

Rational Imagination: Avicenna on the Cogitative Power

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Discussions of the cluster of powers known collectively as the “internal senses” (*al-ḥawāss al-bāṭinah*) often focus on the various functions and activities of the individual faculties themselves, in isolation from their broader contribution to human knowledge as a whole. Unfortunately this tends to marginalize the role of the internal senses in medieval cognitive psychology, and to obscure the fact that medieval philosophers, like their modern counterparts, tended to attribute the majority of both human and animal cognitive functions to faculties localized in the brain. While the intellect may be accorded pride of place as the highest and most distinctively human of the soul’s faculties, it is the internal senses that perform most of our everyday cognitive tasks.

Indeed, most medieval philosophers agree that the internal senses must play an integral role even in the operations of rational thinking. This holds true for one of the most rationalist and dualist of medieval philosophers and the founder of the internal sense tradition itself, namely, Ibn Sīnā (Avicenna). In his standard classification of the internal senses, the power that is commonly referred to as the “cogitative faculty” (*al-quwwah al-mufakkirah*) after its Latin translation as the *vis cogitativa*, is posited for the express purpose of accounting for the interaction between the intellect and the internal senses in human cognitive acts. My aim here is to offer a detailed analysis of Avicenna’s account of the cogitative faculty in order to provide a more accurate picture of how the Persian philosopher understands the nature of human thinking in the light of his soul-body dualism. I argue that the crucial point for a proper understanding of Avicenna’s account of the cogitative faculty is its peculiar status among the internal sense powers. As Avicenna defines it, the cogitative faculty is simply the label given to the uniquely human manifestation of the compositive imagination (*al-mutaḥayyilah*) when it is at the service of and controlled by the intellect. It is not a full-fledged faculty with an independent

organ, operation, or object of its own.¹ On the basis of this hybrid characterization of the cogitative faculty, I contend, it is possible to account for all of Avicenna's references to "thinking" or "cogitation" (*fikr, fikrah, tafakkur*) within a single, unified theory in which the internal senses play a leading role.

1. Imagination and Cogitation among the Internal Senses

The fundamentals of Avicenna's account of the internal senses in general, and of the cogitative power in particular, are most fully spelled out in the *De anima* of the *Shifā'* or *Healing*, and these fundamentals in my view remain quite consistent throughout the rest of Avicenna's mature writings.² So I will begin with a brief overview of the Avicennian

¹ It is interesting to note that in this respect the Avicennian cogitative faculty reflects the view of Aristotelian *phantasia* as functionally incomplete, advanced in WEDIN (1988), 45ff.

² Earlier treatments of the internal senses display some minor variations from the standard *Shifā'* account. Perhaps the most interesting is found in the *Maqālah fī al-nafs* (*Compendium on the Soul*). In chap. 6 of this treatise, Avicenna differentiates the compositive imagination (*al-mutaḥayyilah*), of which the cogitative faculty is the rational manifestation, from the retentive or formative imagination (*al-muṣawwirah*) by claiming that the latter only contains forms first impressed on the common sense (i.e., forms that were not first perceived by the external senses), whereas the former contains "nothing but true forms bestowed by sensation." In his later discussions of the differences between these two faculties, Avicenna allows the formative faculty to preserve any fictional creations that the compositive imagination has concocted, even if they are not true.

With respect to later texts, few offer any discussion of the internal senses that are as detailed as that provided in the *Healing*. But there are several allusions to cogitation (*fikr*) in Avicenna's discussions of human cognition as a whole, in particular as a foil against which to compare intuition (*ḥads*). GUTAS (2001) argues for a development in Avicenna's account of intuition that is also reflected in his later accounts of thinking. By contrast, I believe that the hybrid character of the cogitative faculty which is present in all

schema of internal senses, focusing on those features that are of special importance to understanding the function of the cogitative faculty.

Avicenna sees the internal senses as a cluster of five different faculties localized in the various ventricles of the brain. These five powers are in turn organized into two pairs of faculties, and each of these pairs contains one receptive and one retentive capacity. Between these two pairs the fifth faculty, which I will call the "compositive imagination" (*al-mutaḥayyilah*) to differentiate it from retentive imagination (*al-ḥayāl*, also known as the *formative* faculty, *al-muṣawwirah*), completes the entourage. This intermediate power is physically identical with the cogitative faculty, though functionally and definitionally distinct from it.

It is important to emphasize that Avicenna arrives at this division of the internal senses by deducing it from a set of principles of faculty differentiation.³ The list is neither arbitrary nor simply derived from tradition. The basic split into two receptive-retentive pairs derives from the principle that the same faculty cannot both receive and retain its perceptual objects. This principle ultimately reflects the fact that the internal senses are physiological powers with instruments in the brain; and since different physical matters display different degrees of malleability and stability when affected by other bodies, different physical organs will be appropriate for reception, which requires a fluid substratum that is easily impressed, and retention, which requires denser matter to preserve the impressions once received.

A different principle is invoked by Avicenna to explain why two pairs of receptive and retentive powers are required. In this case the principle is a familiar one within the Aristotelian tradition, namely, that different cognitive objects must be perceived by distinct faculties. Avicenna's application of this principle is novel, however, because of his well-known differentiation between forms (*ṣuwar*, singular *ṣūrah*) and intentions

of Avicenna's writings is sufficient to explain those features of the *fikr-ḥads* contrast that Gutas argues are later (i.e., post-*Shifā'*) developments.

³ For the principles see AVICENNA, *De anima* 1.5, 43-44; *Avicenna's Psychology*, 30.

(*ma'ānin*, singular *ma'nān*), the former of which are perceived by the external and common senses and retained in the formative faculty, and the latter of which are perceived by the estimative faculty (*wahm*) and stored in the faculty of memory (*dikr*).

