abstract from phantasms, on Scotus's more-or-less Aristotelian account, and phantasms require no more than intuitive *sensory* cognition (present or past): sensation, in other words. (As we saw in Chapter 2, Scotus seems to suggest late in his life that we could have

[14] Scotus, *Ord.* 1.3.3.1, n. 368 (Vatican, iii. 224).
[15] See e.g. Aquinas, *ST* 1.89.1 c and ad 3 (I, 436b and 437b).

abstractive cognition on the basis of intuitive intellectual cognition; but he makes no attempt to integrate these hints into his general theory on abstraction.)

The arguments thus far suggest that cognition presupposes more than just Henry's phantasm and its two expressed species. But why suppose that this something more need be something *real* (i.e. real_I)—Scotus's second argumentative strategy against Henry? The idea seems to be that Henry's expressed species in fact require real bearers, and that each expressed species requires a different bearer—one representing the particular, and inherent in the sense; the other representing the universal, and inhering in the intellect. And this latter is just what an intelligible species is supposed to be. Scotus offers two metaphysical considerations in favour of this. First, the fact that we can acquire intellectual content suggests that some real change must take place in the intellect:

> Sometimes an intellect that was previously in essential and remote potency to cognition (*ad intelligendum*) is in proximate and accidental potency [to cognition]. But this takes place in the intellect only through some change. But not [through a change] in the object, as is clear; therefore [through a change] in the intellect. But this change, which results in proximate potency, seems to result in some form through which the intelligible object is present to the intellect. And this form is prior to the act of cognition, because the proximate potency by which someone is able to cognize is naturally prior to the act of cognition.[16]

Something which has 'proximate and accidental potency' to such-and-such an act is such that the production of the act requires no further change in the item other than the mere production itself. The item has intrinsically all that it needs for the production. Having 'remote and essential potency', contrariwise, is being such that the item can in principle produce the relevant act, but only given the presence of some additional power or capacity—here a disposition. An assumption is that the intellect in itself lacks a disposition required for certain sorts of cognitive acts—namely, those that have universal contents: it has to gain such a capacity; and this capacity is the intelligible species. And such contents are required prior to mental acts in order to secure the acts' contents.

The idea in the second argument that I consider here is that the agent intellect—something whose existence Scotus here seems to accept merely on the basis of authority[17]—must, as a real cause, bring about real effects:

> The agent intellect is a merely active power, according to Aristotle, *On the soul* III, both because it is 'that by which [the intellect] makes all things,'[18] and because it is compared to the possible also 'as craft to matter';[19] therefore it can have a real action. Every real action

[16] Scotus, *Ord.* 1.3.3.1, n. 339 (Vatican, iii. 204–5).
[17] Scotus appeals to Aristotle, *De an.* 3.5 (430a11–13, 15).
[18] Aristotle, *De an.* 3.5 (430a15).
[19] Aristotle, *De an.* 3.5 (430a11–13).

has a real end term. But this real end term is not received in the phantasm, because the thing received would be extended, and thus the agent intellect would not transfer from order to order; neither would [the thing produced by the agent intellect] be more proportioned to the possible intellect than the phantasm is. And neither does the agent intellect cause anything in the phantasm, because this is not the thing affected [by its action]. . . . Therefore [the thing produced by the agent intellect] is received only in the possible intellect, because the agent intellect is not receptive of anything. This thing caused first cannot be posited to be the act of cognizing, because the first end term of the action of the agent intellect is the actual universal, because [the agent intellect] transfers from order to order, and the actual universal precedes the act of cognizing . . . because the object as object precedes the act.[20]

According to standard medieval Aristotelianism, the agent intellect is supposed to 'transfer from one order to another'[21]—something usually interpreted to mean 'bring about the universal from the particular', but which Scotus understands to mean 'bring about something unextended from something extended' (on which, see the Introduction). Thus, the real item that is brought about must be something unextended—inherent not in an extended substance but in an unextended or immaterial one. So it cannot be a phantasm, since phantasms are extended. And the item brought about must be prior to the act.

The arguments thus far rely on the assumption that an occurrent abstractive cognition requires a prior disposition. At one point, in a text that Giorgio Pini has highlighted, Scotus proposes an argument of a theological nature that suggests that the priority claim is not true. In the discussion, Scotus claims that God could cause an act of abstractive cognition even in the absence of a species:

The object has intelligible existence in that act, and [the act] has the object as its end term as that which is in it [viz. the act], not as it has prior being in a representation: for if we posit the act of understanding, the object, as the end term of the act, is present in the act even if, *per impossibile*, another representation was not there at the time. For example, if God were to cause an act of understanding even without a species existing in the intellect, the object in this case would necessarily be present as the end term of the act of understanding, because there being an act of understanding that lacks a relation to some present object as the end term includes a contradiction, and nevertheless, through [divine] power, there is no species initiating this act.[22]

[20] Scotus, *Ord.* 1.3.3.1, n. 359 (Vatican, iii. 216–17). See too Scotus, *Ord.* 1.3.3.1, n. 360 (Vatican, iii. 218). In the early book I of the *Metaphysics* questions, Scotus suggests that abstraction might occur not through the activity of the agent intellect but rather by means of the possible intellect's 'considering the unlimited quiddity' and thereby 'cause the universal in [the possible intellect]' (Scotus, *In metaph.* 1.6, n. 39 (OP iii. 144)). But as far as I know, Scotus does not consider this view elsewhere, and I assume he rejects it.

[21] Averroes, *In de an.* 3, com. 18 (ed. F. Stuart Crawford (Cambridge, MA: Mediaeval Academy of America, 1953), 439, ll. 79–81).

[22] Scotus, *Lect.* 1.3.3.2–3, n. 392 (Vatican, xvi. 377), discussed inGiorgio Pini, 'Can God Create my Thoughts? Scotus's Case Against the Causal Account of Intentionality', *Journal of the History of Philosophy*, 49 (2011), 51–2.

The impossibility here is clearly nomological, not logical, as Pini notes.[23] The context is a refutation of the causal view of mental content: that the content of a mental act is fixed by some causal relation between the external world and the relevant act—something that I return to in Chapter 8. Here, the presence of an intelligible species is not necessary for an abstractive act's having the content it has: all that is required is that the object is somehow 'in' the act, with 'intelligible existence' (intentional$_1$ existence). Now, in this case, we could infer that the lack of any requirement for an intelligible species is merely supernatural. Standard cases of abstractive cognition require intelligible species. But what we learn from the discussion is that the arguments against Henry, about the requirement for abstract contents derived from intelligible species, are not supposed to constitute theoretical accounts of the ways in which abstractive acts gain their conceptual content. They are more commonplace: we have cognitive dispositions, and the cognitive acts that we produce on the basis of those dispositions will have the same conceptual content as the dispositional cognitions. What I do not see is any decisive reason for thinking that phantasms might not be sufficient dispositions, coupled with the abstractive power of the agent intellect. But I consider in section 3 a further feature of Henry's account which might suggest that he is closer to Scotus on the issue than the discussion thus far would suggest—and so that, in effect, Henry's position ends up being inconsistent in a way that Scotus successfully highlights.

3. Species and Habits: Against Henry of Ghent (2)

Clearly enough, there are dispositional cognitions, and most medievals are happy with the thought that such dispositions belong intrinsically, though accidentally, to the mind. Scotus identifies these dispositional cognitions as intelligible species, since species have conceptual content, and nothing about species requires that they are episodic or fleeting in the way that the extramental partial causes of such species may be. Species, in other words, do double duty, as the conveyors of content, and as the means by which content is stored. Amongst defenders of intelligible species, these claims are not controversial. We have seen why Henry might object to this: not because he does not accept the possibility of such double duty, but because he does not believe that there could be intelligible species impressed on the mind by (or even partly by) external objects. But Henry has an account of dispositional cognitions, spelled out not in terms of intelligible species but rather in terms of habits. Scotus agrees with Henry that (at least some) dispositional cognitions are

[23] Pini, 'Can God Create my Thoughts?', 51.

habits—the point is hardly controversial given Aristotelian accounts of habits as dispositions that are hard to dislodge.[24]

Given that Scotus accepts intelligible species, it is easy enough for him to identify some of these as habits. One difference between the two thinkers is that Henry's habits are caused merely by the relevant acts (which are in turn caused by the object and the intellect: a standard Aristotelian account of the genesis of habits), whereas Scotus—at least in the explicit arguments against Henry—holds that species are required prior to the relevant abstractive acts, and therefore cannot be initially caused by them.

According to Henry, then, there are dispositional cognitions, but no intelligible species. Scotus summarizes Henry's view by means of a catena of (approximate) quotations:

> Habits of knowledge (*habitus scientales*), 'although they are qualities in the first species of quality, [are] nevertheless [such that] each one has founded on it a relation (essential to it, and that cannot be removed from it) to what can be known as to that thing on which it depends in its essence and existence', such that 'the intellect cannot receive (*capere*) [the habit] unless it receives the thing that can be known, in relation to which it exists'; and this is because of 'the natural correlative attachment (*naturalem colligantiam correlationis*) that [the habit] has to [the thing on which it depends]'. '. . . It has this essential relation to what can be known', such that 'from the nature of the habit of knowledge, the thing that can be known always shines out (*resplendet*) from the thing [viz. the habit] in the intellect to which it belongs', 'much more naturally than would be possibly brought about through a species, since knowledge is more dependent on what can be known than a species is on a thing to which it does not have the relation of being caused'.[25]

I am not now concerned with the accuracy of Scotus's understanding of Henry, since my aim is to try to pick out what Scotus understands his own position to amount to—and for this purpose I need no more than an account of his interpretation of Henry, and how that guides his own formulation of the issues. At any rate, this catena makes several significant points that Scotus responds to in texts I discuss in this section. First, habits are qualities (real accidents). Secondly, they are intentional items, with intentional content (the object 'shines out' from the habit). These habits are thus real_I accidents, inherent in the intellect or soul. Thirdly, they are more dependent on their objects than any species would be, since there is some kind of causal relation between the object and the habit.

[24] Aristotle, *Cat.* 8 (8b27–33).

[25] Scotus, *Ord.* 2.3.2.3, n. 356 (Vatican, vii. 572), roughly quoting and summarizing Henry, *Quod.* 5.14 (fo. 175^{v}H–176^{r}K). See too Scotus, *Ord.* 1.3.3.1, n. 336 (Vatican, iii. 203), referring to Henry, *Quod.* 5.14 (fo. 175^{v}F).

Thus put, it is rather easy to anticipate ways in which Scotus will respond. After all, a key feature of Henry's rejection of intelligible species is that there can be no real$_I$ accidents in the intellect. And there is no reason to suppose that a species is less susceptible of intentionality than a habit is—as Henry seems to suggest in the last passage quoted in this text. In fact, Henry's idea is that habits are caused by acts, and veridical cognitive habits caused by acts directed at real objects, and thus ultimately—in standard cases—by the objects themselves. The mechanism is of some complexity:

> The agent intellect posits a non-complex universal object as present to the memory, from which, as from knowledge in the memory, there proceeds a two-fold knowledge in the intelligence, namely, the act of understanding and the perceived object. Thus, in conceiving this scientific word of the composing intellect, the intellect has, by its investigation, knowledge as a universal complex object in the memory: from which there proceeds a two-fold scientific knowledge in the intelligence, namely, the complex act of understanding and the object conceived as a word.[26]

The end result of the process, if repeated sufficiently often, is the production of a cognitive habit.[27] (Here, Henry refers to the complex result of discursive reasoning as a 'word', something like the conceptual content of a single complex cognitive act.) Robert Pasnau has hypothesized that Henry's rejection of intelligible species amounts to a rejection of representational items in the intellect. On this account, Henry replaces them with simple *dispositions* to cognize—i.e. habits.[28] It is easy to see what makes this reading tempting: Henry's denial of intelligible species seems to amount to a denial of any real$_I$ accident, with representational content, inhering in the intellect, and if habits are more than mere dispositions, Henry's view seems flatly contradictory. But still, this reading is not right. Like phantasms, cognitive habits are, according to Henry, both dispositions and representational items with semantic content:

> This habit can be considered in two ways: in one way, as a habit in the first species of quality, and in the other as it is virtually in some way the things which can be known, and through a natural connection actually presents them to the intellect. In the first way, it is a form inhering in and impressed in the intellect, and for this reason can be called a species. . . . Speaking of the essences of things in this way, as they exist in the intellect virtually in the scientific habit and are objectively presented to [the intellect] through [the habit], I say that an angel understands things other than itself through the essence of things actually presented in and through a scientific habit.[29]

[26] Henry, *Quod.* 4.8 (fo. 98^{r}P); see too e.g. *SQ* 58.2 ad 3 (II, fo. 130^{v}I).

[27] On the whole process, see Henry, *Quod.* 5.16 (fo. 185^{r}E–188^{r}I, and in particular fo. 185^{r}E–185^{v}K). See too Henry, *Quod.* 4.8 (fo. 98^{r}P); *Quod.* 5.14 (fo. 176^{v}O, 179^{r}E); *Quod.* 5.25 (fo. 204^{v}K).

[28] Pasnau, *Theories of Cognition*, 308–9.

[29] Henry, *Quod.* 5.14 (178^{r}V–178^{v}V).

The habit is 'considered in two ways': as a quality, and as a representational item—thus, $real_I$. Accordingly, it is not an expressed species but something 'impressed in the intellect'. At any rate, Henry's point is that if we have these kinds of dispositional cognitions caused by objects, what need do we have for further items such as intelligible species? An assumption that Henry makes, in the very last quotation in Scotus's summary, is that intelligible species, whatever they are, are not habits, and are not caused by their objects: indeed, they are caused merely by the intellect, not the object—and this is not an assumption that Scotus would accept. But in fact Henry does not need this assumption against Scotus, since Scotus concedes that it is possible to have both intelligible species and cognitive acts that fail to be caused by the relevant objects in various non-standard cases: for example, in non-veridical cases, or (as we have just seen) in veridical cases in which God causes the relevant species or act—on which too, see Chapter 8. On Scotus's summary of Henry's theory, Henry would have to give a quite different account of erroneous dispositional cognitions: perhaps one not involving habits at all.

Scotus has what strikes me as a decisive objection to all this: habits are real accidents in the intellect, and if Henry's general claim about real accidents is true—namely, that they cannot include semantic or representational content—then neither will habits be the kinds of thing that can include such content: they cannot be $real_I$.[30] Henry, as we just saw, is explicit about the status of scientific habits as qualities. This looks fatal; after all, Henry's basic objection to intelligible species is that, as real accidents, they simply are not the kinds of thing that can include conceptual content. Perhaps Henry would claim that his objection is only to those putative real accidents that are impressed by the material object on the intellect. But, on the one hand, there seems no principled reason for making such a restrictive claim (it is the reality of the species, not their allegedly impressed nature that seems to be the block to their bearing conceptual content); and, on the other, defenders of intelligible species by and large do not believe that they are simply impressed on the power by the external object of cognition.

Furthermore, habits are dispositions that are 'hard to dislodge' (as the next quotation makes clear), and it is accidental to the notion of an intelligible species that it is hard to dislodge: we sometimes easily forget things we have learned. So at the very least, Scotus argues, we need a notion of something that conveys semantic content and that need not, itself, be a habit:

> I say that [an angel] has grounds for his cognition (*rationes cognoscendi*) which are different from the cognized essences, and which represent them. These grounds are properly and

[30] Scotus, *Ord.* 2.3.2.3, n. 380 (Vatican, vii. 586–7), referring to Henry, *Quod.* 5.14 (fo. 174^{v}Y).

correctly called intelligible species; and if they are called habits by others, what these others mean are features which are actually accidental to the species: for the notion of a habit is accidental to a species as the species in the intellect counts as a habit, in so far as it is hard to dislodge (because it counts as a permanent form). But this [viz. being a species] is not essential to the quality, just as the habit [viz. something hard to dislodge] is not essential to the species—for the same non-relational essence, in the genus [viz. category] of quality, can be both a habit and a disposition.[31]

So, as Scotus makes clear here in a couple of different ways, it is also accidental to the notion of a habit that it conveys semantic content. The idea of a cognitive habit may indeed, as a cognitive habit, require a relation to previous acts; but it is not clear that describing the item merely as a habit (as opposed to a species) establishes that it requires a relation to an *object*. This objection, of course, is a bit heavy-handed: Henry's understanding is that not all habits are cognitive, but that veridical cognitive habits do indeed require semantic relations to real objects. But the crucial point in Scotus's objection is that Henry's language—of habits, as opposed to intelligible species—does not pick out the relevant distinctive feature of a cognitive habit: namely, that it has semantic contents. Habits as such are concrete items, but they need to be more than just this if they are to convey semantic content.

There is, however, a further point lurking here, and it is this: that the questions of the storing of mental content, on the one hand, and of our ease of recollection, on the other, are on the face of it distinct questions. Talk about a habit has to do with ease of recollection, and this might indeed come merely from the repeated exercise of the act. But getting stored content in the first place seems something distinct from this:

Augustine, as much as Aristotle, uses 'knowledge' (*scientia*) not to refer to a habit acquired from repeated acts, that facilitates similar acts, but to refer to the thing through which an object is present as actually intelligible, whether this is posited to be an intelligible species or something else. For science, according to Aristotle, is that in virtue of which a soul is led from essential potency to accidental potency. And this is prior to any actual intellection (*intellectionem*), because that [viz. actual cognition] is the end term of the accidental potency. For knowledge that is acquired from acts, and that facilitates further acts, is not prior to any act of understanding (*actum intelligendi*).[32]

We know things that we are not actually thinking of—and this knowledge or *scientia* is something dispositional with conceptual content, something that Scotus

[31] Scotus, *Ord.* 2.3.2.3, n. 389 (Vatican, vii. 590–1).

[32] Scotus, *Quod.* 15, n. 12 (Wadding, xii. 424). For the priority of species over habits, see e.g. Scotus, *Ord.* 2.3.2.3, nn. 390, 402 (Vatican, vii. 591, 597).

labels a species. And this species can be strengthened by acts, and thus become a habit. These acts are *prior* to the habit, just as in standard Aristotelian accounts of the acquisition of habits by means of repeated activity.[33] And this is a way of making the point that the acquisition of mental content is distinct from the acquisition of a cognitive habit. Equally, it seems that questions of ease of recollection—relevant to the question of a habit—are distinct from those of the complexity of semantic contents—relevant to the notion of an intelligible species. As Scotus notes, one person could be very good at remembering something simple but incapable of understanding something complex, and another very bad at remembering something simple, but very good at understanding something complex, and this seems to suggest that we need to think of two different aspects of our stored mental contents.[34] I take it that not all intelligible species are sufficiently robust to count as habits, but that, certainly, many—perhaps most—are.

4. Phantasms and Abstractive Cognition

Scotus agrees with the standard view that the embodied soul can cognize abstractively only by means of phantasms: and given his strictures about the perfection of the intellect (as functioning in virtue of its own inherent dispositions, not merely in virtue of phantasms inherent in the sense power), this conclusion might be thought surprising. So in this section, I consider it in some detail. As we shall see, Scotus agrees that we always need phantasms in abstractive cognition. But he does not accept that this is because we always need to abstract from phantasms. Rather, he holds that the need for phantasms arises merely from a necessary connection, in the (post-lapsarian) embodied state, between sense and intellect.

[33] On the production of the relevant habit, see Scotus, *Ord.* 1.3.3.4, n. 604 (Vatican, iii. 356–7). Basically, Scotus supposes that the act and the habit are both produced by the same agent—presumably the intellect—and that the intensification of a habit—here the species—takes place by the production of 'more' of the same form, in line with Scotus's general account of the intensification of forms (on this, see my *The Physics of Duns Scotus*, 186–92). Scotus also seems to hold too that there are, even in regular cases, cognitive habits that are not intelligible species: see e.g. Scotus, *Ord.* 2.3.2.3, n. 390 (Vatican, vii. 591); 2.3.2.3, n. 402 (Vatican, vii. 597). Some of these are inclinations to assent to certain claims, where the inclinations themselves are not representational items: see Scotus, *Lect.* 3.23.un., n. 38 (Vatican, xxi. 111–12)—a difficult passage where Scotus talks as though *no* habits can be representations. (At the end of section 5, I quote a text that apparently contradicts this, and comment briefly there.) And perhaps some of them are representational but include too some kind of computational functions, some kind of mechanism *connecting* the different semantic items, allowing us to repeat certain reasoning processes: this is certainly Henry's view (see e.g. Henry, *Quod.* 4.9 (fo. 97^{v}O); *Quod.* 5.14 (fo. 176^{r}K); *Quod.* 11.7 ad 1 (fo. 459^{v}V)). I do not know a passage where Scotus considers the issue.

[34] Scotus, *Ord.* 2.3.2.3, n. 390 (Vatican, vii. 591–2).

Henry of Ghent supports his view, that our occurrent cognitions with universal content have merely phantasms as intermediaries conveying semantic content by, among other things, citing two important Aristotelian claims. The first is that 'we see the essence in the phantasm';[35] the second that 'phantasms are related to the intellect as sensible things are to the sense'.[36] Aristotle appeals to this latter principle as an explanation for the fact that we 'never think without a phantasm'.[37] Scotus uses this as a key to the exposition of the first two Aristotelian claims: all that Aristotle means to assert is that phantasms are necessary conditions for cognition of universals.

> The connection between the imagination and the intellect, in the current state, is such that we cognize nothing universal unless we imagine a singular instance of it, and the conversion to phantasms is nothing other than that someone cognizing the universal imagines a singular instance of it. Neither does the intellect see the essence in the phantasms as the things that are seen, but rather when it *cognizes* the essence shining out in the intelligible species precisely as shining out in the intelligible species, it *sees* it in the singular that is seen in the phantasm by the imaginative power.[38]

Here, Scotus accepts the standard Aristotelian line that we do not in fact cognize universals without using mental images. I assume he does so as a matter of simple empirical observation (as it were)—and we have already seen ways in which Scotus later comes to restrict this connection merely to cases of abstractive cognition. In this passage, he supposes two processes going along side by side: cognition (via intelligible species) is accompanied by imagination (via phantasms).

Some thinkers took this connection to be a necessary consequence of the embodied nature of human cognition. Aquinas, for example, argues that we can infer from the fact that the intellect is embodied that its proper object is something embodied too: as Aquinas puts it, its proper object is 'essence or quiddity existing in bodily matter'; and the reason for this is that 'a cognitive power is proportioned to the thing cognized'.[39] (Talk of the proper object of the intellect is a way of picking out the non-relational feature in virtue of which the intellect cognizes those things that it cognizes.[40]) And the fact that, as this principle entails, the objects of the intellect are material requires that we cannot understand those objects without

[35] Aristotle, *De an.* 3.8 (432a8–9).

[36] Aristotle, *De an.* 3.7 (431a14–15); this passage and the previous one are cited by Henry at *Quod.* 5.14 (fo. 176^{v}O–177^{r}O); also *SQ* 1.8 (Leuven, xxi, 155, 156–7); see Scotus, *Ord.* 1.3.3.1, n. 343 (Vatican, iii. 207).

[37] Aristotle, *De an.* 3.7 (431a16–17).

[38] Scotus, *Ord.* 1.3.3.1, n. 392 (Vatican, iii. 239), my italics.

[39] All quotations in this paragraph are from Aquinas, *ST* 1.84.7 c (I, 414a).

[40] SeePeter King, 'Scotus on Metaphysics', in Thomas Williams (ed.), *The Cambridge Companion to Duns Scotus* (Cambridge: Cambridge University Press, 2003), 16–17.

using phantasms: we understand material things 'by sense and imagination', and this requires that the intellect 'turn itself to phantasms so that it can see the universal nature existing in the particular'.

Scotus does not agree with this. For one thing, he disagrees with the claim that the proper object of the intellect is the quiddity of material substance—although he holds that our current state places some blocks on the functioning of our intellect such that we do not have direct access to just all possible cognitive objects (angels, or God, for example). As he puts it,

> The first object of a power is said to be that which is appropriate to the power as power, not that which is appropriate to the power in such and such a state: just as the first object of sight is not posited to be that which is appropriate to sight existing in a medium illuminated just by a candle, but that which is naturally appropriate to sight in itself, to the extent that it is of the nature of sight. Now, however . . . nothing can be appropriate, as a first object, to our intellect (from the nature of the power) other than the most general; but in our current state the quiddity of a sensible thing is appropriate as the mover [of the intellect], and for this reason, in the current state, it does not naturally understand other things which are not contained under this first mover.[41]

The 'most general' or proper object is just *being*, and this is in principle the first object of the intellect in Scotus's account—since we can cognize anything intelligible.[42] But in our current state, as Scotus points out, we have immediate or non-inferential cognition merely of material things or sensible things. And this is just an empirical matter: we do not (in the usual run of things, and by our natural powers) seem to be able to cognize immaterial things. We live, as the passage nicely puts it, as it were by candlelight. But, Scotus notes, the fact that our current condition is thus restricted should not lead us to generalize from it to conclude about the proper object of the intellect as such—the mistake he ascribes to Aquinas.

The idea is that there is some necessary connection in an embodied soul between the activity of the intellect and the activity of the senses, such that the activity of the intellect requires the activity of the senses too. The argument is again empirical: damage to the brain, for example, can impede cognitive capacities that are proper (according to Scotus) to the soul:

> If, in the conjoined [soul], the intelligible species is not sufficient without the phantasm, this is not because the phantasm is required there as a certain principle of the act of understanding; but it is precisely required as the principle of operation of the imagination, and this operation is required for intellection on account of the connection between the higher and lower powers in acting, since the higher does not perfectly act in relation to some object unless those lower powers that can operate act in relation to the same thing. And

[41] Scotus, *Ord.* 1.3.1.3, n. 186 (Vatican, iii. 112–13).
[42] Scotus, *Ord.* 1.3.1.3, nn. 137–40 (Vatican, iii. 85–7).

this is the reason why the separation of the powers of the soul in relation to different objects impedes their operations.[43]

On the face of it, this kind of view threatens the independence arguments that Scotus appealed to in favour of the existence of intelligible species (in passages discussed in section 1 of this chapter). I take it that the independence arguments are about conceptual or logical connections, and that the arguments about the factual dependence on phantasms are ways of trying to make sense of certain empirical data about human cognitive powers—for example, that damage to the brain can harm our processing capacities. In our current state, as Scotus notes, 'separating' the powers by damaging one of them impedes their operation.

In fact, in another context Scotus makes clear the merely nomological nature of the link between phantasms and abstractive cognition of universals. He considers in detail the case of a disembodied soul's cognitive powers. Clearly, a disembodied soul's cognition cannot require phantasms, since phantasms belong to the imagination, which the medievals suppose to be a feature only of certain bodily things. Scotus holds that it is possible for a disembodied soul to have abstractive cognition in the absence of phantasms, since the role of the phantasm is merely to convey the relevant sensory content from which an intelligible species is caused, and in the case of a disembodied soul (for example), there is no reason why the extramental object itself could not be the relevant object. This cognition would not be abstractive in Scotus's strict sense (i.e. independently of the presence of the extramental object); but it would, as he points out, result in an intelligible species—a habitual cognition—and such a species could then count as the content store for subsequent cognitive acts, irrespective of the presence of the extramental object, and without any need for a phantasm.[44] And it would also be different from imperfect intuitive cognition: cognition of something by means of conscious recollection of a past perceptual act (as discussed at the end of Chapter 2): no such recollection is required in the case I am describing here.

[43] Scotus, *Ord.* 4.45.1, n. 25 (Vatican, xiv. 143). See too Scotus, *Rep.* 1.3.5, n. 153 (Wolter and Bychkov, i. 229–30).

[44] Scotus, *Ord.* 4.45.2, nn. 63–4 (Vatican, xiv. 157); see *Ord.* 4.45.2, n. 52 (Vatican, xiv. 153–4); *Ord.* 4.45.1, n. 31 (Vatican, xiv. 145): the claim is that we need phantasms neither to acquire intelligible species nor to cognize once we have the species. In the case that we acquire the species directly from the

5. The Causal Function and Ontological Status of Intelligible Species

As I show in Chapter 6, cognitive acts are caused jointly by the object and the intellect. But in cases of abstractive cognition, the causal role of the object is mediated by the intelligible species. And it is so only very indirectly, since in the absence of an external object—as in cases of abstractive cognition—the species itself is simply the partial cause of the act. Its representational function, I assume, explains its standardly causing an act with the same content as would have been caused by the object were the object present. Scotus makes the point in the following extended passage:

> That [the species] perfects this intellect is accidental to the species, in so far as it is a partial cause with respect to the act of cognizing, concurring with the intellect as the other partial cause. For even if it perfects [the intellect], it does not give the intellect any activity pertaining to the intellect's causality. Example: the motive power in a hand can use a knife to cut up a body, in so far as [the knife] is sharp. If this sharpness were in the hand as its substance, then the hand could use it for the same operation, and nevertheless it would be accidental to the hand (in so far as the motive power is in it) that sharpness is in it, and vice versa, because the sharpness gives the hand no perfection pertaining to [motive] power. This is apparent, because the motive power is equally perfect without such sharpness, and it uses [the sharpness] in the same way when it is in some other thing joined to the hand—such as a knife—as it would use it if it were in the hand.
>
> So it is in the case at hand. If the species could exist in the intellect without inhering in it in the manner of form, and if by that mode of existence in [the intellect] it were or could be sufficiently conjoined to the intellect, these two partial causes, conjoined to each other, could [tend] to the same operation to which they now can when the species informs the intellect. This is also apparent if we posit some intelligible [object] present without a species. That object is a partial cause that does not inform the intellect (which is the other partial cause); but these two partial causes, close to each other without the informing of the one by the other, cause one common effect by their required proximity alone.[45]

I have offered a detailed discussion of this text elsewhere,[46] and here just want to draw attention to a few salient features. Assume that the species, inherent in the soul, is a partial cause of a cognitive act. The whole point is to explain how it could be that a real accident, inherent in a substance (i.e. in its substrate 'subjectively'), could be a partial cause of some further accident that itself inheres in the same substance. In the background is a self-motion worry: a thing seems to be causing itself to have a certain feature. Scotus's claim is that the intelligible species is a cause

object, the initial act would not count as abstractive, since the object would have to be present, and abstractive cognition is independent of the presence or absence of the object.

[45] Scotus, *Ord.* 1.3.3.2, nn. 500–1 (Vatican, iii. 296–7).

[46] See my 'Some Varieties of Semantic Externalism in Duns Scotus's Cognitive Psychology', *Vivarium*, 46 (2008), 275–301, which is intended to be an extended commentary on this passage.

of a cognitive act in much the same way as the object would be were the object really present and directly accessible (as in the case of intuitive cognition). Scotus's claim about the causal efficacy of an accident is that it makes no difference to the causal story whether the relevant accident is inherent in the substance in which the effect is produced or not (it is 'accidental' to the species's operation that the species is inherent in the soul). Scotus tries to make this plausible by appealing to a rather wonderful example: someone with a knife-blade inherent directly in their arm. He claims that the blade is as much an instrument in that person's activity as a (non-inherent, extrinsic) knife would be.

Pari passu, the inherence of the species makes no difference to its causal function. All that is required is the relevant kind of *proximity* between the two causes, the intellect and the object/species. In abstractive cognition, the relevant proximity is between the species and the intellect, and it is established by the fact of the species's *inherence* in the intellect. This is, of course, fully in line with Scotus's hypostatizing account of forms.

One striking consequence of this is that, in terms of the kind of causal story that we might want to tell, standard cases of a certain kind of intuitive cognition are less problematic than those of abstractive cognition. The relevant kind of intuitive cognition is one which has as its ultimate cause something non-inherent: and this raises none of the hypostatization problems that motivate the concerns about intelligible species. Scotus, of course, is a committed hypostatizer of forms, substantial and accidental; his point here is simply to show that, given hypostatization, inherence is relevant only as one possible explanation of presence or proximity.

The causal process here is different from that Scotus proposes for (veridical) sensation, outlined in Chapter 1. The object (not the sensible species) is always the relevant partial cause of the sensation, albeit that its causal activity requires the existence of a sensible species as an effect of its prior to the act. This is no surprise, since in all forms of intuition the object needs to be present.

Now, all of this entails that an intelligible species is a real accident: it has a causal role in the production of something real (i.e. a cognitive act), and only the real can do this:

> The intelligible species is a non-relational quality (*qualitas absoluta*): which those who posit that the species is a formal principle of understanding (*formalem rationem intelligendi*)—that is, something that in itself principiates an act—must at least concede.[47]

Intelligible species, as should already be abundantly plain, are thus real_1. A formal *ratio* is a cause, and 'those who posit that a species is a formal principle of

[47] Scotus, *Quod.* 13, n. 32 (Wadding, xii. 345).

understanding' are a group that includes Scotus himself, to the extent that he accepts that the species is a partial cause of cognition in standard cases. This gives a good sense of just how far Scotus is from Henry's way of thinking about things: for Henry, there are no impressed species, and neither the cognitive act nor the so-called expressed species are in any sense real. As I showed in section 2, Scotus holds that intelligible species are a kind of habit. And, of course, Scotus holds that habits are qualities—completely in line with his account of the ontological status of intelligible species:

> The species in which the quiddity shines out is not inappropriately called a habit. . . . And it can formally be called a cognitive habit, because it is a quality that remains in the intellect, disposing it to act.[48]

To the extent that Aristotelian habits facilitate certain kinds of action, they have some causal role in these actions. And Scotus explicitly claims that some habits are (partial) efficient causes of relevant activities.[49] So his claims about the causal function of the intelligible species are fully compatible with his claims about habits.

[48] Scotus, *Ord* 1.3.3.1, n. 396 (Vatican, iii. 241–2). The language is Henry of Ghent's: see Henry, *Quod.* 11.7 ad 1 (fo. 459^{v}T–X).

[49] On the causal role of certain habits, see e.g. *Ord.* 1.17.1.1–2, nn. 32, 133, 158 (Vatican, v. 152, 204, 214–15).

5

The Ontological Status of Cognitive Acts

As we saw in Chapter 4, intelligible species are real items with intentional content—real$_I$. And I suggested in Chapter 1 that the same is true not merely of sensible species but also of acts of sensation. My evidence for this last claim is presented largely in the current chapter, on the ontological status of *intellectual* cognitive acts. As I show here, such acts are real, and (as I make clear in Chapter 8) they have intentional content. They are thus real$_I$. Acts of sensation are, of course, real$_I$, but they are *material* or *extended*. Intellectual acts are not physical in this way: they inhere in something real but immaterial or non-extended—the soul. But they are real enough, according to the medievals. To the extent that the non-essential or accidental properties of real things are themselves real things, cognitive acts inherent in immaterial things are as real as such acts inherent in physical things.

