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# THE SOUL'S FACULTIES

DAG NIKOLAUS HASSE

Most medieval thinkers assume that the human soul has several faculties or powers: basic faculties such as digestion or growth, more elaborate faculties such as movement, vision, or imagination, and the characteristically human faculties of will and intellect. This was the mainstream position, but it was not left unquestioned in the later Middle Ages and in early modern philosophy. Several nominalists, for instance, argue that the powers of the soul are nothing but different names for the soul itself, as it is active in different ways. Later, in the seventeenth century, mechanistic philosophers such as René Descartes claim that there is no real distinction between power and act, nor between soul and powers. Descartes reserves the term 'soul' for the mind, and so reduces the number of powers drastically; he claims that all lower powers, such as sense perception or imagination, are equivalent either to the mind or certain powers of the body. Even Thomistic authors of the sixteenth and seventeenth centuries, who usually defend the theory of the faculties, at times question the traditional set of faculties and reduce their number. Francisco Suárez, for example, holds that common sense, imagination, estimation, and memory are in fact one power, because all these functions can be attributed to one faculty.[1]

Nevertheless, in spite of the criticisms voiced by nominalist and early modern philosophers, medieval faculty psychology itself was well supported by arguments that have their origin in Greek philosophy. In the *Republic*, for example, Plato proposes a threefold division of the soul into reason, spirit, and desire. He bases this theory on the fact that there are conflicts in the soul: we may desire an object and at the same time reject it, as when we desire to drink something but reject it because we think it is bad for us. This can be explained, he believes,

[1] John Buridan, *Quaest. de anima* II.4, ed. Sobol; René Descartes, *Traité de l'homme* (ed. Adam and Tannery, XI: 201–2); Francisco Suárez, *Commentaria in De anima* 8.1–2. See Dennis Des Chene, *Life's Form: Late Aristotelian Conceptions of the Soul* (Ithaca, NY: Cornell University Press, 2000) pp. 143–51.

only by assuming that the soul has distinct parts that can come into conflict with each other (435e–439d).

Aristotle is the true founding figure of faculty theory. In the *De anima*, he distinguishes many different powers of the soul. Unlike Plato, however, he rarely calls them "parts" of the soul, and his principal argument for the existence of such powers is different from Plato's. Not only are the soul's powers clearly distinct logically, he says, but we also observe that they are distributed variously in nature. They, in fact, form a hierarchy: the lowest plants have only one or two powers, whereas the more complex animals already have a fuller set, and the highest animal – the human being – has the fullest set, including thinking and deliberation in addition to the powers of the lower animals. The soul is both the principle of these powers and defined by them (*De anima* II.2–3).

The Greek medical tradition reinforced the trend of distinguishing faculties of the soul by localizing some of them in different parts of the brain.[2] Galen, for instance, argued that physical damage to the brain often does not affect the entire soul, but only one or two functions, such as phantasy or memory, while the others remain intact. Nemesius of Emesa, in his *De natura hominis* – an influential treatise in Greek, Arabic, and Latin culture – assigned various internal powers of the soul to the different ventricles of the brain (ch. 13).

The high point of medieval faculty theory was classical Arabic philosophy and later medieval Latin philosophy. In the early Middle Ages, faculty psychology was not yet dominant among Christian authors, who were deeply influenced by the Augustinian idea that the soul is an indivisible unity. Hence they widely accepted that the soul and its faculties are identical.[3] When Greek and Arabic texts on faculty psychology were translated into Latin in the twelfth and thirteenth centuries, however, the discussion changes. Albert the Great is an early witness to this change. Albert holds – against the earlier tradition – that the soul's faculties form a unity with the soul only in the sense that soul and faculties together form a *totum potestativum* ("a totality of powers"). Ontologically they are distinct. On this matter, Albert adopts Avicenna's thesis that the organic and non-organic faculties emanate from one substance, the soul, which exists independently of both its actions and its body.[4]

Avicenna is the single most influential source (apart from Aristotle) for medieval faculty theory, in both the Arabic and the Latin world. He strongly

[2] See also Plato, *Timaeus*, 69c–73d, where the three parts of the soul are located in brain, heart, and liver.

[3] See Pius Künzle, *Das Verhältnis der Seele zu ihren Potenzen: Problemgeschichtliche Untersuchungen von Augustin bis und mit Thomas von Aquin* (Fribourg: Universitätsverlag, 1956).

[4] Albert the Great, *Sent.* I.3.34c; Avicenna, *De anima* (*Shifāʾ*) V.1 (ed. Rahman, p. 208; Van Riet, p. 80).

influenced the general principles of medieval faculty psychology and its detailed treatment of individual faculties.[5] Thus, this chapter will present his system of faculties first, before turning to disputed issues.