Avicenna's claim that forms and intentions constitute distinct perceptual objects is relevant to his accounts of compositive imagination and cogitation, since these powers are in some fashion constituted by their intermediate position between the formative and memorative faculties, i.e., the retentive capacities for forms and intentions respectively. A full consideration of Avicenna's complex and still controversial notion of estimative intentions is not necessary for our present purposes. Rather, it is sufficient to note that Avicenna defines intentions broadly as properties that are not in themselves material, although they can also exist as properties of things in the physical world that accompany their sensible qualities. Because they are not intrinsically material, however, these intentions have a different nature from the proper and common sensibles (which are what Avicenna means here by "forms"), and thus intentions cannot be perceived by faculties which are specifically designed to grasp material forms. Nonetheless, since intentions are on Avicenna's view part of the make-up of the physical world, and since there is evidence that many non-rational animals are able to perceive them, there must be a corporeal faculty for which they constitute the proper object—hence the need to posit a distinct faculty of estimation. While the range of properties included under the rubric of estimative intentions appears to be quite broad, the most vivid and well-known examples that Avicenna gives are of affective qualities, such as the sheep's grasp of the fact that the wolf is her natural enemy, and her recognition of her offspring as an object of affection.

Avicenna's final principal of faculty differentiation is the one which accounts for his claim that the retentive and compositive (or creative) functions of imagination must fall under the scope of two distinct faculties. According to this principle, one must differentiate between passive faculties which simply perceive their objects as they present themselves to the percipient, and faculties which have the capacity to perform further

actions on the objects that they have perceived.⁴ To act upon images in this context means to have the capacity to combine and divide them at will, and this, Avicenna holds, requires a separate faculty, namely, the compositive imagination with which we are here concerned:

The distinction between perception accompanied by action (*al-idrāk ma‘a al-fi‘l*) and perception which is not accompanied by action is that one of the acts of a certain internal faculty is to compose some of the perceived forms and intentions with others and to divide some from others, so that it would have had both to perceive and to act upon what it perceived. As for perception without action, it is for the form or the intention to be merely impressed in the thing without it having any independent action (*taṣarrufan*) over it at all.⁵

In this passage, Avicenna clearly maintains that the capacity to manipulate images and intentions freely necessarily includes the ability to perceive the ingredients being combined. While this may be a reasonable position to hold, it does call into question Avicenna’s claim that distinct faculties are required to explain perception and action. Parsimony would seem to favour the positing of a single faculty, given that the capacities involved do not seem to be mutually exclusive.⁶ Now, while Avicenna does not explicitly

⁴ AVICENNA, *De anima* 1.5, 43-4; 4.1, 165; *Naḡāh*, 201; *Avicenna’s Psychology*, 31.

⁵ AVICENNA, *De anima* 1.5, 43. (Except where otherwise stated, translations are my own.)

⁶ Avicenna’s later critic and commentator, Faḥr al-Dīn al-Rāzī, argued that this view is both inconsistent and uneconomical. He suggested that the estimative faculty was sufficient to account for the animal soul’s compositive abilities, and therefore the compositive imagination is superfluous. In attempting to answer this charge on Avicenna’s behalf, al-Ṭūsī countered that the compositive imagination does not in fact perceive the items that it acts upon, despite Avicenna’s explicit declaration to the contrary. For this point see BLACK (1993), 251 n. 41.

provide the rationale for his position, it emerges readily enough from his description of the compositive capacity of the imagination. Central amongst its functions is the ability to concoct fictional compositions which do not conform to anything that has been or can be perceived in the real world, without any regard whatsoever to their veridicality (and perhaps even their possibility):⁷

Next, we know certainly that it is in our nature to compose some sensibles with others, and separate them from one another, not according to that form which we found in them externally, and not accompanied by assent to the existence of any of them nor to their non-existence. So it is necessary for there to be a faculty in us by which we do this, and this is the faculty which is called cogitative (*mufakkirah*) when the intellect employs it, and imaginative (*mutaḥayyilah*) when the animal faculty uses it.⁸

Avicenna's worry, then, is that if the same faculty were assigned both the fundamental perceptual task of grasping and preserving forms and intentions from the external world, and the further freedom to manipulate these images creatively, there would be no

⁷ This latter qualification is rather tricky, given Avicenna's remarks on the nature of fictional or vain forms and his attempt to classify them as impossible. For a consideration of Avicenna's views on the status of fictional forms, see BLACK (1997).

⁸ AVICENNA, *De anima* 4.1, 165-66. The earlier overview of the internal senses in *De anima* 1.5, 45, gives a similar though more cursory description, including brain localization: "Next is the faculty called 'imaginative' in relation to the animal soul, and 'cogitative' in relation to the human soul. It is a faculty set up in the middle ventricle of the brain at the vermiform [tissue] whose function is to combine [things] in the imagination and to separate them from each other as it wills." For the distinction between retentive and compositive imagination based on the latter's capacity for creating fictions, see also the text from *Qanūn* quoted in n. 14 below.

mechanism to ensure the veridical character of retained perceptions.⁹ The distinction between perception *simpliciter*, and perception accompanied by action, is thus meant to ensure the reliability of the internal senses in providing accurate information concerning the physical states of the extramental world.¹⁰

To summarize, the basic picture of the imaginative faculty that emerges from Avicenna's deduction of the number of internal sense faculties is as follows. The distinction between the formative faculty or retentive imagination and the compositive imagination is the result of parcelling out two distinct functions of Aristotelian *phantasia*

⁹ This is one of the ways in which the proliferation of internal senses can be seen as a correction of the underlying Aristotelian psychology of imagination, and not a decadent multiplication of principles. Aristotle's own grouping of both "voluntary" or creative and passive or perceptual tasks under the rubric of *phantasia* in *De anima* 3.3 makes it difficult to give a unified account of the Aristotelian concept. By parcelling out the competing operations on *phantasmata* to distinct faculties, Avicenna is able to eliminate some of the tensions within the Aristotelian account.

