Chapter 17
Concepts and Concept Formation in Medieval Philosophy

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The opening passage of Aristotle's *De interpretatione*, usually read together with Boethius's two commentaries on the work, was an important source for the medieval understanding of concepts. Aristotle there refers to the conceptual entities in the mind as 'passions of the soul' (*passiones animae*), but Boethius prefers to call them 'understandings' (*intellectus*). These understandings are likenesses (*similitudo*) of things and they mediate between spoken words (*vox*) and external things (*res*) in signification. The concepts are natural in the sense that they are the same for all nations. Boethius's commentaries were widely read since at least the twelfth century. The writings of Augustine were another main source already available in the early Middle Ages. Augustine is the classic authority for the view that the universals exist *ante rem* as ideas in the divine mind. He is also known for the theory of illumination, according to which human beings depend on the assistance of divine light for their intellectual operations. Augustine holds that illumination plays a role in concept formation, but he does not present any detailed account of how this takes place. In addition, Augustine develops the view of interior words of a specific kind. He distinguishes between two intellectual powers in the human mind: memory (*memoria*) as a 'treasure-house' of latent knowledge, and intelligence (*intelligentia*) as the power that brings pieces of knowledge into the focus of actual attention. The interior word (*verbum interior*) is an act of intelligence born from a piece of knowledge in the memory. Augustine develops this view in a theological context to provide an analogy for the Trinitarian doctrine. Anselm of Canterbury, in the eleventh century, brings together Augustinian and Boethian ideas in his analysis of internal speech. Anselm's synthesis affected the way in which Augustine's remarks about the interior word were construed in later discussion (**1**).

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The Arabic thinkers continued the Ancient discussion about active and passive intellect and their nature and function. (The active intellect was also called 'agent intellect', and various names were used of the passive intellect in its different states, including 'material intellect' and 'potential' or 'possible' intellect.) According to Avicenna, the passive intellect is the highest immaterial part of the human soul, whereas the active intellect is a separate substance. In his view, human cognition about material objects is, ordinarily at least, based on an abstraction in which the form of the object is gradually separated from the matter and attachments related to matter. In an advanced stage of the process, after the external and internal senses have performed their functions, the active intellect illuminates the images of things in the imagination and the passive intellect, and the completely abstracted form of the thing becomes imprinted on the passive intellect. At the same time, Avicenna stressed that the intelligible forms emanate into the passive intellect from the active intellect. They will not be stored in the soul but will be received again when needed. Averroes famously held that not only the agent intellect, but also the material intellect, is a separate substance which is common to all humans. Nevertheless, the agent intellect and the material intellect function in each human being closely connected to his or her individual sensory experience, and are thus attributed to him or her (**2**).

The Aristotelian-Arabic *De anima* tradition of psychology entered the Latin discussion gradually during the latter half of the twelfth century and the first half of the thirteenth century. It interacted in various ways with the Augustinian theological psychology, which had been predominant until that time. The view that the active intellect plays a central role in concept formation was widely shared in the early thirteenth century. However, few Latin thinkers held that active intellect is a separate substance. Combining Arabic influences with the Augustinian doctrine of illumination, some thinkers identified active intellect with God ('Avicennising Augustinianism'). The most common position, however, was to take both the active intellect and the possible intellect as powers of an individual human mind. This was taken to be Averroes's view, and Averroes's sayings were used for criticising Avicenna's view of active intellect. A more accurate interpretation of Averroes was achieved around the middle of the thirteenth century, and he gained some followers (Latin Averroism) (**3**).

In the Aristotelian view, the intellectual cognition of an external object requires the presence of the object's form in the intellect. The late thirteenth-century standard account of how the form of the object gets into the intellect further developed the description of the complex psychological mechanism that had emerged in the Arabic tradition. Intellectual cognition is based on sensory cognition, but there is a major shift between these two, because both the organs and the objects of sense perception are material, whereas intellectual cognition is immaterial and universal. The active intellect plays a central role in this transfer from the sensory to the intellectual. The sensory information processed by the interior senses is stored in the sensory memory as phantasms, which are sensory likenesses or representations of particular things (cf. pp. 141, 210, 216 above). The active intellect illuminates the phantasms and abstracts the intelligible content in them by stripping them from their accidental features. The universal forms thus abstracted will be imprinted in the possible intellect as intelligible species (*species intelligibilis*), and the intellect can then use them in

intellectual operations. The intelligible species are universal representations of objects in the intellect, and some scholastic thinkers identified them as concepts. However, the standard view in the late thirteenth and the early fourteenth century was to regard the intelligible species and the concept as two distinct entities. The writings of Thomas Aquinas were instrumental in the development of this view, even though the details of his account vary from one work to another. In some important passages he distinguishes (1) the intelligible species, (2) the act of understanding and (3) the concept. Here, the intelligible species precedes the act of understanding and makes it possible, whereas the concept (*conceptio intellectus*) is seen as the end-product of the act. Thomas associates the concept both with the definition of the thing and with the Augustinian interior word (*verbum*) (**4**).