Given this reality assumption, the medievals attempt to answer the question of the ontological status of a cognitive act by providing an account in terms of Aristotle's ten categories, taken as an exhaustive classification of the kinds of (worldly) things there are.[1] To work out the ontological status of something, we need to work out which category it should be placed in. Three options were standardly canvassed in the case of cognitive acts: quality, action, and passion; and, as we shall see in a moment, at least one thinker suggested that they should be placed in the category of relation. Aristotle himself, to the extent that his view can be reconstructed, probably placed thinking simply in the category of passion, and he was certainly read in that way by some influential commentators. On this view, cognizing consists in the reception (in a certain way) of the form of an external object, and in cognition the mind is *acted upon* by the extramental objects of its cognition: cognition is something *done* to the mind by the object.[2]

[1] Aristotle, *Cat.* 4 (1b23–2a10). [2] Aristotle, *De an.* 3.4 (429a13–15, b22–5).

The reconstruction of Aristotle's position just adumbrated, according to which a thought is a passion, is that adopted by perhaps his most influential medieval commentator, Averroes:[3] in the medieval West, it was explicitly espoused by Godfrey of Fontaines, one of the most Aristotelian-inclined thinkers in the late thirteenth century, among others.[4] Scotus targets Godfrey's view in various ways. I examined some of them in Chapter 3. But my focus here is simply on the correct categorization of cognitive acts, and Scotus's criticisms of Godfrey do not have more than an indirect or tangential bearing on this question. In any case, the view that occurrent cognition is to be categorized as a passion is very much a minority view in the thirteenth century, and in this chapter I consider three views that Scotus himself seems explicitly to consider as possible alternatives: that thinking is an action; that it is a relation; and that it is a quality. The first is Aquinas's view; the second the view of an unnamed opponent whose view Scotus takes extremely seriously; and the third the view of Scotus himself, and of Thomas of Sutton, some of whose views on the topic I looked at in Chapter 1. Scotus works out his own view dialectically, by considering and rejecting the views of various opponents. So in the first three sections of this chapter, I consider the views of the relevant opponents, and sketch Scotus's reasons for rejecting them. In the remaining section, I look at Scotus's own view, and his reasons for adopting it.

One final note: I pointed out in the Introduction that there is a sense in which we might think of the notion of mental content simply in terms of mental acts and dispositions, without appealing (as most modern thinkers would) to non-physical items such as propositions. Content is simply representation. The various options I consider in this chapter in relation to the correct categorization of mental acts all fundamentally agree that we should think of acts as *doings*—they just disagree on the correct placement of these doings in the Aristotelian categorial taxonomy (i.e. as actions, passions, or qualities). To the extent that these acts are all doings, we might appropriately think of mental content not just as representation but as represent*ing*, whether actually or dispositionally.

1. Quality: (1) Thomas of Sutton

According to Scotus, cognitive acts are accidents, and as such must belong to a determinate accidental category. Scotus argues that the category to which cognitive

[3] See Averroes, *In de an.* 3, com. 18 (p. 439, l. 78).

[4] Godfrey, *Quod.* 5.10 (PB 3. 38–9): seeJohn F. Wippel, 'The Role of the Phantasm in Godfrey of Fontaines' Theory of Intellection', in C. Wenin (ed.), *L'Homme et son univers au Moyen Age* (Louvain-la-Neuve: Institut Supérieur de Philosophie, 1986), 579, n. 19. I owe the general shape of this summary, to Giorgio Pini, 'Two Models of Thinking: Thomas Aquinas and John Duns Scotus', in Klima (ed.), *Intentionality*, 83–8.

acts belong is that of quality. Some of his opponents agree about this; but Scotus does not at all agree with the way in which they spell this out. For example, Sutton holds that an intelligible species—a 'likeness of a thing', as he uncontroversially puts it—can inhere in the mind in two 'states', as it were: as a disposition, and as something occurrent. Now, Sutton is clear that the species in either of these states is a quality, but he spends some time relating this claim to the Aristotelian categories of action and passion. In the whole process, according to Sutton's Aristotelian presuppositions, the mind is passive: the relevant species are caused in it by the causal activity of the extramental object. So the passive reception of the species falls in the category of passion; but what is received is a quality. Sutton uses the example of sensation, but he holds that the account can be generalized to include intellection too.

Sutton has various reasons for thinking all this. The most important is to do with Averroes's reading of Aristotle's account of motion:

> Averroes maintains that motion, which is in one way in the category of action, is in another way in the category of passion, and in another in the category of quality. And this is necessary, because every action and passion includes some absolute form, which pertains to some category other than action or passion, just as heating is imperfect heat tending to perfect [heat]. But heat is in the category of quality, and thus heating is in the category of quality: but to the extent that it is considered as being from an agent, and tending to perfection, it is in the category of action, in the sense that heating is the action of the one heating; and to the extent that the heat is considered as being received in a patient, and, along with this, as tending to further perfection, it is in the category of passion, in the sense that heating is the passion of what is heated.[5]

The idea is that we can consider three components in the case of heating: the action of the thing doing the heating; the heat itself, received by the thing being heated; and the reception of the heat in the thing heated. These are three distinct categorial items, belonging respectively to the categories of action, quality, and passion. Likewise, Sutton maintains, we can consider three components in an occurrent cognition: the action of the thing cognized (the extramental object); the occurrent cognition itself; and the reception of this occurrent cognition in the mind: and these three distinct items belong respectively to the categories of action, quality, and passion:

> It is necessary to say, about the operations of the soul, that although they are in the category of action or of passion, [they] are nevertheless in some way in the category of quality, just as sensing, which is an undergoing (*pati*), or in the category of passion, is nevertheless in the

[5] Sutton, *Qu. ord.* 4, ll. 707–17 (p. 117), referring to Averroes, *In phys.* 3, com. 4 (*Aristotelis opera cum Averrois commentariis*, 10 vols (Venice, 1562–74), iv, fo. 87ra).

category of quality, because sensing is nothing other than having a sensible species—which is in the category of quality.[6]

In line with standard Aristotelian views of cognition, all sorts of cognition consist in the inherence of a form in such a way that the subject is not made to be an instance of the relevant kind, as outlined in the Introduction. And in this kind of inherence, unlike in standard cases of inherence (in which the subject is indeed made to be an instance of the relevant kind), we can distinguish different ways in which the form can exist in the subject—dispositionally and actually. All of these points are made rather clearly in the following passage:

> The case of forms caused in the intellect and in the imaginative power is different from that of other forms, which are outside the soul and educed from the potency of matter. For other forms, educed from matter, cannot have actual existence in their subject other than according to perfect act. But species in the intellect and in the imaginative power, and similarly intentions in the memory, can have actual being in two ways: namely, in a habit, or in a hiding-place (*abdito*)—and that actual being is imperfect in relation to the powers of the soul—and in open act, and that actual being is perfect. And this twofold actual being of forms is found nowhere other than in the apprehensive powers. And the reason for this is that the perfection of such a power requires that it knows things in their absence, and this cannot be other than because species of things are conserved in it. . . . And because nature does not permit that there are many species in [the powers] according to open and perfect act, nature doubled up, so that [species] should be conserved in [the powers] according to actual being, but imperfect and hidden, concealed, as it were, in a repository, from which they can be brought into the open, when [the powers] need to use them for the purpose of cognizing. And when they are concealed in the repository, they do not inform the power perfectly, but imperfectly, because they are not being used. But when they are brought into the open, then they have actual perfect being.[7]

The Aristotelian idea expressed here is the familiar one that forms can inhere in substances in two ways. Forms 'educed from the potency of matter' make the substance an instance of the relevant form: a form F-ness educed from the potency of matter makes its subject F. Forms in the intellect and imagination inhere without performing this function. Rather, they make their subject *cognize* F-ness. And as Sutton sees the matter, forms inherent in this way can exist in different degrees of perfection: one and the same species can inhere in the mind imperfectly and perfectly. In the first case, the species is merely a dispositional cognition; in the second way, made to inhere perfectly by the extramental object unfettered by blocks intrinsic to the mind, it is an occurrent cognition. In both cases, the item is a quality, but Sutton has difficulty expressing the difference between the two different

[6] Sutton, *Qu. ord.* 34, ll. 718–24 (pp. 117–18).
[7] Sutton, *Qu. ord.* 23 ad 5, ll. 268–90 (pp. 641–2).

states of the quality (as a disposition and as an act). The best he can offer here is a metaphor: the species having 'hidden' or 'concealed' contents is a disposition; it having 'open' (accessed?) contents is an act.

This framework allows Sutton to categorize the cognitive act as a quality. Scotus agrees with this categorization. But he objects strongly to the view that this quality could be anything like an actualized species in the way that Sutton proposes. One reason for this is that he does not believe that the inherence of a species, actualized or not, could ever be sufficient for occurrent cognition.[8] Now, Scotus has psychological reasons for making this claim, and I considered these in Chapter 1. But he has metaphysical reasons for doubting that a cognitive quality such as a species could exist in two distinct states, as Sutton seems to propose, and I consider these here. Basically, Scotus believes that there is no real change (for example, from dispositional cognition to occurrent cognition) without the production or destruction of some real item. Scotus's argument relies on the following general principle, which he accepts for reasons quite independent of the question of cognition:

> There is never passage from contradictory to contradictory without change (*mutatione*). For if there were no change in a thing, then there would be no more reason why one of two contradictories were true rather than the other; nor [any] more [reason] why one would be false rather than the other, and thus both simultaneously false and simultaneously true.[9]

What Scotus has in mind is that every change involves the production and/or destruction of something real. For example, the principle underlies arguments, made on the basis of the possibility of merely relational change, in favour of the view that relations are things really distinct from the items that they relate. Merely relational changes cannot obtain unless relations are things in this sense. But according to Scotus, certain kinds of merely relational changes do occur (for example, changes in place, consisting simply in different relations to different surrounding bodies); hence, relations are things distinct from the items they relate.[10] Scotus makes use of the principle too when considering a case more akin to the kind of change that Sutton seems to have in mind: the question of the increase in intensity of a quality (here, the theological virtue of charity). Scotus's idea is that increases in intensity require the production of something new, somehow added into the quality in a way akin to that in which quantities can be added together:

[8] He objects too to the view that the mind is causally passive in the whole process: I defer discussion of this to Chapter 6.

[9] Scotus, *Ord.* 1.30.1–2, n. 41 (Vatican, vi. 186–7).

[10] For these arguments, see Scotus, *Ord.* 2.1.5, nn. 209–10 (Vatican, vii. 105–6), and the discussion in Henninger, *Relations*, 76–8.

In this increase there is some change, otherwise charity would not be increased. Therefore it is necessary to posit some new reality, which previously did not exist, in the end term of the change; otherwise the same thing would receive existence twice over.[11]

On this kind of ontology, there is no space for the mere actualization of a disposition without the production of something new, distinct from the disposition.

These considerations, incidentally, explain why Scotus insists so strongly on the fact that occurrent cognition involves a real change in the mind: the inherence of a real, concrete, particular accident to function as in some sense the bearer of intentionality—real$_1$. If there were no real change in the mind, there would be no way to explain the episodic character of thought. (This principle underlies much of Scotus's criticism of Henry of Ghent's rejection of intelligible species, outlined in Chapter 4.) And I suppose that Sutton at the very least owes us an explanation of the way in which a species can exist in two different states, as it were, dispositional and occurrent: at the crucial juncture, his account relies on metaphor, contrasting hiddenness and openness.

By way of summary: granting, with Scotus, that intentionality or mental content, whatever it be, requires some real entity (real$_1$) as its bearer, Scotus's metaphysical assumptions prevent him from holding that a change from dispositional to occurrent cognition simply consists in the species existing successively in two different states: first, such that the soul possesses the content dispositionally, and second such that it possesses it occurrently. As Scotus sees it, what is lacking in Sutton's theory is any sense of how, metaphysically, to account for this change. On Scotus's view really different states of a substance require the sequential inherence of numerically distinct concrete particular accidents. The actualization of a potentiality involves the production of a *new* form, newly inherent in a substance (in this case, the soul). So Scotus does not disagree with the thought that an occurrent cognition is a quality: he simply claims that it must be a different quality from the intelligible species.

2. Action: Thomas Aquinas

Thomas Aquinas (at least in his later writings) accepts part of the position that Scotus maintains against Sutton—namely, that occurrent intellectual cognition involves some kind of real production. But the way in which he spells this out differs sharply from what Scotus's will be. Aquinas holds that cognitive acts should count as items in the category of *action*: things that he labels 'operations'. Following

[11] Scotus, *Lect.* 1.17.2.3, n. 208 (Vatican, xvii. 248).

Aristotle, and in line with standard medieval accounts, he maintains that there are two kinds of operations: those that somehow or another produce something distinct from or external to the agent ('transitive' actions), and those that fail to do so, either by producing something internal to the agent, or by being simple activities, failing to be productive of anything further ('immanent' actions). Aquinas holds—at least in his later account, which is the one that interests Scotus—that thinking is an immanent action:

> Although an operation's object, which is signified as the end term [of the operation], is, in operations which pass to an external effect, something external to the operator, nevertheless in operations which are internal to the operator, the object which is signified as the end term of the operation is in the operator: and in so far as it is in it, there is an actual operation.[12]

The notion of an internal operation is important here: an internal *production*. The intellectual operation of cognizing *produces* something internal to the cognizer. This item is something distinct from the species, and here, for Augustinian and theological reasons, he labels it the 'word':

> That which the intellect forms, in conceiving, is the word. But the intellect itself, as it is in act by the intelligible species, is considered absolutely. And likewise understanding (*intelligere*), which is related to the intellect in act as existence (*esse*) is to a being in act: for understanding does not signify an act passing out of the intellect, but remaining in the intellect.[13]

There are two levels of actuality in the intellect: that which disposes it to occurrent cognition (i.e. the intelligible species), and the occurrent cognition itself, an action consisting in the production (here, conception) of a word. I do not know whether this mental word is supposed to be something real; the account would make a great deal of sense if it should turn out to be something merely intentional (intentional$_I$). In this case, thinking would be an action that results in mental *content*.

In this passage, Aquinas spells out this two-fold actuality in terms of his distinct metaphysics of essence and existence: the actuality of a particular thing (a 'being in act') is somehow explained by its possession of *esse*. We do not need to delay on the details of this. But we should delay on another important feature of Aquinas's account, since it reveals a very particular set of assumptions about what counts as belonging to the category of action. Aquinas's account of sensation involves the claim that sensation is an action—it is a *doing*, we might say—that, unlike intellective cognition in Aquinas's later account, is not productive of anything further, be it internal to the agent or not. In Aquinas's earlier account of intellectual cognition

[12] Aquinas, *ST* 1.14.2 c (I, 77a–b). [13] Aquinas, *ST* 1.34.1 ad 2 (I, 177b).

he accepts that it is closely analogous to the case of sensation: he maintains that thinking is simply a *doing*, not productive of anything else.[14] And he maintains that this action is 'like a certain effect' of the power informed by the species.[15] So for the early Aquinas, the relevant action—thinking—is simply itself a doing; for the later Aquinas, it is a production—what it is to think is to produce a concept, and the act of thinking is literally that: an *action* (I return to this in just a moment). Scotus, as we shall see, maintains, rather differently, that there is a production, but that what is produced is the occurrent cognition, a real ($real_I$) *quality*.

In both his early and late accounts, Aquinas makes a claim about the relation between dispositional and occurrent cognition that is developed by the (Thomistically inspired) Sutton (in passages examined), and that would be strongly rejected by Scotus, for just the reason outlined in his rejection of Sutton's view. Occurrent cognition involves the inherence of the species in the intellect in some kind of actualized state:

> An intelligible species is sometimes in the intellect . . . according to the final completion of the act: and then [the intellect] actually understands. Sometimes it exists in a way intermediate between potency and act, and then the intellect is said to be in habit. And in this manner the intellect conserves species, even when it does not actually understand.[16]

I assume that Aquinas means to claim that the intelligible species inhering 'according to the final completion of the act' is simply to be identified as the action producing the concept (in accordance with my suggestion a moment ago that thinking consists in producing something that is merely $intentional_I$): the actualization of the species in this way is what is itself *productive* of the concept. On this view, the productive act is the actualized species, and what is produced is nothing real at all, but merely $intentional_I$. Aquinas's understanding of production, on this reading, is far distant from Scotus's.

Now, setting these metaphysical issues aside, a mental word is identified as a universal concept ('the idea of the thing, signified by a definition').[17] To think, then, is for the later Aquinas to produce *universal* mental content: it is not just the possession of disposition to such production (i.e. an intelligible species), or the production of such a disposition (by abstraction). So a cognitive act is an item in the category of *action*. Aquinas does not make clear what category the produced concept belongs to, and I do not delay on this issue—perhaps, if it is merely $intentional_I$, it is not a categorial item at all, and it makes no sense to enquire about its real

[14] Pini, 'Two Models of Thinking', n. 21, referring to Aquinas, *ScG* 1.53, first draft (ed. P. Marc and others, 3 vols (Turin and Rome: Marietti, 1961–7), ii. 322a–b.

[15] See e.g. Aquinas, *ST* 1.54.1 ad 3 (I, 267a), on the nature of sensation.

[16] Aquinas, *ST* 1.79.6 ad 3 (I, 388a).

[17] Aquinas, *ScG* 1.53, n. 443 (II, 65a).

ontological status. But note that this aspect of the position is very different from Sutton's. On Sutton's view, the intellect is passive in cognition: the active cause, the item that operates, is the extramental object. For the later Aquinas, it is the intellect that operates, and this operation—an item in the category of action, the production of the mental word—is just what it is to think.

Scotus objects strongly to the view that cognitive acts have to be productive of anything. When we think, it does seem that there is something that we are just doing, and just doing something does not require (also) making something apart from the 'doing' (the operation) itself:

> No end term is produced by cognition, for cognition is not an action productive of any end term: for [if it were] it would be incompossible to think that the action exists and the end term does not exist, just as it is incompossible to think that that heating exists and that there is no heat to which the heating is directed. But it is not impossible to think of a cognition in itself, without thinking that it is of some end term produced by it.[18]

A couple of things are going on in this passage. First, it looks as though Scotus is assuming that Aquinas imagines cognition to involve the production of some internal *object* of thought (the cognition's being '*of* some end term produced by it'). It is true that Aquinas sometimes speaks in ways that suggest this kind of interpretation: for example,

> The word of our intellect . . . is that to which the operation of our intellect is directed. This is the thing cognized, which is called the conception of the intellect.[19]

But a more charitable reading would take Aquinas to be asserting that mental words are the *contents* of mental acts, despite the language of 'objects' here. And, as we shall see in Chapters 8 and 10, Scotus himself holds that claims that mental acts have contents, and for much of his life even asserted that such contents—items with what he labelled *esse intelligibile* or *esse obiectivum*—were produced along with the real acts whose contents they are. But, secondly, the passage strongly suggests that Scotus sees Aquinas's claim about the categorization of thinking as an action—to make it look as though thinking produces something *real*—and (understandably) Scotus objects to this on the grounds that thinking does not have to be productive of anything real beyond itself.

[18] Scotus, *Ord.* 1.27.1–3, n. 55 (Vatican, vi. 86). See too Scotus, *Ord.* 1.2.2.1–4, n. 292 (Vatican, ii. 300–1), opposing Henry of Ghent, *SQ* 54.10 ad 2 (ii, fo. 105^{v}L); *SQ* 60.4 ad 1 (ii, fo. 167^{v}M).

[19] Aquinas, *De ver.* 4.2 c (*Quaestiones Disputatae*, ed. R. M. Spiazzi and others, 2 vols (Turin and Rome: Marietti, 1949), i. 79b). For a defence of this kind of interpretation of Aquinas, see Claude Panaccio, 'Aquinas on Intellectual Representation', in Dominik Perler (ed.), *Ancient and Medieval Theories of Intentionality* (Leiden: Brill, 2001), 190–2.

3. Relation: An Unnamed Opponent (Durand of St Pourçain?)

Perhaps the most important single text for our understanding of Scotus's cognitive theory is the 'long, unremittingly difficult thirteenth question'[20] of the *Quodlibet*. The issue Scotus there sets himself to sort out is this: 'Are acts of cognition and appetition essentially absolute, or essentially relative?':[21] that is to say, do mental acts consist 'in some sort of relation to another object, or . . . in an absolute, non-relational quality of the mind'?[22] An opponent takes the view—highly plausible on the face of it—that a cognitive act is a relation between the mind and its object. After all, such acts are on the face of it about real things, and so this might suggest that an act is a relation, since—plausibly—the identity of a cognitive act cannot be fixed just by its intrinsic nature (and thus, some form of externalism about mental content is true: on which, see Chapter 8).

Who might the opponent be? A quodlibetal disputation is precisely that: a *disputation*, and in such disputations the presiding master—in this case, Scotus himself—assigns to his students the initial task of finding arguments that oppose the view to be defended (here, that cognitive acts are non-relational items), and of responding to them. So perhaps the unnamed opponent here is a student of Scotus's at the disputation, testing out his dialectical mettle. Be that as it may, it has recently been noted that the view is held by Durand of St Pourçain (1275/80–1334)—but is it not clear whether the chronology would allow Durand to have formed his view prior to the disputation, and in any case it is not clear what role Durand himself, not a student of Scotus's and at most a mere spectator in the disputation, could have played in the proceedings.[23] Certainly, if Durand's view was formulated by the time of the disputation an opponent might have presented it, or been required to present it, so as to allow Scotus to give a definitive response to it.

Now, there are at least two possible ways in which an act may be saliently related to an (extramental) object: the object may be (but need not be) a partial *cause* of the act; and the object may be what the act is *about*. (I return to this distinction at the beginning of Chapter 8: Scotus works hard to show that the two relations are in principle independent of each other.) I do not think that anyone would suppose that the fact than an act may be caused by its object is sufficient to show that the act must be a relation: it is plain enough that many entities are caused, and plain

[20] Robert Pasnau, 'Cognition', 287.

[21] Scotus, *Quod.* 13, n. 1 (Wadding, xii. 301).

[22] Pasnau, 'Cognition', 287–8.

[23] For the identification, see Peter John Hartman, 'Durand of St.-Pourçain on Cognitive Acts: Their Cause, Ontological Status, and Intentional Character', unpublished doctoral dissertation, University of Toronto, 2011.

enough too that this is not sufficient to show that they should all be put in the category of relation. But the second looks like a good possibility: cognitive acts are generally about things, and *being about* something seems to be a relation.

The opponent offers several arguments in favour of his relational view. I discuss the two most challenging. The first runs as follows:

> [Acts of cognition] are relative, because such an act cannot be thought of unless the end term is thought of. But an absolute can be thought of without thinking of anything as an end term. Therefore [acts of cognition are not absolute]. The first claim is proved: vision cannot be thought to exist unless it is directed to something visible, or to an object. The minor premise is self-evident.[24]

The gist of this is that thoughts must be *of* something—must have an object—and that this implies that they are relational items: we cannot conceive of a thought that lacks an object, or that is not of something. The opponent uses the seemingly uncontroversial example of some kind of *perception* (here, vision) to make his point.

The second argument in favour of the view that cognitive acts are relations is more complex. A cognitive act's kind is determined by its contents, and it seems that the content of a mental act needs to be determined by a real relation to a real object: and thus that such a real relation is what individuates a cognitive act. The objector makes this point explicitly in an argument of Aristotelian inspiration:

> An absolute is not distinguished specifically by something extrinsic to it, but by a difference that is absolute, and intrinsic and proper to it. But operations are specifically distinguished by objects that are distinct in species, because operations related to [objects in] distinct species are more distinct than operations related to objects of the same species. But these latter are distinguished numerically; therefore the former have a greater difference than numerical: and thus have specific difference [in addition to numerical difference].[25]

As Scotus's reply will make clear, the relevant Aristotelian principle is that acts are (in some sense) distinguished by their objects,[26] so the point of the objection is that acts are individuated—even specified (i.e. have their *kind* explained)—simply by relational facts about them (i.e. their relations to different objects—even different *kinds* of object). And being individuated or specified by something extrinsic seems to be a natural way of distinguishing relations from other kinds of item.

Scotus objects to the first of these arguments on the grounds that, just as there can be a cognitive act without there being anything produced by it, so too there can be a cognitive act without there being any real extramental object which it is

[24] Scotus, *Quod.* 13, n. 1 (Wadding, xii. 301).
[25] Scotus, *Quod.* 13, n. 26 (Wadding, xii. 338).
[26] See the text cited in n. 29.

about. Scotus's view is that linguistic practice allows us to refer to things which are contingently related to other items, and to do so in ways that suggest that they are necessarily related—i.e. to refer to absolute entities as though they are relational entities—and that this practice obtains in the way that we talk about operations. But this practice, Scotus holds, is pretheoretical and misleading:

> If some word were imposed precisely to signify the absolute entity, of itself in the genus of quality, which is an operation or pertaining to an operation, the significate of that word could be understood without thinking of an object as its end term. But generally, words imposed to signify operation imply a relation, either as their principal significate, or by connoting a relation. The reason for this is that an operation is generally understood under a relation that tends towards an object. And things are generally signified in the way that they are understood.[27]

The strategy is simple enough: when we use the term 'operation', we often do so in a way that is (generally harmlessly) misleading. The idea is that words are given meanings by their initial users (they are 'imposed to signify' such-and-such), and that terms such as 'operation' could have been given a meaning that simply picked out the act without any reference to an end term or object. To capture Scotus's point about the semantic content of cognitive acts, we could, for example, invent a word to refer to contentful thinking in the absence of a real object—perhaps 'to θ'. Our θ-ing, in line with this theory, would not be *of* something real: its content would be fixed by its internal features, and this requires neither a relation between the act and any real object, nor even some kind of relation between the act and its content. (This, as we shall see in Chapter 8, is precisely how Scotus comes to explain a cognitive act's intentionality: simply in virtue of its real internal features.) Still, Scotus concedes that as a matter of linguistic usage the term 'operation' generally implies a relation to a real object, and in the case of a cognitive act (operation), it implies a relation to a real object of thought. Scotus here does not commit himself to making a judgement as to whether the term 'operation' is used in a way such that it just *means* a certain sort of relation (i.e. whether it has a relation as its 'principal significate'), or whether it is used in a way that *implies* this in its meaning (i.e. whether it 'connot[es] a relation'). This is simply a question of what standard linguistic practice involves, and Scotus is not the kind of philosopher to worry much about such everyday, pretheoretical, linguistic matters.

On the second argument, Scotus argues that cognitive acts are concrete accidents, and that their identity cannot be dependent upon the identity of things that they are (contingently) related to. The objector, in this case, is doubly in error: he

[27] Scotus, *Quod.* 13, n. 32 (Wadding, xii. 345).

has mistakenly drawn ontological conclusions from a mistaken semantic theory—it is not the case that, in order to secure their contents, mental acts have to be about real things, or have real relations to them, and even if they did, this would not mean that the acts should be categorized as relations. Scotus offers two attempts at a reply. First, this:

> It could be said that acts are distinguished by their objects in terms of the manifestation of the distinction, because the distinction between objects is more manifest than that of acts, and from the one, as from the more manifest, the other is made known. And this is confirmed because in *On the Soul* II[28] Aristotle, just as he claims that acts are distinguished by their objects (indeed, he claims rather that objects are prior to the acts, on account of which it is necessary to treat of the distinction of objects before [treating of the distinction] of acts), so too claims that powers are distinguished by acts. But it is not [that they are distinguished] essentially, because an act is posterior to its power and what is posterior cannot be what in itself distinguishes what is prior. Therefore neither should this other case—namely, about objects in relation to acts—be understood in the sense of an essential distinction.[29]

This first reply makes a distinction between what specifies acts on the one hand, and how we might *discern* (or discover) the distinction between different acts, on the other. In principle, having different real objects is what allows us to discern the distinction between different acts. But the difference of object is not the relevant metaphysical grounding for the distinction between different acts of different kinds. Scotus makes his point by means of some Aristotelian exegesis. At the beginning of *On the Soul* II, c. 4, Aristotle claims that, in order to find out what a power is, we need first of all to find out what its act is; and, furthermore, in order to find out what its act is, we need to find out what the object of the act is.[30] So we begin with objects, and then proceed to acts, and finally powers. As Aristotle makes clear, this procedure is appropriate merely for the order of *discovery*: in order to discern powers from each other, we need first of all to distinguish different sorts of objects, and then, on the basis of this first distinction, different sorts of act. But, as Scotus points out, Aristotle does not mean to imply that the acts explain or ground the nature of the powers, or that the objects explain or ground the nature of the acts. Rather, the acts are the kinds of thing they are because the powers are the kinds of thing they are; and likewise the domain of relevant objects is explained in virtue of the kind of thing the acts are. This does not mean that the identity of the power is not dependent on the kinds of act it can produce—indeed, the identity of the power is determined in just this way. The point here is that the kind of an act that a power can produce does not explain the kind of thing that a power is—quite

[28] Aristotle, *De an.* 2.4 (415a17–22).

[29] Scotus, *Quod.* 13, n. 30 (Wadding, xii. 342).

[30] See the text cited at n. 28.

the contrary. So acts are not essentially distinguished by their objects: in fact, it turns out that their distinction is explained simply by their internal features. Thus, their semantic properties are explained by their metaphysical structure, not the other way around.

The second reply is of more complexity, but is not inconsistent with the first: so both could be accepted—though neither entails the other:

> Or it could be said differently that something has unity, and consequently distinction, from the same thing as that from which it has entity. Therefore what is caused, just as it has entity from some *per se* cause, so too has unity and distinction [from it]. And this is maximally true when it depends on something as its proper cause, or as the proper end term of its dependence, for when there is only one common thing that is the end term of its dependence and of the dependence of something else, the unity and distinction of [the dependent item] are not derived from the unity and distinction of the end term of the dependence.
>
> But now the act depends on the object as on the proper end term of its dependence. Therefore it can be conceded that objects, considered as extrinsic things on which an act depends with essential and proper dependence, distinguish acts. But objects are not what formally distinguish acts [from each other]. Neither—which is relevant to our discussion here—[do objects], as the end terms of the relation included in the acts, [distinguish acts].[31]

This admittedly rather difficult reply attempts a more sophisticated analysis of different kinds of explanation for distinction. What Scotus has in mind is something like the following. It is true that things owe their existence, and thus in some sense their distinction from other things, to the items that cause them, or to items to which they are somehow directed. The 'extrinsic things' on which the acts depend help us to distinguish acts from each other, or are necessary conditions for the distinction between acts. But in the last sentence of the first paragraph, Scotus notes that, if this were what actually *explained* the distinction between different acts, two items dependent on the same cause, or directed at the same object, would be identical. This worry is supposed to show that neither causal origin nor intentional directedness is what *explains* individuation or specification. Cognitive acts are specified—they are 'formally' distinguished from each other—simply by their intrinsic features: their distinction is not dependent on anything external to them. That the act has the relations that it does—even the causal relations that it does—presupposes the identity of the act; it does not explain it.

Scotus offers his own set of arguments in favour of the view that cognitive acts cannot be relations. The first is that the highest perfection of a living substance cannot be a relation, since the highest perfection of a living substance is what it most desires, and no relation can be what something most desires: things ultimately tend towards their *intrinsic* perfection. But according to Aristotle, the act

[31] Scotus, *Quod.* 13, n. 31 (Wadding, xii. 342).

of understanding is our highest perfection. So the act of understanding cannot be a relation.[32] The second, perhaps more compelling, is that a change in relation requires a prior non-relational change: changes in relation cannot be basic. But our cognitive acts are constantly changing, and can be so even in the absence of any extramental change. So such acts cannot be merely relational, and thus their kind cannot be explained by their relations to extramental reality.[33] The third argument is closely related to the second. The existence of the grounds for a relation entails the existence of the relation. But it is possible for the mind and the object to exist and yet there be no relevant act of cognition. So the act of cognition cannot be a relation: indeed, it turns out that the act of cognition is itself the ground for the relation between the mind or act and the object.[34]

These last two arguments are on the face of it very puzzling, given Scotus's assertion that there can be merely relational changes. In fact, the arguments trade on a very particular analysis of Aristotle's categories adopted by Scotus. Basically, he maintains that items in the category of relation are such that, merely given the intrinsic, non-relational, properties of two substances, they arise automatically: a relation is what Scotus labels an 'intrinsically arising relation' (*respectus intrinsecus adveniens*)—let us call it an 'intrinsic relation'. Given two white things, the relation of similarity arises automatically, and thus falls into the Aristotelian category of relation. The argument that cognitive acts are not relations is intended to show that they cannot be classified in the category of relation—they cannot be intrinsic relations. The remaining six non-absolute categories—vesture, position, where, when, action, passion—do not satisfy this condition for intrinsicity: they are 'extrinsically arising relations' (*respectus extrinsecus adveniens*)—extrinsic relations.[35] For example, as I noted, Scotus holds that changes in place can be basic, even though place is no more than a relation between bodies.[36] So Scotus needs to show that cognitive acts belong to none of these categories. As he points out, no one would suppose cognitive acts could belong to any of the first four of these non-absolute

[32] Scotus, *Quod.* 13, n. 3 (Wadding, xii. 302). Scotus cites some seemingly irrelevant texts from Aristotle in this context, but notes too that Augustine sometimes maintains that our happiness consists in the vision of God (e.g. *De trin.* 1.13.31 (*CCSL* 50, 78)) and sometimes in an act of the will (e.g. *De doctrina Christiana* 1.32.35, ed. Josef Martin and Klaus-d Daur, *CCSL* 32 (Turnhout: Brepols, 1962), 26): see Scotus, *Quod.* 13, n. 4 (Wadding, xii. 302). Scotus's official line is that happiness consists in an act of the will: see e.g. *Rep.* 4.49.4, n. 2 (Wadding, xi. 900b), even though the act is dependent on the intellectual vision of God: see e.g. *Rep.* 4.49.4, n. 9 (Wadding, xi. 901b–2a).

[33] Scotus, *Quod.* 13, n. 4 (Wadding, xii. 302).

[34] Scotus, *Quod.* 13, n. 5 (Wadding, xii. 302).

[35] The clearest discussion of the whole issue is Scotus, *Ord.* 4.13.1, nn. 42–55 (Vatican, xii. 450–3).