¹⁰ JANSSENS (2004), 54 n. 22, suggests that there is a puzzle in the fact that the imaginative/cogitative faculty "deals with both forms *and* intentions, ... hence using data derived from both imagination *and* estimation." That is, if distinct faculties are required to explain the perception of forms and intentions, it seems puzzling that the imaginative faculty is able to perceive both types of objects. Presumably the solution to this lies in the basic empirical facts that sensible qualities *are* distinct from intentional properties, i.e., colour is not hostility; and that there are cases where animals perceive sensible qualities that are *not* accompanied by any intentions. Hence, the perception of intentions indicates the presence of a percipient other than the percipients of sensible qualities, i.e., the external and common senses. This does not of itself preclude the possibility that a faculty might be found that is capable of perceiving both forms and intentions —something that the estimative faculty itself must do in its role as the central judgemental faculty in the animal soul.

to two distinct internal sense faculties.¹¹ The compositive imagination is posited to account for the capacity to combine and divide sensible forms and images with estimative intentions without reference to the actual configuration of things in the external world, that is, without any stipulation that the external senses have previously been affected by such combinations. This basic compositive capacity of the imagination in turn admits of two distinct applications, one of which is common to all animal souls, and the other of which is unique to the human soul. In its mere animal manifestations, the combinatory activities of the imagination are controlled by the estimative faculty which, in addition to being the primary percipient of intentions, is viewed by Avicenna as the primary judgmental and controlling power within the animal soul. When it is controlled instead by the intellect, the imagination is transformed into the cogitative faculty.¹² It is of crucial importance to Avicenna's account of the internal senses to note that the cogitative faculty is not, properly speaking, the human imagination, that is, it is incorrect to say that for Avicenna (in contrast to many Latin authors), imagination is replaced by cogitation in

¹¹ For *phantasia* as retentive see ARISTOTLE, *De anima* 3.3, 428b30-29a9; also pertinent is the link between *phantasia* and memory at *De memoria* 1, 450a22-25; and the so-called "decaying sense" account in *Rhetoric* 1.13, 1370a28-30 (see NUSSBAUM (1978) 222-23 for this terminology). For fictive *phantasia*, see *De anima* 3.3, 427b18-24.

¹² The same description is found in works ranging from the early *Maqālah fī al-nafs* through to the *Iṣārāt*. See *Maqālah*, chap. 6, 359-60 (though note that DAVIDSON (1992), 81 n. 30, expresses some scepticism regarding the authenticity of this text.) For other texts see *Mabdā'*, 3.3, 93-4; *Uyūn*, chap. 14, 38-9; *Iṣārāt*, 125. The stipulation that the estimative faculty is the controller of the animal manifestations of the compositive imagination is explicit in all of these passages save the first. And while the passage from the *Healing* cited at n. 8 above does not make explicit reference to the estimative faculty, its controlling function is a theme that is repeated in all of Avicenna's accounts of the internal senses, including the remaining chapters of *De anima* Bk. 4, each of which discusses one or two of the internal sense powers in depth.

humans.¹³ Human beings have estimative faculties as well as intellects on Avicenna's view, and so they may continue to indulge in purely animal exercises of their compositive imagination free from any influence of the intellect. Avicenna may be a rationalist but he is also a dualist, and the possibility of conflicts between the animal and purely human aspects of human nature are very real in his view.

2. Imagination without Reason: Avicenna's Account of the Compositive Imagination

In light of the dependence of cogitation upon the imaginative faculty, it is impossible to understand the function that the cogitative faculty plays in Avicenna's account of knowledge-acquisition without first understanding the underlying compositive capacities of the imagination itself, since the cogitative power is constituted by the intellect's manipulation of those capacities. The central feature that emerges in Avicenna's theory of the compositive imagination is its restlessness or randomness. Indeed, while Avicenna's general accounts of the imagination in his enumeration of the internal senses suggest that the faculty has two principal manifestations, one of which is in the service of estimation and the soul's animal operations, and the other of which is in the service of the intellect and its rational operations, it would be more precise to say that the compositive imagination has three basic types of activity, the most fundamental of which is free from subordination to any other controlling faculty, be it rational or animal. It is when its activity is in this pure and uncontrolled state that the imagination produces phenomena such as dreams and hallucinations, but it is essentially the same type of activity which, when harnessed by the intellect, produces cogitative thought.

¹³ Avicenna is generally quite careful not to refer to the cogitative faculty as the human imagination, and to emphasize that humans have both capacities. The only exception to this that I have found is the following brief remark, which occurs in passing in an explanation of how seeing double occurs: "Then [the form] conjoins with the spirit that bears the estimative faculty through the mediation of the spirit that bears the imaginative faculty (*li-l-quwwah al-mutaḥayyilah*), which in people is called cogitative (*mufakkirah*)" (AVICENNA, *De anima* 3.8, 153).

In its absolute and uncontrolled state, then, the compositive imagination is characterized by incessant activity. That is, by its very nature imagination composes and divides images and intentions continually and, as we would now say, subconsciously. Avicenna often refers to the activity of the compositive imagination as a *taṣarruf*—a term that implies that the act in question is independent and under the control of the agent or power who exercises it. In accordance with this conception, the unharnessed imagination is depicted as having free reign to play with whatever images and intentions the soul has stored up in the retentive imagination and memory.¹⁴ It is clear that Avicenna believes that this free play of the imagination can never be shut off, even though it may often take place beneath the level of conscious awareness. So while there is an element of the voluntary in imagination—to the extent that (1) it is not constrained by what is actually encountered through the senses; and (2) its activity is able to be directed by the intellect or the estimation—there is no “on-off switch” for this faculty.¹⁵

¹⁴ AVICENNA, *Qanūn* 96-7: “... [T]his faculty acts independently on what has been stored in the retentive imagination (*al-ḥayāl*) in such a way that it composes and divides. So it can make present (*tastahḍiru*) a form in accordance with the way in which it has been conveyed from the sense, as well as a form different from it, like a man who flies and a mountain of emerald. And as for the retentive imagination, nothing is present in it except on account of the reception from sensation.”