There was a great deal of dispute concerning issues related to concepts in the late thirteenth and early fourteenth century. Much of the argument revolved around Aquinas's ideas, but there were also some highly original contributions. Peter John Olivi was among the early critics of Aquinas's views. He identified the act of understanding as the concept, and denied that there are either intelligible species preceding such acts or end-products terminating them. Other critics of the intelligible species included Henry of Ghent and Godfrey of Fontaines. Against these criticisms, John Duns Scotus defended the necessity of postulating intelligible species which are distinct from concepts and precede the acts of understanding. Scotus and some others discussed the mode of existence which concepts have as end-products or objects of acts of understanding. It was assumed that concepts have a special mode of being: they exist 'objectively' or 'intentionally' by being objects of understanding, whereas the intelligible species are forms inhering in the intellect (**5**).

The thought of William of Ockham opens a new phase in medieval discussion on concepts. He developed an alternative to the *De anima* approach on the basis of his nominalist ontology. Ockham rejected the idea that intellectual cognition requires the presence of the object's form in the intellect, and he rejected the doctrine of species in all its forms, including intelligible species. He criticised the species as speculative and unnecessary and as a representationalist hindrance to direct realism in concept formation. This criticism was put forward earlier by Olivi, Durandus and others; however, for Aquinas and Scotus, the species in the intellect is an *activator* of the power of understanding, rather than its object. For Ockham, concepts are acts of understanding. More precisely, concepts are abstractive acts of understanding, as opposed to intuitive acts. An intuitive act of understanding is about a present particular object as existing, whereas the abstractive act of understanding does not require the presence of the object and is universal in the sense that it is applicable to many objects (say, to all the members of a species). In Ockham's view, the human mind is so constructed that it is capable of forming concepts of the things it encounters under suitable conditions. Ontologically, concepts are qualities: they are states in which the intellect can be. There is a strong emphasis on the viewpoint of logic and semantics in Ockham's approach. He developed a theory of mental language, and concepts or mental words are among the basic units of that language: they are terms of the mental language. As terms of a language, the concepts are signs, and they have the kind of semantic properties that terms have (**6**).

1 Ancient Latin Sources

a. What are spoken are signs of the passions in the soul, and what are written are signs of those that are spoken. And in the same way as written letters are not the same for everyone, so the spoken sounds are not the same. But the primary things of which these are signs, the passions of the soul, are the same for all; and those of which these are likenesses, namely the things, are also the same. (Aristotle, *De interpretatione* 1, Translatio Boethii)

b. Hence, there are these four: the thing, the understanding, the spoken word, and the written word. The understanding conceives the thing, the spoken words signify the understanding and, again, the written words signify the spoken ones.

The understanding is truly a passion of the soul. For unless the one who understands a thing bears a kind of likeness of it in his soul's reason, there is no understanding. For when I see a circle or a square, I conceive its form by my mind and a likeness of it is formed in my soul's reason, and the soul bears the likeness of the thing understood. Therefore, the understanding will be both a likeness of the thing and a passion of the soul.

Of these four, then, two are natural and two derive from human imposition, for spoken words and written words derive from imposition, whereas understandings and things are by nature. This is proved by the fact that different nations use various spoken words and written words, for the reason that they have themselves composed the spoken words they would use and the written words they would put in writing. But no-one has made up the understandings or the things: instead they are by nature, for what is a horse among the Romans is not a stag among the barbarians – the nature of the things is the same among different nations. Further, it is not the case that the barbarians regard as a dog what we understand to be a horse. The reason of the substances and understandings is the same among nations most unlike. (Boethius, *In Aristotelis Peri hermeneias commentarii I*, ed. Meiser (37–38))

c. In order to appear to translate word for word, we can call ideas either 'forms' or 'species' in Latin. But if we call them 'reasons', we surely move away from a proper translation – for reasons are called '*logoi*' in Greek, not ideas – but nevertheless, whoever wants to use this term is not in conflict with the thing itself. For ideas are particular principal, steady, and immutable forms or reasons of things. They are not formed themselves, and hence they are eternal and always remain in the same way, and they are contained in the divine understanding. And while they neither arise nor perish, still everything that can arise and perish, and everything that does arise and perish, is said to be formed according to them … The singular things are therefore created with their own reasons. But where should we judge these reasons to be, if not in the mind of the Creator? For he did not look at anything situated outside himself to establish what he established; it would be a sacrilege to think so. Therefore, as these reasons of all things that either are created or are to be created are contained in the divine mind, and there cannot be anything in the divine mind that is not eternal and immutable, and Plato calls these principal reasons of things