## AVICENNA'S THEORY OF THE FACULTIES

Avicenna bases his distinction between the faculties on systematic criteria and on observational evidence. His basic principle is that "each faculty – insofar as it is a faculty – is such because from it originates a primary action that belongs to it" (*De anima* [*Shifāʾ*] V.7, ed. Rahman, p. 252; Van Riet, pp. 157–8). A faculty is identifiable by being the cause of an action that it does not share with any other faculty. Hence, the faculty of vision is identified by its primary action, perceiving color, although it also has many secondary actions, such as the perception of black or white. Furthermore, the faculties, Avicenna says, may impede and distract each other from their proper actions (ibid.). This echoes Plato's argument that conflicts in the soul point to the existence of the soul's parts. Avicenna adduces observational evidence to justify the differentiation between powers: unripe fruits possess the nutritive but not the reproductive faculty; decrepit animals possess the nutritive faculty, but they lack that of growth.[6] Avicenna thus adopts the Aristotelian principle that the faculties form a hierarchy and exist independently of each other in nature.

Avicenna's hierarchy of faculties begins with a set that is characteristic of plants but that also exists in animals and human beings – namely, nutrition, growth, and reproduction. These faculties are served by the so-called "subservient faculties" of attraction, retention, digestion, and excretion, which are often discussed in medical texts and which are concerned with the nourishment pertaining to the bodily organs: they attract it, keep it, digest it, and finally remove it.[7]

The animal faculties are generally divided into motive and perceptive faculties. Avicenna distinguishes between two kinds of motive faculties: those that give the impulse and order to move, such as desire and anger, and the faculty that performs the movement, a power distributed in the nerves and muscles, which prompts the muscles and ligaments to contract and extend. Like the majority of ancient and medieval authors, Avicenna holds that there are five external senses:

[5] This influence continues in the Renaissance; see Katharine Park, "The Organic Soul," in C. Schmitt *et al.* (eds.) *The Cambridge History of Renaissance Philosophy* (Cambridge: Cambridge University Press, 1988) 464–84, especially the table on p. 466, which presents a division of faculties typical for Renaissance philosophical textbooks.

[6] Avicenna, *Psychology* (*Najāt*), tr. Rahman, p. 24.

[7] Avicenna, *De anima* (*Shifāʾ*) I.5, ed. Rahman, p. 51; Van Riet, p. 101; *Psychology* (*Najāt*), p. 37; *Canon*, I.1.6.3 (ed. 1877, p. 68; Latin tr. f. 23vb).

sight, hearing, smell, taste, and touch. He also mentions, without adopting it, the position that there are eight external senses, on the grounds that touch is a genus of four distinct faculties discerning hot and cold, dry and moist, hard and soft, rough and smooth respectively.[8]

In addition to these, Avicenna ascribes to animals and human beings five so-called "internal senses" (*al-ḥawāss al-bāṭina*; *sensus interiores*): common sense, imagination, the cogitative/imaginative faculty, estimation, and memory.[9] Although the term 'internal senses' was coined in Arabic philosophy and popularized in the Arabic and Latin worlds through the work of Avicenna, the ultimate source of the doctrine is Aristotle's discussion of the soul's higher perceptual activities (*De anima* III.1–3; *Parva naturalia*). Aristotle observed, for instance, that we perceive ourselves perceiving, that we distinguish between sense data from different senses (such as sweet and white), that images remain in the soul after the object has disappeared, and that post-sensory images (he calls them *phantasmata*) play a major role in memory, dreams, sensory illusions, and the choice of actions, especially among animals. Avicenna draws on Aristotle, the anonymous Arabic *On sense and sensibilia*, and other Graeco-Arabic material, and in his hands the various doctrines concerning the internal senses develop into a systematic and comprehensive theory – an achievement that counts among the most original contributions of medieval faculty theory.

Avicenna's distinction between the five internal senses is based on two particularly influential principles. First, the faculties differ in that some of them *receive* sensory forms, whereas others *preserve* them. Second, some faculties perceive the "form" (*ṣūra, forma*) of the sensed thing – that is, they deal with data transmitted to them by the external senses, such as the shape and color of the wolf. Other faculties perceive so-called "intentions" (*maʿānī, intentiones*) – that is, attributes of objects that have a connotation for the perceiver that the external senses cannot perceive, such as hostility or friendliness (*De anima* [*Shifāʾ*] I.5). These principles, which were subsequently adopted by Thomas Aquinas and others

[8] *De anima* (*Shifāʾ*) I.5, ed. Rahman, pp. 41–3, 73; Van Riet, pp. 83–5, 141; *Psychology* (*Najāt*), tr. Rahman, pp. 26–7.

[9] The fivefold distinction of internal senses appears in Avicenna's main philosophical works. In his medical *Canon*, Avicenna mentions that the physicians recognize only three internal senses because they assign one faculty to each of the three ventricles of the brain and do not distinguish between common sense and imagination (anterior ventricle), nor between the imaginative/cogitative faculty and estimation (middle ventricle). This is because they are concerned only with the possible areas of injury. In the *Canon*, Avicenna also mentions a discussion among philosophers about whether memory and recollection might in fact be two faculties (Avicenna, *Canon*, I.1.6.5 [ed. 1877, pp. 71–2, Latin tr. f. 24v–25r]). The fivefold distinction of internal senses is not yet established in Avicenna's very early *Compendium on the Soul* (ed. Landauer, pp. 358–61); see Harry A. Wolfson, "The Internal Senses in Latin, Arabic and Hebrew Philosophical Texts," *Harvard Theological Review* 28 (1935) pp. 95–100.