¹⁵ It may seem that this claim conflicts with Avicenna’s general position that the soul can only perform one activity at a time, a position that is based upon what might be called Avicenna’s “unity principle,” i.e., the view that the soul is one thing with multiple capacities. (For texts asserting this principle, see n. 30 below.) But the unity principle is meant to apply to conscious activities to which the soul is actively attending. Avicenna does not deny that things may be going on in the soul of which we are not aware; but he does deny that we can attend to all of them simultaneously. In fact, in *De anima* 4.2, 169-71, Avicenna explicitly draws on the unity principle to explain how the imaginative

Part of the nature of this imaginative faculty is to be continually preoccupied with the two storehouses of the formative and memorative [faculties], and to be always inspecting the forms, beginning from a sensed or remembered form, and transferring from it to a contrary or a similar [form], or to something which comes from it through a cause—for this is its nature.¹⁶

This free play of the imagination is, as I've already noted, at the root of the identification of activities such as dreaming and divination as functions of the compositive imagination, and more fundamentally, it is the reason why the imaginative faculty is associated with the production of fictional images, such as "flying men" (not the kinds that are self-aware!), individuals half-human and half-tree, and emerald mountains, to name some of Avicenna's examples.¹⁷ When there are no controls on the imagination, it randomly follows its innate rules of association—similarity, contrariety, and causality—wherever they may lead, and the results are as likely to be fictional as veridical.

Now while there are some perspectives from which this picture of the imagination would be considered a positive one—with its link to creativity and free association—it is problematic within a philosophical system in which the attainment of truth and demonstrative knowledge is the primary goal. For our present concerns, however, the

faculty can do its own thing, so to speak, while the subject's attention is diverted to other tasks.

¹⁶ AVICENNA, *De anima* 4.2, 174-75.

¹⁷ For these examples see AVICENNA, *Mabdā'* 3.3, 94: "And the difference between [the compositive imagination] and the [retentive] imagination is that there is nothing in the latter except what it has taken from sensation, whereas the compositive imagination may compose and divide and create forms which have not and cannot be sensed at all. For example, a flying human being, and an individual half human and half tree." See also *Qanūn* 96-7, quoted in n. 14 above.

randomness and freedom of the compositive imagination are especially problematic for Avicenna's account of thinking, since truth is the end at which the intellect aims. So Avicenna's account of the compositive imagination brings with it many of the problems that also arise in the Aristotelian association of *phantasia* with error.¹⁸ When the compositive imagination is left to its own devices, then, Avicenna recognizes that it may in fact impede the intellect and cause the mind to wander and lose focus:

Know that rational thinking (*al-fikr al-nuṭqīy*) is afflicted by this faculty, for it is preoccupied by the delusiveness of this power. For whenever it uses [this power] concerning some form, in a manner directed toward some end, it is quickly led to some other thing which is not related to [that end], and from it to a third thing, so that it makes the soul forget the first thing from which it began, until it makes it necessary for the soul to recollect, by taking refuge in analysis by conversion (*al-tahlīl bi-al-'aks*), in order to return to its starting point.¹⁹

Now it may appear from this passage that I have backed myself into a corner, since my argument is that all references to *fikr* in Avicenna should *prima facie* be read as evoking the operations of the cogitative faculty, and so by definition all forms of thinking involve the compositive imagination. But here one could justifiably take Avicenna to be differentiating "rational thinking" or "cogitation" (*al-fikr al-nuṭqīy*) from the compositive imagination, since it is hard to see how something could be afflicted by itself. But this, I maintain, is exactly what Avicenna is claiming in this passage: because of its hybrid nature human thinking is indeed internally conflicted, as we might say. Avicenna's notion of the cogitative power is designed precisely to account for the vagaries that inflict embodied intellects, in a way that preserves the purity and infallibility of the intellect while at the same time doing justice to the empirical fact that much of human thinking is

¹⁸ ARISTOTLE, *De anima* 3.3, 427b1-18.

¹⁹ AVICENNA, *De anima* 4.2, 175.

a product of interaction with the imagination, as Aristotle had asserted.²⁰ And there are escape routes, as the foregoing passage makes clear. When daydreaming and the other pleasant distractions provided by the imagination overtake the thinker, she will have to take control again by directing the imagination back to its starting point. This process of redirection is one that Avicenna here identifies with Aristotelian recollection, which Aristotle himself described as a "sort of syllogism," and which Avicenna more specifically identifies as a form of analysis whereby one traces a conclusion back to its principles.²¹ So the inspiration for the cogitative faculty is in many ways vintage Aristotle, though as we shall see, the Avicennian realization of these Aristotelian themes has a unique flavour of its own.

3. The Hybrid Character of the Cogitative Faculty

As I have already indicated, the most important feature of Avicenna's cogitative faculty is its hybrid status. This hybrid nature is nicely captured by the description that Avicenna provides in his treatise *On the Proof of Prophecies*: "The cogitative power, in the absolute sense, is not one of the pure rational powers where light emanates without restriction.... Nor is it one of the animal powers where light is utterly lost."²² On the one hand, as a manifestation of the compositive imagination, the cogitative power is a bodily faculty whose proper objects are sensible images and the estimative intentions associated with them. As an internal sense power, its distinguishing characteristics are its combinatory capacity and its incessant exercise of that capacity. On the other hand, the cogitative faculty is also rational by definition, and as such it has some sort of access to the universal intelligibles that are the proper objects of an immaterial intellect. For this reason, as soon as Avicenna employs the "cogitative" label, he is no longer speaking of a mere sense faculty. Rather, references to cogitation necessarily invoke the controlling

²⁰ ARISTOTLE, *De anima* 3.7, 431a16-17; 431b2; 3.8, 432a3-10.

²¹ ARISTOTLE, *De memoria* 2, 453a13. Avicenna's account of recollection, which he identifies as a form of "inference" (*al-istidlāl*) can be found in his *De anima* 4.3, 185-87.

²² AVICENNA, *Itbāt al-nubūwāt*, 127; trans. Marmura, 117.

function of the intellect, and thus imply a rationally-directed, voluntary activity. While Avicenna will occasionally add the adjectives "rational" or "intellectual" to his descriptions of cogitation in order to be precise (as in the passage I just cited from the *Healing*),²³ these characteristics are already built into his theory of the cogitative faculty. For this reason, it is legitimate for *fikr* and its cognates, used as technical Avicennian terms, to be rendered by their more natural English equivalents of "thinking" and "thought." For thinking is simply the interplay of the innate motion of imagination with the motionless grasp of abstract universals by the intellect, and this is what Avicenna says the cogitative faculty does. On Avicenna's account, then, thinking—in the sense of rational, discursive reflection—just is cogitation.