'ideas'; they are not only ideas, but they are also true, because they are eternal and immutable, and always stay the same way. And whatever there is, regardless of its way of being, comes to exist by participation in them. (Augustine, *De diversis quaestionibus octoginta tribus* 46.2)

d. … we should rather believe that the nature of the intellectual mind is so formed that, being subjoined in a natural order, according to the disposition of the creator, to intelligible things, it will see these things [i.e., the geometrical things under discussion] in a sort of incorporeal light of its own kind, just as the eye of the flesh sees the things which lie about it in this corporeal light, a light which it is able to accept and to which it is suited. (Augustine, *De trinitate* XII.15.24)

e. For that light is already God Himself; the soul, on the other hand, is a creature, although in reason and intellect it is made in his image. And when the soul tries to fix its gaze upon that light, it quivers in its weakness and it is not quite able to do so. Yet it is from this light that the soul understands whatever it is able to understand. (Augustine, *De Genesi ad litteram* XII.31.59)

f. But you will easily see that the numbers themselves are not perceived by the bodily senses, if you reflect that every number is named on the basis of how many times it contains one … But if you have a true notion of 'one', you will certainly find that 'one' cannot be perceived by the bodily senses. Whatever is perceived by a bodily sense is clearly not one but many, for it is a bodily thing and so has countless parts. … Moreover, if we do not perceive 'one' by the bodily sense, we do not perceive any number by that sense, at least of all those numbers that we distinguish with the understanding … How, then, do we recognise that there is this secure, perpetual, and unchangeable order for all numbers … unless we see it by an inner light of which the bodily sense knows nothing? … For those to whom God has given the gift of reasoning and whose wit is not darkened by obstinacy, these and other such instances make it clear that the order and truth of numbers does not concern the bodily senses, but that it does exist, immutable and complete, and is there to be seen in common by everyone who uses reason. Many other things also suggest themselves which are present in common and, as it were, publicly, to those who use reason; these things are perceived by the mind and reason of each person individually, and yet they remain intact and unchangeable. (Augustine, *De libero arbitrio* II.8.22–24)

g. Whoever, then, is able to understand a word, not only before it sounds, but even before the images of its sound are considered in thought – this is a word that belongs to no language, that is, to none of the languages which are of different nations, of which ours is Latin – whoever, I say, is able to understand this, is already able to see through this mirror and in this enigma a certain likeness of that Word of whom it is said: 'In the beginning was the Word, and the Word was with God, and the Word was God' [John 1:1] … The human mind, then, keeps in the treasure-house of the memory all these things that it knows by itself, by the senses of the body, and by the testimonies of others. From them a true word is begotten when we say what we know, but a word that is before all sound and before all thought of sound. For the word is then most like to the thing known, from which also its image is begotten,

since the sight of thought arises from the sight of knowledge. This is a word belonging to no language, a true word about a true thing, having nothing from itself, but everything from the knowledge from which it is born. (Augustine, *De trinitate* XV.10.19–12.22)

h. For in ordinary usage we recognise that we can express the same thing in three ways … For example, I express a man in one way when I signify him by the word 'man', in another way when I think this same word silently, and in a third way when my mind beholds the man himself either by means of an image of a bodily thing (as when it imagines his sensible appearance) or by means of a reason (as when it conceives his universal essence, which is rational, mortal animal). Each of these three kinds of speaking has its own kind of words. Yet, the words of the kind of speaking which I mentioned third and last, since they concern things which are not unknown, are natural and are the same for all nations … No other word appears so similar to the thing of which it is a word, or expresses it in the same way, as does that likeness which is expressed in the gaze of the mind of someone conceiving the thing itself. Therefore, it is rightly to be called the most proper and principal word for the thing. (Anselm of Canterbury, *Monologion* 10)

The opening passage of Aristotle's *De interpretatione* (**a**) and Boethius's comments on it (of which **b** is an extract) were important for the framework in which concepts were approached in medieval thought: there are concepts or 'understandings' in the human mind that correspond to the words (in particular, nouns) of spoken language; the concepts are natural in the sense that they are the same for all people, whereas spoken words are conventional and vary from nation to nation; semantically, concepts mediate between words and things: words primarily signify concepts and only secondarily the things in the world; concepts are likenesses of things, as the form of a square in the mind is a likeness of a square that has been seen. As *De interpretatione* and Boethius's commentaries were used in logic teaching, a medieval university student would come across these ideas in an early phase of his education.

Augustine gives his approval to the Platonic doctrine of ideas when these are interpreted as 'immutable forms or reasons of things' which are in God's mind. God creates the universe according to these ideas, and the created things participate in them (**c**). This view was shared by almost all Christian thinkers in the Middle Ages before Ockham. Augustine's theory of illumination (**d**, **e**, **f**) is obviously related to the same view. Augustine does not claim, however, that divine illumination makes it possible for human beings to see the ideas in the divine mind. Rather, the intelligible structure which human beings see in the divine light appears to be situated beneath the actual divine sphere. Augustine often uses mathematical examples to establish that the immutable intelligible structure is there for every rational mind to reach. He also