[36] See e.g. Scotus, *Ord.* 3.1.1.1, nn. 57–61 (Vatican, ix. 25–9). On this, see my *The Physics of Duns Scotus*, 193–202.

categories, since they are features merely of bodily things.[37] But action and passion look as though they may be live options (Aquinas, after all, accepts the former, and some Aristotelians the latter): so in section 4 I consider in more detail why Scotus rejects these two.

4. Quality: (2) Duns Scotus

Scotus's own view is that cognitive acts are qualities,[38] and he comes to this view simply by excluding any other possible categorial classification.[39] By way of prolegomenon to the discussion, one relevant Aristotelian presupposition is worth recalling. As Scotus understands the *Categories*, it is impossible for one simple property to belong to two categories. Supposing a cognitive act is a quality, for example (as Scotus maintains), it cannot also belong to the category of relation.[40] Of course, this presupposes that a cognitive act is simple in the sense of not being a fusion of two categories. Still, I think the arguments against the unnamed opponent should be sufficient to show that a cognitive act cannot essentially include a relation.

Now, as we have seen, Scotus denies that cognitive acts could be relations in his strict categorial understanding of relations. But why could they not be actions or passions? Again, according to Scotus, part of the reason has to do with the correct technical understanding of Aristotle's categories. What is an action? Necessarily, an action brings something about, and cognitive acts are not like this: they can bring about habitual or dispositional cognitions, but they do not have to.[41] (This, recall, is the basic criticism Scotus has of Aquinas's view.) And they cannot be passions, because cognitive acts are perfections of a cognizer, and items in the category of passion—features of a thing that happen to it—are not perfections of a thing: what perfect a thing are the activities that it itself does and brings about.[42]

Curiously, Scotus accepts this kind of argument *per divisionem*, excluding the various other options given in *Categories*, on the basis of authority: hence the conditionals in the following quotation:

> If therefore the famous division of the categories should be preserved (because, according to Avicenna, *Metaphysics* III,[43] we are compelled to heed the division by which there is said to be ten most general [categories]—we are compelled, I say, on account of the ancient

[37] Scotus, *Rep* 1.3.6, n. 169 (Wolter and Bychkov, i. 234–5).

[38] Scotus, *Quod.* 13, n. 25 (Wadding, xii. 338); see too *Rep.* 1.3.6, n. 169 (Wolter and Bychkov, i. 234–5); *Ord.* 1.3.3.4, n. 601 (Vatican, iii. 354).

[39] Scotus, *Rep.* 1.3.6, n. 169 (Wolter and Bychkov, i. 234–5).

[40] Scotus, *Quod.* 13, n. 24 (Wadding, xii. 337).

[41] Scotus, *Rep.* 1.3.6, n. 173 (Wolter and Bychkov, i. 236).

[42] Scotus, *Rep.* 1.3.6, n. 169 (Wolter and Bychkov, i. 235).

[43] Avicenna, *Metaph.* 3.1 (i. 104); 1.4 (i. 27–8).

authority of the philosophers, which cannot be easily contradicted), it is necessary to say that relation (*respectus*) has sufficient formal *rationes* (sufficient, I say, for the distinction of categories).[44]

Still, the assumption is that the *Categories* gives an exhaustive account of reality: something that Scotus asserts elsewhere, though with little or no argument.[45]

Given all this, it is no surprise that placing mental acts precisely in Aristotle's categorial schema is vital for Scotus's account of the kind of thing a cognitive act is, and in the *Quodlibet* he spends some time wondering whether they should count as belonging to the first species of quality (habits and dispositions) or the third (affecting, or being affected by, something in a way that involves the senses—whether a quality that can cause a sensory effect in another creature, or a quality that results from a sensory effect in the agent).[46] Scotus's view is that we should probably assign the act to the first species, unless we are happy to stretch the third species to include intellectual as well as merely sensory changes. This means that cognitive acts are in some sense dispositions. But, as we shall see in Chapter 8, they are dispositions in a very particular and specialized sense. They are not powers or dispositional properties, in the usual sense of properties that *do* things; rather, they themselves have a natural inclination to be related to extramental items, extrinsic to the acts: they are automatically related if there are such items, and not related if there are no such items.

As Scotus notes, an act of cognition has in common with items in the third species that it is in a state of constant dependence, causally the result of an *action*, something that itself counts as a process:[47] it has being *in fieri* (in a state of becoming), not *in facto esse* (in a state of having become).[48] But unlike categorial actions, it does not have temporal parts: it is not what Scotus calls a 'successive' item,[49] the kind of thing that, in more modern jargon, 'persists by having different temporal parts, or stages, at different times'.[50] In an illuminating text that he (unfortunately) later cancelled, Scotus makes his point clearly enough:

> Action and passion are not in [continuously dependent forms], because they [viz. continuously dependent forms] are *totum simul*, and not part after part; action, however, properly speaking, is directed only at a form whose parts are acquired successively.[51]

[44] Scotus, *Ord.* 4.13.1, n. 42 (Vatican, xii. 450–1).

[45] On this, see Giorgio Pini, *Categories and Logic in Duns Scotus: An Interpretation of Aristotle's* Categories *in the Late Thirteenth Century* (Leiden: Brill, 2002), 186–9.

[46] For the four species of quality, see Aristotle, *Cat.* 8 (8a25–10a25).

[47] Scotus, *Quod.* 13, n. 25 (Wadding, xii. 338).

[48] Scotus, *Ord.* 1.3.3.4, n. 602 (Vatican, iii. 354–5).

[49] See Scotus, *Quod.* 13, n. 27 (Wadding, xii. 340).

[50] David Lewis, *On the Plurality of Worlds* (Oxford: Basil Blackwell, 1986), 202.

[51] Scotus. *Ord.* 1.3.3.4, *text. canc.* (Vatican, iii. 355, ll. 12–14).

A continuously dependent form is one that depends without itself changing. (Scotus's model for thinking is, after all, something more like *contemplation* than it is like ratiocination, and ratiocination (for Scotus) consists in effect of a succession of contemplated essences or something similar.) Presumably the thought is that the *production* of qualities such as cognitive acts is something like a process—it is a successive item—even if the *act* itself is not: but Scotus does not elaborate, and in any case the text is deleted. The metaphysical point need not delay us, not least because Scotus denies that occurrent cognitions are themselves successive in this kind of way.

Scotus's claim that cognitive acts are qualities has a curious consequence, given Scotus's hypostatizing metaphysics. Scotus holds that non-relational accidents such as qualities are separable from their subjects—at least by divine power. And, driven by the need for consistency, Scotus makes the same claim about cognitive acts too:

> It can be said that that quality which is either an operation or included in an operation [viz. a cognitive act] does not have a real relation to a subject any more essential than other qualities do; and therefore, if others are posited not to be essentially related to a subject (about which there is no question now), neither should this [operation] be posited to be essentially related to a subject.[52]

So being inherent in a mind not necessary for being a thought: free-floating thoughts are, it seems, possible.

Now, by way of a final observation, all this raises a question related not to the correct categorial classification of cognitive acts, but rather to the categorial classification of the *bringing about* of such acts—the *production* of such acts. Scotus generally classifies it in the category of action:

> 'Action' in creatures is understood in one way for action in the category of action, and in another way for second act, which is an absolute quality. . . . Our intellect, whose action in the category of action is to generate a word, has . . . another action in the category of quality, namely, the generated knowledge.[53]

But the situation is a bit complex, because Scotus's general account of the category of action makes actions something like *tasks: bringing about such-and-such.* And in the case of transitive actions, these tasks are extrinsic relations:

> This relation [viz. action], which is directed to the patient, arises extrinsically, because it is perfectly possible for the agent and the patient to exist, and even be close to each other,

[52] Scotus, *Quod.* 13, n. 21 (Wadding, xii. 344).

[53] Scotus, *Ord.* 1.6.un, n. 14 (Vatican, iv. 92–4); see too *Ord.* 1.3.3.4, n. 601 (Vatican, iii. 354); *Ord.* 1.2.2.1–4, nn. 311 and 326 (Vatican, ii. 314, 321); *Quod.* 13, nn. 2 and 27 (Wadding, xii. 301, 341).

and yet not have a relation such that the agent is that by which [something] is altered, and neither is something altered by it: for example, if there is something impeding the action. Therefore action, since it is an extrinsically arising relation . . . will be a relation between the agent and the altered patient.[54]

Extrinsic relations do not arise merely in virtue of the existence of their terms. But this seems to generate a general difficulty, at least for transitive actions. After all, on Scotus's hypostatizing ontology, it might be thought that all relations are things, and thus that extrinsic relations themselves have a requirement for being produced—generating a vicious regress of productions. For example, in the passage just quoted, Scotus claims that the action seems to consist in the extrinsic relation 'between the agent and the altered patient': the idea seems to be that the alteration in the patient is correlated with (the result of) the production of the extrinsic relation. Scotus considers this worry in the case of transitive action:

An action cannot be something non-relational . . . Proof: because then there would be an action to an action, and thus to infinity. . . . How this would follow is clear, because there can be some action to any new form, because that form is neither from itself nor from nothing: therefore it is from some agent.[55]

Here the point is that it is wrong to think of the extrinsic relation as something produced *on the way* to the production of the external effect, as it were; the causal sequence somehow runs the other way. The extrinsic relation does not need to be caused: all that needs to be caused is the alteration in the effect. Put differently, the relation arises automatically (and thus *intrinsically*) given the existence of the agent and the altered effect. And this seems right, in a way: over and above producing the effect, nothing *else* has to be done or produced.

The case of immanent activity is similar. In this case, the relation arises automatically given the existence of the agent and the task. It needs no further causal explanation. As Scotus puts it, it is in the category of relation, not that of action (because it is an intrinsic relation, not an extrinsic one—something that I think he ought to have affirmed in the transitive case too):

Sometimes the noun 'action' is taken for the relation of a producer to a product, as a father is said to be the agent cause of a son. But sometimes [it is taken] for the relation of what induces to what is induced, or of what educes to what is educed—as what is hot is said to be the agent cause of heat in a stick. . . . According to [these] . . . significations it is an intrinsically arising relation, and thus properly in the genus of relation.[56]

[54] Scotus, *Ord.* 4.13.1, n. 54 (Vatican, xii. 453).
[55] Scotus, *Ord.* 4.13.1, nn. 27–8 (Vatican, xii. 447).
[56] Scotus, *Ord.* 4.13.1, nn. 57–8 (Vatican, xii. 454).

The first case here is transitive activity. But the language of 'educing' is usually taken to signal immanent activity. So I take it that, according to this passage, in immanent activities, such as thinking, there is such a relation between the agent and the cognition: to think is to bring about the cognition, but this bringing about does not itself need to be brought about.[57] (An analogous case—actualizing the state of affairs that is *an agent's producing a cognitive act*: the *producing* here does not need to be brought about.)

This seems right, since thinking is somehow basic: when we think there is nothing *else* we have to do. But it leaves unclear the precise categorial classification of the relevant production: in the discussion of cognitive acts, Scotus suggests that it should be located in the category of action, and the reason is that both the agent and the object can exist, but yet there be no cognitive act. Here, however, considered as a function of the agent and the *thought*, it seems to be located in the category of relation: it is an intrinsic relation, and arises automatically, given the existence of the agent and the act.

[57] Its correct categorial classification remains ambiguous: in *Quod.* 13, n. 27 (Wadding, xii. 341), Scotus insists that this relation is properly in the category of action, even though it is an intrinsic relation.

6

The Mechanisms of Occurrent Cognition

Scotus holds that cognitive acts are operations—real accidents—and he claims that all such items need causal explanation. In fact, he argues that such operations have two causes that are in standard cases necessary and jointly sufficient: the extramental object and/or the intelligible species, on the one hand, and the intellect on the other.[1] Scotus makes his point by means of a consideration of six views held by his various opponents: by rejecting all of them, he concludes that such joint causal activity is necessary. All but the first two in fact focus on the respective roles of intelligible species and phantasm. More important for our purposes here are the first two, which maintain, respectively, that the intellect is the total cause of a cognitive act (Peter Olivi (1247/8–1298)), and that the object is the total cause (Godfrey of Fontaines). Given that both of these views are false, Scotus infers that both intellect and object must have a causal role in the production of a cognitive act.[2]

1. The Active Mind: Peter Olivi

According to Olivi, cognitive acts are caused wholly by the intellect.[3] The fundamental reason for this is that thinking is an *animate* function, and thus that nothing inanimate can have a role in causing it.[4] Olivi's way of developing the issue is unexpected. Robert Pasnau summarizes:

[1] On the different roles ascribed to the extramental object and the intelligible species, see particularly the texts quoted in Ch. 4, s. 4. In what follows, we shall see that Scotus often slips between talking of the object as the relevant cause, and talking of the species as the relevant cause. I ignore this issue here.

[2] In what follows, I rely on the account in the *Ordinatio*. Scotus develops an identical argument, though in less detail, in *Quod.* 15, nn. 7–10 (Wadding, xii. 421–4).

[3] See Olivi, *In sent.* 2.72 (ed. B. Jansen, 3 vols (Quaracchi: Collegium S. Bonaventurae, 1922–6), iii. 9 and 17); *In sent.* 2.58 (ii. 462); Scotus summarizes the view at *Ord.* 1.3.3.2, n. 407 (Vatican, iii. 247).

[4] Olivi, *In Sent* 2.58 (ii. 412); I give Scotus's summary at the end of s. 2.

[Olivi] proposes an account based on what he calls *virtual attention*. Cognizers obtain information about the external world not by receiving physical impressions through the sense organs but by virtually extending the soul's cognitive attention to particular features of the external environment.[5]

Of course, Olivi does not wish to deny that cognitive acts have objects. But he does want to deny that the object can ever have any efficiently causal role in the production of the act. And he denies that anything in the mind—other than the mind itself—could be a partial cause of a cognitive act. So he maintains that an object of cognition is necessary for the existence of a cognitive act—the act is about something—but denies that the object has any kind of causal role in the production of the act.

According to Scotus, it is obvious that our cognitive acts are episodic (the relevant text is the first in section 3 of this chapter), and his main objection to Olivi's view is that it cannot allow for this fact:

When two causes, prior to the thing—namely, the efficient cause and the material cause—are in themselves perfect, present (*approximatae*) to each other, and non-impeded, the effect follows, or can follow. Therefore, if the soul is the total cause of generated knowledge (*notitiae*), and is itself the disposed matter or the subject receptive in relation to the same [generated knowledge], and is always actually present to itself, then, since it is a natural cause, there will always be some actual intellection in it, of which it is the cause, whether it is the *per se* cause of this, or (at least) is something in respect of which it is most able to cause.[6]

The idea is that the existence of an accident standardly requires two items: a cause for the accident, and a subject for it. And if these two items are not defective ('perfect'), appropriately positioned ('present to each other'), and not impeded by some other item, then the relevant accident exists. But, according to the objection, all of these conditions are satisfied in the case that the soul alone is the cause of an occurrent cognition. The soul itself, given the dispositional cognition, is both the cause and the recipient of the accident: the soul *ex hypothesi* is a sufficient cause of the act, and the act is the soul's: the soul is the subject of the act. So the soul will always cognize whatever it can cognize—which is clearly false, not least because the soul can occurrently cognize *anything* it knows, and it clearly does not occurrently cognize *everything* it knows.

Perhaps Olivi could reply that the presence or absence of an object might be sufficient to explain the episodic nature of occurrent cognition: the object could be a necessary but non-causal condition for the act. But it is not clear to me that this would quite do. It would allow Olivi to explain the episodic nature of perceptual

[5] Robert Pasnau, *Theories of Cognition*, 168.
[6] Scotus, *Ord.* 1.3.3.2, n. 414 (Vatican, iii. 251).

cognition, but (oddly, given his views on the active nature of the mind) it would leave the episodic nature of non-perceptual, abstractive, cognition problematic. Olivi, in other words, will have difficulty explaining the episodic nature of abstractive cognition. And it would suggest further that the object has some kind of causal role, even on Olivi's view. If we deny that this role is efficient causation, it seems that the existence of a *real* item—the act of cognition—would be partly explained by something that fails to have a causal role in its production. Commenting on Olivi's claim that the object cannot be a (partial) efficient cause, Scotus claims that we need to posit that the object is some further and unknown kind of cause: 'How will its being necessarily required be preserved unless we posit five kinds of causes?'[7] The point is that, if a real object is to have any kind of role in explaining the episodic nature of a perceptual cognitive act, then the object must have some kind of causal role in the production of the act. Olivi's position is thus, according to Scotus, contradictory, implicitly requiring that the object has a causal role, while explicitly rejecting the possibility of such a causal role. Scotus himself, as we shall see, has a rather different account, both of the episodic nature of cognitive act and of the requirement for an object's presence. For myself, I see no reason why Olivi could not simply reply that the object is a necessary (*sine qua non*) condition for perceptual cognition, such that the act exists when the object is present, even though the soul is the total cause of the act.

Scotus needs to navigate around Olivi's position very carefully, because (like Olivi) he denies that being about an object requires being *caused* by that object—I consider this in Chapter 8. For example, in support of the claim that Olivi is implicitly committed to a fifth kind of cause Scotus offers two 'probable' arguments[8] (the third and the fourth in the next passage) that he clearly regards as having some considerable force:

> First, because then [i.e. on Olivi's view that the act is not caused by the object] the act would not be a likeness (*similitudo*) of the object; secondly, because it would not be the case that it was essentially distinguished through the distinction of objects, because essential distinction does not arise from something that is not a cause.
>
> Thirdly, because then a cognition of some more perfect intelligible object would not be more perfect given equal effort on the part of the intellect in each of two cases, which is untrue because an action is more perfect if we posit that the total cause operates more effectively, and thus if the soul were the total cause, then wherever it, on its part, acts more perfectly and with greater effort, it produces a more perfect cognition, and thus [its] cognition of God would not be more perfect than [its cognition] of a mouse.
>
> It would seem also, fourthly, that then there would be infinite activity in the intellect, to the extent that the intellect is active in relation to all intellections, because for

[7] Scotus, *Ord.* 1.3.3.2, n. 415 (Vatican, iii. 252), repeated at n. 489 (Vatican, iii. 289–90).

[8] Scotus, *Ord.* 1.3.3.2, n. 489 (Vatican, iii. 290).

one intellection there is required some perfection in the cause of the intellection, and for another intellection of another kind there is required at least as much perfection, or more, because [the activity would] virtually contain two perfections of two proper causes in the two cases. Therefore if it has both of them, it will be more perfect than something that just has one of them, and thus, having infinite such [perfections] as a total cause, it is infinite in perfection.[9]

Now, the first two of these are inconsistent with Scotus's claim that semantic content is not dependent on the causal origin of the act—and the second with his rejection of the view of the unnamed opponent in *Quodlibet* 13 too—and it is no surprise that Scotus rejects them (albeit in a rather half-hearted way, by claiming that only the third and fourth are worth thinking about further).[10] The idea in the third is that the causal role of the object can help explain the *perfection* of the act—and indeed that Olivi's denial of such a role will lead him to the view that the contents of different cognitive acts have no effect on the perfection of the act (since the only way in which contents could affect perfection is by means of a causal role between the object and the act). The fourth is, if anything, even more puzzling: Scotus seems to reason that, since the intellect can know anything, it must be of infinite power—presumably on the grounds that, if it can know anything, it must be able to cognize everything (at once?). But this seems to be simply invalid.

Still, Scotus must be right on at least one point: the presence of the object, or of something doing duty for an object, must standardly be some kind of necessary condition for cognition, and this suggests that the mind cannot be the sole cause of cognition. Such presence, after all, is not just a background condition for cognition (in the way that, for example, the whole physical structure of the universe is some kind of generally necessary condition for, say, human existence and cognition): hence Scotus's worry that Olivi is implicitly committed to some kind of causal role—and hence his worry about the fifth kind of cause.

2. The Passive Mind: Godfrey of Fontaines

Godfrey's view is, as Scotus puts it, 'entirely at the opposite extreme' to Olivi's. According to Godfrey, the intellect is wholly passive in the production of cognitive acts, and the object is the only cause. Godfrey's view is that cognitive acts are passions. He takes this to follow from the passivity of cognition—the view that cognition is something brought about in the cognizer by the object.[11] Scotus focuses on

[9] Scotus, *Ord.* 1.3.3.2, nn. 490–2 (Vatican, iii. 290–1).

[10] Scotus, *Ord.* 1.3.3.2, n. 493 (Vatican, iii. 291).

[11] Godfrey, *Quod.* 9.19 c (ed. Jean Hoffmans, PB 4/2 (Louvain: Institut supérieur de philosophie de l'Université, 1928), 276–8), discussed at Scotus, *Ord.* 1.3.3.2, nn. 437–8 (Vatican, iii. 265–6).

refuting this latter claim. In doing so, I suppose he can take himself to be entitled to reject the view that cognitive acts are passions too.

Godfrey's main reason for his view is that self-motion is impossible, and that it is thus impossible for the intellect to have a causal role in the production of its own mental act.[12] Now, in cases of non-perceptual cognition, both Scotus and Godfrey claim that there is some kind of more or less complex causal mechanism that allows the object to be present to the intellect. But they disagree as to the nature of this causal mechanism. Scotus holds that the presence requires both an intelligible species and (at least *pro statu isto*) a phantasm. Godfrey, contrariwise, argues that a phantasm alone is sufficient. Since sensory representations are corporeal, inherent in a bodily organ, the object somehow represented in the phantasm is able to cause a mental act—something inherent in the soul—without violating Godfrey's strict rejection of self-motion: the body and the intellect are distinct items.[13] But Scotus has no worries of this kind, since he has no objections in principle to the notion of self-motion in cases in which the effect is different in kind from the cause (in cases of equivocal causation, in the medieval jargon).[14] We should keep in mind too that Godfrey believes that the only kind of intellectual cognition is non-perceptual. I examine in a moment Scotus's general response, one that also aims to show why perceptual (intuitive) cognition cannot be merely passive.

Scotus's main *ex professo* reply to Godfrey focuses wholly on Godfrey's claim that the phantasm alone could have an immediate causal role in the production of a cognitive act that has universal content:

> The claim that nothing other than a phantasm could be the immediate total cause of a cognitive act] greatly vilifies the intellect. For it seems that a phantasm is not able to cause in the intellect any perfection that exceeds its own nobility, because an effect does not exceed its cause, but falls away from it, particularly in the case of an equivocal effect. Therefore nothing is caused in the intellect precisely by a phantasm, as this opinion posits. For either every intellection is more perfect than a phantasm, or there will be no [intellection] in a human being.[15]

The key principle here is the claim that 'an effect does not exceed its cause [in nobility], but falls away from it'. This is supposed to be a general metaphysical principle. I doubt that it is universally true. But it seems fully germane in this case. Phantasms are supposed to have particular contents, not universal contents, and if nothing other than the phantasm caused an intellectual act, then the contents

[12] Godfrey, *Quod.* 8.2 c (ed. Jean Hoffmans, PB 4/1 (Louvain: Institut supérieur de philosophie de l'Université, 1924), 23–30); see Scotus, *Ord.* 1.3.3.2, n. 422 (Vatican, iii. 256–7).

[13] Godfrey, *Quod.* 6.7 c (PB 3. 171–2); see Scotus, *Ord.* 1.3.3.2, n. 426 (Vatican, iii. 260).

[14] For the whole discussion see Scotus, *Ord.* 1.3.3.2, nn. 512–27 (Vatican, iii. 303–14).

[15] Scotus, *Ord.* 1.3.3.2, n. 429 (Vatican, iii. 261–2).

of the intellectual act would be underdetermined. But it is at least arguable that Godfrey himself would not be moved by Scotus's attempt to refute his view, since (as we saw in Chapter 3) he claims that phantasms can indeed have universal content. Still, on a different model of abstraction, one on which a phantasm fails to have universal contents, Scotus's argument seems fair enough. And note that the perfection argument here cannot be construed in terms of the immateriality or materiality of the relevant items, since Scotus denies the only items that can have a causal role in the production of immaterial effects are immaterial causes—though he affirms that nothing merely material could cause something immaterial, as we saw in Chapter 4.

In any case, whether or not successful, all of this is merely *ad hominem*. After all, given that intelligible species have universal content, and are thus no less perfect than cognitive acts, anyone (such as Scotus) who holds that intelligible species are required for non-perceptual intellectual cognition, and who (such as Scotus) holds that self-motion is possible, could maintain that the object (represented in the intelligible species) is the total cause of a cognitive act without being vulnerable to Scotus's rejection of Godfrey's view. And in any case, Scotus's position seems open to the objection that intuitive intellectual cognition could be purely passive. But another of Scotus's arguments, even though framed in terms of non-perceptual cognition, is sufficient to show that no intellectual cognition could be entirely passive:

> If the phantasm is the efficient cause of every intellection, and a natural cause does not do anything other than in accordance with the nature by which it is actual, the phantasm will never cause any action in the intellect other than one in conformity with the phantasm, and thus it will never cause a false composition repugnant to the notions of the extremes which the phantasms in the imagination are about. . . . And if you say that a phantasm falsely represents its object, and for this reason produces a false intellection in the intellect, it follows that the same phantasm, remaining the same, can never cause the opposing assent, and thus that the intellect will not be able to apprehend the same proposition (*complexum*) as now true, and now false.[16]

Here a 'composition' is a predication, and the claim is that a phantasm, if it is the only causally active component in cognition, will cause both predications and our assent to such predications. But as a merely natural cause it always acts reliably, and thus will always cause true predications. And, contrariwise, as a merely natural cause, it always acts in the same way—thus if the phantasm could produce a false predication, it would always do so. So on the assumption that the intellect is merely passive, in the case that the phantasm is an accurate representation of reality, we

[16] Scotus, *Ord.* 1.3.3.2, n. 435 (Vatican, iii. 264–5).

would have no way of making a mistake; and in the case that the phantasm fails to be an accurate representation, we would have no way of avoiding one. But error is always possible, and avoiding error is generally possible too. So cognition—be it perceptual or non-perceptual—must involve some further causal input—presumably internal to the cognizer.

Furthermore, Scotus notes that the reason that Olivi posits in favour of Olivi's own opinion, that thinking is an animate function, is, if properly interpreted, effective against Godfrey:

> Thinking (*cogitatio*), since it is an animate operation (*operatio vitalis*), cannot be from something inanimate (*non-vivo*) as from its total cause, even though something inanimate can be a partial cause of something animate, or of an animate effect, just as the inanimate sun is, with a father, a partial cause in the generation of an animate son.[17]

Again, the claim is distinct from Aquinas's strictures on the causation of something immaterial by something material: the claim is that something *animate* cannot be totally caused by something inanimate. And it is different from Olivi's account too, since Olivi maintains that the inanimate cannot have *any* causal role in the causation of something animate. Furthermore, Scotus's argument, if effective, will cover the cases both of acts that have universal content, and of acts that have particulars as their objects or content. The same broad scope is found in a more substantive consideration—namely, that the production of cognitive acts is in our power, such that the intellect cannot be merely passive or receptive in relation to them—that Scotus offers when discussing the precise nature of the joint causality exercised by the object and the intellect (on which, more later).

3. The Activity of Mind and Object: Duns Scotus

Scotus's conclusion is that, in standard cases, both the object and the intellect have a causal role in the production of a cognitive act:

> An actual intellection is something episodic (*non perpetuum*) in us, that has being after non-being, as we experience. It is necessary to posit for this some active cause that is somehow in us, otherwise it would not be in our power to cognize when we will. . . . But it is clear here that it is necessary for the soul and the object present to be joint causes ([viz.] the object in the intelligible species . . . because the object is not present as actually intelligible in any other way, if we are talking of a sensible and material object). I say, then, that the object is not a total active cause of this intellection, neither in itself nor specifically, as is clear from the first reason against the second opinion. Neither is the intellective soul, or

[17] Scotus, *Ord.* 1.3.3.2, n. 509 (Vatican, iii. 301). For the effectiveness of this argument against Godfrey, see Scotus, *Lect.* 1.3.3.2–3, n. 338 (Vatican, xvi. 359).

something formally in it, the total cause of intellection, on account of the reason about the four causes brought against the first opinion.[18]

The basic assumption is that occurrent cognition is somehow in our free power, and Scotus argues that this would not be the case if we had no intrinsic causal function in the process of occurrent cognition. The soul and the intelligible species are both concrete particulars, and both have (or are) active causal powers. On a less hypostatizing ontology, it would be possible to argue that an intelligible species representing such-and-such an object just *is* the intellect's power to cognize that object: the intelligible species is an abstract accidental property of the intellect, one that confers on it a certain power. But for Scotus the intelligible species is a concrete particular just as the soul is, and it is this claim that generates the questions about causal cooperation. (We might assume something similar underlying the view that the phantasm has a causal role in the production of an intelligible species, too.) Note, in passing, the denial, in this passage, of the intuitive cognition of extramental particulars. I assume that Scotus would later have modified this passage in the light of his changing views on the subject.

Scotus spends considerable time working out the precise metaphysics of this causal cooperation, and concludes that in some sense the soul is the principal cause of its act. Scotus distinguishes various kinds of causal cooperation.[19] First, the cooperation can be of the same kind ('two people dragging some one body', in his example) or different in kind. Scotus assumes that when causes different in kind cooperate, it will always be the case that one is more perfect than the other. And this kind of cooperation can take place in two ways: the lower cause can act by virtue of its own intrinsic causal power; or the activity of the lower cause is fully the result of the activity of the higher cause—an example of the first: a mother's 'active power for the generation of a child and the active power of the father concur as partial causes, albeit ordered (since the one is more perfect than the other)';[20] an example of the second: 'hand, stick, ball'. And this final case—where the activity of the lower cause is fully the result of the activity of the higher cause—can likewise come in two forms: in the first, the motion comes from the higher cause, but the lower cause's *power* is the result of its own essential features; in the second, even the power is an accidental feature of the lower cause, and is conferred on it by the higher cause. (The first of these is the 'hand, stick, ball' case; Scotus does

[18] Scotus, *Ord.* 1.3.3.2, nn. 486–9 (Vatican, iii. 289–90); the 'reason' that Scotus refers to in the last sentence is his main objection to Godfrey (*Ord.* 1.3.3.2, n. 429 (Vatican, iii. 261–2)), quoted in s. 2.

[19] For the material in the rest of this paragraph, see Scotus, *Ord.* 1.3.3.2, n. 496 (Vatican, iii. 293–4).

[20] Scotus supposes that the father has a more significant causal role in procreation than the mother does, against the standard Aristotelian view that the mother has *no* active role in procreation. See Scotus, *Ord.* 3.4.un., nn. 37–8 (Vatican, ix. 210–11).

not give an example of what he means by the second case; elsewhere, dealing with the theological question of the causal role of sacraments in conferring grace, he marks the contrast as between secondary causality and instrumental causality, and gives as an example of instrumental causality a saw cutting a piece of wood: the hardness of the saw is not an active power but merely a passive resistance to being penetrated—a passive resistance that the softer wood lacks.[21])

Scotus applies all this straightforwardly to the issue of the respective roles of intellect and object in cognition:

> In the case at hand, the intelligible object, present in itself or in an intelligible species, and the intellective part [of the soul] do not concur as equal causes in causing intellection, because then each one would have imperfect causality, and the other would supplement it; and if either were perfect, it could have in itself alone the whole causality of both, just as, if the motive power of one were perfect, it would supplement the power of the other, and then the species would be like a certain degree of intellectivity, supplementing the deficient degree of intellectivity to the intellect; and then if the intellect could be made more perfect according to that degree, then it could have its act of understanding without the species and without the object, which is false.
>
> Therefore these two concur as things that have an essential order. But not in the first way, because the intellect does not give the nature of the causality belonging [to the object or the species] to the object or the species, for the object is not naturally inclined, whether in itself or in its species, to bring about intellection through something that it receives from the intellect, but rather [is naturally inclined to bring about intellection] through its nature; neither does the intellect receive its causality from the object or the species of the object, as was proved in the first reason against the fifth and sixth opinions. Therefore they [viz. the object and the intellective part of the soul] are causes essentially ordered in the last way, namely that one is simply more perfect than the other, such that, however, each is perfect in its proper causality, and not dependent on the other.[22]

Briefly, the causal cooperation cannot be such that both intellect and species/object act in the same kind of way, because then simply strengthening the power of one of these would allow that one to be a sufficient cause of a cognitive act: something Scotus believes himself to have already shown to be false in his refutations of Olivi and Godfrey. But it is not the case that the species/object receives the causal power in virtue of which it is a partial cause of cognition from the soul: it has it intrinsically, in virtue of the kind of thing it is. Neither does the intellect receive its causal power from the species/object, because objects and species are different in kind from cognitive acts—they are different kinds of concrete particular—and on the principle that effects different in kind from their causes are less perfect than their

[21] On all this, see my 'Some Varieties of Semantic Externalism in Duns Scotus's Cognitive Psychology', 286–92.

[22] Scotus, *Ord.* 1.3.3.2, nn. 497–8 (Vatican, iii. 294). The Vatican editors obscure Scotus's reference to his earlier argument by a misleading textual emendation. I follow the reading in the apparatus.

causes, the causal activity of the object or species would entail that the cognitive act is less perfect than its object or the species that represents the object—something that Scotus believes to be false.[23] Presumably, Scotus holds that the independent causal activity of the soul is what secures the cognitive act's being at least as perfect as the object or the species—something that requires the assumption that the soul is of greater perfection than the object.

Given that intellect and object are unequal in causal efficacy, Scotus's final task is to determine which has the greater role in producing cognitive acts, and just what the nature of that greater role is. First, it looks as though the object is bound to be more significant. It is, after all, the primary mover, not itself moved by any mental property.[24] And, secondly, the object is what makes the intellect to be like it, and this looks to be the most important causal factor in cognition.[25]

But Scotus disagrees with this, for two reasons. First,

> It seems that the intellective part has the principal causality with respect to intellections that in our current state naturally pertain to us, first, because when one of a pair of ordered causes is undetermined to any one effect, and is as it were unlimited [with respect to its effects], and the other is, according to its maximal power, determined to one particular kind of effect, then the more unlimited and universal seems to be the more perfect and principal [cause]. An example is the sun and particular generators. Now, the intellect has a power that is as it were unlimited and undetermined with respect to all intellections, whereas the objects naturally known by us have determined power with respect to determined intellections which pertain to [the objects], even according to their maximal power—that is, each is determined to an intellection of itself. Therefore [the intellective part has the principal causality with respect to intellections that in our current state naturally pertain to us].[26]

The idea is that the intellect can naturally have a role in producing cognitive acts with any object (or at least any object other than God—hence the qualification about 'our current state': the issue of the beatific vision is not relevant to the general case). And this is supposed to entail the claim that the intellect is the principal cause, since 'the more unlimited . . . seems to be the. . . . principal' cause. The example from medieval physics is the sun: something that was believed to have a causal role in the production of all sorts of offspring, and that was believed to be a cause of greater power than any particular generator.