It is this annexation of the operations of the cogitative faculty to the realm of rational thought that explains the relative paucity of attention paid to the cogitative faculty's operations in *De anima* 4.2, the chapter that is purportedly devoted to an in-depth consideration of the formative and imaginative/cogitative powers. Since cogitation is a rational activity directed by the intellect, its operations are more properly studied as part of the account of knowledge-acquisition found Book 5 of the *De anima* of the *Healing*, in the epistemological parts of its logic, and in parallel passages in Avicenna's other major writings.

That is not to say that Avicenna entirely ignores the cogitative, ratiocinative operations of the compositive imagination in Book 4 of his *De anima*. Near the beginning of *Psychology* 4.2, for example, Avicenna describes forms stored in the retentive imagination as the subjects not only of the compositive imagination's creative activity, but also of the cogitative faculty's rational operations of analysis and synthesis: "For the cogitative power may freely manipulate (*tataşarrafu*) the forms which are in the formative faculty, through synthesis and analysis, because they are its subjects."²⁴

²³ At n. 19 above.

²⁴ AVICENNA, *De anima* 4.2, 169. I take it Avicenna does not mean to exclude estimative intentions here; he simply omits to mention them for the sake of brevity, and

Avicenna then proceeds to contrast the purposive and controlled character of cogitation with the randomness and restlessness of the compositive imagination when left to its own devices:

The imaginative faculty is one which the soul may divert from its special operations in two ways. ... The [second of these ways] is when the soul sometimes uses [the imagination] in those of its actions which are conjoined to it by way of discrimination (*al-tamyīz*) and cogitation (*al-fikrah*), something which also happens in two ways. One of them is for [the soul] to have mastery over the imaginative faculty and make use of it, along with the common sense, in composing and analyzing forms in their singularity (*bi-‘ayni-hā*), in a way in which a correct aim would occur to the soul. And for this reason the imagination does not have control over the exercise (*al-taṣarruf*) of that which belongs to it by nature to exercise independently. Instead, it is in some way driven by the rational soul’s control over it.²⁵

In this passage, Avicenna clearly assigns the standard operations of discursive thinking—analysis and synthesis—to the compositive imagination when it is under the control of the rational soul. Yet it is no accident that Avicenna says little more here regarding the operations of the cogitative faculty. As I have just suggested, Avicenna considers the various manifestations of cogitation to be of relevance primarily to the study of the operations of the rational soul which controls it. While the cogitative faculty, considered psycho-physically, is nothing but the compositive imagination seated in the brain, the activity of cogitation itself is not primarily one of imagining, but of thinking. So it is necessary to turn now to Avicenna’s account of the role of cogitation in the operations of the intellect itself.

because his main topic in this chapter is the relations between the formative and compositive imaginations.

²⁵ AVICENNA, *De anima* 4.2, 172.

4. Two Types of Thinking?

In a recent article Dimitri Gutas claims that Avicenna recognizes two different types of thinking (*fikrah*) in his late (i.e., post-*Healing*) works, especially the *Investigations* (*Al-Mubāḥaṭāt*). According to Gutas, while one type of thinking is indeed a function of the internal sense faculty of cogitation, there is another type of thinking which is proper to the intellect alone.²⁶ Gutas also takes issue with both me and Herbert Davidson, suggesting that we fall into the trap of assuming that *fikr* in Avicenna always pertains to the realm of the internal senses.²⁷ Gutas's rejection of this claim is based on the fact that in the course of a discussion of *fikr* in his *Investigations*, Avicenna denies that a bodily faculty can combine and divide universals. This, Gutas alleges, indicates that any act of thinking which involves universals cannot be attributed to the cogitative faculty. Gutas's alternative is to posit two distinct but simultaneous activities of thinking concurring in the soul: "So what Avicenna is necessarily doing here ... is *setting up two parallel processes of thinking*, one in the rational soul and the other in the animal. The function of the former is to combine universal propositions. ... The function of the second process in the animal soul, that of the Cogitative faculty, is to combine conceptual images of particulars *in imitation of* ... the process in the intellect for the purpose of aiding it."²⁸

²⁶ GUTAS (2001), 18ff. It should be noted that Gutas is not distinguishing here between discursive thinking and non-discursive understanding or contemplation, which would roughly parallel the Aristotelian distinction between *dianoia* and *noēsis*. Such a distinction is in my view unproblematic, and in fact it is crucial to the understanding of Avicennian cogitation. In Avicennian terms, I would take Aristotelian *noēsis* to be equivalent to "simple knowledge" in the terminology of *De anima* 5.6; the cogitative knowledge with which it is contrasted would be an Avicennian interpretation of *dianoia*. For a consideration of this distinction see section 6 below.

²⁷ GUTAS (2001), 36-37 n. 45. The works in question are BLACK (1997), 448, and DAVIDSON (1992), 95ff.

²⁸ GUTAS (2001), 22.

As may be obvious from my argument thus far, I am not convinced by Gutas's account, since I believe that the concern he raises is easily explained by the hybrid character of the cogitative faculty that I have been highlighting. It is a truism not only for Avicenna, but for the entire Aristotelian tradition, that insofar as thinking involves universals it cannot be the function any body or bodily power. So I agree with Gutas that imagination alone, as a bodily power, cannot compose and divide universals. But there are important issues of explanatory economy and duplication at stake here. Gutas's interpretation of the interplay between intellectual and cogitative thought ignores the fact that the intellect is by definition already involved in the operations of the cogitative power.²⁹ Thus, on his view the intellect must not only be engaging in the composition of universal propositions and deductive syllogisms, but at the same time directing the imagination's combination of the images which imitate them, as Avicenna's account of the cogitative power explicitly requires. But since Avicenna holds that the soul cannot turn its conscious, rational attention to two disparate activities at once, this seems problematic: "It is not in the capacity of our souls to understand [many] things together in a single instant,"³⁰ as Avicenna famously declares, and it is hard to see how Gutas's thesis would not constitute a violation of this dictum.

²⁹ It is telling that Gutas refers to the thinking going on in the Cogitative/imaging faculty as something that is "*in the animal soul*" (Ibid., 18). This seems to overlook the distinction between cogitation—a distinctively human manifestation of the imagination—and simple compositive imagination. The latter alone, properly speaking, is an activity in the animal soul.