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discusses numbers, like 'one', to establish that there are notions that the human mind cannot form on the basis of sense perception alone (**f**). In the theological treatise *De trinitate*, Augustine works to provide analogies that elucidate the doctrine of the Trinity. One of the analogies is between the human interior word (*verbum interior*) and the Divine Word (*Verbum*), i.e. the second person of the Trinitarian God. In the background is a distinction between memory, which is a treasure-house of knowledge, and intelligence, which is a power that brings pieces of knowledge into the focus of actual attention. The human interior word is an act of intelligence born from a piece of knowledge in the memory, and in the same way the Word (the Son) is born from the Memory (the Father) (**g**). Bonaventure later offered a succinct statement of the interior word in the context of a Trinitarian analogy: 'Moreover, if we consider the order, origin and relationship of these powers of the human mind, it leads us to the blessed Trinity itself. For from the memory arises the intelligence as its offspring, because we understand only when the likeness, which is in the memory, is reproduced in the gaze of the intellect, and this is nothing other than the word' (Bonaventure, *Itinerarium mentis in Deum* 3.5). Like Boethian 'understandings' (**b**), Augustine's interior words do not belong to any particular language and are the same for all people. In the eleventh century, Anselm of Canterbury brought together Augustinian and Boethian ideas in his division of three kinds of words (*verba*) and three kinds of speaking of a thing (**h**). Anselm tones down the idea that the interior word should be seen in contrast with a piece of knowledge in the memory, and he connects the interior word to the Aristotelian idea of 'likenesses'. The connection between one kind of interior word and the definition of the thing is noteworthy.

2 Avicenna and Averroes on Intellectual Cognition

a. We say that the human soul first potentially understands and then comes to actually understand. But what comes into actuality from potentiality can only do so through some cause which is actually of that kind and brings it to actuality. There is, therefore, a cause by which our souls are brought from potentiality to actuality regarding intelligible things. But the cause of intelligible forms must be an actual intellect which possesses the principles of abstract intelligible forms.

This intellect is related to our souls in the same way that the sun is related to our sight. For just as the sun is actually seen in itself, and things that were not seen are actually seen in its light, this is also the case with this intellect in relation to our souls. For when the rational power considers the particular things which are in

the imagination, and this is illuminated by the light which is directed to us from the active intellect that we were talking about above, they become stripped of matter and its attachments, and are imprinted in the rational soul – not so that they themselves pass from imagination to our intellect nor so that the intention which depends on many things makes a likeness of itself … but rather so that the consideration of these particulars prepares the soul so that what is abstract emanates upon it from the active intellect. (Avicenna, *Liber de anima* V.5 (ed. van Riet, 126–127))

b. The relation of this intellect [i.e. the active intellect] to what is understood is in one respect like the relation of light to colours. That is, just as light is that which makes colours become colours in act after they were in potency, and which gives the pupil of the eye that by means of which it receives colours, that is, transparency, similarly this intellect is the agent and creator for what is understood, and it gives the hylic intellect that by means of which it receives what is understood, I mean that it gives the hylic intellect something resembling the transparency in sight, as has become clear before. (Averroes, *Middle Commentary on Aristotle's De anima* (296), ed. Ivry (116), trans. Jari Kaukua)

c. It is clear that this [i.e. the active intellect] is in one respect an agent and in another respect a form for us, since it is up to our will to give birth to what is understood, that is, when we want to understand something that we have understood, our intellection of it is nothing else than first creating and secondly receiving what is understood. The thing that has the same status in relation to the intellect as the colours in potency have in relation to light is the individual intentions in the imaginative faculty, I mean that this intellect makes them become actually understood after they were in potency. It is clear about the matter concerning this intellect, which is a form for us in one respect and the agent for what is understood in another respect, that it is separate and that it is neither generated nor corruped, for the agent must always be nobler than what is acted upon and the origin nobler than hyle. The intelligent and intelligible aspects of this intellect are essentially the same thing, since it does not understand anything external to itself. It is necessary that there is an active intellect here because the agent for the intellect must be an intellect, since the agent can only give a resemblance of what is in its substance. (Averroes, *Middle Commentary on Aristotle's De anima* (297), ed. Ivry (116), trans. Jari Kaukua)

d. For in the same way that the sight is not moved by colours except when they are actual (which does not take place except when the light is present, as the light is what draws them from potentiality to actuality), in the same way the imagined intentions do not move the material intellect except when they have been actually understood, which is not realised in them except when there is something present which is intellect in actuality. And it was necessary to attribute these two actions, namely receiving the intellection and making it, in us to the soul, even though the agent and the recipient are eternal substances, for the reason that these two actions depend on our will, namely, to abstract that which is understood and to understand it. For abstracting is nothing other than making imagined intentions

actual after they were potential, and understanding is nothing other than receiving these intentions. When we discovered that the same things, namely the imagined intentions, are transferred in their being from one order to another, we said that it is necessary that this happens due to an agent cause and a recipient (the recipient is the material cause, and the agent is the efficient cause). And when we discovered that we act through these two powers when we will, and nothing acts except through its form, it was therefore necessary to attribute these powers of the intellect to us. (Averroes, *Commentarium magnum in Aristotelis De anima* III, 18 (161D–E))