The argument does not make clear precisely in what way the intellect is the principal cause, something that Scotus makes explicit in his second argument:

[23] Scotus, *Ord.* 1.3.3.2, n. 463 (Vatican, iii. 279).
[24] Scotus, *Ord.* 1.3.3.2, n. 554 (Vatican, iii. 331).
[25] Scotus, *Ord.* 1.3.3.2, n. 555 (Vatican, iii. 331).
[26] Scotus, *Ord.* 1.3.3.3, n. 559 (Vatican, iii. 333).

It seems that the intellective part has the principal causality with respect to intellections that in our current state naturally pertain to us . . . because that thing is the principal cause which is such that, when it acts, the other cause acts along with it, but not vice versa. But when our intellect acts with the goal of understanding, the object in itself or in the species merely acts along with it, for it is in our power to understand because 'we can understand when we want to' (*On the soul* 2).[27] But this is not principally on account of the species, which is a natural form, but rather on account of the intellect, which we can use when we will.

{But how is it proved that it is more in the power of the will to use the intellect than to use the intelligible species, since each in itself is a natural agent—and why is not each free 'by participation'? Reply: nothing is primarily free by participation other than something that is in the same essence as the will. Against this: an organ and the organic powers, even if they are extrinsic, are free by participation; likewise, no vegetative act is within our power. This is an obscure way of objecting, because it is not clear which things in us are subject to our will, and which are not.}

But the action of the species, which [action] is naturally uniform on the part of the species, mainly follows the action of the intellect.[28]

Setting aside for the moment the material interpolated later by Scotus, which I have put in curly brackets, the idea is that the species/object has a causal role only when the cognizer wills; or, more properly, that the object has any causal role only when the intellect does too, because the object, even when appropriately present, does not have a role in causing the cognition unless the intellect adds some further non-automatic causal input. The object does not have to *do* anything to cooperate with the intellect. The object is always in a state such that, when the intellect (voluntarily) directs attention to it, it operates. It is in this state even when the intellect fails to direct attention to it. This is the point of calling it a 'natural form' in this context: it acts automatically, not voluntarily. And according to Scotus this is sufficient to show that the intellect is the principal cause. The object acts automatically, but its activity is not sufficient for the effect unless some non-automatic cause—the intellect—acts too. This asymmetry accounts for the fact that the intellect is the principal cause of the act of cognition.

The material interpolated by Scotus attempts (and fails) to explain just how the intellect is a non-automatic cause—namely, because the will is involved too. The worry, expressed in the objection in the curly brackets, is that the will's control seems to extend as much over the intelligible species as over the intellect, and Scotus's reply is agnostic: it is not in fact clear that things extrinsic to something's essence might not be as directly under that thing's control as features intrinsic to the essence are.

[27] Aristotle, *De an.* 2.5 (417b24).

[28] Scotus, *Ord.* 1.3.3.3, nn. 559–60 (Vatican, iii. 333), and *textus interpolatus* (Vatican, iii. 333, l. 23–p. 334, l. 19).

Given all this, how does Scotus reply to the two arguments, already given briefly, that attempt to defend the view that the species/object has the primary causal role? To the first, Scotus reasons that the intellect is not moved by the object, but rather counts as the primary mover in the production of a cognitive act, such that the object acts only when the intellect does: the intellect makes the object's partial causal efficacy actual by attending to the object ('understand[ing] when we want to').[29]

The second objection is more substantive, and Scotus's reply spells out something of the mechanism that secures that objects and species (of such and such a kind) generally cause corresponding acts (i.e. acts with the same informational content as the species, or which are about the object):

> I say that the effect is, formally, made to be like the proximate lower cause to a greater extent than it is made to be like the remote and more perfect principal cause, as is clear in the case of a son in relation to his father and the sun; so this argument is for the other side, because it proves that the act of intellection is from the object as its proximate cause, because it is made to be formally like [the object] to a greater extent [than it is made to be like the intellect]....
>
> Generally, the more principal agent is an equivocal cause, and has the perfection of its effect in it more perfectly than a univocal cause, and for this reason does not formally make something like itself to a greater extent [than a univocal cause does] (because making an effect to be like [the cause] in this sense is an imperfection in the cause); rather, it makes it like itself in the sense that it gives to the effect a form through which it is made like [the cause] equivocally, [and it gives to the effect] more than a particular agent gives; and this active likening is a result of the perfection of the cause, even though the likening is not greater if we think of formal likeness.
>
> Likewise, a more perfect cause, to a greater extent than a lower cause, makes an effect which can be made like something, for it more greatly causes an effect of the kind in which the effect is caused. But an effect can be made formally like its proximate cause to a greater extent [than it can be made like its remote cause]; therefore the more remote cause is more greatly an efficient cause of the likeness of the effect of the proximate cause than the proximate cause is. That a son is formally like his father is from the remote cause, efficiently making the son like his father, to a greater extent than it is from the proximate cause, because what is a greater cause of the form by which the effect is made like [the cause] is a greater efficient cause of the likening.[30]

In cases of the relevant kind of causal activity, at most one of the agents is of the same kind as the effect, and the assumption made in the second paragraph here is that in cases in which at most one of the agents is of the same kind as the effect, the agent which is of a different kind from the effect (the equivocal cause) is more perfect than the effect. And given that univocal causes are equal in perfection to their effects, this claim is equivalent to that invoked in an earlier discussion—namely, that 'effects

[29] Scotus, *Ord.* 1.3.3.3, n. 564 (Vatican, iii. 335).
[30] Scotus, *Ord.* 1.3.3.3, nn. 565–7 (Vatican, iii. 336–7).

that are different in kind from their causes are necessarily less perfect than their causes'. (Scotus supposes that no two kinds of thing are equal in perfection.) In the case that an equivocal cause and a univocal cause cooperate in the production of an effect, the equivocal cause is always more perfect than the univocal one, and thus, on the assumption that the more perfect cause in such cases is always the principal cause, the cause which makes an effect the same in kind as itself is necessarily secondary. Much the same point is made, without the same amount of argumentation, in the first paragraph. In the third, Scotus adds a further claim: in such cases, the primary cause somehow explains how it is that the secondary cause is able to make an effect that is like itself. All of these claims are causal generalities: the remote cause explains how it is that the effect—here a cognitive act, or a son—is made to be like its proximate cause: it is made to be so in virtue of the activity of the more remote cause. So the various claims should not be mistaken as attempts to show that these kinds of causal relation are what secure that acts and species have representational content. As we shall see in Chapter 8, acts and species have representational content simply in virtue of the kinds of thing that they are. And they are not the same in kind as their objects: they imitate them, and this imitation relation is sufficiently like sameness in kind to allow for the causal generalizations to be applicable to the cognitive case of the production of a veridical mental act.

4. Controlling Thought

These arguments rely on the claim that thinking is under our conscious control—contrast abstraction, which, as I showed in Chapter 3, section 1, is automatic and unconscious. This assumption about the control of thought was widespread in the Middle Ages, and thinkers frequently appeal to a claim made by Averroes about habits (so, here, intelligible species), that a habit is 'that which someone uses when he wishes'.[31] But if applied to the issue of occurrent cognition, this claim raises an immediate problem, which Scotus puts with his customary trenchancy:

> Cogitation is not in the power of the will. . . . And this is proved because every volition requires an intellection that is temporally simultaneous but prior in nature. But if volition were the cause of intellection or cogitation—as it would be necessary to claim if it were in the power of the will—that cogitation would be posterior in nature to its cause. Again, there is no circle in *per se* causes. But cogitation, since it is naturally prior, is the *per se* cause of volition, and not *vice versa*.[32]

[31] Averroes, *In de an.* 3, com. 18 (p. 438, ll. 27–8), quoted by Scotus at *Ord.* 1.3.3.2, n. 439 (Vatican, iii. 266).

[32] 'Cogitatio non est in potestate voluntatis. . . . Et probatur illud quia omnis volitio requirit intellectionem simul duratione et prius natura. Sed si volitio esset causa intellectionis vel cogitationis, sicut

The problem is that the medievals accepted (and understandably so) an assumption that any kind of appetitive control involves a *prior* cognition. Here, Scotus talks about a priority 'in nature', by which he means to draw attention to some kind of necessary causal order; the claim that the volition might be temporally simultaneous is supposed to draw attention to the fact that the relevant cognitive act, even though it is causally presupposed to the volition, might occur at the same time as the volition.

Scotus's own view, at least in the late work that this quotation is taken from, is that it is not in fact true that thought is a *cause* of volition: it is rather a necessary condition for volition—a *sine qua non* condition.[33] But he believes that the same objection can be raised even on this weaker assumption:

> You will say that intellection is not a *per se* cause of volition, but only naturally prior as a *sine qua non* [condition].
>
> Against: this equally concedes what is proposed. An act that is naturally prior does not require a posterior act as something prior in nature, whether as a per se cause or as a *sine qua non* [condition], since what is prior in nature never presupposes what is posterior in nature. Therefore if cogitation is in the power of the will, the act of volition is prior in nature to the act of cogitation, just as a cause [is prior in nature] to the effect. Therefore it does not require intellection or cogitation prior in nature or simultaneous in nature.[34]

The idea is that even if, as the objector supposes, the thought is merely a necessary condition for the volition, it is still relevantly *prior* to the volition—and thus cannot be the object of the volition, or be such that it presupposes the volition. Hence the objection goes through on either understanding of the role of cognition in volition.

As Scotus makes clear, the cognition that is presupposed is an *occurrent* cognition, not merely a dispositional cognition:

> Habitual [cognition] is not sufficient for the will's actually willing, because no intellection is sufficient for the will's actually willing unless it is sufficient for the will's willing an object as the end term of an act (because the opposite in the restrictive clause (*in adiecto*) is for someone to will an act but not the object that is its end term—just as no one can cognize an

oporteret dicere si esset in potestate voluntatis, illa cogitatio esset posterior natura quam sua causa. Item in per se causis non est circulus. Sed cogitatio est per se causa volitionis cum sit prius natura. Ergo non e converso': Scotus, *Rep.* 2.42.1–3 (MS M, fo. 217^{v}). I follow the reading in MS M; for a good discussion of the Wadding text, a text interesting in its own right, seeMichael Barnwell, *The Problem of Negligent Omissions: Medieval Action Theories to the Rescue* (Leiden, and Boston, MA: Brill, 2010), 134, 139–51.

[33] See Stephen Dumont, 'Did Scotus Change his Mind on the Will?', in Jan Aertsen, Kent Emery, and Andreas Speer (eds), *After the Condemnation of 1277: Philosophy and Theology at the University of Paris in the Last Quarter of the Thirteenth Century* (Berlin: Walter de Gruyter, 2001), 719–94.

[34] 'Dices: intellectio non est per se causa volitionis sed solum prius natura sine quo non. Contra: hoc aequaliter concedit propositum. Actus prior naturaliter non requirit actum posteriorem tamquam prius natura nec ut per se causa nec ut sine quo non, cum prius natura numquam praesupponit posterius natura. Ergo si cogitatio est in potestate voluntatis, actus voluntatis est prius natura quam actus cogitationis sicut causa effectu. Ergo non requirit intellectionem vel cogitationem prius natura vel simul natura': Scotus, *Rep.* 2.42.1–3 (MS M, fo. 217^{v}).

act without cognizing the object that is its end term). But for the will's actually willing an act habitual cognition is not sufficient, because otherwise someone sleeping (since a habit remains in him) could actually will.[35]

There are apparently two arguments here. First, willing needs an actual object, or else we could have a content-free act of will: willing, but not willing anything. The argument does not seem wholly successful, since it is hard to see why it would not be open to Scotus's opponent to claim that the act gets its content from the dispositional cognition. Secondly, willing requires more than a merely dispositional cognition as its ground, otherwise someone sleeping—who possesses, after all, all the same dispositional cognitions that he has when awake—could actually will something. And this is false.

The solution is that any *initial* cognition arises automatically, and that it is only once there is an occurrent cognition that thought can be voluntarily controlled:

> It is necessary to distinguish between a first cogitation and a second. The first cogitation is not within the power of the will, because some cogitation precedes, by nature, every willing.[36]

This is the standard solution, adopted by most of the medieval thinkers.[37] The idea, as Scotus sees it, is that certain thoughts arise automatically:

> Whatever is, by its formal nature, a productive principle, is a productive principle in whatever it exists in without imperfection; but perfect memory or (which is the same thing) this whole, the intellect having an intelligible object present to itself, is by its formal nature a principle productive of generated knowledge.[38]

The claim is that the intellect along with an intelligible species (i.e. 'perfect memory') automatically produces occurrent cognitions in appropriate circumstances: the intellect

[35] 'Habitualis non sufficit ad hoc quod voluntas velit actu, quia nulla intellectio sufficit ad hoc quod voluntas velit actu nisi ipsa sufficiat ad hoc quod voluntas velit obiectum ut terminat actum, quia oppositum in adiecto est aliquem velle actum et non obiectum ut terminat (sicut nullus potest intelligere actum non intelligendo obiectum ut terminat). Sed ad hoc quod voluntas velit actum actualiter non sufficit cogitatio habitualis. Tunc enim posset dormiens actu velle, cum in eo remaneat habitus': Scotus, *Rep.* 2.42.1–3 (MS M, fo. 218^{r}). The parenthetical material is added in the margin, but is correctly inserted into the text in the slightly later MS B, fo. 285^{r}.

[36] 'Oportet distinguere de cogitatione prima vel secunda. Prima cogitatio non est in potestate voluntatis, quia aliqua cogitatio praecedit natura omne velle': Scotus, *Rep.* 2.42.1–3 (MS M, fo. 218^{r}).

[37] For a discussion of this whole issue, see my 'The Role of the Will in Sensory and Intellectual Cognition', in Russell Friedman and Martin Pickavé (eds), *A Companion to Cognitive Theory in the Later Middle Ages* (Leuven: Leuven University Press, forthcoming).

[38] Scotus, *Ord.* 1.2.2.1–4, n. 221 (Vatican, ii. 259).

is 'productive in the manner of nature'.[39] Cognizers think of everything that they can unless they are prevented, or unless they are dependent on further causal requirements.

But once we have an occurrent cognition, we are able to control subsequent cognitions. And (unlike most of his predecessors), Scotus proposes a mechanism to account for this. Central is his view, discussed in Chapter 2, that it is possible for the intellect to have more than one cognitive act at once. As we saw, Scotus imagines a case in which we have two acts, directed to two distinct objects, such that we are aware of both objects but only of one of the two acts. We voluntarily focus our awareness by attending to one of the objects, and thereby becoming aware of the relevant act:

> I say that the will can take pleasure in the pre-existing intellection, and thus not remove it (which it would be necessary to say if it caused a new intellection), and consequently this cogitation can be willed even if it is not pre-cognized as a pre-cognized object, but only as an act elicited in relation to the pre-cognized object.[40]

The cognition is intensified by the will's direct attention to the object, not the act: this is just what it is for the will to intensify a cognitive act. Attention to the object makes the act to be perceived, and thence intensified, and the will's attention is *prior* to the cognition of the act:

> I say that, when the will converts itself to a cogitation that the soul first had as imperfect, it has, through the conversion, the same as perfect: and [the cogitation] as imperfect is naturally prior to the act of the will; nevertheless, the pleasure of the will is naturally prior to the perfect cogitation.[41]

The cogitation 'as imperfect' is the non-perceived act: it is by focus on the object of this act that we can bring the act to mind and focus on it, and this gives us cognition of both the object *and the act*. Furthermore, as the penultimate passage makes clear, although Scotus talks of our capacity to 'perceive' our acts, he does not mean in this context that the *unperceived* act itself is an object of thought. And objects of unperceived acts are cognized, but, like the acts, in some sense not perceived (in Scotus's admittedly rough terminology).

[39] Scotus, *Ord.* 1.2.2.1–4, n. 222 (Vatican, ii. 261).

[40] 'Dico quod in intellectione praeexistente potest voluntas complacere et per hoc non removere, quod oporteret dicere si causaret novam intellectionem, et per consequens ista cogitatio potest esse volita, etsi ipsa non sit praecognita ut obiectum praecognitum sed tantum ut actus elicitus respectu obiecti praecogniti': Scotus, *Rep.* 2.42.1–3 (MS M, fo. 218^{v}).

[41] 'Dico quod cum voluntas se convertit ad cogitationem quam habuit anima prius ut imperfectam, per conversionem habet eandem ut perfectam, et prius natura est ipsa ut imperfecta quam actus volunatis. Tamen complacentia voluntatis est prior natura quam cogitatio perfecta': Scotus, *Rep.* 2.42.1–3 (MS M, fo. 218^{v}).

7

The Soul and its Powers

I have so far spoken a great deal about the various powers of the soul. Now I attempt to present the topic systematically. I begin by sketching the various kinds of cognitive powers that Scotus accepts. In the second and final section, I examine two related claims that Scotus makes about powers: first, that they are non-relational, and secondly, that the essential causal powers of any given thing are at most formally distinct from each other.

1. Kinds of Cognitive Power

In line with standard Aristotelianism, Scotus makes a distinction between sensory powers—organic bodily powers capable of sensing things in the world—and intellectual powers, the powers of an immaterial substance capable of cognizing universals. I begin with the first sort of power—about which Scotus has little to say—and then consider his account of the intellectual powers—about which he has a great deal to say.

As far as I can see, Scotus says nothing much of interest about the five external senses, and I ignore the topic here.[1] Medieval accounts generally accept four internal senses too, using insights from Avicenna that are in turn based on Aristotle's assertion of some sort of 'common sense'.[2] Aquinas, for example, is typical, and I take it had an important role in establishing the received opinion on the matter.[3] He distinguishes (1) the common sense; (2) the imagination; (3) the *vis aestimativa*; and (4) the sense memory (*vis memorativa*). In line with Aristotle, Aquinas supposes that the common sense is responsible for distinguishing different sorts

[1] Briefly, he notes that the organ of sight is the optic nerve (see the discussion of illusion in Ch. 2, and Scotus, *In de an.* 2, n. 11 (OP v. 17)); and that the organ of touch is the nerves too, spread throughout the body (Scotus, *In de an.* 2, nn. 6, 9–10 (OP v. 14, 15–16)). Scotus's discussion seems to follow the relevant portions of Avicenna's account of the sense organs in *De an.* 5.8 (ii. 181).

[2] Aristotle, *De an.* 3.2 (426b12–15); see Avicenna, *De an.* 4.1 (iv/v. 1–3).

[3] Unless otherwise noted, what follows in this paragraph is taken from Aquinas, *ST* 1.78.4 c (I, 380b–1b).

of sensations from each other (sounds from sights, for example), and that it is responsible for perceiving that we sense.[4] The imagination stores sense images in the absence of their objects, and is the faculty that recalls such images. The *vis aestimativa* is the power for 'apprehending *intentiones* that are not received through the senses', on the basis of which an animal forms appetitive responses: as Robert Pasnau nicely puts it, 'animals must have some capacity that sees beyond what the senses themselves can see'.[5] (The same power in humans is labelled by Aquinas the *vis cogitativa*, or sometimes, in other authors, the *vis collativa*.) The sense memory stores the *intentiones* gathered from the *vis aestimativa* or *vis cogitativa*.

On the common sense, Scotus follows Aquinas's reading of Aristotle closely. Thus, he accepts the two functions of the common sense that Aquinas highlights, and uses them as evidence for the existence of such a sense.[6] But Scotus adds further considerations, drawn from Avicenna, in favour of the existence of the common sense. As we saw in Chapter 1, Scotus accepts the view—that he takes to be Avicennian—that the common sense is presupposed to our capacity for imagination and memory. A second Avicennian argument for the existence of the common sense exploits this sense to explain certain apparent but misleading perceptions:

> If we attend to drops of rain following each other, it looks to us as though there is one continuous line, as it were, from all the drops. Likewise, if a stick, at whose tip is a certain colour, is moved in a circular motion, it looks to us as though there is a circle at its tip, on account of the circular motion of the tip or apex of the stick. From this it can be argued as follows: it is impossible for a particular sense to perceive its sensible object where it is not. But the tip of the moving stick is not always in the same place as that in which the circle appears, because the circle looks to be as it were immobile, whereas [the tip] is always moving. It is the same for the drops [of rain]. Therefore, that circle, or that line, is not perceived by a particular sense; therefore [it is perceived] by the common [sense]. It is similar in the case of a human being on a moving ship, who judges from his senses that the bank moves.[7]

The idea is that certain kinds of illusion *seem* to us to be a certain way, but that they could not be *perceived* by the external senses to be in that way, since this would involve an external sense naturally perceiving what is not, and this seems to be impossible. (Contrast the case of hallucination considered in Chapter 1, where an act is caused in an external sense in some deviant manner that Scotus does not specify.) So the common sense must be the faculty responsible for the misleading perception. Scotus does not explain the precise mechanism (and neither does he explain how the common sense can be, and the external senses cannot be, thus

[4] Aquinas, *ST* 1.78.4 ad 2: see Aristotle, *De an.* 3.2 (426b8–29).
[5] Robert Pasnau, *Thomas Aquinas on Human Nature*, 268.
[6] Scotus, *In de an.* 9, nn. 8–10 (OP v. 71–4).
[7] Scotus, *In de an.* 9, n. 12 (OP v. 75), referring to Avicenna, *De an.* 1.5 and 3.7 (i. 88 and 255).

deceived); but all I am really interested in here is his account of the kinds of thing that the common sense does. Equally, as we saw in Chapter 1, Scotus is happy to affirm, with Aristotle, that the common sense perceives time and magnitude—the common sensibles.

Scotus follows Aquinas in rejecting, or modifying, Aristotle's view that the organ of common sense is the heart.[8] He reports a controversy between 'medical doctors and philosophers (*medicos et philosophos*)' on the question: doctors argue that the organ of the common sense is the brain,[9] and philosophers that it is the heart.[10] Scotus's view, roughly following Aquinas, is that a network of nerves connects the two organs, such that nerves from the particular senses link with the brain, and thence to the heart. But Scotus does not specify a role for the heart; he seems to assume that Aristotle is right to suppose that the common sense has its 'root' in the heart, but adds that there is plenty of evidence to show that it must involve the brain too. (Among other things, he notes—presumably from experience—that hard study may result in a headache, but not in heart pains, and that this is evidence for the location of the common sense in the brain.[11])

On the remaining three internal senses, however, Scotus diverges from Aquinas's account quite sharply. Most radically, he seems to reject the existence of the *vis aestimativa* altogether. As he sees it, the *vis aestimativa* is supposed to convey additional informational content over and above that provided by the external senses, and he does not see how it can do this. According to Henry (Scotus's specific opponent here), the *vis aestimativa* is capable of 'excavating' further informational content from sensible species, on the basis of which an animal forms an appropriate appetitive response to the object of sense. Scotus holds that animals have instinctive appetitive responses to intentionally received species of certain kinds, but he argues that these responses cannot occur on the basis of any informational content over and above that conveyed by the external senses.[12] A sheep can see a wolf but, in reference to the wolf, it does not *see-as-harmful*. The sheep runs away from the wolf because of the *appetitive* or emotional response—fear—generated automatically by the inherence of the sensory act that has the wolf as its object. So while this response requires perception, the response is divorced from any kind of cognitive explanation. Scotus proposes a thought experiment to show this: it seems plausible

[8] See Aristotle, *De somno* 3 (456a1–11).

[9] Scotus, *In de an.* 10, nn. 9–10 (OP v. 83).

[10] Scotus, *In de an.* 10, nn. 11–13 (OP v. 83–4).

[11] For the whole discussion, not particularly high level, see Scotus, *In de an.* 2, n. 10 (OP v. 15); for the connections between the particular senses and the common sense, see too *In de an.* 2, n. 7 (OP v. 14–15). A useful summary of Aquinas's position can be found in Pasnau, *Thomas Aquinas on Human Nature*, 191.

[12] See Henry, *SQ* 1.1 ad 7 (Leuven, xxi. 28).

to suppose that, if something appears to be a sheep, a sheep will respond to it as though it is a sheep—even if it should in fact turn out to be a wolf.[13] The point is that it is puzzling to suppose that animals can see 'beyond what the senses themselves can see'. If they could do this, then why could they not spot a wolf in sheep's clothing? After all, it is precisely the capacity to see more than appearances that is being ascribed to the *vis aestimativa*. So we might more parsimoniously and plausibly maintain that it is simply the sight of the wolf that generates in a (properly functioning) sheep the *desire* to flee. Henry could respond that there are different cases of 'seeing more than appearances': a misleading appearance might be sufficient to block the proper function of the relevant internal sense. But Scotus says no more on the subject.

Given his rejection of the *vis aestimativa*, it is no surprise that Scotus offers a different account of the imagination and sense memory from that offered by Aquinas. But it is not merely the rejection of the *vis aestimativa* that motivates this. After all, on the face of it the relevant modification of Aquinas's account would simply involve abandoning the sense memory altogether, since this power, according to Aquinas, is responsible for storing and recalling the *intentiones* gathered by the *vis aestimativa*. But Scotus's views on memory, discussed in Chapters 1 and 2, show that he needs both faculties: one to recall information about things sensed, and one to perceive or think of them as past. There is no parallel in Aquinas to Scotus's sense memory, just as there is no parallel in Scotus to Aquinas's sense memory, connected, as it is, to the *vis aestimativa*. So even apart from his rejection of the *vis aestimativa*, Scotus has reason to modify Aquinas's account of imagination and the sense memory. As he sees it, the imagination conjures up things irrespective of their being past, whereas sense memory has the pastness of its objects attached to it in some way.[14] I discussed the issue at length in Chapter 1, section 3.

[13] For the discussion, see e.g. Scotus, *Lect.* 1.3.1.1–2, n. 13 (Vatican, xvi. 228); *Ord.* 1.3.1.1–2, n. 21, *text. int.* (Vatican, iii. 13, l. 17–p. 14, l. 16); *Ord.* 1.3.1.1–2, n. 62 (Vatican, iii. 43–4). In his remarks on the last passage from Scotus here, the early 16th-century Scotist Francis Lychetus astutely notes that Scotus's position here is precisely analogous to his view on distress or pain. Distress is an appetitive response to an object on the basis of the simple perception of that object, and does not require the *further* cognitive perception that the object or species is harmful: see Wadding, v. 405a. See too *Ord.* 3.15.un., nn. 35–7 (Vatican, ix. 491–2). Emotion has no *distinctively* cognitive component. On distress and pain, see Ch. 1, s. 6. At *In de an.* 9, n. 17 (OP v. 77) Scotus talks about the *sensus collativa* as a cogitative power, and identifies it as the *sensus memorativa*. But in standard scholastic views, the *sensus collativa* is the kind of *vis aestimativa* found in humans. I suppose this is further evidence of the fact that the *De anima* questions are early in Scotus's work, and that his views were not fully worked out at this stage in his career (if ever they were). It is, as far as I can tell, the only reference to such a power in Scotus's output. At any rate, the reference is merely passing, and has no philosophical role in the argument.

[14] Scotus, *In de an.* 9, nn. 16–17 (OP v. 77).

So much for Scotus's discussion of the sense powers. He has much more to say on the question of the intellectual powers, attempting to find a way of bringing together Aristotle's distinction between the agent and possible intellects and Augustine's distinction between the memory and the intelligence: something that he attempts not, I think, for mere antiquarian interest, but because he thinks that both authors were right, but right about different issues. Thus, as we saw in Chapters 3 and 4, Scotus holds, in good Aristotelian fashion, that there is an agent intellect, and that it is the faculty that (partially) causes intelligible species. In like manner, such items inhere in the possible intellect. But, following Augustine, Scotus refers to the faculty responsible for storing intelligible species as the 'memory' (*memoria*), and he holds too that the memory is the relevant causal power that produces occurrent cognitions:

> Memory in the Father is the Father's operative principle, by which, as first act, the Father formally understands in second act. The same memory in the Father is a productive principle, by which the Father, existing in first act, produces generated knowledge in second act. The productive act is not grounded on the essential act, which consists in second act.[15]

The context here is a discussion of Trinitarian theology, which Scotus takes to model very closely the operations of the mind. The idea is that memory—the storehouse for intelligible species in humans—causes, jointly with these species, occurrent cognitions.

Following Augustine, at least as interpreted by Scotus,[16] occurrent cognitions inhere in the intelligence, which is thus the power that actually thinks, or that has the relevant operation (or rather, the activity is the soul's, and the memory grounds the activity: for this clarification, see section 2). Scotus makes the point as follows, using Augustine's terminology of the mental word to refer to an occurrent cognition:

> Therefore, the word can be described as follows: the word is an act of the intelligence, produced by perfect memory, existing only with an actual act of intellection. . . . And from these things it is clear that the word pertains neither to the will nor to the memory (because it is the second part of the image, not the first or the third), and consequently it is not an intelligible species or habit, or anything that pertains to the memory. Therefore it is something that pertains to the intelligence.[17]

Since, according to Aristotle, again as interpreted by Scotus, the faculty that actually thinks, and that stores intelligible species, is the possible intellect, the possible intellect must include both memory and intelligence.

[15] Scotus, *Ord.* 1.2.2.1–4, n. 311 (Vatican, ii. 314).

[16] On this reading of Augustine, see my 'Aristotle and Augustine', s. 2. Scotus's reading can be found too in Olivi, as I note there.

[17] Scotus, *Ord.* 1.27.1–3, n. 46 (Vatican, vi. 83).

Scotus makes these points in the following passage:

> Comparing Augustine's distinction, in *On the Trinity* X, ch. 2, between memory, intelligence, and will, to Aristotle's [distinction] between the agent intellect and the possible intellect, they correspond with each other in the following way: only the possible intellect is the intelligence, because only it receives the act of understanding, and in this way too Aristotle generally speaks of the intellect, as that by which we understand, or by which we receive an intellection; and the possible [intellect] pertains to the memory too, in so far as the memory receives habitual knowledge (*notitiam habitualem*), according to what is said in *On the Trinity* X: 'Knowledge (*scientia*), which we store in the memory'; and Aristotle sometimes speaks in this way of the possible intellect, as that by which we know (*scimus*), through which [viz. knowledge (*scientia*), the intellect] is reduced from essential potency to accidental potency. . . . The other act of the memory . . . is to generate actual knowledge (*notitiam actualem*).[18]

The idea here is that the possible intellect is the 'intelligence'—the power for occurently cognizing, for 'receiving the act of undestanding'. And the possible intellect is the 'memory' too, the storehouse for intelligible species and cognitive dispositions. Evidence for this comes from Augustine: *scientia* is stored in the memory, and the term here is used to refer to habitual cognitions—intelligible species. The point is that the presence of *scientia* brings it about that the intellect can occurrently cognize without any further change—it is in accidental potency rather than essential potency.

The distinction between memory and intelligence appears because of the requirement for self-motion—something that crops up in Scotus's rejection of Godfrey's view on the passivity of cognition discussed in Chapter 6. The intellect causes its own act of cognition: and this kind of self-motion is possible, according to Scotus, only if there are distinct active and passive powers in a thing, or at least if a thing is such that it is able to affect itself in a certain way and be affected by itself in a certain way. The idea is that, in a change from (say) being-φ to being-ψ, all that is required is an active power to make something ψ, and a passive power to be made ψ, and that in the case that having the relevant active power does not require instantiating the property *being*-ψ, there is no objection to the active and passive powers being possessed by one and the same item:

> When it is proved [by Godfrey] that the . . . [intellect] cannot have any causality, because no one thing can act on itself, I reply that this proposition [viz. 'no one thing can act on itself'] is true only of a univocal agent; and his proof, that [it would follow] that the same thing would be both in act and in potency, is sound only when the agent acts univocally—that is, causes in the patient a form of the same kind (*rationis*) as that through which [the agent]

[18] Scotus, *Quod.* 15, n. 20 (Wadding, xii. 430).

acts. For if something were to act in this way on itself, it would simultaneously have a form of the same kind as that to which it is moved, and that while it was moved to that [form] it would lack it; and thus it would simultaneously have that [form] and not have it. (At least, this follows of two forms of the same kind, or of the same [form].) But in equivocal agents, that is, in those agents that do not act through forms of the same kind as that which they cause, the proposition that nothing moves itself has no necessity, and neither does his [viz. Godfrey's] proof, that something is in potency and act in relation to the same, show anything, for the agent in this case is not formally of the same kind in act as that to which the patient is formally in potency: rather, the agent is virtually in act in the same kind as that to which the patient is formally in potency. And because one thing is *virtually* such-and-such in act, and *formally* such-and-such in potency, there is no contradiction.[19]

Being 'formally in act' (of such-and-such a kind) is technical language for instantiating such-and-such a property, and, correspondingly, being 'formally in potency' (to such-and-such a kind) is technical language for having a capacity to instantiate such-and-such a property. And being 'virtually in act' (of such-and-such a kind) is technical language for having a power to make something instantiate such-and-such a property (*virtus* here = 'power'). So one and the same thing could be formally in potency (to instantiate such-and-such a property) and virtually in act (to bring about the same property): it could have the power to bring it about that it itself instantiates such-and-such a property. And this is the self-motion that Godfrey wants to reject.

Despite appearances, we should be wary not to read too much ontological import into this argument. Scotus's ambitions are modest. All he is trying to establish is the relatively trivial claim that the soul can do certain kinds of thing, and certain kinds of thing can be done to it (it can produce cognitive acts, and it can be the subject of such acts)—and this rather trivial claim is, he thinks, all he needs against Godfrey. The argument is not an attempt to establish any kind of strong distinction between the soul's various intellectual powers and capacities. To this extent, the whole discussion is a way of working out adequate and accurate ways of labelling the soul, or of discovering what it can do and have done to it—and talk of faculties and of their doing things should not be taken too literally. (I explore all of this in section 2.)

Should the memory's active power to produce occurrent cognitions be included in the possible intellect too? The alternative is that the memory is partly included in the agent intellect. Is it, in other words, the agent intellect or the possible intellect that produces occurrent cognitions? Scotus discusses the issue at considerable length, but inconclusively.[20] I get the impression he found both options quite

[19] Scotus, *Ord.* 1.3.3.2, n. 513 (Vatican, iii. 303–4). For a thorough discussion of Scotus on self-motion, see Peter King, 'Duns Scotus on the Reality of Self-Change', in Mary Louise Gill and James G. Lennox (eds), *Self-Motion from Aristotle to Newton* (Princeton: Princeton University Press, 1994), 229–90.