³⁰ AVICENNA, *De anima* 5.6, 241. In *De anima* 5.2, 220, Avicenna also asserts the more general principal that the rational soul cannot attend simultaneously to the operations of the body and to its own purely intellectual operations: "The substance of the soul has two acts: an act belonging to it in relation to the body, namely, governing; and an act belonging to it in relation to itself and to its principle, namely, intellectual apprehension (*al-idrāk bi-al-'aql*). These two [acts] are mutually opposed and contradictory. For if [the

Perhaps most importantly, however, on Avicennian principles the imagination's role within cogitation is required to explain the intellect's own capacity to engage in discursive thinking—a crucial point that Gutas's account overlooks. For, as Avicenna makes clear, the activities of even a human intellect, inasmuch as it is an intellect, cannot involve motion, temporality, or divisibility, all of which are essential elements in discursive ratiocination. Strictly speaking, then, for Avicenna there is no real composition and division of universals except incidentally, in virtue of the concomitant activity of the imagination. To that extent, composition and division are the discursive parallels to abstraction. Thinking, a cognitive activity peculiar to human intellects, can therefore only be accounted for by the intellect-body interaction which defines the cogitative power unique to human knowers. And this too is a point that I believe Avicenna upholds not only in the *Healing*, but also in his later writings.

5. Cogitation and Conceptualization

While I've already noted that Avicenna says comparatively little about cogitation in Bk. 4 of the *De anima* of the *Healing*, which contains his most sustained account of the internal sense powers, cogitation figures prominently throughout the discussion of how the human intellect acquires knowledge in chapters 5 and 6 of *De anima* Bk. 5. In the opening passage of chapter 5, cogitation is included in Avicenna's brief sketch of his thesis that all new intelligibles must ultimately be explained with reference to a direct emanation from the Agent Intellect.³¹ Here cogitation, like all activities involving images,

soul] occupies itself with one of the two, it turns away from the other, for it is difficult for it to combine the two." The full discussion of this point extends from 219-221; for the corresponding discussion in the *Naḡāh*, see *Avicenna's Psychology*, chap. 10, 53-54.

³¹ It should be noted that Gutas links his views on cogitation to his acceptance of the theory advanced in HASSE (2001), that Avicenna is indeed an abstractionist. While I agree with both Hasse and Gutas that Avicenna does have an account of what the philosophical tradition usually refers to as "abstraction," I am not convinced that the traditional emanationist account of knowledge-acquisition attributed to Avicenna is incorrect, and

is presented as a necessary pre-condition for emanation to occur, even though it is not itself sufficient to provide a full causal explanation of how a new intelligible is produced. In this context cogitation or thinking is described as a motion in virtue of its association with the combination and division of simple terms which results in propositions, an activity that is parallel in function to the role of the middle term in producing knowledge of a syllogistic conclusion:³²

For cogitations and reflections (*al-afkār wa-al-ta'ammulāt*) are motions which prepare the soul for the reception of the emanation, just as middle terms [of syllogisms] are a preparation, in a way more intense, for the reception of the conclusion, although the first occurs in one way, and the second in another way, as you shall learn.³³

The role of cogitation in all human knowledge is asserted even more strongly in *De anima* 5.6, which includes Avicenna's notorious views on the true nature of intellectual memory, as well as his account of rational prophecy as a function of intellectual intuition (*ḥads*). Central to all of these topics is a basic distinction, elaborated in the middle of this chapter, between simple and cogitative knowledge (*al-'ilm al-basīṭ; al-'ilm al-fikrīy*).³⁴

indeed, it seems to me to make the best sense both textually and in terms of its coherence with Avicenna's philosophical views as a whole.

³² In the *Healing* Avicenna remains silent on any role that cogitation might have in relation to middle terms. The passage from the *Investigations* that I cite at n. 44 below, however, links cogitation both to propositional knowledge and to syllogistic knowledge via middle terms.

³³ AVICENNA, *De anima* 5.5, 235.

³⁴ *Ibid.*, 5.6, 243. For a discussion of some of the same texts I consider here, see ADAMSON (2004), 90-93. Adamson translates *fikrīy* in this context as "discursive," which allows him to bracket the question of whether the term constitutes a technical reference to the internal sense power. But Adamson does endorse Gutas's claim that there

The distinction between these two types of knowledge is itself part of a broader division of the modes of conceptualization (*taṣawwur*) into three types: (1) actual conceptualization; (2) intellectual "memory"; and (3) a phenomenon for which Avicenna has no technical term, but which, for reasons that will become clear below, I have chosen to call "spontaneous" conceptualization.

Actual conceptualization for Avicenna is the basic act of entertaining a complex proposition as a single, unified thought. Avicenna describes it as "conceptualization which is in the soul in actuality, distinguished and ordered" and he offers as an example the proposition, "Every human is an animal."³⁵ Avicenna affirms that the parts that are ordered here are "universal meanings," so they must have something incorporeal as their subject. He adds that there may also be a concomitant arrangement of parts in the imagination (*al-ḥayāl*) when the proposition is expressed linguistically.³⁶ This linguistic, imagined counterpart may also admit of different but equivalent formulations. For example, one could say instead, "Animal is said of every human," but in such cases, Avicenna claims, "their pure intelligible is one" nonetheless.

Actual conceptualization, then, is the end product of the intellect's normal cogitative operations, which issue in universal intelligibles that are structured unities. The linguistic

are in fact two forms of *fikr*, one taking place in the intellect, and another occurring in the cogitative power of the brain (91-92 n. 10).

³⁵ AVICENNA, *De anima* 5.6, 241. Notice that Avicenna uses propositional examples here, even though the act of understanding in question is one of "conceptualization," *taṣawwur*.