Avicenna combines Aristotelian and Neoplatonic ideas of concept formation by arguing that a common active intellect helps particular human intellects to understand the intelligible forms of things, which are present to internal or external senses, by producing the abstract universal forms in the passive intellect through illuminative emanation (**a**). See Davidson 1992; Hasse 2000; D'Ancona 2008. According to Averroes, both the agent intellect and the receiving hylic (material) intellect are immaterial eternal substances in which the particular human minds participate when they form the universal concepts of things. This takes place when the active intellect makes the intelligible aspects (intentions) of sensory forms in imagination actually intelligible by abstracting them from matter and particularity and the intentions are received by the material intellect – this is called understanding (**b–d**). See Ivry 2008a, b. Avicenna and Averroes did not operate with the idea of intellectual memory. Concepts as intelligible units are not stored in the soul, but the soul develops a disposition to receive them from the active intellect. The theories of Avicenna and Averroes influenced Latin discussions in various ways.

3 Varieties of the Theories of Intellection in Thirteenth-Century Latin Thought

a. The cognitive intellect is divided into two parts, of which one is called the 'agent intellect', and the other is called the 'possible intellect', which 'is nothing actually before it understands'. The relation of the agent intellect to the possible intellect is like that of light to the sight. For as light makes the species of a colour to move over from the coloured thing to the eye, in the same way the agent intellect abstracts species from the phantasms which the material intellect has prepared for it, and it makes them in a way to move to the possible intellect. The agent intellect, hence, has two acts: that of abstracting species from phantasms, and that of arranging the abstracted species in the possible intellect.

Avicenna erred in this matter, for he assumed the agent intellect to be something distinct from the soul (namely, an intelligence or an angel), as the sun is distinct from the sight. But there is no doubt that this intellect is a power of the soul, since it is in the soul's power to engage in understanding when it wants to. (Anonymous, *De anima et de potenciis eius* (50–51))

b. Therefore the agent intellect is that particular agent which is needed for the operation of the speculative intellect, which agent intellect according to the Commentator is a part of the soul. According to Al-Farabi, Aristotle, and Avicenna, it is something else. (Roger Bacon, *Questiones supra libros Prime Philosophie Aristotelis*, ed. Steele, vol. X (298–299))

c. It should be noted, however, that intelligible things are divided into two kinds: one kind is infused or impressed from above; the other is acquired through mediation of corporeal and spiritual vision. Regarding an intelligible thing of the first kind, it holds that it reaches the intellectual soul without some other vision mediating, for this kind is entirely elevated above the sense. Augustine speaks of this kind in Book X of *Confessions* and Nebridius in Letter 83. Things are different with the second kind. For it consists in sensible things, and this kind therefore reaches the intellectual soul through the mediation of corporeal and imaginative vision, and not in any other natural way. In Book III of *De anima*, Aristotle seems to be dealing with this kind of intelligible thing and the way to understand it. For he says there that 'without phantasms, the soul does not understand at all', and a little later: 'that which understands thinks of the species in the phantasms'. (Robert Kilwardby, *De spiritu fantastico* 26)

d. Every cognition is produced by means of light and in the light, as the bodily eye is illuminated by the light of the sun or of a physical lamp so that it can see; and the eye of the mind is illuminated by the intelligible light which 'enlightens every man' [John 1:9], which is God, as Augustine teaches in Book I of *Soliloquies*, chapter 13. (Robert Kilwardby, *De spiritu fantastico* 164)

The anonymous treatise *On the Soul and Its Powers* (c. 1225) puts forward the view repeated by many Latin interpreters of Aristotle that the active intellect and the possible intellect are both powers of the human soul: one for abstracting the intelligible species from the phantasms and the other for receiving this species through which the understanding of the universal concept is actualised (**a**). See Bazán 2005; Pasnau 1995. While some writers of the first half of the thirteenth century took this to be Averroes's view as well, the role of the unity of the material intellect in Averroes's noetics was soon detected by many masters of arts and by theologians such as Albert the Great, Bonaventure and Aquinas. It was regarded as metaphysically problematic and also incompatible with the Christian view of the immortality

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of the individual soul. See Bazán 2005. Roger Bacon, a great admirer of Avicenna, repeats the early thirteenth-century view of Averroes in his questions on Aristotle's *Metaphysics* from 1240s, and contrasts this with Avicenna's theory of a separate agent intellect (**b**). He later equated the separate active intellect with God. See Hasse 2000, 203–223. Robert Kilwardby was one of the authors who developed the Augustinian 'illumination' theory of the intellect (**c**–**d**). Henry of Ghent refers to divine illumination as follows: 'When it [the intellect] reaches these incorporeal reasons (*rationes*), being illuminated by this kind of the eternal light, not as the object of knowledge but as a ground of knowledge, it achieves a sincere truth about these which it cannot receive from senses or phantasms' (*Quodlibet* IX.15 (262)). See also Pasnau 2011.