[20] For the whole discussion, see Scotus, *Quod.* 15, nn. 13–20 (Wadding, xii. 425–31).

appealing, and could not think of a way of deciding between them (though recall that he seems to ascribe to the agent intellect the causal power relevant in the production of acts of intuitive cognition, as we saw in Chapter 2). On the one hand, if we ascribe the relevant causal role to the agent intellect, this entails that all active agency in the mind belongs to the agent intellect, and all passive receptivity to the possible intellect.[21] On the other hand, the agent intellect's particular kind of activity is to transfer from order to order—to transfer from the extended to the non-extended—and there does not seem to be any such action in the production of a cognitive act from an intelligible species: which perhaps suggests that the possible intellect is the relevant power.[22] Concluding his answer to a question about the relevant power in the production of an occurrent cognitive act, Scotus notes:

> If it is held not that there is a distinction between powers, whether by a non-relational reality or by a real relation, but merely that the same non-relational item, in some way unlimited, is the immediate principle of many acts, and thus with respect to different acts is said to be a different power, then the first way [viz. that the agent intellect is the relevant partial cause of an occurrent cognition] seems probable.[23]

The passage is in fact rather hard to understand, because on the face of it adopting this first view—namely, that the agent intellect is the relevant power—requires a compositional view of powers: the memory and the agent intellect are overlapping but distinct, and the point of claiming that there is no distinction between the powers at all seems to be to preclude any compositionality. On the second view, both the memory and the intelligence are fully included in the possible intellect.

2. The Nature of Powers

As Scotus makes clear, 'power', strictly speaking, picks out a non-relational or absolute property: a feature of a thing that neither 'is nor includes a relation'.[24] Such a property is the ground or basis (*fundamentum*) of activity, or the '*per se* principle of activity'.[25] Helpfully for our purposes here, Scotus uses the soul and its powers of intellect and will as the basis for his discussion, though there is no doubt that the account is supposed to be fully general.[26]

[21] Scotus, *Quod.* 15, n. 13 (Wadding, xii. 425).
[22] Scotus, *Quod.* 15, n. 13 (Wadding, xii. 426).
[23] Scotus, *Quod.* 15, n. 20 (Wadding, xii. 431).
[24] Scotus, *Rep.* 2.16.un., n. 12 (Wadding, xi. 347b).
[25] Scotus, *Rep.* 2.16.un., n. 11 (Wadding, xi. 347b).
[26] I deal with some of the same material that I discuss here in my 'Accidents, Substantial Forms, and Causal Powers in the Late Thirteenth Century: Some Reflections on the Axiom "*actiones sunt suppositorum*"', in Christophe Erismann and A. Schniewind (eds), *Compléments de substance: Etudes sur les propriétés accidentelles offertes à Alain de Libera* (Paris: Vrin, 2008), 133–46.

Scotus opposes a number of different views on the nature of causal powers, most significantly those of Thomas Aquinas and Henry of Ghent. Aquinas's position is that activities such as thinking and willing require dispositions really distinct from the soul itself. Aquinas reasons that the soul itself, as a form, is somehow *actual*, and that to explain its further, episodic, *activity*, it needs dispositions really distinct from itself, and (I take it) from its other properties: if there were no such dispositions, the soul would itself be an actualized disposition—would be permanently acting.[27] Scotus rejects the argument for this view on the grounds that it confuses formal causation with efficient causation: it does not follow from the fact that the soul has the actuality of a form that, unless it has certain further dispositions, it will be automatically causally active.[28]

Henry's view is that a power is both relational and somehow the same as the non-relational thing that grounds it. Scotus summarizes the view like this:

> Acts and powers are relations; therefore the essence of the soul, considered under one relation, is said to be such a power, and considered under another relation is said to be another power.[29]

Scotus rejects this view on the grounds that it misunderstands the nature of powers: powers are not relations or activities, or things which are both non-relational and relational, but simply the bases for such activities.[30]

What is the relation between the powers of the soul and the soul itself? And what is their relation to each other? In his most extensive treatment of the issues Scotus answers the first by means of an answer to the second—and on both issues offers two distinct views. And he has difficulty deciding which one is true. On the first account, there is some kind of 'formal' distinction between a thing's essential powers. As Scotus puts it, a thing's kind nature 'unitively contains' the powers, such that these powers are formally distinct from each other. A paradigm case of unitive containment is the relation between a thing's kind-nature and its *propria*—necessary and inseparable properties of the thing, but not properties constitutive of the kind of thing the item is. The tie that binds the thing and its *propria* is symmetrical in the sense that these various items are inseparable from each other. But unitive containment is supposed to signal that there is a further, asymmetrical explanatory relation between the two: the kind-nature explains the *propria*, which is what Scotus means when he claims that the soul 'unitively contains' the powers.[31]

[27] See Aquinas, *ST* 1.77.1 c (I, 370a); Scotus summarizes at *Rep.* 2.16.un., n. 2 (Wadding, xi. 345a–b).
[28] Scotus, *Rep.* 2.16.un., n. 5 (Wadding, xi. 346a).
[29] Scotus, *Rep.* 2.16.un., n. 10 (Wadding, xi. 347a); see e.g. Henry, *Quod.* 3.14 (fo. 67^{r}S).
[30] Scotus, *Rep.* 2.16.un., nn. 11–12 (Wadding, xi. 347b).
[31] Scotus, *Rep.* 2.16.un., n. 18 (Wadding, xi. 348b).

In works before the *Quodlibet*, Scotus seems to defend this account, though in an increasingly desultory way. For example, in the *Ordinatio* he holds that if the doctrine of the Trinity is true (as he believes), then some kind of formal distinction between the divine intellect and the divine will is necessary for the truth of this doctrine:

> The distinction of attribute-perfections [in God] is the basis in relation to the distinction of emanations. But the distinction of emanations is real, as is evident. But no real distinction presupposes of necessity a distinction which is merely rational, just as nothing truly real presupposes something which is merely a being of reason. Therefore the distinction of attributes is not merely rational, but in some way real (*ex natura rei*). The assumption is clear, for real being, as distinguished from being of reason, is that which has existence of itself, in circumscription from every act of intellect as intellect. But whatever depends on a being of reason, or presupposes it, cannot have its existence in circumscription from every act of intellect. Therefore nothing which presupposes a being of reason is truly a real being.[32]

The idea is that the divine intellect is the power responsible for the production of the Son, and the divine will the power responsible for the production of the Holy Spirit. Suppose powers are necessary conditions for causal relations, and suppose too that powers lack any kind of reality. On this view, a cause is an aggregate of something and nothing (the substance and its power)—and any such aggregate is nothing at all, and thus cannot have a real effect. The conclusion is that the relevant divine causal powers have some kind of extramental reality of their own, and are thus formally distinct from each other.[33]

These arguments are not repeated in later works (as far as I have been able to ascertain), and Scotus seems increasingly agnostic about his claim that there is a formal distinction between a thing's causal powers. Thus, the second view outlined in the *Reportatio* discussion is that powers are

> entirely the same both in reality and in reason, viz. that the essence of the soul, entirely lacking distinction, whether in reality or in reason, is the principle of many operations without any real diversity of powers.[34]

Scotus goes on to note that he prefers the unitive containment view because the alternative 'does not preserve as many authorities as the other can'.[35] The second view is very hard to understand, since it seems to maintain that activities have no

[32] Scotus, *Ord.* 1.8.1.4, n. 177 (Vatican, iv. 246).

[33] On this, see my *Duns Scotus on God*, 103–13.

[34] Scotus, *Rep.* 2.16.un., n. 17 (Wadding, xi. 348a).

[35] Scotus, *Rep.* 2.16.un., n. 18 (Wadding, xi. 348b). Scotus talks of some kind of non-identity between the soul and its powers at *Rep.* 1.33.2, n. 67 (Wolter and Bychkov, ii. 331).

bases at all: the soul *lacks* any relevant kind of structure, and there is no explanation for the fact that it has the activities that it does.

In the *Quodlibet*—around the last passage quoted in the previous section—Scotus simply reports both positions without deciding between them. Oddly, the whole taxonomic question concerning the roles of possible and agent intellects that concerns Scotus in this passage makes sense only on the assumption that the powers are somehow distinct from each other. But he does not seem to have noticed this.

Scotus's discussion raises a further point of ambiguity too. He often talks of causal powers as themselves *causes*, and we need to examine just how seriously we should take this kind of language, or how it is best understood. I shall argue that we should understand it to be simply a way of talking about things that the soul can do, or activities that it can ground.[36] The soul itself is the cause.

For example, Scotus often talks as though he thinks of power language (here 'memory' and 'intelligence') as simply a way of signifying simply the soul itself, under a certain description:

> The soul has in itself some perfection according to which it is first act in relation to generated knowledge (*notitiae genitae*), and has in itself some perfection according to which it formally receives generated knowledge. . . . These . . . perfections are called memory [and] intelligence . . . or the soul in so far as it has them. Therefore the soul, in so far as it has total first act in relation to an intellection—that is, a part of the soul (*aliquid animae*), and an intelligible object present to it—is called memory, and perfect memory if we include both the intellect and that [viz. the intelligible species] in virtue of which the object is present to it. And that same soul is called intelligence in so far as it receives generated knowledge, and perfect intelligence as it is actually the subject of that generated knowledge.[37]

To be in first act is to have a power, and to be first act, or to be in total first act is to have a power along with whatever further inherent features are required for the activity that the power grounds. The soul's power to cause itself to have such-and-such a cognitive act is the memory along with the inherence (in the memory) of an intelligible species: the soul or memory in 'total first act'. The soul's power to have such-and-such a cognitive act is the intelligence. Memory causes a cognitive act to inhere in the intelligence (i.e. the soul causes a cognitive act to inhere in itself). But these are just labels of the soul itself: 'the soul [under a certain description] . . . is called memory, . . . and that same soul [under a different description] is called

[36] To the extent that I use this kind of language in this chapter and elsewhere, much the same caveat should be applied to what I say, too.

[37] Scotus, *Ord.* 1.3.3.3, n. 580 (Vatican, iii. 343).

intelligence'. The view that there is a formal distinction between the soul's powers, and that the powers are 'virtually contained' in the soul, makes the powers really the same as the soul. But the containment relation is asymmetrical: the soul is the basic entity that explains the powers, and the soul is the entity that is the agent, and that is signified by 'memory' and 'intelligence', in Scotus's example.

8

Semantic Internalism and the Grounds of Intentionality

In Chapter 1, I tried to disambiguate two different senses of 'intentional': intentional$_R$ and intentional$_I$. The first of these picks out real things that have representational content in some sense; the second picks out merely the content itself, whatever that be. I concluded that, in the case of sensation, both of these are explained in terms of the reception of a form. As I discussed there and elsewhere, Aristotelians think of the form that is received as in some sense the same as the form of the extramental object. But I left as an open question Scotus's view on this—i.e. his view on the nature of the relation between the real form of the object (real$_R$) and the intentional form (intentional$_R$) of the cognizing subject (for example, numerical sameness; sameness in kind; some kind of similarity). Scotus talks of intellectual cognition in terms of the reception of a form, as will become clear in this chapter. But he clarifies what he understands the relation between the two forms (real$_R$ and intentional$_R$) to be here. The appeal of the Aristotelian view is that it provides an obvious way for explaining how it is that a cognitive act is about an object: intentionality is grounded in the *sameness* of the real form and the intentional form. Thus, a mental act is about an object because it consists in the form of the object received in the mind in a certain way.

Scotus, as we shall see, argues rather differently. Basically, he claims that thoughts are wholly distinct from their objects, and are such that they are *measured* by them—conform to them in a certain way that Scotus attempts to describe. I try to show that this measurability relation is somewhat akin to our modern notion of *content*, and that Scotus ascribes this feature to all intellectual cognitive acts, including those that lack an object. In cases of acts that have objects, Scotus claims that, in addition to measurability, such acts have a further relation—that of *tending to*, of *being about*, we might say. As we shall see, and in line with what we might expect given the discussion in Chapter 2, Scotus distinguishes between the cases of intuitive and abstractive cognition: intuitive acts have real objects, and really *tend* to these objects; abstractive

ones (basically) do not. But both kinds of act have *measurability*: cases of intuitive cognition are actually measured by their objects; cases of abstractive cognition are (basically) merely counterfactually measurable. I argue that the ground of these relations is simply the real internal structure or nature of the cognitive act itself.

So in this chapter I discuss the distinction between tending and measurability, and show that Scotus's account of conceptual content, at least in the case of abstractive cognition, is strictly *internalist*: acts have content/measurability independently of the way the extramental world is at the time of thinking. And I show that, in contrast to sensation, acts of intuitive intellectual cognition are related to their external objects by virtue of their intrinsic structures—of different kinds corresponding to different specific kinds of objects. In Chapter 9, I consider the fundamentally linguistic nature of conceptual content. And in Chapter 10, I consider the question of possible ontological commitments in Scotus's account: whether, as is often maintained, Scotus holds that an act's content requires, at least in cases of abstractive cognition, some kind of spooky 'unreal' or mental thing to be the end term or object of an act's intentionality. I argue that he does not.

1. Causal Accounts of Intentionality Rejected

One way in which we might account for the fact that a cognitive act is about a certain object is by appealing to a causal relation between the object and the act: the act is about the object because it is caused by it, or is at the end of a causal sequence that has the object as its starting point. After all, as we have seen, Scotus holds that the object, or something that does duty for it, does in standard cases have a partial role in causing a cognitive act. But Scotus does not argue in this way. In a close reading of three central Scotist texts, Giorgio Pini demonstrates that Scotus believes questions of intentionality to be quite independent of the kind of causal relation I was just talking about. In the first text—*Questions on the Metaphysics*, VII, q. 14—Pini notes Scotus's argument that a cognitive act could have as its partial cause an intelligible species that was itself caused not by the object that it represents, but directly by God:

> Suppose that God impresses the form *horseness* in my intellect. In that case, God makes me able to perform an act of thinking about horses. If performed, that act would still be an act of thinking about horses, not about God, even though the form *horseness* has been impressed in my intellect by God and not by horses. As a consequence, the cause and the object of a certain cognitive act are not necessarily the same, even though most of the time it is indeed the case that our cognitive acts are about what causes them.[1]

[1] Pini, 'Can God Create my Thoughts?', 47, referring to Scotus, *In metaph.* 7.14, nn. 30–1 (OP iv. 290–2).

So whatever intentionality is, it cannot depend on a real *causal* connection with an extramental object.

As Pini notes, this position was 'not entirely original',[2] odd though it may sound to us. But Scotus makes two further moves that are rather more notable. In a passage from the *Lectura* (the last passage quoted in section 1 of Chapter 4), Pini's second text, Scotus argues that God can cause an abstractive act directly without the presence of an intelligible species. Thus, as Pini puts it, even in the absence of (for example) any real horse,

> God can make me think about horses even though I do not have any representational form of horses, i.e. even though I have no information about horses in my intellect prior to my act of thinking about them. Thus, Scotus concludes that my act of thinking is about horses just because it is an act directed at horses. Since, in that counterfactual but possible situation, I have received no representation of horses before actually thinking about horses, Scotus draws the further conclusion that an act of thinking is about what it is about even though its object or the representation of that object plays no causal role in the formation of that act of thinking.[3]

And in a passage from the *Ordinatio*, Pini's third text, Scotus claims that God can cause me to have a thought of something real, such that the thought is about the object even in the absence of any causal role played by either the object or the intellect in the production of the thought.[4]

Pini's reading here is exactly right. But there is an immediate pressing problem: does Scotus's disjunction between causal and intentional aspects of mental states rest on any stronger foundation than merely the theological speculations that we have thus far seen? If not, there does not seem to be any compelling philosophical reason to accept it (theological considerations seem, on the face of it, wholly extrinsic to a theory about intentionality). I think the basic requirement that Scotus identifies is that we need to have an account of the semantic content of items such as abstractive acts that lack real objects. And understanding the discussion requires taking into account the distinction that Scotus makes between an act's *tending* and its *being measured*—the topic of my next two sections.

[2] Pini, 'Can God Create my Thoughts?', 48: Pini finds it in Aquinas, *ST* 3.76.8 c (III, 462a–3b; Olivi, *In sent.* 2.58 (ii. 470); and Matthew of Aquasparta (*c.*1238–1302), *Quaestiones de cognitione* 1 ad 12 (*Quaestiones disputatae selectae. I. Quaestiones de fide et cognitione* (Ad Claras Aquas: Collegium S. Bonaventurae, 1903), 237).

[3] Pini, 'Can God Create my Thoughts?', 52, referring to Scotus, *Lect.* 1.3.3.2–3, n. 392 (Vatican, xvi. 377).

[4] Scotus, *Ord.* 1.3.3.2, nn. 477–8 (Vatican, iii. 285–6), discussed in Pini, 'Can God Create my Thoughts?', 52–6.

2. Measurability and Semantic Content

Here is Scotus's *Quodlibet* description of the distinction between tending and measurement, first drawn in the context of a discussion of intuitive cognition:

> It can be said that the first [act of knowing], viz. that which is of a thing existing in itself, necessarily has joined to it a real actual relation to the object, and the reason is that such a cognition could not exist unless the cognizer actually has to the object a relation that necessarily requires that the extremes are actual and really distinct, and which necessarily follows the nature of the extremes.
>
> In particular, there seem to be in the act two actual relations to the object. One can be called a relation of the measured, or, more accurately, of the measurable to the measure. The other can be called a relation that, as an intermediary to the end term to which it unites, formally unites, and this relation of being the medium of unification (*medii unientis*) can, in a special name, be called a relation of attaining something as an end term, or of tending to it as to an end term.
>
> This distinction between two relations, namely of the measurable to the measure, and of attaining to the end term, seems sufficiently evident, because each can be separated from the other: just as in the case of essences, the higher is the measure with respect to the lower even though the lower does not always have, with respect to the higher, the relation of attaining about which we are talking here. And an act of the intellect or will that is the total cause of an object seems to satisfy the description of tending to the object as to the end term of the intellection or volition (whether this relation is real or rational), but nevertheless such an intellection or volition has, with respect to the object, not the relation of being measurable, but rather the relation of measuring.[5]

In this passage, Scotus claims that there are two relevant relations between an intuitive cognitive act and its object. The first is that the object 'measures' the act; the second that the intuitive act 'attains to' or 'tends to' its end term, or is 'united to' it somehow. (I take it that, as this passage suggests, these technical terms—'attaining to', 'tending to', 'being united to'—name the same relation.) The rest of the text is intended to show that the relation of tending towards is distinct from that of being measured. Scotus argues that the relation of being measured can exist without the relation of tending towards something. The example Scotus gives is that of a relation between essences: higher essences measure lower ones without tending towards them in the relevant sense. The idea is that lower essences resemble higher essences, but not in such a way that we would say that the lower essences are *about* the higher essences in the distinctive way in which thoughts are about things. So these measurement relations do not count as semantic relations.[6] And

[5] Scotus, *Quod.* 13, n. 11 (Wadding, xii. 311–12).

[6] I assume, therefore, that Scotus does not think that lower angelic essences are (e.g.) natural *signs* of higher angelic essences. I assume too that some natural objects are natural signs of others—but perhaps they are not so by and large by being *representations* in any sense (smoke does not *represent* fire, and is, I take it, a sign in virtue of some kind of causal relation between the fire and the smoke).

the last sentence claims that measurability is distinct from the relation of tending towards, since God's cognitive acts tend towards their objects without being measured by them. The acts' contents are in fact such that God's acts measure their objects, and I return to this in a moment.

In this section, I examine the measurability relation; in section 3, the tending relation, showing too that, to the extent that tending is the *aboutness* relation between an act and an object, we might label (and Scotus sometimes did label) tending 'intentionality' ('in-tending': the Latin terms 'intendo' and 'intento' are practically synonymous)—and although I am not always fully consistent in my usage, for the most part I here use 'intentionality' to signify tending, and when I do not I hope that what I mean is sufficiently apparent from the context. (So 'intentionality' in this discussion is a term of art that is narrower in scope than the ways in which I have been using the term up to the point. In this chapter, I am interested in the grounding for *both* of these features: measurability and tending.)

That the two relations are different immediately suggests that Scotus believes there to be a semantic feature of intuitive acts—measurement—that is distinct from their intentionality. I try to argue that it is something like *content*. To start with, measurement, turns out to be some kind of likeness:

> [An act of cognition] is something that is measurable by an object, that is, is naturally apt in its entity to depend on an object with that special dependence which is its, which is likeness (*similitudo*) by imitation [of] or participation in that thing of which it is a likeness.[7]

Here measurability is spelled out in terms of likeness to, imitation of, or participation in an object: all, I take it, supposed to be equivalent relations—more precisely, the *same* relation. And at one point, Scotus specifies the kind of participation he has in mind:

> When something can participate in many ways in the perfection of another, so the act of knowing is related to the object by participation, just as a likeness is to that of which it is a likeness. I do not mean a likeness through communication of the same form, as in the case of a likeness between two white objects, but a likeness through imitation, as in the case of the likeness of what is ideated to an idea.[8]

Here, what is received 'participates' in the form of the external object, 'just as a likeness participates . . . [in] that of which it is a likeness'. And Scotus explicitly rejects the claim that the relevant form could be the *same* as the form of the object

[7] Scotus, *Quod.* 13, n. 13 (Wadding, xii. 320). What is measured must be somehow 'equal' to, or 'adequate' to the measure: given standard definitions of truth as the 'adequation of the thought to the thing' (e.g. Aquinas, *De ver.* 1.3 c (I, 6a)), it is perhaps not surprising that Scotus should have alighted on the notion of measurement in this context.

[8] Scotus, *Quod.* 13, n. 12 (Wadding, xii. 312).

(contrast Aristotelian cases of formal sameness considered in Chapters 1 and 5). Scotus does not merely reject the view that the participated form could be *numerically* the same as the form of the object; he rejects too the view that the form could be *specifically* the same as the form of the object: the sameness of form is not one which could be exemplified by (using Scotus's example) 'two white objects'. This should not be understood to amount to no more than the claim that the reception of the form is not *natural* but *animal*, in the senses outlined in Chapter 1. Rather, the relevant likeness is analogous to 'the likeness of what is ideated to an idea'. So the animal reception of a form is the reception of something that is in some way *like* a real form.

Scotus goes on to spell out, in the second of the two passages just quoted, the way in which he understands this likeness relation. Talk of an 'idea' here is technical language for *God's* thought of an actual object, and 'what is ideated' is just the object itself. The claim is that the contents of God's thoughts constitute the nature of a real object: the object is 'measured' by God's thoughts[9]—the objects somehow map God's thoughts. So we are to imagine the following kind of analogy: as God's thoughts are to things, so things are to all other thoughts. (I take it, then, that there is a limited and curious sense in which all creaturely items are semantic items: they are all signs of divine thoughts, though, I take it, without being *about* them. But this is not relevant to my purposes here.) On this view, one feature necessary for being an intellectual act is that such acts have this kind of likeness relation, whatever it be. The feature is not sufficient, however, since intelligible species have it too—something that is no surprise, given that intelligible species are likewise representations of objects. As is made clear in the first passage from Scotus quoted in Chapter 4, section 2, Scotus ascribes measurability to intelligible species (and perhaps to phantasms too—though I would assume in this latter case that the relation would not be spelled out in terms of ideation relations).[10] Still, species are dispositions; what makes an *act* a thought is precisely that it has this counterfactual measurability relation to an object.

Now, this is, of course, wholly uninformative, because we have no grasp of the first relation—the way in which the ideated is measured by a divine idea. So the lesson is that there is simply a relation, of *participating* (in the relevant sort of way), or being (relevantly) *like*, or *imitating*, that does not admit of further conceptual analysis. In particular, it cannot be explained in terms of sameness of form, or of intentional reception. If instead of Scotus's measurement relation we use the analogy of

[9] See e.g. *Ord.* 1.35.un., n. 27 (Vatican, vi. 256).

[10] See too Scotus, *Rep.* 1.3.4, n. 97 (Wolter and Bychkov, i. 210–11) = *Ord.* 1.3.3.1, *textus interpolatus* (Vatican, iii. 212, ll. 9–20).

a map, we might think of items in the world as maps of divine ideas; and we might think of those acts of ours that have such items in the world as their objects as, in turn, maps of such items: maps of maps. There is some mystery here; but the mapping model at least gives some clue as to what Scotus might have in mind: maps are in some way structurally related to the things they map, and I take it that Scotus has something analogous in mind in the case of conceptual content. But the central mystery remains: maps are related by being similar to the things they map—by in some sense *looking like* them. Cognitive acts, of course, cannot satisfy anything like this relation.

Now, intuitive cognitions have two relations to their objects: tending, and being measured. Abstractive cognitions have the second, but not the first. Although Scotus does not make it explicit, his discussion of the measurability of abstractive acts clearly presupposes two distinct cases of abstractive cognition. As we saw in Chapter 2, the basic criterion for abstractive cognition is that the act's object is *absent*—not directly accessible. But this absence condition can be satisfied in two ways: first, in the case of an existent object that is not relevantly present; and, secondly, in the case that there is no real object at all. In the first case, there is an actual relation to the object: the act is measured by a real object even in the case that the object is not accessible. In the second case, it is not. But the act is still such that, in virtue of its internal constitution, it is *counterfactually* measured by an object:

> The second act of cognition—namely, which is not necessarily of the existent as existent, does not necessarily have an actual relation to the object, because an actual real relation requires a real *per se* end term. But this second act can be posited to have a potential real relation, and this the first one about which was spoken in the previous member, namely, of the measurable or of dependence.[11]

Talk of a potential real relation here is presumably a way of talking about the situation in the case of an act that simply lacks an object. If the act were to have a real (though absent) object, it would have the real relation of being actually measured by the object. Thus, the act is such that, if there were a real object, that object would measure the act:

[11] 'Secundus actus cognoscendi, qui scilicet non est necessario existentis ut existentis, non necessario habet relationem actualem ad obiectum, quia relatio realis actualis requirit per se terminum realem et actualem. Tamen iste secundum actus potest poni habere ad obiectum relationem realem potentialem, et hoc primam de qua in praecendenti membro dictum est, scilicet mensurabilis vel dependentiae': Scotus, *Quod.* 13, n. 13 (Wadding, xii. 320; I have corrected Wadding on the basis of MS V, fo. 34^{r} and MS W, fo. 24^{r}b): for the significance of these manuscripts, seeTimothy B. Noone and H. Francie Roberts, 'John Duns Scotus' *Quodlibet*', in Christopher Schabel (ed.), *Theological Quodlibeta in the Middle Ages: The Fourteenth Century* (Leiden, and Boston, MA: Brill, 2007), 131–98.

Abstractive cognition has a potential and aptitudinal real relation, of measurability, to an object, even when it does not exist (*ad obiectum etiam non existens*). This is proved, because that which has an actual relation to an existing end term, and which, from its own side, is always uniformly related to [the end term], has an aptitudinal relation to that end term when [the end term] does not exist. And the operation [viz. the act of cognition] is this kind of thing, because it is something that is measurable by an object, that is, is naturally apt in its entity to depend on an object with that special dependence which is its, which is likeness (*similitudo*) by imitation [of] or participation in that thing of which it is a likeness. And all these things, from the side of the foundation [for the relation], would be actual if the end term were actual.[12]

The real object of any act of cognizing, if there is such an object, is a real item. Again, I assume that abstractive acts whose objects are existent but absent have such real relations too, since in that case the object is actual. As Scotus puts it elsewhere, 'An abstractive [act] is of the existent and of the non-existent.'[13] But here Scotus is perfectly happy to countenance the thought that such an act might lack any object at all. So, I suggest, measurability is supposed to amount to something like the *content* of abstractive cognitions. As we have seen, intuitive acts have both relations—they have both object and content. But, as I shall argue, nothing suggests that their having a real object is salient to the question of their measurability—of their content.

The discussion relies on Scotus's distinction between real and rational relations (something I discussed in the Introduction), and supposes too that real relations are subject to various further modalizations: being actual, being aptitudinal, and being potential. An item x has an actual real relation if a real relation inheres in x. x has an aptitudinal real relation if x lacks such a relation but is such that in the appropriate circumstances a real relation would inhere in it with no further change intrinsic to x. x has a potential real relation if x lacks such a real relation but is such that it is possible for a real relation to inhere in x. Maintaining that the real relation is potential picks out the counterfactual aspect; 'aptitudinal' adds that, with no further change in the act, the real relation would automatically exist given the real existence of the object. Claiming that the act is aptitudinally measured explains why Scotus claims that cognitive acts should be classified in the first species of the category of quality—i.e. as habits or dispositions (as we saw in Chapter 5, section 4). Scotus does not mean that the act is any kind of power, or a way of acting. What he means is that the act is possibly (or, more precisely, aptitudinally or dispositionally) subject to a relation: being measured.

[12] Scotus, *Quod.* 13, n. 13 (Wadding, xii. 320). As Scotus makes clear elsewhere, the conformity of an act with simple semantic content to an extramental object is 'accidental' to the act, such that, in the lack of such an object, the act 'has no measure': Scotus, *In metaph.* 6.3, n. 49 (OP iv. 74).

[13] Scotus, *Quod.* 6, n. 8 (Wadding, xii. 145).

Now, causal accounts of mental content, or of intentionality, are *externalist*: the semantic content of a mental item depends on features of the real world. We have seen, following Giorgio Pini, that Scotus rejects causal accounts of mental content. But the discussion thus far might suggest that Scotus's account of mental content replaces a causal relation to an external object with some other kind of relation to an external object: it is, say, in virtue of being measured by an external object that an act has the content it does. And this is another kind of externalism: the content depends in some sense on the way that the world is, and on objects that actually exist. But I do not think this is quite the right reading. It is true that being measured is some kind of relation. But, as we saw in Chapter 5, Scotus holds that cognitive acts are qualities. So the relevant relation is grounded in the intrinsic features of the act (its 'entity', in the passage just quoted); and in any case, measurability is *counterfactual*: measurability does not require or depend on any object in the world. So it is had by an act, or by a species, quite independently of the way in which the extramental world is constituted. It is thus what we would call an 'intrinsic' property: one that (as two modern philosophers have put it) belongs to something at time *t* independently of that thing's accompaniment or loneliness at *t*, where something is accompanied if and only if it coexists with a contingent object wholly distinct from itself, and lonely if it fails to do so.[14] Scotus's category of relation, then, is rather wider than that of the non-intrinsic, and includes properties that we would think of as intrinsic. In this sense, Scotus's account of mental content is in fact rigidly *internalist*, such that the content of acts of abstractive cognition is fixed by things internal or intrinsic to the mind, and nothing else at all.[15] (Obviously, intuitive acts are genuinely intentional—they have, in this context,

[14] See David Lewis and Rae Langton, 'Defining "Intrinsic"', *Philosophy and Phenomenological Research*, 58 (1998), 333–45 (see particularly pp. 333–5).

[15] It might be thought that this claim is incompatible with the view that the objects of both intuitive and abstractive cognition are not substances but sensible accidents. Giorgio Pini offers a very helpful analysis: 'Scotus's argument has a striking resemblance to the famous Twin Earth thought experiment [Hilary Putnam, 'The Meaning of "Meaning"', in K. Gunderson (ed.), *Language, Mind, and Knowledge* (Minneapolis: University of Minnesota Press, 1975), 131–92]. Think of Mary as somebody on Earth acquainted with water and think of Paul as somebody on Twin Earth acquainted with a substance that has all the same superficial phenomenological properties as water but is not water. Interestingly, if faced with the Twin Earth thought experiment, Scotus would not conclude that Paul, on Twin Earth, is not thinking about water whereas Mary, on Earth, is thinking about water. Rather, he would conclude that Mary's thought and Paul's thought have the very same content but that neither of them is about the real essence of water; both thoughts are de dicto thoughts about any subject that happens to underlie the phenomenological properties that on Earth we associate with water': Pini, 'Scotus on Knowing and Naming', 262. Pini himself, wrongly in my view, continues as follows: 'Should we conclude that Scotus is an internalist about the content of mental states, that is, that for him mental content is fixed exclusively by what is inside the thinker's head? No. Both Paul and Mary are directly acquainted not with their internal experiences but with sensible accidents, such as the color of bread,

real objects that they are about or are directed to—and I will return to the intentionality relation in a moment.)

What might explain the fact that acts of abstractive cognition are such that they are counterfactually measurable? It cannot be anything about the object, since there need not be one. It must, then, be something about the act. Each act must be *intrinsically* such that it is measurable by items of such-and-such a kind in the world. Now, as we saw in Chapter 5, Scotus classifies cognitive acts as qualities. His metaphysics, as we saw in the Introduction, allows such categorial items themselves to be complexes of formally distinct components. So we might think of cognitive acts as having some kind of complex metaphysical structure. And it is this structure, along with the kinds of components that the structure possesses, that, I would suggest, grounds the measurability relation—or, better, grounds the relation of *being measured*, since measurability is the intrinsic property that is the ground for actual measurement; or so I have been arguing. And the different structures of the different acts (i.e. acts that are counterfactually measured by different objects) explain the fact that the acts are measured by different objects. So the items I am talking about are real accidents, and they differ from each other in terms of their real intrinsic features, in ways that are not determined by the semantic properties that they might have—albeit that these semantic properties are determined by, or just are, the real features, or, as I say, structure, of the real accidents. At one point, Scotus makes a helpful comparison between a cognitive act and some kind of artistic representation of something—say, a statue of Hercules.[16] What makes the statue a statue of Hercules is its (real) structure. Obviously, there are disanalogies between an artistic representation and a psychological one: the former is conventional, the latter natural; and the former is by some kind of iconic resemblance, and the latter by the kind of measurement relation that exists between material objects and divine ideas—as already outlined.

I suggested a moment ago that what makes a given kind of act a thought is that that it has a counterfactual measurability relation to an object. We can now say that

its taste, its consistency, etc. Now Scotus (like all his contemporaries) regards these accidents as components of the real world. So our thoughts about sensible accidents are thoughts about items in the world, and such thoughts are individuated because they are about certain items and not about others. Thus, it would seem more appropriate to consider Scotus an externalist. Our thoughts are about accidents in the world': Pini, 'Scotus on Naming and Knowing', 263. It does not follow from the fact that thoughts have real objects (that they are, in this case, 'about accidents in the world') that questions of the semantic or conceptual *content* of those thoughts is fixed by the way the world is at the time of thinking. As I have just argued, Scotus attempts to find a way of fixing semantic content independently of the way the world is at the time of thinking.