(*Summa theol.* 1a 78.4c), allow Avicenna to distinguish systematically between the internal senses.

The common sense is located in the front of the brain's front ventricle. It is the place where all sensory forms are received and where such judgments are formed as that this moving thing is black. This, rather than the external faculties, is the power that *truly* senses, inasmuch as it is the center of the senses. The faculty of imagination, the second internal sense, is the storage place of the sensory forms; it does not perceive, but retains. It is located in the rear part of the front ventricle of the brain. The third faculty is called the "imaginative faculty" in non-rational animals and the "cogitative faculty" in human beings. In contrast to all other internal senses, it neither receives nor preserves forms, but acts upon them, combining and separating forms and intentions. This faculty, which resides in the middle ventricle, is responsible for the production of unreal images; its existence explains the hallucinations of mad, sick, or dreaming people. The cogitative faculty has a further important function in human thought: whereas the intellect is able to think in terms of universal concepts, the cogitative faculty combines particular concepts and thus aids the intellect.[10] The fourth internal sense is estimation (*wahm, aestimatio*), located in the rear part of the middle ventricle: it perceives intentions and forms judgments on their basis, such as the sheep's judgment that this wolf is to be fled. Memory, the last internal sense, is mainly responsible for the storage of intentions; it resides in the rear ventricle of the brain.

The number of internal senses becomes a matter of dispute in later medieval philosophy, since, unlike Avicenna, Averroes and Aquinas recognize only four internal senses (common sense, imagination, cogitative faculty, and memory): Averroes rejects the concept of an estimative faculty, whereas Aquinas makes estimation the animal counterpart to the human cogitative faculty, as will be apparent below.[11]

Avicenna further distinguishes two non-organic faculties: the practical intellect, whose main function is to govern the bodily faculties, and the theoretical intellect, which is concerned with grasping universal forms. A well-known doctrine of Avicenna's is his distinction between four theoretical intellects; in some places he calls them "powers," but in his most detailed descriptions it is obvious that the four intellects are four different relations (*nisab*) of the

[10] Dimitri Gutas, "Intuition and Thinking: The Evolving Structure of Avicenna's Epistemology," in R. Wisnovsky (ed.) *Aspects of Avicenna* (Princeton, NJ: Princeton University Press, 2001) 1–38.

[11] Averroes, *Epitome of Parva naturalia*, ed. Blumberg, pp. 42–3, tr. Blumberg, p. 26 (Blumberg's translation of *quwwa mumayyiza* ("discriminative faculty") as "estimative faculty" is misleading); Averroes, *Commentarium magnum De anima* III.6 (ed. Crawford, pp. 415–16); Aquinas, *Summa theol.* 1a 78.4c. See also note 9 above.

theoretical faculty to its intelligible objects. They are therefore not faculties of the soul, but different states of the same intellect that represent different levels of actualization and of intellectual development (see also Chapter 23).[12]

## THE ORGAN AND MEDIUM OF TOUCH

A question of great disagreement in faculty psychology up to the sixteenth century concerned the faculty of touch. The discussion was sparked by the fact that Aristotelian and Arabic theories of touch were based on different epochs of medicine, inasmuch as Aristotle did not yet know about nerves. (These were first distinguished from veins and arteries by physicians in Alexandria, who had carried out dissections in the third century BCE.) Aristotle had maintained that the organ of touch lies within the body, close to the heart, and that although we do not usually recognize a medium of touch, there exists one within us, our flesh (*De anima* II.11). In contrast, Avicenna and other Arabic philosophers, attempting to make Peripatetic philosophy compatible with the medical knowledge of their time, held that the organ of touch is the collection of nerves distributed throughout the body's flesh and skin, and that there is no medium at all. The arguments of the Arabic authors are partly anatomical, partly philosophical: if flesh is not accompanied by nerves, it does not have the sense of touch; there is touch not only in flesh, but also in bones and teeth; finally, objects of touch are dangerous or conducive to the life of the animal, which is why the entire body is the organ of touch and why the objects are in direct contact with the organ.[13]

Subsequent medieval philosophers were thus offered two rival theories. Among the scholastics, there were many who avoided the problem (or perhaps did not see it) and who simply quoted one of the two positions. Others argued for one side against the other, or else proposed a compromise, as did, for example, John Blund and the *Summa fratris Alexandri*.[14] In this discussion, Albert the Great stands out because he changed his mind on the issue. In his early *De homine*, he distinguishes between an ontological and an epistemological meaning of 'touch.' In the first sense, touch is what makes an animal soul an animal soul – it is its perfection; in the second sense, it is a faculty and a part of the soul (*De homine* 33.1 [ed. Cologne, XXVII.2: 246b]). When considered ontologically, as

[12] Avicenna, *De anima* (*Shifāʾ*) I.5 (ed. Rahman, pp. 45–50; Van Riet, pp. 90–99); *Psychology* (*Najāt*) (tr. Rahman, pp. 32–5); see Dag Nikolaus Hasse, *Avicenna's De anima in the Latin West: The Formation of a Peripatetic Philosophy of the Soul 1160–1300* (London: Warburg Institute, 2000) pp. 177–83.