4 Intelligible Species and Universal Concept

a. As it is brought from potentiality of understanding to the act, this does not take place for the reason that it would have innate knowledge of some intelligible things, but for the reason that the intellect has from its maker, or from its nature, a natural potency in virtue of which it knows the nature of all the intelligible things when they are being presented to it. And this potency is the potency of the material (or possible) intellect. And presenting the intelligible things takes place through imagined intentions by the active intellect. (Siger of Brabant, *Quaestiones in librum tertium De anima* III.12 (40))

b. But since Aristotle did not hold that the forms of natural things subsist without matter, and since the forms which exist in matter are not actually intelligible, it followed that the natures or forms of sensible things which we understand are not actually intelligible. But a thing can be brought from potentiality to actuality only by some thing which is actual, as the sense is made actual by the sensible things which are actual. Therefore, it was necessary to posit an intellectual power which would render them actually intelligible by abstracting the species from material conditions. And this is why it is necessary to posit an active intellect. (Thomas Aquinas, *Summa theologiae* I.79.3)

c. But nothing corporeal can produce an impression on an incorporeal thing. For this reason, according to Aristotle, the mere impression of corporeal sensible things is not enough to cause an intellectual operation, but something nobler is needed: for 'the agent is more honourable than the thing acted upon', as he himself says. It is not the case, however, that the intellectual operation would be caused in us by the mere impression of some higher things, as Plato had claimed. Instead, that higher and

nobler agent, which he calls the active intellect and which we have already treated above, makes the phantasms received from the senses actually intelligible by means of an abstraction of a kind. In this way, then, the intellectual operation is caused by the sensory power as far as the phantasms are concerned. But because the phantasms are not sufficient to bring about a change in the possible intellect and they have to be made actually intelligible by the active intellect, it cannot be said that sense cognition would be the total and perfect cause of intellectual cognition; rather it is the material of the cause in some way. (Thomas Aquinas, *Summa theologiae* I.84.6)

d. It is the case that the phantasms are illuminated by the active intellect, and it is the case that the intelligible species are abstracted from them by the power of the active intellect. The phantasms are illuminated by it, for as the sentient part of the soul is made more powerful by its connection with the intellectual part, so by the power of the active intellect phantasms are made fit for intelligible intentions to be abstracted from them. And the active intellect abstracts the intelligible species from the phantasms, insofar as it is by the power of the active intellect that we are able to receive in our thought the natures of the species without their individual features, and the possible intellect is informed by their likenesses. (Thomas Aquinas, *Summa theologiae* I.85.1, ad 4)

e. The relation of intelligible species to the intellect is like that of sensible species to the sensory power. But a sensible species is not that which is sensed, but rather that by which the sensory power senses. Therefore, the intelligible species is not that which is actually understood, but that by which the intellect understands … That which is understood is by its likeness in the one who understands. According to this it is said that that which is understood in actuality is the intellect in actuality, insofar as the likeness of the thing understood is the form of the intellect, as the likeness of the sensible thing is the form of the sensory power in actuality. Hence, it does not follow that the abstracted intelligible species is that which is actually understood; instead, it is a likeness of it. (Thomas Aquinas, *Summa theologiae* I.85.2 c, ad 1)

f. Sometimes the intelligible species is in the intellect only in potentiality, and then the intellect is said to be in potentiality. But sometimes it is in the intellect in fully complete actuality, and then the intellect actually understands. Sometimes it is in a middle state between potentiality and actuality, and then the intellect is said to be habituated. It is in this way that the intellect conserves the species, even when it does not actually understand. (Thomas Aquinas, *Summa theologiae* I.79.6, ad 3)

g. But this conception of the intellect in us is properly called the word, because it is what is signified by the exterior word. For the exterior spoken sound signifies neither the intellect itself nor the intelligible species nor the act of the intellect, but it signifies the conception of the intellect, and through the mediation of the conception the sound refers to the thing. (Thomas Aquinas, *De potentia* 8.1)

h. It is further to be noted that the intellect, which has been informed by the species of the thing, forms within itself in an act of understanding a certain kind of intention of the thing understood; this is the reason of the thing that the definition signifies … Since this understood intention is, as it were, a terminus of intellectual operation, it is distinct from the intelligible species that makes the intellect actual and must be seen as the principle of intellectual operation, even though both are a likeness of the thing understood. For because the intelligible species, which is a form of the intellect and the principle of understanding, is a likeness of the external thing, it follows that the intellect forms an intention which is similar to that thing, since just as a thing is, so are its works. And because the understood intention is similar to the thing in question, if follows that the intellect understands that thing when it forms an intention of this kind. (Thomas Aquinas, *Summa contra Gentiles* I.53.3–4)