[16] See Scotus, *Rep.* 1.3.4, n. 105 (Wolter and Bychkov, i. 213); *Ord.* 1.3.3.1, *textus interpolatus* (Vatican, iii. 363 ll. 3–5).

what makes it a thought is that it has an ontological structure such that it is counterfactually measurable in the way that objects are measured by divine ideas. And what makes it a thought with a given content (such that it is counterfactually measurable by this specific kind of object but not that specific kind) is that it has this kind of intrinsic structure rather than that. This, incidentally, would explain how it is that, in standard and veridical cases of intuitive cognition, the object causes the right kind of act: the real structure of the object causes an act with the appropriate real structure too—whatever that be. (Note through all of this a point that I highlighted in Chapter 5: that thoughts are logically separable from minds, such that inhering in a mind is neither necessary nor sufficient for an act to be a thought.)

It might be thought odd to have such internalist components in the case of *intuitive* cognition (as well as abstractive). Why could Scotus not argue, for intuitive intellectual cognitions, as he argues in the case of sensations, that their contents are fixed wholly in virtue of a relation to an external object? And why could he not appeal to their intentionality to explain this—their tending—just as he appeals to measurability in the case of abstractive acts? My suggestion is that, in the absence of some kind of causal account of intentionality—excluded for the theological reasons that we saw in section 1—the *only* way for intuitive acts to be about their objects is for their internal structure to explain this state of affairs. Tending is unexplained in the absence of some internal feature of the act, given the lack of any causal explanation. But, unlike the case of abstractive cognition, we should not think of the content of intuitive cognitions as a wholly internalist matter. As I tried to argue in Chapter 1, Scotus denies that we have *de re* intuitive cognition of singulars, while affirming that we do nevertheless have singular cognition (and in this, I followed a proposal made by Peter King). King has drawn attention to an obvious consequence of this view: namely, that Scotus's account of mental content in the case of intellectual intuitive cognition must have externalist components:

> [T]he content of Socrates's cognition depends on purely internal features, whereas its character depends on the world's being in a certain way. External factors determine what a singular thought is indeed directed at, as a contingent matter.[17]

So on this reading Scotus accepts some kind of externalism of mental content for intuitive cognitions, or at least, for cognitions that do not have the universal as their content. But the externalism extends only so far as singular cognition. To the extent that intuitive cognitions include cognition of the common nature, intuitive cognitions directed at different natures have different internal structures, just as in the case of abstractive cognitions. And, as far as I can see, it follows from the fact

[17] King, 'Thinking about Things', 116.

that haecceities cannot be known that every intuitive cognition must include some kind of cognition of a nature. (As we saw in Chapter 3, cognition of natures can be very vague indeed: but even in such cases it is cognition of a nature.)

At risk of further muddying the already murky terminological waters, I will note a recent assessment of Aquinas on intentionality that seems germane, and analogous to what I claim for Scotus on the measurability of a cognitive act. According to Jeffrey E. Brower and Susan Brower-Toland, Aquinas accepts a

> 'primitive nonrelational theory' [of intentionality]—concepts are by their very nature about other things, but their aboutness consists, not in any relation in which they stand, but rather in a monadic or nonrelational feature they possess.[18]

I do not know whether this interpretation of Aquinas is correct—among other things, I do not know whether Aquinas holds concepts to be intentional$_R$ items (as this account might suggest—and as is explicitly asserted by Brower and Brower-Toland in a passage to be quoted at the end of Chapter 10—and as Scotus holds) or merely intentional$_I$ items (as I suggested in Chapter 5). But it seems startlingly close to what Scotus has to say about content/measurability, as I understand it, and its authors explicitly contrast this view to one which would posit a primitive *relational* theory of intentionality (according to which 'Concepts are entities that by their very nature stand in a relation to the object they are about').[19]

Why should Scotus highlight the *measurement* relation—a new feature in his account of the semantic values of mental items in *Quodlibet* 13? He develops an account that takes as its lead the thought that measuring—construed, I take it, rather loosely—fundamentally provides *information* about things: 'For something to be measured is for the intellect to be made certain about its determinate quantity

[18] Jeffrey E. Brower and Susan Brower-Toland, 'Aquinas on Mental Representation: Concepts and Intentionality', *Philosophical Review*, 117 (2008), 231.

[19] Brower and Brower-Toland, 'Aquinas on Mental Representation', 231. Giorgio Pini, in the most extensive discussion of Scotus on these issues available in the literature, argues that Scotus's talk of a potential real relation here commits him to the view that acts of thought include a real relation, since such an act 'has a positive and real inclination to be about [an]. . . object' (Pini, 'Can God Create my Thoughts?', 59); 'Scotus can account for thoughts about non-existents without . . . giving up his view that the relation between a thought and its object is real' (Pini, 'Can God Create my Thoughts?', 61). On this reading, Scotus adopts a primitive relational theory of intentionality. But for reasons I have just given, I think this is probably a little misleading: Scotus's relations here are, as I have been arguing, slightly misnamed, and it is better to think of the act's *intrinsic* features as explaining its content, rather as Brower and Brower-Toland claim for Aquinas. Peter King seems closer to the mark: he notes that Scotus's language of *esse obiectivum* or *esse intentionale* is a way of talking about the content of an act irrespective of the existence of any real object: seePeter King, 'Duns Scotus on Mental Content', in Olivier Boulnois, Elizabeth Karger, Jean-Luc Solère, and Gérard Sondag (eds), *Duns Scot à Paris: Actes du colloque de Paris, 2–4 Septembre 2002* (Turnhout: Brepols, 2004), 79. Sadly, it is not clear to me that Scotus ever tidily correlates these kinds of *esse* with the measurement relationship; but in any case I return to all of these issues in Ch. 10.

through something else.'[20] The informational component of measurement, presumably, makes measurement a better basis for an account of mental content than, say, tending would be. Scotus develops the general account of measurement in a discussion that is anything but clear, even by his lax standards. Basically, he holds that measurement requires two distinct relations: one between the thing measured and the intellect, and the second between the thing measured and the measure: 'Being measured implies a relation to the intellect for which certainty is brought about, and to the measure through which certainty is brought about.'[21]

Take a body whose extension might be measured by—say—a tape-measure, in virtue of which measurement someone comes to know how large the body is. The measurement secures a relation between the body and the cognizer: the cognizer *knows* the size of the body. And all such relations are non-mutual, and unreal in the object: there is no real relation of *being cognized* in the object (albeit there is a real relation of cognizing in the intellect): 'The first is not real, just as neither is that of what is known to the knowledge.'[22]

The second relation is of the body to the measure. Scotus's discussion relies on the assumption that being measured is *mind-dependent*: there is no measurement unless there is a mind making the relevant comparison between measured item (bodily extension, in my example) and measure (the tape-measure). Scotus argues that, since measurement is mind-dependent ('to be actually measured is to actually depend in being cognized'),[23] the *relata* are mind-dependent too: 'the object as cognized [and] . . . the object as that by which it is cognized'[24] (the extended body and the tape-measure, respectively, but only as cognized). Absent any mind, nevertheless, there is a *potential* measure relation: 'the measurable implies aptitudinal or potential dependence in being cognized, or implies dependence in cognizability'.[25] In all of these cases, Scotus insists, the measured object depends on the measure: it is the measure that makes the object cognized in the way that it is cognized (for example, as having a determinate size): and thus the actual or potential relation between the object and the measure is non-mutual—the object depends on the measure:

> By the measurable is understood that substrate in virtue of which this is measurable, and this is caused being, or participated being, and thus something is said to be in the third mode of relatives through this, that it is like the measurable to the measure, and it is understood to

[20] Scotus, *Quod.* 13, n. 12 (Wadding, xii. 312).
[21] Scotus, *Quod.* 13, n. 12 (Wadding, xii. 312).
[22] Scotus, *Quod.* 13, n. 12 (Wadding, xii. 312).
[23] Scotus, *Quod.* 13, n. 12 (Wadding, xii. 312).
[24] Scotus, *Quod.* 13, n. 12 (Wadding, xii. 312).
[25] Scotus, *Quod.* 13, n. 12 (Wadding, xii. 312).

be said like the dependent in entity on that from which it participates in entity, so that there is a simply real relation in the third mode from the side of the measurable, because that is understood to be a being by participation or imitation with respect to another.[26]

So there is, in the intellect, a real relation to the measured object, and, in the object, a (potential or actual) real relation to the measure. Both of these are non-mutual: there is no real relation to the intellect in the measured object, and no real relation to the measured object in the measure.

How might any of this apply to the case of the measurement of an act of cognition by an external object? The matter is not wholly straightforward, and Scotus does little to help his stricken reader. My analogy (to an extended body and a tape-measure) might suggest that we can simply check off the features of our internal act by comparing it to the external object. But that, of course, is impossible, since our only grasp of the external object is by means of the internal act. And nothing that Scotus writes commits him to this way of understanding the analogy. My best guess is this. The first relation is indeed between the intellect and its act. The act is what makes the actual or possible external object—the *measure*—known, and in this sense the intellect has a real relation to the act, as that in virtue of which the external object is made known. The act participates in, or imitates, the actual or possible external object (the measure), and this is the act's real relation to the measure.

3. Tending and Intentionality

So much for measurement. Scotus says quite a lot about tending in this context too, though what he says is not entirely clear. One thing that is, I think, quite clear, is that it is supposed to be some kind of aboutness relation—something that we (and sometimes Scotus) would label 'intentionality'. Consider the following passage from the *Metaphysics* questions, quoted by Robert Pasnau in his remarkable brief summary of Scotus on cognition:

A cognitive power must not only receive the species of its object, but also tend through its act toward the object. This second is more essential to the power, because the first is required on account of the power's imperfection. And the object is the object less because it impresses a species and more because the power tends towards it.[27]

[26] Scotus, *Quod.* 13, n. 12 (Wadding, xii. 312).

[27] Scotus, *In metaph.* 7.14, n. 29 (OP iv. 290), tr. Pasnau, 'Cognition', 288. The editors of Scotus's *Opera philosophica* suggest that this question is an earlier version of *In metaph.* 7.15, one that Scotus 'later suppressed in favor of question 15' (OP iv. 281, n. 1). This may well be the case. But Scotus does not explicitly reject, in question 15, the point he makes here, although, as I am trying to show in this section and the previous one, he comes to add a great deal to it in the later *Quodlibet* discussion. I do

Now, the importance of this is that it makes the reception of an object's species parasitic on some other relation, namely, that of tending towards, and the *tending towards* is supposed to *explain* the reception of the species. Pasnau suggests that

> *to tend* (*tendere*) has all of the contemporary implications of *intentionality*. To tend toward another is to represent another, to be about another—not in the way that a word of a picture represents something else, but in the distinctive (and highly mysterious) way in which thoughts and pictures are about things. Words and pictures do not themselves tend toward what they represent; they do so only through the mind of an interpreter. Thoughts and perceptions need no interpreter, for they are the interpretation; they themselves tend toward other things. In this sense, they have intentionality.[28]

This is a bit too wide since, as we have seen, not all cognitive acts tend to objects. But it is also, in a different way, a bit too narrow, because according to Scotus many different kinds of thing tend in different ways to different objects. Thus, Scotus holds that, in their various ways, things, powers, habits, and acts, all *tend*. In the first of these cases, talk of tending is just a way of talking about something's *telos*: it tends to its own perfection.[29] In the remaining cases, tending is a way of talking about the *object* of a power, habit, or act: the thing that the power/habit/act is directed at.[30] Clearly, this has a bearing on cognition, since by and large cognitive powers, habits, and acts have objects—things that the acts (of the power/habit) are *about*.

First of all, a necessary feature of intuitive cognitive acts is that they really tend to or attain their objects: they have a *real* relation of union, as Scotus puts it here, with their objects. Abstractive acts necessarily lack such a real relation:

> About the relation of attaining to the term that is attained, it can be said that such a real or aptitudinal relation does not pertain to abstractive cognition. This is proved, because it does not pertain to the ground, from its side; and neither does it pertain actually if the end term were posited actually, because the end term as actually existing is not made to be attained by that act.[31]

Scotus here claims that an abstractive act lacks an aptitudinal relation of tending: the end term is 'not made to be attained by the act', is not naturally attained by it. But I assume Scotus would want to hold that the end term *cannot*

not take this as evidence in favour of the opinion taken by the editors of the *Metaphysics* questions, which is made specifically on the grounds of textual evidence: see OP iv, pp. xxxii–xxxiv. But nor do I see reason to doubt their opinion.

[28] Pasnau, 'Cognition', 288.

[29] See e.g. Scotus, *Ord.* 2.39.1, nn. 4 and 24 (Vatican, viii. 456 and 464).

[30] For habits, see e.g. Scotus, *Ord.* 3.31.un., n. 18 (Vatican, x. 121–2); for powers, see Scotus, *Ord.* 2.38.un, nn. 8–9 (Vatican, viii. 450–1).

[31] Scotus, *Quod.* 13, n. 14 (Wadding, xii. 320).

be attained by it, otherwise we would be left with the anomalous claim that the act could be made (for example, by divine power) to attain the object even if it cannot naturally do so. But attaining requires the presence of the object; and it occurs naturally in the presence of the object. So it is not clear how God could achieve the act's attaining in the *absence* of the object. This shows, among other things, that an abstractive cognition cannot become intuitive: the cognition lacks even an aptitudinal real relation (*de re* modality, not merely *de dicto*). Contrast the measurement relation: an abstractive act has a real representational relation to a real object, and a potential or aptitudinal one if there is no such object: it is always such that it has content.

But abstractive acts, while they necessarily lack real relations of union, can have relations *of reason* to objects. Thus, after noting that an abstractive act can have a potential real relation of being measured, Scotus adds:

> But [an abstractive can]not [have] the second, that is, of union or attaining. And this cognition can have an actual relation of reason to the object, but this is not necessarily required for its being of the object itself.[32]

I gloss: abstractive acts can have (non-real or rational) relations of being about objects in the case that there are such (absent) objects; but they have content independently of such objects ('this [non-real relation of tending] is not necessarily required for its being of the object itself': i.e. for its having content, since the whole point is a discussion of a cognitive act that *lacks* an object).

That this is what Scotus has in mind is confirmed a little later in the discussion:

> The third [thing to be discussed], namely about the relation of reason [viz. the relation of tending] in abstractive cognition, can be understood . . . thus: when the end term does not have real being, but only being in the intellect, then there cannot be anything other than a relation of reason to it [viz. the end term], because the relation cannot have truer being than the end term to which it is. And in this case the object that is the end term of the abstractive cognition need not have being other than in the intellect. Therefore [there cannot be anything other than a relation of reason to it].[33]

[32] '. . . non autem secundam, scilicet unionis vel attingentiae. Potest etiam ista cognitio habere ad obiectum relationem rationis actualem, sed illam non necessario requiritur ad hoc quod sit ipsius obiecti': Scotus, *Quod.* 13, n. 13 (Wadding, xii. 320; again, I have corrected Wadding on the basis of MS V, fo. 34^{r} and MS W, fo. 24^{r}b). The text is difficult: the best manuscripts have 'this is not necessarily required for its being of the object itself'; manuscripts more remote from Scotus's apograph (according to the *stemma* provided by Noone and Roberts, 'John Duns Scotus' *Quodlibet*', 153) and the Wadding edn omit 'not'. Including it is the *lectio difficilior*, both given Scotus's arguments against Henry, and given other claims that Scotus makes in the *Quodlibet*—which I discuss in detail in a moment. See too *Ord.* 2.9.1–2, n. 65 (Vatican, viii. 165).

[33] Scotus, *Quod.* 13, n. 14 (Wadding, xii. 320).

The counterfactual measurability relation is fundamentally an *intrinsic* real feature of the act, and the actual measurability relation is a real relation in the case that there is a real (though abstractively cognized) object. The abstractive act's tending is a relation of reason, in the sense that the object is of necessity not present in a way that the act can really attain it or be united to it. I take it that the presence of the object in such a case consists simply in the act's having the *content* that it does. The act has a 'relation of reason' to its content. As we shall see in Chapter 10, Scotus takes a rather reductionist line on the reality of mental content: hence there is nothing real for the act to be related to other than itself. Again, I think we should say that the act has *content* even in the absence of an object. (Scotus rightly does not think that abstractive acts are *about* their contents, or about items with *esse intelligibile*—items which exist merely as thought—despite some of his language (talking sometimes of mental content in terms of an act's object, in terms of what the act is about).[34])

In addition, Scotus holds that this relation of reason—the *aboutness*—is a *necessary* feature of a cognitive act in the case that there is such an object (i.e. presumably, in the case of abstractive cognition a real but absent object), something that he confusingly pinpoints by calling the relation 'real':

> [The relation] is rational from the side of the object, but real from the side of the act, because it seems to follow the nature of the act, and not merely to belong to the act as an object that is cognized or compared.[35]

[34] Commentators sometimes suggest differently. Martin M. Tweedale notes, 'The *ens objectivum* is the immediate object of thought and represents the nature, which then becomes the remote object of thought' (*Scotus vs. Ockham: A Medieval Dispute over Universals*, 2 vols (Lampeter: Edwin Mellen Press, 1999), ii. 410). This line perhaps makes the species a cognitive intermediary between the external world and the cognitive act (since the item with *ens obiectivum* is the species on this account). See too e.g.Dominik Perler, 'What am I Thinking About: John Duns Scotus and Peter Aureol on Intentional Objects', *Vivarium*, 32 (1994), 80. But this is not exactly Scotus's position. The *ens obiectivum* is the item that 'shines out' in the intelligible species (see the discussion in s. 1 of Ch. 4). But all that Scotus means is that the species has content such that it can represent a real object, and I do not think we should read it as suggesting a theory as to *how* the species represents the object (e.g. by being itself an internal object of cognition). It is admittedly true that Scotus occasionally talks of the species as (sometimes) an object of cognition. We saw an example in Ch. 1. But he more properly and carefully speaks of the species as a representation of the object, without this suggesting that the species itself is the object: as we saw in Ch. 1, too. See too Scotus, *Lect.* 1.3.3.2–3, n. 392 (Vatican, xvi. 377): 'The intelligible species is not primarily the end term of the act of understanding, but the act has as its end term the object according to the *esse intelligibile* which it has in the actual intellection.' Peter King, again, seems to be on exactly the right lines. Having argued that Scotus distinguishes between content and object, he notes, 'This is not to hold, though it is compatible with holding, mental content to be the (intentional) object of thought or the item of which we are immediately aware in thinking. It merely asserts that there must be some feature of the mental act rather than of the world that makes the act have the character it does, that is, to be about what it is about' (King, 'Duns Scotus on Mental Content', 65, n. 2).

[35] Scotus, *Quod.* 13, n. 15 (Wadding, xii. 320–1).

Scotus does not really mean 'real' here: he is using the term merely to signal some kind of asymmetry in the relations, as the following passage makes clear.[36] Thus, more properly, Scotus holds that it is a relation of reason, but one that follows automatically from the internal structure of the act:

> This attaining is a relation of reason in an abstractive act. But because it is generally understood under the notion of that relation of attaining—and indeed of actual attaining, even though this is not real actuality but the actuality of a relation of reason—for this reason generally the operation is signified under such an actual relation, and it is necessary for the object to be understood along with [the act] as the end term of such an actual relation.[37]

Objects do not have to have cognitive acts that are about them; cognitive acts, however, must have content, albeit that those contents are secured by the acts' internal structures.[38] And people 'generally understand' this in terms of an actual relation of reason between the act and an object. But I do not think that Scotus wants us to draw strong ontological commitments from what just seems to be (yet again) a point about common linguistic usage.

4. A Brief Note on Some Earlier Texts

The distinction between *tending towards* and *being measured by*, in this context, was known to Scotus prior to the *Quodlibet*; but it is only in the *Quodlibet* that he explains precisely, or perhaps even comes roughly to formulate, what he has in

[36] Elsewhere, Scotus remarks briefly that in cases such as this the question of non-mutuality is more significant than the question of the reality/non-reality of the various relations: see *Ord.* 1.3.3.2, n. 485 (Vatican, iii. 288). This is hard to understand, because the definition of non-mutuality, as Scotus understands it, requires the distinction between real and rational relations.

[37] Scotus, *Quod.* 13, n. 33 (Wadding, xii. 345).

[38] Much of the material in the passage that I discuss here relates not to the 'direct' act that I am interested in, but in the relation between such a direct act and a reflex act in which the cognizer attends to the direct act. This material does not have a bearing on the question of the semantic content of direct acts, and so I do not discuss it in any detail. Briefly, what Scotus is concerned with is cognizing the relation between a *past* direct act and an object of abstractive cognition (Scotus makes this point by noting that the relevant direct act is 'non-existent': *Quod.* 13, n. 15 (Wadding, xii. 320)). Since objects of abstractive cognition are cognized in direct acts, the question thus involves a reflex act comparing the contents of two direct acts, a present one (call it 'A_{PR}') and a past one (A_{PS}). A_{PR} and A_{PS} are relevantly related to each other simply in virtue of the reflex act: if there were no reflex act, there would be no comparison, and thus not even a relation of reason between A_{PR} and A_{PS} (since A_{PS} does not exist, and since the object of A_{PR} is, by stipulation, absent or non-existent). The case is supposed to contrast with the tending relation between an abstractive act and its object, in which the act necessarily has a relation of reason to an object. For the whole, terribly obscure, discussion, see Scotus, *Quod.* 13, nn. 14–15 (Wadding, xii. 320–1). The crucial thing about the text is that the relevant direct act 'can be of a non-existent cognition' (Scotus, *Quod.* 13, n. 15). I assume it must be, and thus must be of a past act; if not, then what is at issue is comparing an occurrent direct act to its object. But in that case, we need some further access to the object, and such access is not possible.

mind.[39] In earlier texts, Scotus's major focus is on the relation of tending, and it is this that he takes its semantic features to consist in. Commentators have tended to focus on earlier passages, and to this extent my account of Scotus on these matters is rather different from what can be found in the literature.

I gave an example earlier: Robert Pasnau's focus on intentionality/tending, on the basis of a passage from the *Metaphysics* questions. In the *Ordinatio*, Scotus basically distinguishes two relations between object and act, a causal one and an intentional one:

> The relation of an intellection to an object, in so far as it moves the intellect, or more properly in so far as it causes the intellection, pertains to the second mode of relatives, like that of a son to a father, or of produced heat to the producer. And the relation of the intellect, as movable, to the object as mover, pertains to the second mode, like the relation of being heatable to what heats.
>
> But in addition to these relations of the second mode, there is another relation of the intellection to the object, as of what has an end term to what is its end term. For an intellection is not merely *from* an object as its efficient cause (whether total or partial), but is *to* the object as to its end term, or as that about which it is.[40]

The text goes on immediately to consider a case highlighted by Giorgio Pini, in which God alone causes my cognition of an object: in which case, we have intentionality in the absence of any relevant causal relation. Scotus here argues that the intentionality relationship is analogous to, but independent of, any measurement relation:

> This second relation [viz. of having an end term] can be posited to belong to the third mode [of relatives], not because it is a relation of being measured, but because it is similar to that, since it is non-mutual. For universally an act requires something that it is about, but not *vice versa*; and neither is the relation of being measured the only [relation] of the third mode, but every [relation] similar [to it]—namely, [every] non-mutual relation: and [the relation] of having an end term, in the way outlined, to what is the end term, is like this. And between the same absolutes the relation, to the measure, of being measured goes along with this, even though it can be posited to be formally different from this relation of having an end term.[41]

Note that Scotus explicitly distinguishes the relation that he is talking about from that of measurement, and thus he lays out his whole discussion of aboutness in terms that make that relation independent from measurement. But measurement is discussed here not as a specifically semantic relation at all, but simply to illustrate

[39] See, in addition to the texts I discuss in a moment, Scotus, *Ord.* 1.35.un., n. 27 (Vatican, vi. 256); *Rep.* 1.36.1.1–2, n. 60 (Wolter and Bychkov, ii. 400).

[40] Scotus, *Ord.* 1.3.3.2, n. 477 (Vatican, iii. 285).

[41] Scotus, *Ord.* 1.3.3.2, nn. 479 (Vatican, iii. 286–7).

one of the formal features of intentionality: namely, that intentional relations are like measurement relations on the grounds that the latter are a standard case of what Aristotelians label non-mutual relations. The relation in the measured item is real, but not so in the measure. On the analogy, Scotus wants us to understand that intentionality relations are non-mutual too. But this passage provides no clue that Scotus elsewhere sees measurability (of a certain kind) as a semantic relation, or at least came to see it as such.

5. A Divine Exception: Externalism in God's Knowledge

I will discuss aspects of God's necessary (i.e. non-intuitive) knowledge of individuals and kinds in Chapter 10. In the last section of this chapter, I want to consider very briefly what Scotus has to say about the explanation for the content of God's acts of intuitive cognition that have as their objects contingent states of affairs, since it contrasts markedly with his account of creaturely intuitive cognition. This divine knowledge is dependent on contingent facts, and thus could be other than it is. And this raises a theological problem: God is wholly unconditioned, and nothing about him depends on anything external to himself. And, in line with this, he is wholly necessary: nothing about him could be other than it is. Scotus suggests the following solution:

> When it is said, 'Every immutable being is formally necessary, therefore what is immutable in being understood is necessary in being understood', I concede the antecedent [viz. 'Every immutable being is formally necessary'], but I deny the consequent [viz. 'What is immutable in being understood is necessary in being understood']. The first is clear, namely that the antecedent is true, because a being that is immutable is so through its form, and therefore cannot exist, through its form, in a different way: and therefore such a being is simply necessary. But an object exists immutably on account of the real immutablity of an act, but is not immutable simply speaking and formally, since it is not necessarily required for the act, and so it is not necessary that there is any necessity, formally, in the secondary object or in its being made an object, because there is some necessity in it only in virtue of the first object, namely, the divine essence, and there is no absolute necessity either in the being of such an object, or in its being made an object.[42]

The idea is that a divine cognitive act is immutable and necessary, but that its contents—determined by its 'secondary' object—are contingent. Thus, these secondary objects are neither necessary in themselves ('it is not necessary that there is

[42] Scotus, *Rep.* 1.39–40.1–3, n. 69 (Wolter and Bychkov, ii. 485–6). For discussion of the theological context, and the theological problem the passages are designed to solve, see my *Duns Scotus on God*, 86–7.

any necessity, formally, in the secondary object') nor in God's causal relation to the object ('it is not necessary that there is any necessity . . . in its being made an object'). One and the same act can have different contents, and these contents are fixed by the real objects of the acts. So Scotus's theory of God's knowledge of contingent facts is wholly externalist: the content of the act (that God has necessarily and immutably) is fixed wholly by things external to God. This allows Scotus to reconcile God's intrinsic immutability with the contingency of the contents of his knowledge: the contingency is wholly extrinsic and relational.

9

Mental Language and the Nature of Conceptual Content

I have argued in Chapter 8 that Scotus believes conceptual content to be grounded in the real structure of a cognitive act, such that it is the real structure of the act that explains its having the content that it has; and in Chapter 10 I argue that this content is in fact to be ontologically *reduced* to the real structure of the act: the content is nothing over and above the real act itself. (It is not, for instance, some kind of spooky unreal being.) In the current chapter, I want to examine the *nature* of conceptual content. As I try to show, Scotus conceives of it not imagistically but rather *linguistically*. Scotus does not make the point explicitly; it has to be inferred from other things he says about the nature of thought.

Following Augustine, the medievals thought of conceptual acts as mental *words*, and while this in itself is not sufficient to show that conceptual content is linguistic, I believe that Scotus holds that there are mental acts with genuine syntactic structure, suggesting that Scotus thinks of conceptual content as linguistic in nature. I thus argue that Scotus has an inchoate account of *mental language*. I begin with a brief general discussion of some medieval views on the mental word, and then turn to consider Scotus's discussion of those mental acts that have syntactic structure (syntactically complex combinations of different mental acts).

1. The Mental Word

As we saw in Chapter 5, Aquinas holds that cognitive acts are productive of concepts, and that these concepts are in some sense the content of the relevant acts. We saw too that Aquinas labels these concepts 'mental words'. Scotus disagrees with the first of these claims, since he does not believe that cognitive acts produce things. But he does believe that there are items that are appropriately labelled 'mental words'. These items are just the cognitive acts themselves. Now, part of the reason for the terminology is traditional: back to Augustine, and behind him to

John's Gospel and the Stoics. But Scotus believes that these mental words can be combined syntactically: so the traditional label is particularly apposite for his view.

In his discussion of the mental word, Scotus mentions five different views on the topic (including his own):

> In the intelligence there does not seem to be anything other than [1] the actual cognition, or [2] the object terminating this cognition, or [3] according to others a species generated in the intelligence from a species in the memory (which species in the intelligence precedes the act of cognizing), or [4] according to others something formed by the act of cognizing, or . . . [5] according to others the cognition itself, as a passion, caused (as it were) by itself as action; and according to these five things there can be five opinions about the word.[1]

In all of these views, the mental word is associated with the intelligence, and thus with occurrent cognition. The first view is Scotus's own. The second, as later spelled out by Scotus, has not yet been identified, though the Vatican editors have found a discussion of the view in James of Metz (fl. *c.*1300).[2] The third is that of Roger Marston (*c.*1235–1303).[3] The fourth is Aquinas's view, also held by Giles of Rome (*c.*1243/7–1316),[4] and the fifth is that of William of Ware (fl. 1290–1305).[5] Scotus makes it clear that this classification is exhaustive—the mental word must be one of these five entities, and he defends his own view (the first) simply by showing that the other four are false.[6]

Very briefly: against the second view, Scotus argues that (non-reflex) cognitions do not have internal objects;[7] against Marston, he reasons simply on grounds of parsimony that there is no such species;[8] against Ware, he claims that no quality can cause itself to begin to inhere in a subject in which it already inheres;[9] and against Aquinas, he argues, in line with what we saw in Chapter 5, that it is not necessary for an occurrent cognition to produce anything.[10] So, by elimination, the cognitive act itself is the mental word. Aquinas's view is significant, because

[1] Duns Scotus, *Ord.* 1.27.1–3, n. 48 (Vatican, vi. 84).

[2] See James of Metz, *In sent.* 1.27.3 c, quoted by the editors in Vatican, vi. 84, apparatus F, at ll. 2–9.

[3] See Marston, *De emanatione aeterna* 6 c (*Quaestiones Disputatae* (Ad Claras Aquas: Collegium S. Bonaventurae, 1932), 118).

[4] See Giles of Rome, *Quod.* 5.9 ((Louvain, 1636), fo. 91ra); for Aquinas, see later in this chapter.

[5] See William of Ware, *In sent.* 1.27.3 c, ed. Michael Schmaus, *Die Liber Propugnatorius des Thomas Anglicus und die Lehrunterschiede zwischen Thomas von Aquinas und Duns Scotus,* ii.*Die Trinitarischen Lehrdifferenzen, 1. Systematische Darstellung und historische Würdigung* (Münster: Aschendorff, 1930), 264*.

[6] Scotus, *Ord.* 1.27.1–3, n. 59 (Vatican, vi. 87). For a detailed discussion of all of the views, including too that of Henry of Ghent, and of Scotus's refutation, see my 'The Mental Word in Duns Scotus'.

[7] Scotus, *Ord.* 1.27.1–3, n. 54 (Vatican, vi. 86).

[8] Scotus, *Ord.* 1.27.1–3, n. 49 (Vatican, vi. 84–5).

[9] Scotus, *Ord.* 1.27.1–3, n. 58 (Vatican, vi. 87).

[10] Scotus, *Ord.* 1.27.1–3, n. 55 (Vatican, vi. 86).

he links the notion of a mental word with that of the *definition* of an essence. For example, he notes (here using 'intention' as a synonym for 'word'):

> The intellect, formed by a species of the thing, by understanding forms in itself an intention of the thing understood, which is the idea (*ratio*) of the thing, signified by a definition.[11]

The idea is that a mental word is a definition formed as the end result of a complex reasoning process. Henry of Ghent thinks something similar.[12] Clearly, Scotus uses the term far more widely than this. But these earlier views are important, because they suggest that Aquinas and Henry might want to highlight the fact that the talk of a mental word itself suggests that thought might be linguistic in character, to do with definitions. In fact, however, they do not do this; it is with Scotus that we find these kinds of thought initially developed, and it is this to which I now turn.

2. Mental Language

One of the most suggestive features of the Augustinian language—a feature that Scotus capitalizes on—is that labelling cognitive acts 'words' draws attention to the fact that they are semantic items with semantic content. But words paradigmatically feature in complexes that have *syntactic* structure, and this suggests in turn that thinking of cognitive acts as words of a certain kind might lead us to conclude that they can be components in a mental *language*. In this section, I consider the extent to which Scotus treats mental words as the components of syntactically structured complexes. By way of summarizing what I am about to argue, I claim that Scotus does indeed have some elementary account of a kind of mental language. Paradigmatically, mental language in the Middle Ages is associated with Ockham. As Ockham is usually interpreted now, he is committed to the view that there are mental sentences with both semantic and syntactic features. Such sentences are composed of simple concepts, and concepts are understood linguistically in the sense that they can be analysed using the standard tools of fourteenth-century logic: that is to say, the concepts have signification—they are signs of things—and when combined into syntactic complexes have supposition too—they refer in particular ways—just as spoken or written words do. And Ockham makes quite a few suggestions for the kind of syntactic rules that mental language should follow.[13] We find nothing as developed as this in Scotus. But some of the leading ideas are there, nevertheless.

[11] Aquinas, *ScG* 1.53, n. 443 (II, 65a). [12] Henry, *SQ* 54.9 ad 1 (Paris, ii. 104^{r-v}C).

[13] On Ockham, see e.g. Claude Panaccio, *Le Discours intérieur de Platon à Guillaume d'Ockham* (Paris: Editions du Seuil, 1999), 253–78.

Now, we just saw that Aquinas, for example, holds that concepts can be *definitions*. On the face of it, this might suggest syntactic complexity. But Aquinas does not make a crucial additional move, one that Scotus makes, that secures such complexity. The move is this: syntactically structured concepts are built out of *distinct* simples (lacking syntactic structure), with appropriate syntactic connectors.[14] To allow for this, Scotus posits something that earlier thinkers reject: namely, that we can have more than one occurrent cognition at once—a view of Scotus's that I outlined in section 5 of Chapter 2. These cognitions are what get appropriately combined into sentences in mental language. Admittedly, Scotus does not explain his account in any systematic kind of way, and certainly he offers nothing like the kind of developed theory that we find in Ockham, for example. I assume that the issue was not one that he devoted any systematic attention to, and that the hints we find in his discussion are little more than that.