[13] Avicenna, *De anima* (*Shifāʾ*) II.3; Albert the Great, *De anima* II.3.34.

[14] Blund, *Tractatus de anima* XVI, ed. Callus and Hunt pp. 58, 60; Alexander of Hales *et al.*, *Summa theologica* II, pars I, IV.1.2.2.1. See Hasse, *Avicenna's De anima*, pp. 98–106.

a *perfectio*, the organ of touch is the entire body (in particular, nerves, flesh, and skin), and there is no medium. When considered epistemologically, however, as a *potentia*, flesh and skin are the first recipients of an impression from outside, which is then passed on to the nerve – this is a faint echo of Aristotle's original theory that flesh is the medium (ibid., 33.3 [252b–254a]). This – Albert's early position – can be reconciled with the Arabic and medical tradition, but not with Aristotle. Hence, he has to counter Aristotle's principal argument for the existence of a medium, which is that without a medium the organ would be in direct contact with the object, with the result that perception would not occur (*De an.* II.11, 423b20–1). It is a fundamental principle for Aristotle that all perception is perception of form, not of matter, and hence that a direct contact between organ and material object does not result in perception. Albert's answer is that only the nerves of the brain require a medium; the nerves distributed through the rest of the body are able to be affected directly and in a very subtle way by the object. In this respect, then, touch differs from the other senses (*De homine* 33.3, p. 253b). However, in his later *De anima*, Albert changes his mind: "Wishing both to save the truth and to give reverence to the father of the philosophers, Aristotle, we say that flesh is the medium of touch" (II.3.34, ed. Cologne, VII.1: 147a). Albert is aware that he has to reconcile this position with medical theory, and therefore he adds the qualification that teeth and nerves are "flesh-like" insofar as they have the same complexion as flesh. Albert's change of mind testifies to two developments in the second half of the thirteenth century: the growing authority of Aristotle, and the growing tendency to sacrifice the physiological part of faculty theory if it appears in conflict with philosophical teaching.[15]

In later medieval faculty theory, several attempts were made to reconcile Aristotle's theory of touch with later theories. One solution was to save Aristotle's view that the organ lies close to the heart by distinguishing between a primary organ of touch, the heart, and a secondary organ, the nerve.[16] Another strategy was to acknowledge the empirical incompleteness of Aristotle's theory and explain it in terms of the developing history of anatomy. Averroes first took this approach, in commenting on Aristotle's statement that the organ of touch lies "within" the body (423b23): "This is in accordance with what came out later (after Aristotle's death) through anatomy, namely that the nerves play a part in touch and movement. Therefore, what Aristotle knew in theory, later

[15] See Mark Jordan, "The Disappearance of Galen in Thirteenth-Century Philosophy and Theology," in A. Zimmermann *et al.* (eds.) *Mensch und Natur im Mittelalter* (Berlin: De Gruyter, 1992) 703–17.

[16] D. N. Hasse, "Pietro d'Abano's 'Conciliator' and the Theory of the Soul in Paris," in J. Aertsen *et al.* (eds.) *Nach der Verurteilung von 1277* (Berlin: De Gruyter, 2001) 635–53, esp. pp. 641–5.

was apparent through experience" (*Comm. magnum de anima* II.108, p. 298). Averroes interprets the term "within" as referring not to something close to the heart, but to the as yet unknown nerves below the surface of the skin. Aristotle had "smelled" the right solution, even though "the science of dissection had not been perfected in his time," as Peter of Abano put it in the early fourteenth century (*Conciliator* diff. 42, ed. 1565, f. 64va). This historical solution to the doctrinal problem appears in a good number of *De anima* commentaries, whereas other authors, such as Thomas Aquinas, generally avoid discussion of physiological issues. In any event, the case of the nerves is a good indication of the willingness of medieval authors to consider medical and empirical arguments in the philosophy of the soul.