Siger of Brabant puts forward the standard view of the thirteenth-century Aristotelians that human intellect is a power of understanding which needs an active component which brings it in contact with the intelligible aspects of things through the sensory soul (**a**). Understanding takes place through the abstracted 'universal reasons of intelligible things' (see also (51)). Thomas Aquinas describes this procedure in a more detailed way. The passive power of understanding things in the world requires an activator which is the intelligible form rendered actually intelligible by abstracting the intelligible species from phantasms (**b–c**). Aquinas writes that 'there must be one principle which is the active power and makes the object actual and another principle which is moved by the object which is actual' (*Summa theologiae* I.79.7). The active intellect 'illuminates' phantasms and 'abstracts' intelligible species from them. How this happens remains somewhat mysterious, but the result is that the intelligible form is present in the intellect and actualises it. The intellectual species is a likeness of the intelligible essence in things which is the object of understanding, the abstracted species being that by which the intellect understands (**d–e**). The abstracted species is in the intellect potentially, when the object is not yet actually understood, and it remains there as a habitual basis of further acts of understanding in which the agent intellect again turns to phantasms (**f**). See also I.79.6. For Aquinas's view of turning to phantasm as a necessary concomitant of intellection, see p. 141 above. When a passive intellect is actualised, the intellect forms a concept or definition which is also called the understood intention or internal word (**g–h**). See also *Summa theologiae* I.85.2, ad 3; *Summa contra Gentiles* IV.11 and pp. 382–384 below. This is a pretty complicated metaphysical theory which is structured in accordance with Aristotle's theory of active and passive powers and which aims to guarantee that the intelligibility which is embedded in things is objectively grasped in the act of understanding. That which is understood, the nature of things, is in the intellect, insofar as the intelligible species as a likeness is in intellect. The formal sameness of the activator in the intellect somehow guarantees that the act is about the corresponding nature.

5 Controversies Around the Intelligible Species

a. Therefore, my answer to the question is that it is necessary to posit in the intellect, insofar as it is memory, an intelligible species which represents the universal *qua* universal and is prior to the act of intellect as far as the order of nature is concerned. This answer is based on the arguments produced above, considering the object as universal and as present to the intellect; these features (namely, universality and presentness) precede the intellection as far as the order of nature is concerned. (John Duns Scotus, *Ordinatio* I.3.3.1, n. 370 (ed. Vat. 3, 225))

b. … there is no path from the imperfect to the perfect except through the middle, particularly when there is great distance between these two. Because a phantasm is very imperfect when compared to intelligible being, it therefore seems that there is first formed a species in the intellect itself which is, as it were, of an intermediate nature. But it appears that this does not hold. On the contrary, one should say that nothing other than the intellection itself is formed in the possible intellect. For if a power has the ability to do something *per se*, then that thing will be produced *per se* by the proportionate agent in the power, and not by something else. Since the apprehensive power as such has, *per se* and alone, the ability for acts of cognising or cognition, nothing other than that is caused by the agent in the power in question *per se*. And so it seems that neither the sensible as such nor the intelligible as such causes in the sense or in the intellect anything other than the act *per se*. (Godfrey of Fontaines, *Quodlibet* IX.19 (273–274))

c. Furthermore, no species represents an object in the same way as the object itself represents itself. Therefore, when the attention of a faculty is presently directed to the object, it is not required that it is represented to the power by anything other than itself. Consequently, if something else is located between the attention of the power and its object, this would veil the thing, and impede (rather than help) its being attended to as present in itself. (Peter John Olivi, *Quaestiones in secundum librum Sententiarum* 58 (II, 469))

d. … I state briefly, for the time being, that the intelligible species of a material thing is something which is really distinct from an understanding of that thing. By 'intelligible species', I understand an abstract and spiritual form which is produced by the intellect and which represents the material thing in a virtual and abstract way. By 'understanding', I understand a cognition that the intellect has of the thing itself as presented to it by the species. For the time being, my main proof for this conclusion is as follows. If the intelligible species were really identical with the understanding, then that which is the immediate active principle of the intelligible species would be the immediate active principle of the understanding. This is manifest. The consequent is false, since the phantasm is the immediate active principle of the intelligible species, as practically everyone agrees. But this phantasm cannot in itself be the perfect immediate active principle of an understanding, as will be proved below. Therefore, etc. Further, it is easy to prove that the phantasm is the immediate active principle of the species. For the possible intellect is not the immediate principle of

the species, for it is in the potentiality of receiving the species … neither can the active intellect be the adjacent principle for the species, for it is the virtual cause of all species and therefore it cannot be the immediate and adjacent cause for any one of them unless it is made determinate by some principle which is active and immediate, and what could this be other than the phantasm? Therefore, etc. (John of Jandun, *Questiones super libros De anima Aristotelis* III.14).

e. It appears that it must be said, in accordance with this, that the understanding of one and the same quiddity (for example, whiteness) requires two intelligible species, of which one is caused by the form of whiteness existing in the human imaginative power, whereas the other is caused by an act of the cogitative power, and the latter is more perfect than the former, since the cogitative power is nobler than the imaginative power. (John of Jandun, *Questiones super libros De anima Aristotelis* III.16)

f. The cognitive power must not only receive the species of the object, but also tend through its act toward the object. This second is more essential to the power since the first is required because of the imperfection of the power. And the object is the object because the power tends to it rather than because it impresses a species. (John Duns Scotus, *Quaestiones super libros Metaphysicorum Aristotelis* VII.14, 29)

g. The intellect is not merely changed by the real object, insofar as this real species is imprinted there; it is also changed by the object in an intentional way, insofar as the object shines in the species, and this second change is the reception of intellection, being from the intelligible as intelligible; and this change is understanding. (John Duns Scotus, *Ordinatio* I.3.3.1, n. 386 (ed. Vat. 3, 235))