First of all, then, the possible simultaneous inherence of multiple cognitive acts. We saw in Chapter 2 some of Scotus's reasons for positing this, and his defence of it. Now I need to show how this is germane to the question of mental language. In section 5 of that chapter I quoted an important text from Aquinas, in which Aquinas denies that more than one act of cognition can inhere in the mind at once. Now, this seems to raise an immediate problem for cognitive acts with complex content. On the face of it cognitive acts can be semantically simple, semantically complex, or be both semantically and syntactically complex (i.e consist of affirmations or negation—composition or division, in the technical medieval jargon). But, given that no more than one cognitive act can inhere in the intellect at once, it seems to follow that all cognitive acts are simple, at least in the sense that they are not composed of further acts. Aquinas accepts the implication. He claims that, in the case of an act with complex contents, the parts are known merely 'under a certain confusion'—i.e. as lacking some semantic specificity:

> Parts can be understood in two ways. In one way, under a certain confusion, as they exist in a whole, and in this way they are known through the one form of the whole, and thus known simultaneously. In the other way, [they are known] by distinct cognition, to the extent that each is known by its species. And in this way they cannot be understood simultaneously.[15]

(I discussed confused cognition in Chapter 3.) Aquinas gives the same account of relational concepts (concepts relating two or more things together):

[14] I take it that this is an essential feature of any kind of language of thought: see Jerry A. Fodor and Zenon W. Pylshyn, 'Connectionism and Cognitive Architecture: A Critical Analysis', *Cognition*, 28 (1988), 3–71. I am grateful to Eric Hagedorn for pointing out the significance of this.

[15] Aquinas, *ST* 1.85.4 ad 3 (I, 421b).

When the intellect understands a difference or comparison between one thing and another, it knows each of the differing or compared things under the concept of the comparison or difference, as it was said that it knows the parts under the concept of the whole.[16]

The idea is that, in knowing the 'difference or comparison', we cognize the two concepts thus related merely confusedly. (I take it that we cognize the difference or comparison confusedly too, since the distinction or comparison 'virtually or potentially includes a plurality of elements which are not cognized distinctly by us'.) The same holds, too, for content that might be thought to involve syntactic complexity:

The intellect's composition and division is brought about by a certain difference or comparison. Therefore the intellect knows many things by composing and dividing—that is, by knowing the difference and comparison of things.[17]

The idea is that the mental bearer of such semantically complex content turns out to be syntactically non-compositional: it is one species or act, not composed of other species or acts, and its content is the *relation* (composition or division) between the two terms. Presumably, again, both the proposition and the things thus composed or divided are known merely confusedly, like the parts of a complex image.[18]

Scotus, by contrast, explicitly denies all of this, and simply concedes the possibility of more than one mental act at once: 'There are simultaneously . . . many [cognitions] in act.'[19] On this, Scotus follows Olivi, who puts the point with his customary trenchancy:

Just as whiteness cannot be with blackness, so neither can the proper likeness of the white be (in creatures) the proper likeness of a black thing; whence too the act which is an actual representation of a white thing is not the act which is the proper representation of a black thing. But knowledge of the many terms of the same proposition or relation apprehends and expresses each of the end terms under their proper notion (*ratio*); therefore it necessarily includes in it many acts of knowing.[20]

Olivi does not seem moved by Aquinas's Aristotelian worry here. (Olivi frequently found himself unmoved by Aristotle's views.) Scotus circumvents it by claiming that not all the acts are equally perfect—at most, one of them is introspectively conscious—something I discussed in Chapter 2.

[16] Aquinas, *ST* 1.85.4 ad 4 (I, 421b).

[17] Aquinas, *ST* 1.85.5 ad 1 (I, 422a).

[18] Aquinas maintains that the paradigm cases of distinct cognition are cognitions of essences: see e.g. *ST* 1.85.3 c (I, 420a). Presumably, in such cases what are known are simply the parts of the definition, and not the proposition expressing the definition (*rational animal*, not '"man" is a rational animal').

[19] Scotus, *Rep.* 2.42.1–3 (MS M, fo. 218^{v}). I quote the complete passage in Ch. 2.

[20] Olivi, *In sent.* 2.78 (iii. 158).

Now, this gives us the possibility of distinct acts—distinct real qualities, with distinct semantic content—being combined into one syntactic complex (something that Olivi did not consider, as far as I know), and thus a way of giving an account of the nature of mental complexes. The fact that the acts are not all equally perfect, of course, has no bearing on the specificity of their contents—and it is (I take it) some reasonable degree of specificity that is required for their being able to function as the components of a mental sentence.

As I suggested, I take it that simultaneous plurality of real mental acts is a necessary component of anything resembling modern 'language of thought' hypotheses, which typically think of mental sentences as 'molecular' representations built up from 'atomic' representations by means of an appropriate syntactic structure: and I do not see how a theory that accepts mental acts but denies more than one mental act at a time could satisfy the requirement for molecular representations in this way. Scotus imagines the two concepts joined by a linking concept, the copula, whose function is to confer syntactic complexity:

> Truth [in the case of composition and division] is an act that compares one simple concept to another—that they belong to the same thing in affirmative [propositions] and to different things in negative ones. A relation of reason in each extreme to the other is a necessary consequence or concomitant of this, and this relation is signified by the word 'is', in so far as it is a mark of composition, namely, as it is a third element [in the proposition]. . . . And furthermore, this relation of reason conforms to the thing.[21]

The idea in the second sentence here is that we form complex concepts of the relevant kind by combining unstructured concepts by means of whatever it is that is signified by the verb 'is', here identified as the relevant (the only possible?) item syntactically linking the two unstructured concepts. What are joined are two mental items—the semantic contents of two concrete accidents, not the concrete accidents themselves—so the joining amounts to a relation of reason, lacking real terms, as Scotus here points out. In negations, the two concepts are disjunct. So, according to the first and third sentences here, affirmative concepts of this kind are true if the items joined 'belong to the same thing' (and false if not), and negations are true if the items disjoined fail to belong to the same thing (and false if not): they are true, in short, if they 'conform' to reality, and false if they fail so to do. Furthermore, cognizing the whole syntactic complex requires cognizing all of

[21] Scotus, *In metaph.* 6.3, n. 65 (OP iv. 80). Scotus assumes that complex concepts are formed from simple ones at *Ord.* 4.8.2, n. 106 (Vatican, xii. 25). For an excellent discussion of the role of the copula in mental propositions, and of different possible interpretations of this, see L. Cesalli, *Le Réalisme propositionnel: Sémantique et ontologie des propositions chez Jean Duns Scot, Gauthier Burley, Richard Brinkley et Jean Wyclif* (Paris: Vrin, 2007), 115–18. I do not need such detail here, since I am merely interested in establishing Scotus's views on thought's linguistic character.

the parts. As Scotus comments, in relation to spoken sentences, 'The concept of a whole utterance (*orationis*) is not had without concepts of all the parts.'[22] (Note here the semantic dependence of the whole on the parts: a key feature of recent language of thought hypotheses.)

It is not immediately clear what Scotus means in claiming, in the first sentence here, that truth is an 'act'. He certainly holds that truth is a property of thoughts, and that thoughts are acts. But he seems to make a further claim too: that truth is an act that 'compares' concepts, which seems to suggest that what is at issue is not whether or not our thoughts are true, but the epistemic question of whether or not we *know* that they are true. In fact, this act of 'comparing' the complex concept to whatever makes it true is not such that, in order to know that a complex concept is true, we need to know the further proposition 'this concept is true', or have the comparative act as the object of reflex knowledge. As Scotus puts it:

> The knowledge (*notitia*) of the act by which I compare [the concepts in the complex] . . . is one act, naturally correct (*rectus*), that can be cognized. . . . It is not known as an object, but as an act of cognizing that is naturally correct.[23]

So truth is, after all, simply a *property* of an accurate complex mental representation.

One further very important point: what does Scotus have to say about mental grammar? After all, simply having the relevant concepts (subject, verb, object) does not secure a syntactically unified whole. Scotus does not address the problem explicitly. But he seems to assume that complexes in mental language simply mirror those of spoken language. Considering a case in which someone communicates something to another person by means of speech, he suggests the following: 'The intellect, in the final instant of [the utterance], causes, by means of its combining (*collationem*), the understanding or concept of the whole.'[24]

The idea is that the parts of the utterance are kept as 'dispositions', which the intellect combines at the conclusion of the utterance—and, I assume, in ways that mirror the syntactic structure of the spoken utterance:

[22] Scotus, *Ord.* 4.8.2, n. 105 (Vatican, xii. 25). The early Scotist Thomas Wylton, in 1312–13, defends just the view that I am ascribing to Scotus, according to which a mental proposition 'includes in itself two simple [acts], through which the intellect cognizes each of the extremes, and compares the extremes to each other': Wylton, *Quaestio 'Quod in intellectu . . . '* (ed.Prospero T. Stella, in 'Le "Quaestiones de libero arbitrio" di Durando da S. Porciano', *Salesianum*, 24 (1962), 508), quoted in Russell Friedman, 'Mental Propositions Before Mental Language', in Joël Biard (ed.), *Le langage mental du moyen âge à l'âge classique* (Louvain-La-Neuve: Editions de l'Institut Supérieur de Philosophie; Louvain and Paris: Peeters, 2009), 98). Friedman comments: 'It appears to me that in the medieval university context this compositional theory is something original to Wylton' ('Mental Propositions', 99). I think it likely, rather, that Wylton adopted the teaching from Scotus's Paris commentary some ten years earlier.

[23] Scotus, *In metaph.* 6.3, n. 61 (OP iv. 77).

[24] Scotus, *Ord.* 4.8.3, n. 108 (Vatican, xii. 26).

The signification [of the parts of the utterance] is not the formal grounds for causing the concept [of the whole utterance] in the hearer, but is a kind of preliminary disposition (*dispositio praeambula*) from which follows, through the intellect's combination, the causation of the whole concept from the concepts caused by the parts.[25]

I assume the concepts caused by the parts come with syntactic markers of some kind. The case Scotus discusses is the performative utterance 'This is my body', uttered by a priest in the Eucharist. As he sees it, the sentence consists of a 'prounoun, "this", a verb "is", and in the predicate position (*in apposito*) "my body"'.[26] The standard syntactic marker in Latin is inflection. But here the situation is more complex. We have an identity statement in which (as Scotus analyses it) the *sequence* in which the words appear is crucial for the performative function of the utterance.[27] I infer, then, that the syntax of Scotus's mental language would be constituted not by inflection but by word order. But this, of course, is a speculation, and perhaps made on the basis of rather scant textual evidence.

Giorgio Pini has shown how these seemingly abstruse discussions have a further very significant philosophical pay-off. Since the copula is a second intention concept—a concept whose extension includes merely other concepts, a *feature* of certain concepts—it does no more than establish a mental link between subject and predicate: the resulting syntactic complex does not of itself assert anything about the external world. Thus, the default status of such complexes is merely a predication: and this predication has semantic content, but does not *of itself* assert anything.[28] The contrast is with Aristotle and Aquinas, for whom the default status of such complexes is to make a judgement about the external world (and it seems likely that, for Aristotle, there is no syntactic complex that does not express a judgement about how things are).[29] For Scotus, propositional content is distinct from assertive force.

It might be thought that this kind of account would make syntactic complexes the only bearers of truth-values. And in a way it does. But Scotus talks in a way that might suggest otherwise, and I spend the next couple of paragraphs sorting

[25] Scotus, *Ord.* 4.8.3, n. 109 (Vatican, xii. 26).

[26] Scotus, *Ord.* 4.8.3, n. 63 (Vatican, xii. 13).

[27] Scotus, *Ord.* 4.8.3, nn. 121–32 (Vatican, xii. 29–32). The details of this analysis are not relevant here. For discussion of the whole issue of performative utterances in this context in Scotus, seeIrène Rosier-Catach, *La parole efficace: Signe, rituel, sacré* (Paris: Seuil, 2004), 436–49.

[28] Giorgio Pini, 'Scotus on Assertion and the Copula: A Comparison with Aquinas', in Alfonso Maierù and Luisa Valente (eds), *Medieval Theories on Assertive and Non-Assertive Language: Acts of the 14th European Symposium on Medieval Logic and Semantics, Rome, June 11–15, 2002* (Florence: Olschki, 2004), 307–31.

[29] On this, see G. Nuchelmans, *Theories of the Proposition: Ancient and Medieval Conceptions of the Bearers of Truth and Falsity* (Amsterdam and London: North Holland Publishing Co., 1973), 29.

out what he has to say, for the sake of completeness. According to Scotus, what distinguishes unstructured concepts from structured ones is the way in which the relevant concepts function as truth-bearers. As Scotus puts it:

> Truth in the intellect is two-fold, according to [the intellect's] two-fold operation, and according to each of these [the intellect] is naturally apt to be conformed to an object as measured to measure.[30]

In medieval Aristotelianism, the 'two-fold operation' of the intellect amounts to a distinction between what was labelled 'simple apprehension' and 'composition and division'. Composition and division are the formation of (respectively) affirmative and negative complexes—usually thought of as judgements, and (I take it) understood by Scotus to be syntactic complexes in the way just outlined. A simple apprehension lacks syntactic structure. And there are two kinds of syntactically unstructured concepts: simple concepts are unstructured such that no distinction is possible in their contents; complex unstructured concepts are two or more simples considered together. This gives two kinds of simple apprehension: one whose contents are wholly non-compositional, and another whose contents are composed, but in a syntactically unstructured way.

As just noted, Scotus distinguishes these from each other, and from syntactic complexes, by considering different ways in which these various things are bearers of truth-values. I have dealt with the question of syntactic complexes already. Veridicality in the case of a completely simple concept simply amounts to having the concept: it is opposed not to falsity but to ignorance.[31] In the case of syntactically unstructured complexes, it consists in combining two concepts in a syntactically unstructured way such that the relevant combination is true if really instantiated (for example, *black cat*), and false if not really instantiated (for example, *golden mountain*).[32] Presumably the point of the distinction—that there cannot be non-veridical simple concepts, and that non-veridical complex concepts are concepts that are not instantiated—is simply that, in our current epistemic situation, we cannot think of uninstantiated simple concepts: our conceptual processes always involve conceptualizing from simple concepts that we have abstracted from the world.

Scotus goes on to note that the compositional structure of a syntactically complex concept need not in any way correspond on a one-to-one basis with the structure of the real item that the concept is about:

[30] Scotus, *In metaph.* 6.3, n. 31 (OP iv. 67–8). For the distinction, see too e.g. Scotus, *In metaph.* 1.4, n. 12 (OP iii. 99).

[31] Scotus, *In metaph.* 6.3, n. 32 (OP iv. 68).

[32] Scotus, *In metaph.* 6.3, n. 33 (OP iv. 68).

It is not necessary that there is another relation in reality between the extremes, as real, similar to that [relation] of reason which is between the extremes as understood—indeed, as compared to each other by the intellect—for then this would be false 'A man is a man'. Neither is it necessary to appeal to the composition of form with matter, both because the proposition does not express that [composition], and because then this would be false 'God is God'. But this relation corresponds to the thing when it is such that the thing virtually contains it, or when it is such that the thing of itself is naturally apt to make it in the intellect (if the thing makes that relation).[33]

What Scotus is saying is that the composition relation apparently obtaining between subject and predicate need not mirror the ontological structure of reality. In affirmative propositions, the relation is one according to which 'one simple concept is compared to another, as belonging to the same thing'.[34] In the case of 'a man [viz. this man] is a man', presumably, 'human nature conceived as predicable of many is predicated of human nature conceived as this'[35]—a passage I discussed in Chapter 3, section 3. But there is no sense in which the truth of the claim requires two properties to be instantiated by one and the same item (there is only one property involved: *humanity*), or that one of the properties ('human nature . . . predicable of many') inhere in the other ('human nature . . . as this'). And even though it is true that material reality is structured hylomorphically, this matter-form structure is not what 'a man is a man' expresses. On this understanding, there is a radical disjunction between mental syntax and ontological structure.

Scotus is right to maintain this. We might, for example, think of the predicate calculus of modern logic as a perspicuous way of analysing linguistic form without at all committing ourselves to the belief that reality is structured in anything like the way that might be thought to be suggested by the formulae in the predicate calculus. (If we did not do this, we might, for example, end up agreeing with Locke that substances are bare particulars.) Scotus's thought is that affirmative structured complex concepts are true if and only if the item that the subject term is about falls under the extension of the item signified by the predicate term. And this semantic fact gives no independent information about the ontological structure in virtue of which it obtains. This is what Scotus might mean by claiming that the thing 'virtually contains' the mental composition, or by claiming that the thing 'is naturally apt' to cause the mental composition.

This is not really much of a theory of mental language, though it certainly contains some components of such a theory (mental items with semantic content

[33] Scotus, *In metaph.* 6.3, n. 66 (OP iv. 80).
[34] Scotus, *In metaph.* 6.3, n. 65 (OP iv. 79).
[35] Scotus, *In periherm. (I)* 5–8, n. 51 (OP ii. 85–6).

related by means of a very simple syntactic structure, with the semantic content of the whole derivative of the semantic content of the parts). My impression is that Scotus is trying to find a way to talk about the fact that (as I think he believes) *thoughts* are the fundamental bearers of truth-values, and that this requires some of them to have some kind of syntactic structure.

10

The Ontological Status of Mental Content

As is well known, the notion of intentionality was reintroduced into modern philosophy by Franz Brentano. As Brentano understands it, the notion of intentionality is dependent on the scholastic notion of the animal reception of a form, or 'formal sameness' of knower and known: in my terminology what it is for something to be cognized is for its form to have intentional$_I$ existence in the mind, just as it has real$_R$ existence in extramental reality.[1] I have given, I believe, plenty of evidence, in Chapters 1 and 8, to show that this approach is not open to Scotus. For him, the intellect's tending, like an act's being measured, cannot be explained by this kind of formal sameness. In this chapter, I consider in more detail what we might want to say about the ontological status of intentionality. For Brentano, as Robert Pasnau points out, intentionality is 'a kind of existence'[2]—the intentional existence of the object, or the object's 'inexistence' (i.e. *in* the mind). Scotus keeps something of this language, talking of *esse intentionale*, or *esse intelligibile*—language that he inherits from Henry of Ghent and from Henry's distinctive account of the existence of the known in the knower. But—so I claim—he radically recasts the theory in a highly reductionistic way. In what follows, I will attempt to relate Scotus's talk of *esse intelligibile* to the account of mental content that I outlined in Chapter 8, and introduce some significant (though, I believe, mistaken) modern commentary to the effect that we should understand *esse intelligibile* as a kind of existence—albeit of a reduced or spooky kind. In section 2, I outline a view of the reality of non-existent *possibilia* that Scotus rejects, one that posits such *possibilia* precisely to stand as objects for cognition of non-existents. In section 3, I show that Scotus, at any rate towards the end of his life, comes to accept that *esse intelligibile*

[1] See e.g. Franz Brentano, *Psychology from an Empirical Standpoint*, tr. Linda L. McAlister (London: Routledge & Kegan Paul, 1973), 88. I take the reference from Pasnau, *Theories of Cognition*, 35.

[2] Pasnau, *Theories of Cognition*, 35.

is not a kind of existence at all, other than merely the (real) structure of the mental act (in this, though with some modification, I follow an argument proposed by Peter King), thus trying to reject the recent readings that I report in section 1. The issue is delicate, both because of Scotus's tendency to speak as though he wants to reify *esse intelligibile*, and because of his tendency—which I discuss in detail in section 4—to speak as though an *ens rationis* is indeed some kind of *ens*, some kind of being or entity. But I show in what follows how and why these tendencies are not to be given great weight.

1. Preliminaries: *esse intelligibile* and Mental Content

I claimed in Chapter 8 that Scotus distinguishes two semantic components of a mental act: its *tending* to its object, and its being *measured*. And I claimed too that both of these are in some sense consequences of the item's internal structure: it is because the item is structured in the way that it is that it is appropriately measured by such-and-such an object, or tends to such-and-such an object. Now, this suggests that it is simply the *real* structure of the act that explains its semantic features: or, indeed, that *is* its fundamental semantic feature of (counterfactual) measurability. But in addition to all this there is Scotus's talk of intentional changes contrasted with real ones (intentional$_I$ versus real$_I$). And there is a great deal of associated technical terminology:

> 'being in opinion (*esse in opinione*)' . . . , 'being in an intellection (*esse in intellectione*)', 'being exampled (*esse exemplatum*)', 'being cognized (*esse cognitum*)', '[being] represented ([*esse*] *repraesentatum*)', which are all equivalent.[3]

And these are all equivalent to *esse intelligibile*. We might add to this list 'objective being (*esse obiectivum*)' too.[4] All of these are cases of what Scotus calls 'diminished being (*esse deminutum*)'.[5] These are ways of talking about mental items that lack *esse reale*, whatever such items turn out to be. They are ways, in other words, of talking about intentional being: intentional$_I$. Now, whatever *esse intelligibile* is, it is the *relatum* of the merely rational relation of tending to or aboutness in the case of abstractive cognition, as outlined in Chapter 8. Thus, in *Quodlibet* 13, Scotus talks about an abstractive act having a rational relation of tending to an *ens rationis* or *ens cognitum*.[6] This way of talking is not supposed to be a way of picking out the real objects of such acts, since there are no such objects. (As I will show, it is not

[3] Scotus, *Ord.* 1.36.un., n. 34 (Vatican, vi. 284).
[4] See e.g. Scotus, *Ord.* 1.36.un., n. 47 (Vatican, vi. 289); *Quod.* 15, n. 16 (Wadding, xii. 426).
[5] See Scotus, *Ord.* 1.36.un., n. 34 (Vatican, vi. 284).
[6] See Scotus, *Quod.* 13, n. 12 (Wadding, xii. 312).

supposed to be a way of picking out anything other than the real ($real_1$) act itself, in fact, but that is for later.) It seems to me that (as Peter King has suggested),[7] despite Scotus's explicit linking of *esse intelligibile* with the relation of intentionality, Scotus really means it to pick out mental *content*, and I proceed on this assumption, while being attentive to the fact that Scotus's language of objects is rather looser than what we are perhaps used to today (since at times he uses the term to pick out more or less what we would mean by 'content').

The question I address here is: what is the ontological status of *esse intelligibile*? Scotus frequently talks about *esse intelligibile* as some kind of existence distinct from real existence. This, understandably, has led commentators to wonder what this existence might be, and how it might relate to real existence. For example, I suggested in Chapter 8 that Scotus's account of our cognition of extramental objects does not require that there is any internal object over and above the external object itself. But our cognition nevertheless has content, and this content—the object 'as thought'—is or has *esse intelligibile*. Is this *esse* some kind of 'spooky existence'? It seems so, at least according to some commentators. Consider the following discussion taken from Dominik Perler's treatment of this whole difficult issue:

> One could argue that the thing related to the intellect is something *in* the intellect in a literal sense: a mental item . . . [with] dependent mental existence. . . . [Or] one might be tempted to give a different account of the thing with intelligible existence, saying that it is an entity which is always related to the intellect, but which does not exist in the intellect. It is rather some kind of supra-individual entity, having an ontological status in its own right.[8]

This gives us the distinction between something intramental and something extramental, and Perler elsewhere notes that

> The passages where he points out that it [viz. the thing with intelligible existence] is a thing *in* the intellect and *produced* by the intellect clearly favour the first interpretation. Those passages, however, where he says that the thing with intelligible existence is primarily present to God's mind and secondarily only present to the human mind, seem to speak in favour of the second interpretation. For what is present both to God and the humans cannot be an entity in this or that individual intellect.[9]

[7] See Ch. 8, n. 34.

[8] Perler, 'What am I Thinking About', 80.

[9] Dominik Perler, 'What are Intentional Objects? A Controversy among Early Scotists', in Dominik Perler (ed.), *Ancient and Medieval Theories of Intentionality*, 210. For discussion of similar options in 17th-century Scotists, e.g. seeTobias Hoffmann, *Creatura Intellecta: Die Ideen und Possibilien bei Duns Scotus mit Ausblick auf Franz von Mayronis, Poncius und Mastrius* (Münster: Aschendorff, 2002), Ch. 7. According to all sources, one or other of these interpretations is correct. Even Peter King, whose views I will discuss, argues that mental content, even though it lacks any kind of reality, *supervenes* on the categorical structure of a mental act: something apparently contradicted by textual evidence that I will consider.

As this makes clear, both of these ways of talking can be found in Scotus—and, as Perler sees it, the second way seems to imply that the thing with intelligible existence is 'a third object that belongs to a special realm of entities'.[10] Now, it seems to me that Scotus comes to see that both of these ways of talking are misleading: when I talk about *esse intelligibile*, all I am really talking about is the fact that a real accident has a real structure such that it can represent things. To the extent that the accident does not make its bearer an instance of the kind of thing that it represents, it is (in my terminology) real_I, not real_R (this is just a matter of definition): but it is real; any further function it might have is explained simply by its real structure. And its real structure is all that we are referring to when we talk about it, however we talk about it.

2. Anti-Reductionist Accounts Rejected: Against Henry of Ghent and Richard of Conington

I begin with a discussion of one of the key ways in which Scotus introduces the notion of *esse intelligibile*. The context is a rejection of what Scotus understands (wrongly) to be Henry's account of God's thoughts, specifically, God's thoughts of non-existents. The rejected view requires a realm of possible essences—items with, in the jargon, *esse essentiae* or *esse quidditatis*—that, despite being somehow real, lack real existence. This realm is required because, it is alleged, thoughts—even God's thoughts—require objects. The position is in some ways similar to one adopted later by Alexius Meinong—positing non-existent objects of thought to solve the problem of intentionality in the case of thoughts which lack real objects (since intentionality requires objects). In its simplest form, the position can be found ascribed apparently to one of the early followers of Henry of Ghent, Richard of Conington (d. 1330):

> There is a proportion between knowledge (*scientiam*) and what can be known. But a proportion can only obtain between beings. Therefore it is necessary that a created thing, known by God, has some being, at least of quiddity (*esse . . . quidditatis*).[11]

The idea, as Scotus understands this view, is that there is a domain of real but non-actual or non-existent kind-natures somehow prior to God's cognitive act,

[10] Perler, 'What are Intentional Objects?', 210.

[11] Scotus, *Lect.* 1.36.un., n. 6 (xvii. 462–3). The Vatican editors note that marginal annotations in a MS of William of Nottingham's *Sentence* commentary ascribe this argument specifically to Richard of Conington: see Vatican, xvii. 462 apparatus F.

responsible for being the real, extramental, *objects* of such acts, and for giving them their contents (for accounting for the 'proportion' between God's cognitive acts and their objects). God's cognitive acts, in other words, have extramental but non-existent objects, and these objects are what determine the contents of God's cognitive acts. Here there are items with *esse intelligibile*, and they are identified as essences, items with what the medievals label *esse essentiae*.

As just noted, the context here is a consideration of God's knowledge of (real but non-existent) essences—items that have *esse essentiae*—not (real) individuals, items with (in the jargon) *esse existentiae*. In his reply to this view, Scotus maintains that the cognition of non-existent essences does not require that they have either kind of being, *esse essentiae* or *esse existentiae*—indeed, to the extent that the essences are non-existent, it requires that they have neither kind of being:

> If something is not, it can be understood (*intelligi*) by us (and this whether its essence or its existence) . . . and neither is there a difference . . . between the divine intellect and ours in this regard, other than that the divine intellect produces these intelligible things in *esse intelligibile* primarily, and ours does not produce them primarily. But if this *esse* is not of itself such as to require *esse* simply speaking, then producing it in *esse* of such a kind is not producing anything in any *esse* simply speaking, and thus it seems that, if this *esse intelligibile* (comparing it to our intellect) does not require *esse* simply speaking, then if we compare it to the intellect that produces it in this *esse* (viz. the divine) it will not be *esse* simply speaking. . . . Likewise, our agent intellect produces a thing in *esse intelligibile*, even though it is already produced, and nevertheless we would not posit, on account of this production by our agent intellect, that the thing thus produced has *esse* simply speaking.[12]

According to the position Scotus is rejecting, God's cognition of non-existent essences requires that they have some sort of minimal extramental being in order to serve as objects of God's cognition. Scotus responds by noting that no one, including his opponent, believes that cognition of non-existent *particulars* requires that such particulars have some sort of minimal being in order to serve as objects of God's cognition. So there is no general principle to the effect that cognition of non-existents requires that there is a domain of extramental but non-existent things. Scotus's talk of *esse intelligibile* in this passage is—I claim—a way of talking about semantic content, and his thought here is that we can talk of the semantic content of divine (and other) cognitive acts without appealing to a realm of non-existent but real items with *esse essentiae*.

Conington's position makes essences with *esse intelligibile* somehow *prior* to God's cognition of them. Thus, for example, one of Scotus's worries is precisely how it could be that God knows how to produce such essences. They are,

[12] Scotus, *Ord.* 1.36.un., nn. 28–9 (Vatican, vi. 281–2).

after all, not divine, and therefore need to be created. If God produces such things, then either (1) he does so in virtue of his knowing the essences; or (2) it is not the case that he does so in virtue of his knowing the essences. But Scotus assumes that God produces nothing external to himself without *knowing* what he is to produce: the content of God's knowledge determines the nature of what is produced. So the second option is impossible. Now, as Scotus sees it, the whole point of his opponent's position is to explain how God knows possible but non-actual essences. So it seems that his opponent's position requires that God has the relevant conceptual contents prior to his production of the conceptual objects. And this makes the production of the objects superfluous.[13] But Scotus is here nevertheless insistent that we need to be able to speak of items with *esse intelligibile*, somehow constituted by God's cognitive act. The question is important, for Scotus's discussion of the semantic content of divine cognitive acts is in some ways very close to his account of the semantic content of intelligible species and human cognitive acts.

Henry of Ghent himself defends a view rather different from the one ascribed to Conington. Henry does not hold that these things with *esse essentiae* are required as immediate objects of divine cognition, for he holds rather that the only real object of divine cognition is the divine essence. But he argues that, in order fully to know his essence as imitable, God has to know too the possible things that imitate his essence:

> These *rationes* in God are merely relations by which he, as exemplar cause, is related to the essences of things external to himself as to things that have exemplars (*exemplata*) and are thus related to God, such that those things that are something essentially have exemplars. But in order to cognize (*cognoscens*) distinctly one *relatum*, it is necessary also to cognize the other.[14]

Now, as I argue elsewhere, Henry does not believe that these things are external to God's cognition.[15] But Scotus mistakenly ascribes to Henry the view that such essences are somehow real, external to God's intellect, and attempts to refute it on this assumption:

> Correlatives are naturally simultaneous. Therefore God cognizing (*intelligens*) a stone, and the cognized stone, are naturally simultaneous. Therefore, since a stone, cognized by the divine intellect, is cognized to the extent that it is distinct from the divine essence (and this divine cognition is real and metaphysical, not logical), it follows that the thing which is the

[13] Scotus, *Ord.* 1.36.un., n. 22 (Vatican, vi. 279).

[14] Henry, *Quod.* 9.2 (Leuven, xiii. 30, ll. 24–9).

[15] See my 'Henry of Ghent on the Reality of Non-Existing Possibles—Revisited', *Archiv für Geschichte der Philosophie*, 92 (2010), 115–32.

end term of this cognized will be a true thing; therefore [the thing that grounds the relation of *being cognized by God* has true *esse essentiae*].[16]

(Talk about simultaneity is merely a way of talking about the fact that two *relata* require each other.) The idea is that God's cognition of non-existent essences—items that can be instantiated extramentally (thus 'real and metaphysical, not logical' cognition)—requires that those essences have some kind of being short of real existence: in Henry's terminology, that they have *esse essentiae* (the being of an essence), but not *esse existentiae* (the being of existence). This is the sort of view that would posit a realm of extramental objects of thought, more extensive than the set of existent things. Now, imitability, according to this view, is a relation, so Henry, as Scotus understands him, should reason that if the divine essence is imitable, then there are things that actually imitate it. The divine essence is imitable by all possible things; so there must be a sense in which all possible things are real.

The difference from a position such as Conington's is that the relevant things are *posterior* to God's cognitive act. So the opinion presented here, which Scotus (mistakenly) ascribes to Henry, is distinct from one which would require that God's thoughts need real but non-existent things, produced by God, or by God's thoughts, in order for them to have contents. But it still requires that the relevant things are *external* to God, and thus that there is a realm of such things. So Scotus sets out a complex series of arguments to try to show that positing any sort of actual extramental but non-existent thing leads to absurdities. Some of the arguments are theological in character, and presuppose that Henry is committed to the view that the same things can eternally have *esse essentiae* and temporarily have *esse existentiae* too—a position that Scotus takes to be incompatible with the view that God creates existent things *ex nihilo*.[17] This is clearly effective *ad hominem* against Henry, since Henry does indeed accept the claim that things with *esse essentiae* can in some sense gain or lose *esse existentiae*.[18] But, of course, it would be possible to accept the view that God's cognitive acts require extramental objects without holding that these objects can somehow—under appropriate circumstances—acquire real existence. So Scotus also worries that any view that posits that objects are required for every divine cognition will entail that all such things—given God's omniscience—are necessary: a position that entails that God is not the only necessary real thing.[19]

[16] Scotus, *Ord.* 1.36.un., n. 2 (Vatican, vi. 272); see too *Rep.* 2.1.2, n. 4 (Wadding, xi. 244a).

[17] Scotus, *Ord.* 1.36.un., nn. 13–18 (Vatican, vi. 276–8).

[18] See e.g. Henry, *Quod.* 9.2 (Leuven, xiii. 31, ll. 44–52).

[19] Scotus, *Ord.* 1.36.un., n. 19 (Vatican, vi. 278); for a more complex variant of this objection, see *Ord.* 1.36.un., n. 20 (Vatican, vi. 278–9).

Scotus offers a further argument too, one which accepts a general principle to the effect that the production of less perfect items, by a perfect and independent natural cause, presupposes the production of more perfect things by that same cause. Now, according to Henry, God produces his cognitive acts before he produces things with *esse essentiae*. This implies that the acts are more perfect than the things with *esse essentiae*. But this seems in turn to imply that the things with *esse essentiae* cannot be more real than the divine cognitive acts. The divine cognitive acts lack any kind of real being; they are nothing at all, mere *entia rationis*. So *esse essentiae*, in Henry's account, must likewise be nothing at all, lacking any kind of real being.[20] The argument is hardly convincing, since it rests on principles that scarcely seem obviously true. But it begins to provide evidence for what I in effect argue for in section 3, that Scotus's account of *esse intelligibile* is intended to be metaphysically deflationary.