## THE TRANSMISSION OF ODORS

The question of whether odors are transmitted materially or immaterially was discussed by many scholastic authors, from Albert the Great to Suárez. The origin of the discussion lies in a disagreement between Avicenna and Averroes, which in turn goes back to ancient disputes. Plato had maintained that all odor is vapor or mist (*Timaeus* 66e), which most likely is the position Aristotle was targeting when he refuted the theory that odor is smoky evaporation (*De sensu* 5, 443a21–b2).[17] The ancient commentary tradition paid considerable attention to the question and introduced empirical evidence, such as that vultures smell dead bodies in places too distant for material particles to have traveled to the perceiver.[18] In light of this ancient background, Avicenna distinguished between three different explanations of how odors reach the organ of smell: on the first account, small particles are issued from the odorous body and mix with the air; on the second, the medium is changed by the odorous body; on the third, there is transmission of effect without any change in the medium, the function of the medium being merely to make transmission possible.[19] The first two explanations are viable, he says, and are supported by evidence, such as that decaying apples shrink because they issue odorous particles, which suggests an evaporation theory. The third explanation is untenable, however, because smells may remain in the medium after the smelling object has disappeared. Avicenna acknowledges the objection that vultures fly to distant places for prey – for example, to a battlefield in a different country – and that material particles or

[17] Aristotle's own view is not entirely clear; in *De sensu* 2, 438b20–7, he seems to embrace the smoky evaporation theory.

[18] Richard Sorabji, *The Philosophy of the Commentators, 200–600 AD: A Sourcebook* (Ithaca, NY: Cornell University Press, 2005) I: 47–52, III: 108–9.

[19] Avicenna, *De anima* (*Shifāʾ*) II.4, ed. Rahman, pp. 77–8; Van Riet p. 148.

alterations of the air cannot bridge such a distance, but he replies that vultures probably see rather than smell the dead bodies, because they circle at extreme heights.[20]

A different position was taken by Ibn al-Ṭayyib, a contemporary of Avicenna, who favors a position similar to Avicenna's third alternative: he claims that forms are imprinted upon the air as an immaterial (*rūḥānī*) impression. This must be so, he argues, because the air receives contrary properties (as when the images of a white and a black man are transmitted through the same region of air), whereas the corporeal impression of contrary properties is impossible.[21] Averroes also disagrees with Avicenna, without naming his opponent. He repeats the vulture argument, extending it to bees and tigers, and he concludes that odors exist in their medium in the same way that colors exist in the transparent medium – namely, with immaterial existence (*wujūd rūḥānī*; *esse spirituale*) – whereas they exist materially in the odorous body. He concedes that winds have an impact on the transmission of odors that they do not have on colors, but he responds that there are degrees of immateriality: colors are more immaterial (*rūḥānī*; *spiritualis*) than odors (*Comm. magnum de anima* II.97, pp. 276–8). Averroes also uses the argument from the reception of contrary qualities to argue more generally against the material existence of sensible forms in the medium.[22]

The scholastic tradition generally preferred Averroes's over Avicenna's theory, and often cited the vultures' long-distance sense of smell. Albert the Great, for instance, pointed out that the material theory in effect dispenses with a medium altogether, inasmuch as odors hit the organ directly (*De an.* II.3.25 [ed. Cologne VII.1: 135b]). This again has the problematic consequence that perception would result from direct contact between organ and object. On the other hand, an immaterial theory of transmission was difficult to reconcile with several pieces of evidence: the influence of wind, the shrinking apple, the hand that smells after touching something odorous, the interference of odors in the medium, and the odor's remaining in the medium after the disappearance of the odorous body. As a solution to this problem, Aquinas, John Buridan, and others argue that there exists evaporation, but only in the immediate vicinity of the odorous object. The remaining distance is bridged by an immaterial medium, which is affected qualitatively by the perceptible object.[23]

[20] Avicenna, *De anima* (*Shifāʾ*) II.4, ed. Rahman, pp. 78–81; Van Riet, pp. 148–54.

[21] See Cleophea Ferrari, "Der Duft des Apfels: Abū l-Faraj ʿAbdallāh ibn aṭ-Ṭayyib und sein Kommentar zu den *Kategorien* des Aristoteles," in V. Celluprica and C. D'Ancona Costa (eds.) *Aristotele e i suoi esegeti neoplatonici* (Naples: Bibliopolis, 2004) 85–106, esp. pp. 98–100. The argument from the reception of contrary qualities is already in Alexander of Aphrodisias; see Sorabji, *Sourcebook* I: 47–8.

[22] Averroes, *Epitome of Parva naturalia*, ed. Blumberg, pp. 23–4; tr. Blumberg, pp. 15–16.

[23] Aquinas, *In De anima* II.20; Buridan, *Quaest. de anima* II.20, ed. Patar, pp. 390–1.

## THE ESTIMATIVE FACULTY

The estimative faculty was the most successful addition to Aristotle's faculty theory;[24] it was adopted by numerous writers in Arabic, Hebrew, and Latin. Medieval Latin authors were divided over a number of issues concerning the estimative faculty and its object, intentions, including whether estimation exists in animals only or in human beings as well; whether the intentions are derived from the perceived thing or from the processing of sensible forms; and, finally, what kind of judgments are made by estimation.