³⁶ Note that Avicenna uses the term for retentive imagination here. I don't think this is especially problematic; Avicenna is sometimes sloppy in his use of terminology when the distinction between the two imaginative faculties is not of central concern. And it is possible that he is assuming here that the result of cogitative thinking issues in a new imaginative composition that itself becomes stored as a sense memory within the formative faculty.

expressions of our conceptualizations (which Avicenna believes are merely an incidental by-product of our embodied nature³⁷) are the remnants of those cogitative operations on images, whose goal is to produce the "ordering and arrangement" of universals. But how can cogitation, an operation that involves the combining and dividing of images, be the source of ordered universal propositions? What becomes clear from Avicenna's ensuing account of the other modes of conceptualization in this chapter is that cogitation is in fact the only process that can introduce multiplicity into the intellect, something it is able to do in virtue of the underlying images it employs. The entire thrust of Avicenna's theory of conceptualization in *De anima* 5.6 is to uphold the simplicity of the intellect on the one hand, and the unity of the intelligible on the other. Cogitation allows Avicenna to account for the apparent manipulation of universals that our linguistic and inferential operations imply, without thereby violating the maxim that "the pure intelligible is one."

That the discursive character of thinking is not intrinsic to the intellect's own operations, but rather reflects its cogitative interactions with the imagination, is nowhere more evident than in Avicenna's remarks on the curious phenomenon that I am calling "spontaneous conceptualization." This is an act of understanding that occurs when someone immediately recognizes the answer to some problem which she has not previously considered, and only after acquiring this knowledge does she resort to cogitative sorting in order to articulate what she has discovered:

Another type of conceptualization is like what happens to you when a question is asked of you about what you know or what you are close to knowing, and the answer presents itself to you in an instant. For you would be certain that you are answering it with something that you know, without there being any distinguishing there at all. Rather, you only begin to distinguish and compose in your soul when you begin the answer which

³⁷ On this see BLACK (1992).

proceeds from your certitude that you know it, before distinguishing and composing.³⁸

There are, of course, all sorts of puzzling issues that arise from Avicenna's account of this unusual, if recognizable, phenomenon, but pursuing those issues is beyond the scope of my present concerns. What is crucial in the present context are the claims that Avicenna makes here about the role of composing and distinguishing the contents of one's thoughts in episodes of spontaneous conceptualization, as compared to the paradigm case of actually conceptualizing a proposition such as "A human being is an animal." Avicenna tends to minimize the differences between these two scenarios, reducing them more or less to the temporal relations that hold between the cogitative sorting and the ultimate emanation of the universal intelligible. Thus he declares, "The third [spontaneous conceptualization] differs from the first [actual conceptualization] in that it is not something arranged in cogitation (*al-fikr*) at all, but rather it is like a principle for this when conjoined with certitude."³⁹ Avicenna is insistent that what we have here is an example of actual knowledge, which is, after all, the ultimate aim of cogitative thought. Yet with spontaneous conceptualization, one begins to "think" or cogitate only after one already knows the answer. This, needless to say, seems counterintuitive. But Avicenna does not believe that such cogitation is superfluous. We need cogitation in this case as a form of articulation for the purpose of teaching not only others, but even ourselves, something of which we already have certain knowledge:

³⁸ AVICENNA, *De anima* 5.6, 241-2.

³⁹ *Ibid.*, 242. Avicenna also notes that spontaneous conceptualization differs from intellectual memory as follows: "It differs from the second by not being turned away from it, but rather, it is actually considering it in some way." In spontaneous conceptualization, the knower is not recalling something she previously learned in order to answer a question, but rather, she is discovering for the first time that she already knows the answer to a new question being posed to her.

And it is something wonderful that when this respondent begins to teach someone else some distinction which occurred in himself all at once (*da'fatan*), he learns knowledge of the second type [i.e., intellectual memory] along with what he is teaching the other person, so that this form is arranged in him along with the arrangement of its verbal expressions.⁴⁰

6. Simple versus Cogitative Knowledge

Now Avicenna is aware that some readers might be sceptical of his claim that the person who enjoys spontaneous conceptualization has actual knowledge of any intelligible prior to articulating it linguistically. To counter such scepticism, Avicenna argues that such a person is still lacking the sort of knowledge that we normally associate with human minds, though she does in fact possess the higher sort of knowledge that is proper to human minds not *qua* human, but *qua* intellects. The former sort of knowledge which is lacking in this case is in fact cogitative knowledge; the latter—in keeping with Avicenna's emphasis on the unity of actual intellection—is more properly called "simple" knowledge:

But one of these two [types of knowledge] is cogitative knowledge, in which ultimate perfection is only reached when it is ordered and composed. The second is the simple knowledge whose nature is not to have in itself one form after another form, but instead it is one and from it forms emanate into the receiver of forms. For this knowledge is the agent (*al-fā'il*) of what we have called cogitative knowledge, and its principle (*mabdā' la-hu*). This [simple knowledge] belongs to the absolute intellectual faculty (*li-l-quwwah al-'aqlīyah al-muṭlaqah*) of the soul

⁴⁰ AVICENNA, *De anima* 5.6, 243. The reference to learning knowledge of the second variety in this passage seems to suggest that the cogitative process and its linguistic unfolding perform a mnemonic function: until I sort out my insights, I will be unable to call them "mine" and thereby develop the necessary habit for reconnecting with their corresponding intelligibles in the Agent Intellect.

which resembles the agent intellects. As for the act of distinguishing (*al-tafṣīl*), it belongs to the soul *qua* soul, for what does not have this does not have psychological knowledge (*‘ilm nafsānīyah*, i.e., knowledge that is characteristic of souls).⁴¹

Human beings do, then, possess some glimmer of simple knowledge, as is manifested in their acts of spontaneous conceptualization (and of intuition as well). It is only a glimmer, however, to which we have access precisely to the degree to which we do indeed possess intellects, and thus share the core of our true natures with the separate, agent intellects. *Qua* human, however, we are more properly characterized as psychological beings, not intellectual ones, and our mode of knowing is dependent upon the body which acts as an instrument to our soul. Hence the mode of knowledge most proper to us is cogitative knowledge, wherein the intellect uses our imaginative faculties to sort through the complex unities to which our participation in simple knowledge gives us access. Throughout the course of *De anima* 5.6 Avicenna repeats the theme that composition and division are characteristic of the mode of knowing proper to human minds or souls: “For the soul which belongs to the knower inasmuch as it is a soul has the sort of conceptualization which composes and divides, and for this reason it is not simple in every respect.”⁴² By the same token, Avicenna later reiterates that the act of

⁴¹ AVICENNA, *De anima* 5.6, 243.