The main lines of Aquinas's metaphysical psychology of intelligible species were accepted by many authors, including Scotus (**a**), even though he altered the emphasis; cf. (**f**) below. Godfrey of Fontaines, who often follows Aquinas, finds the notion of the intelligible species as an entity in the soul to be superfluous (**b**). Godfrey and some others were reluctant to accept the theory of abstracted species because it questioned the Augustinian thesis of a radical difference between intellect and phantasm. See Spruit 1994, 193–244. In this context Peter John Olivi used the notion of *aspectus*, actual attention, which refers to the intellect 'turning' to the intelligible object without any causal connection between the intellect and the sensory soul. They are related by a *colligantia* – the actuality of the lower power is accompanied by an act of the higher power (**c**). Like Siger of Brabant, John of Jandun had a high opinion of Averroes's commentaries, although he did not endorse the view of active and passive intellects as separate substances. Jandun argued that the notion of intelligible species can be applied to what Averroes calls intentions. The role of the agent intellect is to actualise the intellectual power, rather than abstract

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the species which is caused by the sensory soul when the intellect is actual. Jandun seems to assume that there are two intelligible species of which one is caused by a phantasm in imagination and the other by the act of sensory cogitative power (**d**–**e**). He apparently thought that these are needed for two aspects of concepts, one of which is related to content and the other to universality.

Scotus explains that when the abstracted species activates the intellect, the common nature as an object of cognition is displayed to the intellect through a second act. The common nature shines forth (*relucet*) through the intelligible species and is grasped as the content of the act of understanding. This content is said to have *intentional* or *objective* being (*Ordinatio* I.27.1–3, n. 54 (ed. Vat. 6, 86); *Ordinatio* IV.1.2, n. 3 (ed. Wadding 8, 56–57)). Universality as plural predicability belongs to the concept as a second intention, i.e. as a tool of intellect (*Ordinatio* II.3.1.1, n. 42 (ed. Vat. 7, 410)). Many authors have found this to be an innovative attempt to distinguish between something in the mind 'subjectively' (faculty, species, thought) and 'objectively' as the content of an act (King 2004a, 65–88; Perler 2002, 217–230; Pasnau 2003, 287–290). For **f**, see also p. 79 above.

6 William of Ockham on Concepts as Signs and as Acts of Understanding

a. The conceived term is an intention or passion of the soul naturally signifying or co-signifying something, fit to be a part of a mental proposition and fit for suppositing for the things in question. These conceived terms and the propositions composed of them are, therefore, those 'mental words' of which Blessed Augustine says, in Book XV of *De trinitate*, that they belong to no language because they remain within the mind and cannot be uttered externally, although spoken words are pronounced externally as signs subordinated to them. (William of Ockham, *Summa logicae* I.1 (OPh 1, 7))

b. The entity in the soul that is a sign of a thing, and that enters in the composition of a mental proposition in the same way as a spoken proposition is composed of spoken words, is sometimes called an 'intention of the soul', sometimes a 'concept of the soul', sometimes a 'passion of the soul', sometimes a 'likeness of a thing', and Boethius calls it an 'understanding' in his commentary on the *De interpretatione*. (William of Ockham, *Summa logicae* I.12 (OPh 1, 41))

c. But what is the entity in the soul that is such a sign? Let us remark that there are different opinions about this point. Some thinkers say that it is something which the soul has invented. Others say that it is a certain quality which exists subjectively in the soul and is distinct from the act of understanding. Still others say that it is the act of understanding. On the side of those who are for the latter view is the rule that 'it

is useless to do by many means that which can be achieved by fewer'. Now, everything that can be preserved by positing some entity distinct from the act of understanding can be preserved without positing such a distinct entity, in that an act of understanding is suitable for suppositing for something and signifying something in just the same way as some other sign is. There is, therefore, no need to posit something else besides the act of understanding. (William of Ockham, *Summa logicae* I.12 (OPh 1, 42–43))

For William of Ockham, concepts are basic units of a mental language. As terms of a language, the concepts are signs, and they have the kind of semantic properties that signs have. The concepts are the same for all people, and the words of spoken languages are signs subordinated to them. Ockham takes his view of concepts to express what authors like Augustine and Boethius had meant (**a**, **b**). (For another translation of **a**, see p. 395 below.) Referring to his principle of parsimony, Ockham identifies the acts of understanding as concepts. Like Peter John Olivi before him, he found it superfluous to postulate either intelligible species preceding such acts or some end-products terminating them (**c**). See also Panaccio 2004 and pp. 394, 395, and 397 below.