As to the first issue, Avicenna's contention that estimation is a faculty shared by animals and human beings was challenged by both Averroes and Thomas Aquinas. According to Averroes, although human beings and animals pass judgments about the intention of a specific image, human beings do so through the intellect, whereas animals employ a faculty without name, "which Avicenna calls estimation."[25] In the *Incoherence of the Incoherence*, Averroes claims that the assumption of an estimative faculty in animals can be dispensed with altogether, since all of its functions are performed by the faculty of imagination (tr. Van den Bergh, p. 336). Non-rational animals lack the cogitative faculty of human beings (he also calls this the "discriminative faculty"), which "separates and abstracts" individual intentions from the perceived images, for instance the intention of this individual man and the intention of this individual horse (*Comm. magnum de anima* II.63, pp. 225–6).

Aquinas further develops Averroes's line, relegating the estimative faculty to the animal realm. When animals perceive individual intentions, they are able to flee the harmful and pursue the useful. The estimative faculty is a faculty of instinct directly tied to actions: intentions are apprehended only insofar as they are the end or starting point of an animal's acting or being acted on. Human beings also compare individual intentions and apprehend the individual as existing under a common nature. In virtue of this, they cognize this human being as it is this human being, or this piece of wood as it is this piece of wood. This human faculty must thus be different from the animal estimative power, and Aquinas calls it the "cogitative power" or "particular reason." Only human beings have this faculty, because it operates in the vicinity and under the guidance of the intellect.[26]

[24] See Deborah L. Black, "Estimation (*Wahm*) in Avicenna: The Logical and Psychological Dimensions," *Dialogue* 32 (1993) 219–58, and Hasse, *Avicenna's De anima*, pp. 127–53.

[25] Averroes, *Epitome of Parva naturalia*, ed. Blumberg, p. 39; tr. Blumberg, p. 24.

[26] *In De anima* II.13, *Summa theol.* 1a 81.3c. Robert Pasnau, *Thomas Aquinas on Human Nature* (Cambridge: Cambridge University Press, 2002) pp. 267–78.

Albert the Great, and like him many other writers of the thirteenth century, take the opposite, Avicennian standpoint. Estimation is a faculty shared by both animals and humans. The human faculty of estimation is sometimes helped and advised by reason to pursue this or to avoid that, but it is impossible for estimation to understand individual intentions as falling under a common notion. This is the work of reason. Estimation is a faculty intimately connected to imagination, since it grasps intentions in this and that image. In fact, it is the extension of imagination into the realm of action.[27]

A second issue involving the estimative faculty concerns the ontological status of intentions. Avicenna had maintained that "some faculties perceive the forms of the sense-perceptible object and some perceive the intentions of the sense-perceptible object."[28] The form of the wolf is exemplified by its shape and color, the intention of the wolf by its hostility. In Avicenna's theory, an intention is not a meaning assigned by the perceiver to a perceived form, nor something abstracted from a perceived form; it is itself an object of perception, an immaterial thing that accompanies a particular sense-perceptible form and that is always grasped in connection with such a form.[29]

Later writers advanced conflicting theories of intentions as objects of estimation. John Blund, for instance, around the start of the thirteenth century, takes Avicenna's position to one extreme, claiming that intentions are properties of an object of the world, such as the quality of the wolf that makes the sheep flee. What is received by estimation is not the intention – that is, the property itself (as in Avicenna's theory) – but rather an image or likeness of the intention (*Tractatus de anima*, ed. Callus and Hunt, pp. 68–71). This realist interpretation of intentions was not shared by other writers. For Averroes, intentions were intentions *of* images; that is, they were not objects of perception on the same level as images (or sensory forms), but something like the meaning that an image has for the perceiver. Human beings are able to separate and abstract the intentions from the images.[30] Albert the Great follows Averroes on this point, arguing that the estimative faculty extracts intentions from the apprehended

[27] *De anima* III.1.2, ed. Cologne VII.1: 168; *De homine* 39.3, ed. Cologne, XXVII.2: 295b: "extensio phantasiae in praxim." Examples of authors who adopt the Avicennian standpoint are John Blund, William of Auvergne, Robert Grosseteste, Hugh of St. Cher, Roland of Cremona, John of La Rochelle, the *Summa fratris Alexandri*, Vincent of Beauvais, and Peter of Spain. The most elaborate discussions are in Blund, *Tractatus* XIX; John of La Rochelle, *Summa de anima* ch. 101; Peter of Spain, *Scientia libri de anima* (*Obras fil.* I: 319–23 [ed. 1941]).

[28] Avicenna, *De anima* (*Shifā'*) I.5, ed. Rahman, p. 43; Van Riet, p. 85.

[29] Avicenna, *De anima* (*Shifā'*) II.2, ed. Rahman, pp. 60–1; Van Riet, pp. 118–19; *Psychology* (*Najāt*), tr. Rahman, p. 39.

[30] *Comm. magnum De anima* II.63, ed. Crawford, p. 225; *Epitome of Parva naturalia*, ed. Blumberg, p. 39; tr. Blumberg, p. 24.

form. That is, intentions are the result of the internal processing of sensory forms. They are a product of abstraction.[31] In the ensuing scholastic discussions, both languages are adopted: that of intentions as objects of perception, as in Aquinas (*In de anima* II.13; *Summa theol.* 1a 78.4c), and that of intentions as products of abstraction, as in John Buridan (*Quaest. de anima*, ed. Patar, II.22).