⁴² The full passage is as follows: “Know that in the pure intellects of the two there is nothing at all which involves multiplicity, nor is there any ordering of one form after another, but rather, [the pure intellect] is the principle for every form which emanates from it into the soul. ... For the soul which belongs to knower inasmuch as it is soul has the sort of conceptualization which composes and divides, and for this reason it is not simple in every respect. And every intellectual act of apprehension (*idrāk ‘aqlīy*) is a sort of relation (*nisbah mā*) to a form separate from matter and its material accidents in the aforementioned way. But this belongs to the soul insofar as it is a substance which receives what is impressed on it, whereas it belongs to the intellect insofar as it is

differentiating or unpacking what the intellect receives a simple unity is fundamentally a cogitative act: "Learning is the search for the perfect disposition (*isti 'dād*) for conjunction with [the Agent Intellect], until the understanding which is simple comes from it. Then the forms differentiated (*munfaṣalah*) by means of cogitation emanate from it into the soul."⁴³

The *Healing*'s distinction between simple and cogitative knowledge seems to be reflected as well in Avicenna's scattered allusions to cogitation in late works such the *Investigations*: "Cogitation (*al-fikr*) requires conjunction with the principles in the procurement of definitions and their conceptualization, and in the procurement of the middle [term]. As for combination, this belongs to [cogitation], which it sometimes does well, and sometimes poorly."⁴⁴ Avicenna's claim in the *Healing* that cogitative knowledge has its roots in an act of simple knowledge that is ultimately traceable to an emanation from the Agent Intellect is parallel to the claim in this text that cogitation requires conjunction with the principles of knowledge, i.e., the separate intellects. By the same token, all compositional activity required for the acquisition of knowledge is once again assigned to cogitation itself. There is no more reason here than in the *Healing* to see this form of cogitation as a function of anything other than the internal sense power of compositive imagination, which is elevated to the level of a rational faculty—the cogitative power—through the controlling influence of the intellect and its contribution to an intellectual end. Even more noteworthy, however, are the echoes of the hybrid

substance [which is] an agent creative principle. Thus what is characteristic of the essence [of the intellect] in virtue of its being a principle for [the soul] is its intellectuality in act (*'aqlīyatu-hu bi-al-fi'l*), whereas what is characteristic of the soul in virtue of its conceptualizing through them and its reception from them is its intellectuality in act."

(AVICENNA, *De anima* 5.6, 243-44.)

⁴³ AVICENNA, *De anima* 5.6, 247; the context here is Avicenna's account of the nature of intellectual memory.

⁴⁴ AVICENNA, *Mubāḥaṭāt*, ed. Badawi, §359, 199; ed. Bidarfar, §595, 198.

character of the internal sense power of cogitation in the following answer to the query of one of his followers reported elsewhere in the *Investigations*:

And if by the cogitative faculty (*al-quwwah al-fikrīyah*) one means [the faculty] which is seeking, it belongs to the rational soul and it is of the species of the habitual intellect, especially when it adds a perfection by way of surpassing the habit. And if one means by it the moving faculty which presents the forms, it is the imaginative faculty insofar as it is moved with the desire of the rational faculty.⁴⁵

The question to which Avicenna is replying here is whether any faculty other than the intellect employs the cogitative power (*al-mufakkirah*). Just before the passage that I cite, Avicenna notes that except in rare cases where an intelligible is emanated immediately through intuition (*hads*), the intellect will have no choice but to "take refuge in the motions of other faculties whose role is to prepare it for the reception of the emanation." And he adds that these other faculties are able to play such a preparatory role because what is impressed on them has "a likeness or a resemblance" to the forms that are in the Agent Intellect. Avicenna then proceeds to reiterate in this passage the dual aspects of the cogitative faculty as both rational and imaginative that have characterized his account of this power in all of his previous philosophical writings. Against the background of his standard account of the cogitative faculty as an internal sense power, then, Avicenna's meaning here is unambiguous. He is reminding the questioner of the hybrid character of

⁴⁵ Ibid., ed. Badawi §468, 232; ed. Bidarfar, §255, 111. GUTAS (2001), 36-37 n. 45, expresses puzzlement that I should take this passage as an allusion to the internal sense faculty of cogitation. I am in turn puzzled as to why this passage would be considered evidence that there is a second type of thinking taking place within the intellectual soul, since this overlooks the fact that the internal sense power of cogitation has an intellectual or rational element built into it. I do, however, accept Gutas's suggestion that the adjective "moving" probably modifies "faculty" rather than "forms," though both readings remain possible.

the cogitative faculty, a point on which the questioner himself seems confused. To ask whether another faculty than the intellect can use the cogitative power is to forget that every exercise of cogitative power involves both the rational faculty, which is directing or controlling the search for knowledge, and the compositive imagination, which is doing the seeking. The cogitative faculty can thus be viewed as a complex power composed of an unmoved mover—the intellect—and a moved mover—the imagination.⁴⁶ Avicenna is not asserting here that there are two types of cogitation, one rational and one imaginative: he is reminding us that cogitation is always and by its very nature an activity of both faculties.

7. Conclusion

For Avicenna the cogitative faculty represents an adaptation, suitable to his own dualist and emanationist framework, of the basic Aristotelian dictum that the soul never thinks without an image. Like many of the characteristic theses of Avicenna's philosophy, his theory of the cogitative faculty is a compromise that allows him to assert the fundamentally intellectual and immaterial character of human minds, while at the same time taking due account of the obviously sensible and empirical basis of human knowledge. The cogitative faculty, as simultaneously both intellect and imagination, allows Avicenna to uphold his conviction that the human soul is essentially a subsistent intellect, whose sojourn in the body nonetheless circumscribes the methods by which it is able to gain access to the intelligible realm.

⁴⁶ The reference to the habitual intellect also serves to evoke the more elaborate account of intellectual memory in *De anima* 5.6, 245-48, which Avicenna reinterprets as a facility for conjoining at will with the Agent Intellect, rather than as a form of storage.

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