It seems to me that Scotus, curiously, misses by far the most obvious argument against Henry's position, as he construes it: namely, that the imitability of the divine essence is not a relation: it is an intrinsic property that *grounds* the relation of imitation. The divine essence's having the property of imitability does not require that there are things—existent or non-existent—that actually imitate it. So God's essence is imitable even in the absence of any such things. At any rate, I hope that it is evident from my discussion thus far that Scotus rejects any kind of extramental realm of real, or actual, but non-existent, items. I return in section 3 to the question of whether Scotus accepts the reality of merely mental items distinct from the domain of real objects, and somehow distinct from any concrete accident inherent in the mind. I argue that, despite some initial language to the contrary, Scotus comes to reject any such reality.

3. The Ontological Status of *esse intelligibile*: Scotus's Reductionist Account

In his early account of the nature of God's thoughts (book I, distinction 36 of the *Ordinatio*), Scotus talks as though God's cognitive act somehow *produces* some intramental item with (merely) *esse intelligibile*, and that this item is required to be the object of God's cognition. Here are some relevant extracts from the discussion:

> God's intellection (*intellectio*), even though it is not absolutely caused, nevertheless, to the extent that it is of this secondary object (e.g. a stone), is quasi-principiated, and this by the [divine] essence as by the equivocal objective formal ground (*ratio*) [for the quasi-principiation of the cognition], and thus it is principiated to a greater degree than

[20] Scotus, *Ord.* 1.36.un., n. 21 (Vatican, vi. 279).

[the cognition] of the first object is, because this latter intellection is principiated such that it is so by a univocal objective formal ground. For an intellection, as it is of this thing, to be equivocally quasi-principiated is for the thing to be principiated in diminished being, just as for an intelligible species to be principiated in the intellect is for an object *secundum quid* to be principiated as actually intelligible. . . .

But when it is said that the act, as it is of the secondary object, is quasi-equivocally principiated, this means merely that the act is extended (*protendi*) beyond the first object (as it were) to the second object, in virtue of the objective equivocal principle. But what is it for the act to be thus extended? It is not for a relation to the second object to be in the act, or in the first object, according to you [viz. Scotus]; therefore it is for the second object to be referred to the act or the primary object. But this can only be for something that has some being (*esse*); and then that which was maintained above follows, [viz. that the secondary object has diminished *esse*].[21]

At issue is God's cognition of objects other than the divine essence—here labelled 'secondary objects', in contrast to the 'first object' of a divine cognitive act, which is simply the divine essence. The first paragraph provides a first stab at an account of this; the second then clarifies precisely what Scotus has in mind. The idea in the first paragraph is that what it is for God to know such objects is simply for the object to be 'principiated in diminished being', where 'diminished being' is here some kind of mental existence distinct from real existence. Note the parallel, in this paragraph, with an intelligible species, making clear one of the ways in which the divine case parallels the creaturely: what explains the production of an intelligible species is the principiation of *intelligible*, something merely intentional$_I$, on which the production of something intentional$_R$ is somehow parasitic—though the mechanism here and the metaphysics seem far from clear. (The modality is important: if something is *actually* cognized, then there is, of course, a cognitive act, not merely an intelligible species or dispositional cognition.)

The second paragraph explicates the notion of the quasi-principiation of the secondary object: it is for there to be an object that has some kind of reference either to the cognitive act or to the divine essence (the 'primary object'). The relation (between the secondary object and the divine cognitive act or essence) cannot belong to the divine essence, since the secondary object is in some sense caused by God, and God is not really related to things that depend on him (according to a standard medieval view about the grounding of relational predications of God). So the relation must belong to the secondary object. And the secondary object must have some kind of being or *esse* to serve as the subject of the relation. Not real being, clearly; so some kind of diminished being or *esse secundum quid*—namely, *esse intelligibile*.

[21] Scotus, *Ord.* 1.36.un., nn. 39, 41–2 (Vatican, vi. 286, 287). For the requirement of such secondary objects, see too *Ord.* 1.35.un., n. 32 (Vatican, vi. 258).

There are two crucial claims here: first that *esse intelligibile* is some kind of diminished being, and secondly that *esse intelligibile* depends on a cognitive act. Both of these claims, I take it, provide at least prima facie evidence in favour of the kind of account of this issue defended by Perler. In particular, as Peter King has argued, the discussion here involves construing *esse intelligibile* as a kind of *esse deminutum*, and in his early writings Scotus wants to allow that *esse deminutum* is a genuine case of being:

> Scotus describes *esse deminutum* in this ontological fashion [viz. as 'way of distinguishing ontological levels] in his earlier writings. For example, when he discusses the nature of the Divine Ideas in *Ord.* I d. 36 q. un. n. 45 (Vat. VI, 288), Scotus explains the relation between diminished being and ordinary being as a version of the relationship of being *secundum quid* to being *simpliciter*, likening it to Aristotle's case of the Ethiopian who is white in respect of his teeth but black overall; diminished being is genuinely a case of being, just as the Ethiopian's teeth are genuinely white, but it is not the full story with respect to its subject. If we follow out the analogy, diminished being is the sort of being something has in respect of being cognized or represented, not in virtue of what it is absolutely; it is a kind of 'partial' being, the way whiteness only partially applies to the Ethiopian.[22]

Now, in the parallel (and slightly later) *Reportatio* discussion, Scotus denies both of these claims. Scotus holds that God's cognitive act fails to be in any way distinct from (for example) a stone in *esse cognitum*: they are 'really the same'.[23] The object is included in the divine essence 'eminently'[24] or 'naturally':[25]

> I do not see that it is necessary on account of the dependence of one extreme on the other to posit relations in either extreme: not in the divine intellection (*intelligere*) in relation to a stone, because the measure never depends on what it measures; and not, conversely, in the understood measured stone in relation to the divine intellection, because a stone in merely cognized being is in reality nothing at all (*nihil secundum rem*), and for this reason has no dependence at all, because what is nothing does not depend.[26]

The issue is whether God's cognition of (possible) items other than himself requires, as the 'moderns' suppose,[27] a relation of reason. I return to this issue in

[22] King, 'Duns Scotus on Mental Content', 83.

[23] Scotus, *Rep.* 1.36.1.1–2, n. 62 (Wolter and Bychkov, ii. 409).

[24] Scotus, *Rep.* 1.36.1.1–2, n. 62 (Wolter and Bychkov, ii. 401).

[25] Scotus, *Rep.* 1.36.1.1–2, n. 70 (Wolter and Bychkov, ii. 404).

[26] Scotus, *Rep.* 1.36.1.1–2, n. 65 (Wolter and Bychkov, ii. 402–3). See too *In metaph.* 7.19, n. 32 (OPh iv. 367).

[27] Scotus, *Rep.* 1.36.1.1–2, n. 35 (Wolter and Bychkov, ii. 390). Among the moderns Scotus has in mind are Henry of Ghent, *Quod.* 8.1 (fo. 300°B) and 8.8 (fo. 312ᵛF–13ᵛF); Bonaventure (*c.*1217–74), *In sent.* 1.35.un.1 c. (*Opera omnia*, 10 vols (Quaracchi: Collegium S. Bonaventurae, 1882–1902), i. 601b) and 1.35.un.3 c and ad 1–ad 5 (i. 608a–9b); James of Viterbo (*c.*1255–1308), *Quod.* 1.5 (ed. Eelcko Ypma (Rome: Augustinianum, 1968), 64–5); Godfrey of Fontaines, *Quod.* 8.3 (PB 4/1. 48–9); Peter Olivi, *Responsio fratris Petri Ioannis ad aliqua dicta per quosdam magistros Parisienses de suis Quaestionibus*

a moment. But first I want to consider two more important claims that emerge from the passage. First of all, items with *esse intelligibile* are literally nothing (i.e. over and above the act). On the face of it, this makes the identity claim hard to construe, since it makes God's act identical with a composite of something (the act) and nothing (the item with *esse cognitum*), and a composite of something and nothing is nothing. But what Scotus is trying to say is evident enough: items with merely *esse cognitum* are nothing at all, over and above the cognitive act (here the divine essence itself, since the discussion is about necessary objects). The identity claim highlights at the very least that they are not items over and above cognitive acts: they are *reducible* to those acts. As we have seen, Scotus in the *Ordinatio* talks about *esse intelligibile* as a kind of 'diminished' *esse*. Crucially, as King has shown, Scotus drops this way of talking in the *Reportatio*, perhaps—as King has argued—because it misled his opponents into believing that diminished being was some minimal kind of real being. And, King plausibly maintains, it is because Scotus saw that talk of diminished being was potentially misleading in this way that he is explicit in the *Reportatio* that items with merely *esse intelligibile* are nothing at all:

> By the time he came to Paris, however, Scotus no longer endorsed this ontological interpretation of diminished being. His discussion of the Divine Ideas in *Rep. par.* I A d. 36 qq. 1–4 . . . drops the explanation of diminished being as being *secundum quid* as compared to being *simpliciter*. In fact, he drops all mention of diminished being. . . .
>
> When Scotus returns to the subject in his Paris lectures, he gets rid of anything that suggests the ontological reading of diminished being. Instead, he offers a starkly explicit denial . . . : 'A stone in cognized being is in reality nothing at all.'[28]

In fact, even in the *Ordinatio* Scotus claims that diminished being is nothing real, but he does not make the point with such decisiveness or clarity.[29] The lesson to take from this is that '*intelligibile*' in this context (talk of *esse intelligibile*) is a case of an *alienans* adjective: *esse intelligibile* is not a case of *esse* at all.[30]

The second key claim to emerge is that such items do not supervene on any mental item—they do not depend on any such item ('a stone in merely cognized being is in reality nothing at all, and for this reason has no dependence at all, because what is nothing does not depend'). It is for this reason that I have claimed that,

accepta (ed.Damasus Laberge, 'Fr. Petri Ioannis Olivi, OFM, Tria scripta sui ipsius apologetic annorum 1283 et 1285', *Archivum Franciscanum Historicum*, 28 (1935), 396), and, it seems to me, his earlier self. For the references, seeTimothy B. Noone, 'Duns Scotus on Divine Ideas: *Rep. Paris. I-A*, d. 36', *Medioevo*, 24 (1998), 406–7.

[28] King, 'Duns Scotus on Mental Content', 83–4.

[29] Scotus makes the point in considerable detail in *Ord.* 1.36.un., nn. 32–6 (Vatican, vi. 283–5).

[30] For this reason, I do not think it is quite right to speak of Scotus 'doubling' the forms here—positing both a real form and an intentional form—as King suggests (see 'Duns Scotus on Mental Content', 78).

however we talk about a cognitive act, its real structure is all that we are referring to (since it is all there is to refer to). Here, I think, King, in his commentary on this passage, goes slightly wrong:

> Scotus might mean that items with diminished being have *no being at all* in their own right. They are instead completely dependent, having being only in and through something else, namely the real item they accompany. But what has no ontological status of its own, yet 'exists' in dependence on another?
>
> The answer: something that *supervenes* on a given (real) item.[31]

The point about basic ontological status—*no being at all*—is well taken. But I think King is not quite right when he claims that *esse intelligibile* supervenes on the concrete accident: in the relevant passage, Scotus explicitly claims that *esse intelligibile* is nothing, and, in consequence, 'has no dependence at all'. And I take it that we should understand this reductionistically: content is reducible to real structure, and real structure is counterfactual measurability. (I mean the 'is' of identity: the real structure of the act, the assemblage of formalities, or whatever, is all there is.)

Despite his claim, in the *Reportatio*, that 'a stone in merely cognized being does not depend', Scotus persists in talking about the 'production' of an object with *esse intelligibile*, or of the object's being 'constituted' in *esse intelligibile*.[32] A discussion of abstraction in the *Quodlibet* casts some light on this:

> By the power of the agent intellect, there is generated from the phantasm in the imagination an intelligible species, or some notion (*ratio*) in the intellect, in which the intelligible actually shines out, and this real generation of a representation from a representation is said to have as a concomitant the metaphorical generation of object from object, that is, of the intelligible from the imaginable.[33]

Here two things, on the face of it, are generated: the real_{I} representation, and the $\text{intentional}_{\text{I}}$ object. But this second generation is to be understood strictly as a *metaphor*: 'the metaphorical generation of object from object' (another *alienans* adjective).

As we might expect, given the discussion of the relation of tending in Chapter 8, Scotus is happy enough to claim that (for example) a stone in cognized being has a rational relation to the divine cognitive act—though, as we have seen, it is not a causal or dependence relation. Basically, Scotus agrees with what he takes to be the opinion of the moderns, that God's cognition of items other than himself involves a relation of reason.[34] And he understands the relation of reason to consist in the

[31] King, 'Duns Scotus on Mental Content', 84.
[32] See e.g. Scotus, *Rep.* 1.36.1.1–2, nn. 54, 77, 83, and 85 (Wolter and Bychkov, ii. 397, 406, 409).
[33] Scotus, *Quod.* 15, n. 16 (Wadding, xii. 426).
[34] Scotus, *Rep.* 1.36.1.1–2, nn. 31–2 (Wolter and Bychkov, ii. 389).

relevant objects' functioning as secondary objects of divine cognition—just as in the *Ordinatio* account.[35] But he proceeds to give a wholly deflationary account of *esse intelligibile*. This relation does not involve any object other than the divine essence itself, such that the rational relation is between the divine essence and itself.[36] (This is no surprise: the medievals in general, following Aristotle, understand reflexive relations to be relations of reason: the intellect's 'treating an object as if it were two things'.[37]) In fact, the relation amounts to no more than the fact that the divine essence is imitable: which is a way of denying that there are objects of God's necessary knowledge, in any sense, other than the divine essence.[38] In line with my earlier discussion, I take it that this is just a way to talk about the contents of divine cognitive acts in the absence of any object. And in any case, Scotus does not believe that the presence of such objects is *necessary* for God's cognition of items other than himself, on the (metaphysical) grounds that God is unlimited, and that the unlimited can of itself represent anything: the divine essence, in other words, is itself the relevant representation, and intrinsically includes all semantic content.[39] My guess is that Scotus, in the *Reportatio*, is reluctant to compromise divine omniscience, as understood by the moderns, by claiming that there are items—i.e. the relations between God and possible objects—that God cannot know: albeit that these relations are relations of reason with only one real *relatum* (namely, the divine essence).

In all of these passages, barring the definitive *Reportatio* passage in which he actually explains what he means, Scotus follows his main source (Henry) in talking about intentionality as a kind of being. But the admittedly difficult material that I have attempted to discuss in this section suggests that Scotus, despite his Henrician language, wants to get rid of the notion of intentionality as a kind of being—a way in which the object exists. He could have done the job much more simply had he explicitly treated intentionality not 'as a kind of *existence* . . . [but] as the property of having representational content', in line with 'current usage'.[40] I submit that this, in fact, is what he was attempting to do, despite the convoluted language—and I take it that it is what King suggests Scotus was attempting to do too: inventing the (modern) notion of mental content as a '*feature* of the mental act'.[41] But I differ from King in one crucial respect, which I hope should by now

[35] Scotus, *Rep.* 1.36.1.1–2, nn. 47–8 (Wolter and Bychkov, ii. 394–5).

[36] Scotus, *Rep.* 1.36.1.1–2, nn. 35 and 40 (Wolter and Bychkov, ii. 390–1).

[37] Aquinas, *ST* 1.28.1 ad 2; Scotus, *Rep.* 1.31.1–3, n. 33 (Wolter and Bychkov, ii. 278); for Aristotle, see e.g. *Metaph.* 5.9 (1018a7–9).

[38] Scotus, *Rep.* 1.36.1.1–2, n. 48 (Wolter and Bychkov, ii. 394–5).

[39] Scotus, *Rep.* 1.36.1.1–2, n. 52 (Wolter and Bychkov, ii. 396).

[40] Pasnau, *Theories of Cognition*, 35.

[41] King, 'Duns Scotus on Mental Content', 65 n. 2: my italics.

be clear: it is simply the *real* structure of the representational item that explains content; nothing supervenient on it; nothing else at all, spooky or not. So, in terms of the terminology I introduced in Chapter 1, the item that has the property of having representational content is intentional$_R$; and we cannot, in Scotus's view, speak properly of items that are merely intentional$_I$, despite his tendency to do so in early writings. And note that, as we might expect given my discussion in Chapter 8, this account of mental content is not at all explanatory: Scotus says nothing about what it is in the real structure of a cognitive act that explains its representational function. But perhaps this is no surprise: we know little enough about the real structures of such things even now, and very little indeed if we accept some kind of substance dualism, or some view that locates intellectual cognition fundamentally in the immaterial soul.

4. *Nihil secundum rem*

I basically agree with King's deflationary reading on this crucial issue, which is why I quoted it at such length. But understanding all of it requires a further and more precise sense of how Scotus construes the claim that *esse intelligibile* is 'nothing in reality' (*nihil secundum rem*), taking into account a further, late, discussion. I think it is possible to piece together what Scotus means, though it is not a straightforward matter. The most significant piece of the puzzle can be found in a long discussion found in the *Quodlibet* of the different senses of *res* ('thing') or *ens* ('being')—terms which Scotus takes to be synonymous. The discussion largely involves dividing the concept of *being* into ever more determinate categories, beginning with the very first division of *ens* into *ens reale* and *ens rationis*—the division which is relevant to my discussion. Scotus claims that, in their very widest sense, 'thing' and 'being' include in their extension anything that is 'not nothing', and 'what is nothing is that and only that which includes a contradiction, for this excludes every existence both outside the intellect and in the intellect'.[42] Thus construed:

> 'being' or 'thing' . . . is taken entirely most generally, and includes anything which does not include a contradiction, whether this be a being of reason (*ens rationis*)—that is, having being only in the thinking (*considerante*) intellect—or a real being (*ens reale*), having some entity apart from the intellect's thought.[43]

Here, then, we seem to have a sense of 'being' and 'thing' in which their extension includes merely intentional$_I$ items—perhaps suggesting that the merely intentional$_I$ does indeed have some kind of spooky existence; and if not existence, at least

[42] Scotus, *Quod.* 3, n. 2 (Wadding, xii. 67).

[43] Scotus, *Quod.* 3, n. 2 (Wadding, xii. 67).

spooky being. But this would be a mistake, I think: 'being' or 'thing' in this sense are not ways of picking out the actual referents of substantives. What Scotus is interested in picking out here is simply non-contradiction: the domain of *being* is simply that of the non-contradictory, without any thought that there is any *actuality* to whatever is thus identified. Thus, the account of the extension of *being* ('anything which does not include a contradiction') does not mention (real) *existence*, and so allows Scotus to propose a general sense of 'being' that allows it to embrace mental items too.[44]

Scotus makes the point very elegantly elsewhere, contrasting *man* and *chimera* in the case that, as a matter of fact, there are no human beings, and given that the concept *chimera* is logically contradictory:

> The first reason, not reducible to any other reason, why existence (*esse*) is not incompatible with man is simply that man is formally man (and this is so whether [man is understood] really, in reality, or intelligibly, in the intellect), and the first reason why existence is incompatible with chimera is that chimera is chimera. Therefore this negation, *nothingness*, is in one way in man considered from all eternity and in another way in chimera considered from all eternity, but it nevertheless does not follow from this that one is more nothing than the other.[45]

The point about consideration 'from all eternity' is simply that Scotus is supposing that God can think of humanity even given that there are no human beings in existence: the assumption, true and reasonable enough, is that there have not always been human beings. Neither *man* considered from all eternity nor *chimera* so considered is in any sense real: neither 'is more nothing than the other'. One, however, but not the other, can be the contents of a concept (since there are no concepts of *impossibilia* according to Scotus, and nothing is a lion, goat, and snake all over (as Scotus seems to be conceiving of the situation)). 'Nothing', then, excludes both concepts—(non-existent) *man* and *chimera*—from the domain of the real, or the domain of what has any kind of existence—after all, no one supposes that the concept of chimera has any kind of existence (it lacks *esse intelligibile*, after all), and *pari passu* talk of a thing that is merely *esse intelligibile* is misleading: there is no such thing, just as there is no such thing as the concept *chimera*.

[44] This marks a considerable refinement over the oft-quoted but slightly different definition that Scotus elsewhere gives of 'being', according to which 'a being (*ens*) [is] that to which existence (*esse*) is not repugnant': Scotus, *Ord.* 4.8.1, n. 23. (Vatican, xii. 5). This definition seems to entail that there is no sense in which *entia rationis* count as beings in some way: something that Scotus here rejects, albeit that, in line with what I have argued, he offers a very deflationary account of being in this context.

[45] Scotus, *Ord.* 1.36.un., n. 62 (Vatican, vi. 296–7).

Scotus wonders—as an interesting side question—whether 'being' in this sense is univocal or analogical: is the sense of 'being' as it extends over both real and rational things the same or not:

> And in this most general understanding, just as anything conceivable, which does not include a contradiction, is said to be a thing or a being (whether that commonness is one of analogy or of univocity, I do not now care).[46]

The question of the univocity of 'being' in this broadest case remains unresolved, and it is easy to see why Scotus might be hesitant to commit one way or the other. On the one hand, Scotus could claim that '(a) being' in this sense—as in '*x* is a being'—is univocal, simply meaning 'non-contradictory' or 'thinkable'. On the other hand, he might be moved by the thought that 'being' in one sense refers to all and only those things that could be referred to by—as we would put it—the subjects of true existentially quantified sentences, and that it is hard to see how this sense could have anything in common with another sense in which 'being' could never so refer.

On the one occasion known to me when Scotus addresses the issue directly, he is broadly agnostic, though he seems slightly to prefer the view that there is no univocal sense of 'being' in this broadest case. The question is whether there is any common feature shared by real and rational relations, and Scotus seems to incline towards the view that there is no common sense of 'relation' applicable in the two cases. His reason for this is that unreal things cannot belong to real species.[47] But this, of course, is irrelevant to the question of a term's meaning, since meanings—for example, nominal definitions—do not have to be restricted to real genera and real species. And Scotus goes on to make just this point: as he notes, the category of quantity includes number, and number is (on one view) something mind-dependent: thus something mind-dependent is included in a category, and so susceptible of real definition.[48] Scotus proposes that the primary division of *being* is into *real being* and *rational being*, and that genera can include unreal items—i.e. conceptual contents.[49] This proposal, of course, amounts to the view that *being* could be a genus whose extension includes both existent and non-existent items, and both real things and concepts—though with the various *caveats* that Scotus adds to the

[46] Scotus, *Quod.* 3, n. 2 (Wadding, xii. 67).

[47] Scotus, *Rep.* 1.29.un., n. 9 (Wolter and Bychkov, ii. 238).

[48] Scotus, *Rep.* 1.29.un., nn. 11–12 (Wolter and Bychkov, ii. 239–40). For the view that number is mind-dependent, see Scotus, *Rep.* 1.24.un., n. 49 (Wolter and Bychkov, ii. 42–3); in the discussion of the univocity of 'relation', Scotus leaves the question of whether some unreal items admit of real definitions as a *dubium*: see *Rep.* 1.29.un., n. 12 (Wolter and Bychkov, ii. 240).

[49] Scotus, *Rep.* 1.29.un., n. 12 (Wolter and Bychkov, ii. 240).

effect that *being* thus understood merely reflects common usage of the term 'being', and is not supposed to include any strong metaphysical commitments.[50]

Medieval accounts of concepts generally assume that the distinction between concepts under whose extension real things fall (first intentions) and concepts under whose extension concepts fall (second intentions) is exhaustive and exclusive. On the face of it, adopting a view that makes being in this broad sense univocal would entail abandoning the view that the distinction between first and second intentions is exclusive: the concept of being would be both a first-intention concept and a second-intention concept.[51] But Scotus leaves the issue doubtful, and later suggests that, if it is denied that genera can include *entia rationis*, then there is no sense of 'being' univocal to *ens rationis* and *ens reale*. And the motivation for this view is to press home the point that there is *no* sense other than that of merely non-contradictoriness in which an *ens rationis* is a kind of being.[52]

The whole discussion, despite some appearances to the contrary, is not designed to push us towards any kind of Meinongian view. (Henry's perhaps is, I am not sure; and Conington's certainly so.) While Scotus does indeed distinguish *ens* (being) from *esse* (existence), he does not want to commit himself to the view that there is a sense in which all beings are, or that there *are* some things of which it is true to say that they are not, or do not exist. 'Being' in the broadest sense is not supposed to pick out things that could be referred to by the subjects of true existentially quantified sentences, and it would be a mistake to construe Scotus's talk in ways that required him to *refer* to anything (real or spooky) when using the term 'being'. There is no doubt that Scotus's way of talking is less perspicuous than it might be. But the whole point, as I have tried to argue in this chapter and in Chapter 8, is to give an account of mental content in the case that the relevant mental states (acts, species) lack objects, and thus to *distinguish* between object and content in ways that Meinong's project does not allow—and, indeed, is specifically designed to avoid.

So, as implied in King's discussion, Scotus is trying to express a distinction between object and content in the absence of a term such as 'content' that might correspond to the sense that King (and I) have in mind. And I say (against King) that Scotus's notion of content is fully explained by the notion of measurability construed as resulting from the intrinsic real structure of a real mental event.

[50] See Scotus, *Quod.* 3, n. 2 (Wadding, xii. 67).

[51] For the evolution of this line of thinking in the later Scotist tradition, seeSabine Folger-Fonfara, *Das 'Super'-Transzendentale und die Spaltung der Metaphysik: Der Entwurf von Franziskus von Marchia* (Leiden, and Boston, MA: Brill, 2008).

[52] Scotus, *Rep.* 1.29.un., n. 19 (Wolter and Bychkov, ii. 243–4).

Given the claim of Brower and Brower-Toland, discussed in Chapter 8, that Aquinas accepts a primitive non-relational theory of intentionality, it is perhaps no surprise that they interpret Aquinas on the question of *esse intentionale* in much the way that I interpret Scotus:

> There are passages in which Aquinas speaks as if he accorded a type of being even to nonexistent objects—namely, 'intentional being' or 'being of reason' (*ens rationis*). At first blush, such passages might suggest, not only that there is a realm of nonexistent objects, but also that the introduction of this realm is motivated precisely by the assumption that intentionality always consists in a relation—in this case to something having merely intentional being. Yet, while it is certainly possible to read Aquinas's treatment of beings of reason in this way, we deny that it is the only or the best way to read it. On the contrary, when Aquinas characterizes (say) a centaur as a being of reason, we think that he is best understood as referring to the concept of a centaur—in effect, to be saying that there is nothing in extramental reality corresponding to the concept.[53]

On Aquinas, I am unsure, as I said at the end of Chapter 8. But this seems to me to represent precisely Scotus's considered view, as I have tried to argue in this chapter.

[53] Brower and Brower-Toland, 'Aquinas on Mental Representation', 232.

Concluding Remarks

I have proposed a number of novelties in this account of Scotus, and in these very brief concluding comments I try to draw together some of the things that I have claimed. Part of my procedure will be to draw attention to some parallels with Ockham, aspects of whose theory of cognition seem to me to be much closer to Scotus's than commentators have supposed.

First of all, Scotists in the years—indeed, centuries—after Scotus's death devoted a great deal of intellectual effort to a discussion of the ontological status and function of *esse intelligibile* or *esse obiectivum*: the being of intentional$_I$ items. And they did so largely in the context of an attempt to understand and explain Scotus's own views. If my argument here is correct, this is exegetical effort that was largely wasted, since (despite the great intrinsic interest it has on its own account) it does not reflect Scotus's own, largely deflationary and reductionist, account of *esse obiectivum* and mental content. While his followers supposed him to posit *esse intelligibile*, and to do so in order to do some heavy metaphysical lifting, Scotus himself does no such thing. His account is reductionist, and *esse intelligibile* does *no* work in his account of mind—or, at least, in his later account of mind. Or so I have argued.

And, if my argument here is correct, this is not the only surprise. A similarly reductionist account came to be adopted by Ockham—and my reading thus makes Scotus far closer to Ockham than is generally imagined. It is fairly well known among commentators on Ockham that Ockham changed his mind on the nature of mental content. In his early work, he posited the existence of mental entities known as *ficta*: intentional items (intentional$_I$) whose role is to explain the mental content of mental acts. Ockham sees them as the mental *objects* of acts with universal content.[1] But later, Ockham comes to the view that the mental acts themselves, real qualities, inherent in the mind, can function as signs of collections of particulars.[2] The details, of course, are different—not least, Ockham's claim that

[1] Ockham, *Ord.* 1.2.8 (OT ii. 271–4).
[2] Ockham, *In periherm.* 1.prooemium, § 6 (OPh ii. 351–8).

the content of acts of abstractive cognition consists in its being a sign of a collection of particulars. But the crucial claim—that content is reducible to the real quality, the item 'subjectively' in the mind, inherent in the mind as a subject—is the same. On neither view is there any place for the merely intentional$_1$.

So too, I maintain that Scotus has an account of mental language, that, while not particularly like Ockham's, clearly anticipates aspects of Ockham's own theory. And, since it requires structural complexity (which Ockham's does not), it is in some ways clearer and better than Ockham's own.[3]

Scotus's account of intuitive cognition represents a novel attempt to account for the conceptual content of singular predications, one that received widespread (though far from universal) endorsement. If I am right it is more similar to Ockham's than is largely credited. Particularly, it seems to me, Scotus comes to affirm—like Ockham—the reality of the intuitive cognition of extramental, material, objects. And I argued that intuitive intellectual cognition requires an *act* of sensation, not merely prior sensible species. This is precisely Ockham's view too.[4] There are differences, of course; in particular, Scotus (unlike Ockham) does not maintain that an intuitive cognition causes a (further act of) *judgement*. And Ockham allows for action at a distance and thus rejects the need for sensible species in intuitive cognition.[5]

Ockham's denial of species relates not merely to the question of action at a distance. As we saw, Scotus posited species to account for memory, among other things. As he sees it, memory requires stored mental content. Ockham adopts an entirely different view: memory is accounted for merely by positing dispositions to recall things (rather like the account one might have wished Henry of Ghent had adopted).[6] To some extent, Scotus's internalism tends to undermine his argument (against Henry) that species are required to fix the content of abstractive acts, although not his view that habitual cognitions must themselves be content-bearers, and not mere dispositions to have cognitive acts with such-and-such contents.

And in another, even more significant, respect, Scotus's theory of cognition stands at the opposite pole to Ockham's. Ockham is (according to most commentators) a committed externalist in the question of mental content: the content of acts is fixed entirely by their causal relations to extramental objects.[7] Ockham

[3] For Ockham's denial of the necessity for syntactic complexity, something that has caused his commentators great difficulty, see Ockham, *In periherm.* 1.prooemium, § 6 (OPh ii. 356). I am grateful to Eric Hagedorn for this reference.

[4] Ockham, *Ord.* 1.3.6 (OT ii. 494).

[5] See Ockham, *Rep.* 2.13–13 (OT v. 309).

[6] Ockham, *Rep.* 3.3 (OT vi. 116).

[7] On this, see Panaccio, *Ockham on Concepts*, Ch. 1.

accepts, in the modern terminology, a theory of wide content. Scotus radically disagrees: the content of acts is fixed largely by their own intrinsic structures (and wholly so in the case of abstractive cognitions): Scotus adopts an internalist, narrow, theory of mental content.

To the extent that Scotus accepts species in all parts of his philosophical psychology, he is a representative of the kind of fusion of Aristotelian and Islamic ideas that is characteristic of the late thirteenth century—quite different from the kind of thing we find in (say) Ockham, or even Olivi. But he reinterprets the theory in the light of his own, hypostatizing, ontology. For example, it might be thought that a central feature of the species theory, in its developed Aristotelian form, is the view that dispositions (species) and acts are the same thing existent somehow with greater or lesser degrees of actuality. We saw this view in Sutton, for example. But Scotus strongly disagrees (and thus distances himself from what we might think of as classical species theory). Species and acts must be distinct particular items, and the production of an act *over and above a species* is what it is to think or sense. This is novel. To some extent, it is a function of Scotus's metaphysics, not his psychology—albeit that it allows Scotus to develop his narrow theory of mental content (since the acts have their own intrinsic structure in virtue of which they represent). But it relates too to perhaps the most striking feature of Scotus's account: the rejection of the Aristotelian view that cognition, dispositional and occurrent, consists in the inherence of the form of the external object in the cognizer. This forces Scotus to confront head on the question of the causal processes involved, since it cannot be the case—as on the Aristotelian view—that the mind is fundamentally passive, or that its causal role simply consist in uncovering what is already in some sense present (viz. the universal in the phantasm, or something like that). At all stages, the mind has to produce things: species and acts. And the object must be the other cause, since (in standard cases) what is produced is supposed in some sense or another to represent the object, and it is hard to see how it could do that naturally if the object had no causal role in producing it. In terms of the metaphysics, Scotus seems to have replaced Aristotle's *formal* causation with some kind of *efficient* causation. But Scotus would believe himself to have both metaphysical and psychological reasons for doing so: first, his hypostatizing metaphysics, and secondly his exposure of the explanatory emptiness of Aristotelian formal sameness. But the view is far from mechanistic, given Scotus's very strong conception of the role of the will in conscious thought.

And the rejection of the view that an act is simply an actualized disposition opens the way both for the inchoate account of mental language, and for the introspective view of consciousness as involving a higher-order, reflex, thought. Actualized dispositions are 'perfect' forms, and there is no place for the inherence

of more than one in any given subject. But Scotus does not have to accept this. A higher-order, reflex thought is distinct from the thought that it is supposed to make introspectively conscious. But the two thoughts are supposed to be simultaneous. Hence the requirement that more than one thought can inhere in the soul at once.

A radically different response to species-theory is found in Henry of Ghent, who might be thought of as simply replacing any real ($real_I$) accident in the soul with merely intentional ($intentional_I$) ones. On this reading, there would be something to be said for the view that Henry invents the notion of the purely intentional; or even, as I have suggested, Aquinas (depending on how we should understand Aquinas's conception of thought as an operation). Scotus, as we saw, denies that anything could be merely intentional ($intentional_I$); and ultimately comes to the view that any kind of $intentionality_I$ should simply be reduced to the real representational accident ($real_I$/$intentional_R$).

As this very brief summary might suggest, Scotus represents something of a transition position, adopting many aspects of thirteenth-century psychology while at the same time inventing, or anticipating, many aspects of fourteenth-century psychology. While some of the detailed arguments (particularly in defence of intelligible species) do not fit nicely within the overall system, there is no reason to suppose that the overall system lacks systematic coherence. Looseness at the edges, and any appearance of non-systematicity, is probably merely a function of the fact that Scotus's thoughts on these (as on most other) matters was in a state of constant, lively, and sometimes radical development.

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General index

C

Index Locorum