A third issue concerns the content of estimative judgments.[32] The stock example of such a judgment, which was coined by Avicenna, is the sheep's judgment that the wolf is harmful and to be avoided. Like many other Arabic and Latin writers, Avicenna uses the term "judgment" in a wide sense that also covers non-linguistic acts. On this view, human beings and animals share several faculties that pass judgments, such as the external senses, common sense (for instance, "this moving thing is black"),[33] and estimation. The examples of such judgments are usually described in sentences, with the consequence that some writers, such as John Blund, were tempted to analyze animal judgments as consisting of several terms *(termini)* – for instance, 'this wolf' and 'to be fled' – in spite of the fact that animals do not have language (*Tractatus de anima*, pp. 68–71). Aquinas avoids this difficulty by distinguishing between "intellectual judgments" and "natural judgments." A natural judgment is prompted by instinct, which is the source of uniform actions: all swallows, for instance, form the natural judgment that nests should be made in a certain way (*Quaest. de veritate* 24.1c). In contrast, intellectual judgment is based upon inquiry and comparison, and is the source of free choice.

There were authors, however, who objected to the idea of animal judgments altogether. The background to this critique is a different notion of judgment that excludes non-linguistic judgments. William of Ockham thus maintains that the senses cannot judge, since judging presupposes the formation of a complex sentence – that is, a sentence composed of several terms, which can be assented to or dissented from.[34] Adam Wodeham shares this notion of judgment and infers from it that animals do not truly judge; they only appear to judge and to act like humans. The only form of cognition animals have is the non-complex, simple apprehension of something harmful or beneficial, which is directly followed by a certain reaction. This kind of cognition does not presuppose linguistic abilities.[35]

[31] *De homine* 37.1, ed. Cologne, XXVII.2: 284b; *De anima* II.4.7, ed. Cologne, VII.1: 157.

[32] See Dominik Perler, "Intentionality and Action: Medieval Discussions on the Cognitive Capacities of Animals," in M. Pacheco and J. Meirinhos (eds.) *Intellect et imagination dans la philosophie médiévale* (Turnhout: Brepols, 2006) I: 73–98.

[33] Avicenna, *De anima* (*Shifāʾ*) IV.1, ed. Rahman, p. 165; Van Riet, p. 6.

[34] *Ordinatio* prol. 1.1 (*Opera theol.* I: 16); *Reportatio* III.2 (*Opera theol.* VI: 85–6).

[35] *Lectura secunda* prol. 4.2.8 (ed. Wood and Gál, I: 99–100).

## PROPHETIC FACULTIES: IMAGINATION, POWER OF THE WILL, AND INTUITION

Faculty theory served many explanatory purposes in medieval philosophy. This is particularly true for phantasms, the post-sensory images that were employed to explain memory, dreams, sensory illusions, and also the abstraction process, and that eventually lead to intellectual knowledge. With respect to these topics, medieval authors moved largely in step with Aristotle. They clearly departed when discussing prophecy, however, because Aristotle did not share the belief of many contemporaries in the possibility of divinely inspired dreams (*On Divination in Sleep* ch. 1). Several Arabic and Jewish authors give philosophical explanations of prophetic phenomena such as visions or the working of miracles as relying – partly or even entirely – on the extraordinary disposition of human faculties.

Al-Fārābī, for instance, followed by other philosophers such as Avicenna and Maimonides, maintains that an extremely powerful faculty of imagination is a necessary condition for prophetic visions. Some human beings are naturally predisposed to receive in their faculty of imagination either particular forms or sensory imitations of universal forms from the active intellect – that is, from the lowest of the celestial intelligences (*On the Perfect State* IV.14.8–9). Maimonides emphasizes that the cerebral organ of imagination needs to be in the best balance of humors for such reception, and that prophets are born with such a perfect material disposition (*Guide of the Perplexed* II.36). Avicenna, on the other hand, distinguishes between different kinds of prophecy that depend on different faculties of the soul: the imaginative faculty, will, and intellectual intuition (*hads*). The extraordinary disposition of these three faculties explains, respectively, visions, the working of miracles, and the complete knowledge of all universal forms that are in the active intellect. Avicenna thus uses faculty theory to develop a naturalistic explanation of prophecy. Neither the working of miracles nor intellectual prophecy (which consists in intuiting middle terms that automatically trigger the emanation of intelligible forms from the active intellect) involves divine assistance. Only visions require a contact between the imaginative faculty and the divine realm.[36] Maimonides's explanation is less naturalistic: God bestows prophetic knowledge on whom he chooses, with the exception that he cannot turn stupid people into prophets (ibid., II.32).

The contention that prophecy is dependent on the disposition of certain faculties of the soul would be criticized by Thomas Aquinas, although he does

[36] *De anima* (*Shifāʾ*) IV.2 (on the imaginative faculty), IV.4 (on the power of the will), and V.6 (on intuition).

concede that a person may acquire a disposition for prophecy through repeated inspirations, and that such a person will more easily receive further inspirations. He also concedes that there is the phenomenon of "natural prophecy," which occurs when the faculties of imagination and intellect are put into contact with the celestial bodies and angels. This kind of prophecy does presuppose a specific balance of humors. Nevertheless, Aquinas maintains that natural prophecy ought to be distinguished from "divine prophecy," which is given by God and which is entirely dependent upon the divine will and not upon any form of preparedness.[37]

## HOW THE SENSORY FACULTIES ASSIST THE THEORETICAL INTELLECT

Medieval authors inherited from Aristotle various statements about the relation between the sensory and rational faculties that are difficult to reconcile. On the one hand, Aristotle stresses the separability of the intellect from the body and from the rest of the soul;[38] on the other hand, he maintains that "the soul never thinks without an image" (*phantasma*).[39] Avicenna holds that not all activities of the theoretical intellect are in need of phantasms, claiming that the sensory faculties bring to the intellect particular forms, which the intellect uses to abstract universal concepts and to form simply constructed premises based on empirical or transmitted data. These are the principles for the intellect's own activities of conception and judgment, for which the lower faculties are not needed, unless an additional principle needs to be obtained or an image retrieved. This happens more often at the beginning stages of intellectual life, but seldom with experienced and strong souls. In fact, if the intellect does not isolate itself from the lower faculties, they tend to divert it from its proper activity. Avicenna compares the lower faculties to a riding animal that is used to reach a certain place and afterwards becomes a useless instrument and a hindrance.[40]

Albert the Great follows Avicenna on this issue. In his commentary on Aristotle's *De anima*, he holds that all knowledge initially arises from the senses, but that once the intellect has acquired complete knowledge via the external and internal senses, it can be called the "acquired intellect" *(intellectus adeptus)* (see Chapter 23) and has no further need for the sensory faculties – just as someone

[37] *Quaest. de veritate* 12.1 ad 1, 12.3c, 12.4c. See Hasse, *Avicenna's De anima*, pp. 154–74.
[38] *De an.* II.2, 413b25–7; III.4, 429a18–b6.
[39] *De an.* III.7, 431a16–17. Cf. III.10, 432a8–9.
[40] *De anima* (*Shifāʾ*) V.3, ed. Rahman, pp. 221–3; Van Riet, pp. 102–5; *Psychology* (*Najāt*), tr. Rahman, pp. 54–6.

who has used a vehicle to arrive in his home country can then dispense with it. Moreover, he claims that only the acquired intellect is an intellect in the full sense, since it is fully devoid of matter, unchangeable, and immortal, because it is not changed or influenced by the lower faculties (III.2.19). The *intellectus adeptus* is the result of a conjunction between the possible intellect and the active intellect, which is a part of the soul whose light is not always connected with the possible intellect. This *intellectus adeptus* is the last stage of an intellectual ascension in this life, which results in God-like knowledge of all intelligible forms. Only in this universal mode of knowing does a human being reach perfect contemplative happiness (see Chapter 33).[41] In other works, Albert adds that phantasms are indispensable for knowing physical and mathematical objects, but are not necessary for knowing the immaterial objects of metaphysics, that is, the separate substances.[42]

Aquinas, in contrast, denies that knowledge of the essences of immaterial substances is possible in this life. He insists that our intellect always needs to turn toward phantasms (*convertere se ad phantasmata*), not only at the beginning of the thinking process, but also after the acquisition of knowledge. Evidence for this is that brain damage may impede all thinking processes, and that we are unable to conceive an intelligible form without phantasms representing examples of it. The human intellect differs from the angelic intellect in that it is joined to the body; its proper object, which is proportioned to its capacity, is the quiddities that exist in matter. Separate substances can only be known indirectly via a comparison with material substances (*Summa theol.* 1a 84.7; *In De anima* III.13).[43] To say that the intellect can dispense with the senses just as a traveler can dispense with a horse upon arrival is true only of the intellect in the afterlife, when the soul, being temporarily separated from the body, has a different mode of knowing (*Quaest. de veritate* 18.8 ad 4). But one reason Aquinas offers for insisting on the resurrection of the human body is that such intellectual activity apart from the senses is foreign to the soul's nature. The human intellect, being weaker than the angelic intellect, has complete and proper cognition only when working with the senses (*Summa theol.* 1a 89.1).

[41] *De anima* III.3.11 (ed. Cologne VII.1: 221–2) and III.3.12 (ed. 7.1: 224b).

[42] Albert, *Metaphysica* II.2 (ed. Cologne XVI: 92–3); *Summa theologiae* II (ed. Borgnet XXXII: 196a). See Carlos Steel, *Der Adler und die Nachteule: Thomas und Albert über die Möglichkeit der Metaphysik* (Münster: Aschendorff, 2001) pp. 22–4.

[43] See Pasnau, *Thomas Aquinas on Human Nature*, pp. 284–95.