

## Making Abstraction Less Abstract: The Logical, Psychological, and Metaphysical Dimensions of Avicenna's Theory of Abstraction

*Jon McGinnis*

---

*Abstract:* A debated topic in Avicennan psychology is whether for Avicenna abstraction is a metaphor for emanation or to be taken literally. This issue stems from the deeper philosophical question of whether humans acquire intelligibles *externally* from an emanation by the Active Intellect, which is a separate substance, or *internally* from an inherently human cognitive process, which prepares us for an emanation from the Active Intellect. I argue that the tension between these doctrines is only apparent. In his logical works Avicenna limns an account where through the internal human process of abstraction accidents accruing to an essence existing in matter are extracted, thus preparing the essence for new accidents emanating externally from the Active Intellect, which make the essence something conceptualized in the intellect. This study, then, outlines the epistemological and metaphysical framework presented in the logical works that underpins Avicenna's theory of abstraction presented in his psychological works.

In his 2001 article "Avicenna on Abstraction" Dag Hasse submits Avicenna's doctrine of *tajrid*, abstraction, to close scrutiny. He focuses on a cluster of concepts that appear in Avicenna's earliest treatment of abstraction and then follows their evolution throughout Avicenna's corpus. In opposition to a well-received view that makes Avicenna's notion of abstraction a metaphor for an emanation from the Active Intellect, and thus an operation that is external to the human soul, Hasse concludes that for Avicenna abstraction refers to an internal cognitive operation proper to the human soul itself. Hasse's approach is self-avowedly a 'developmental approach,' which he glosses as "an explanation that does not consider [Avicenna's] philosophy a system but follows the formation of the theory from the writings of his youth to that of his age."<sup>1</sup>

Although I think that Hasse's conclusions concerning Avicenna's theory of abstraction are on the whole correct, the approach by which he arrives at those conclusions, I believe, is potentially dangerous; for, in the words of Wordsworth,

“we murder to dissect.” *Pace* Hasse, Avicenna himself thought he had a philosophical system and yet Hasse’s account leaves unclear how abstraction fits into that system and more specifically what role, if any, the Active Intellect plays in Avicenna’s noetic. Moreover, if Hasse is correct in that abstraction refers to an operation internal to the human soul and not to the activity of a separate Intellect (and again I believe that he is correct), then certain serious philosophical puzzles arise. Richard Taylor, following in the footsteps of Averroes, has noted perhaps the most pressing problem, namely, “How is one to explain the inter-subjective unity of scientific discourse?”<sup>2</sup> The problem as I understand it is this: if abstraction were an operation internal and proper to each human intellect, then the product of such an operation, namely, the intelligible concepts, would be as numerous and diverse as the human intellects that produce them; however, when there is scientific knowledge, what is known is not unique to the various intellects, but is universal and is at least potentially common to all intellects. Thus, if abstraction is an internal human operation, whose product is something *particular* to the individual performing the act of abstraction, what is it that explains the *universal* nature of scientific knowledge as it exists in different intellects?

Again, on the whole I agree with Hasse’s conclusions, even if not always his approach. Thus what I want to undertake here is a *synthetic approach*: an explanation that considers how abstraction fits in with other elements in Avicenna’s philosophical system, such as the Active Intellect, as well as showing how Avicenna could have responded to the charge that his theory of abstraction precludes the unity of scientific knowledge.

In order to see how Avicenna’s theory of abstraction fits into his overall system, however, we must begin with a topic that initially may seem unrelated to Avicenna’s psychology, namely, his doctrine of essences (*māhīyāt*).<sup>3</sup> For our purposes there are three important things to note about Avicenna’s account of essences.<sup>4</sup> First, essences are significant for Avicenna’s general theory of knowledge because there is a close relation between essences and conceptualization (*taṣawwur*), where conceptualization for Avicenna is one aspect of scientific knowledge (*ilm*) and is closely linked with concept acquisition and mastery.<sup>5</sup> Indeed for Avicenna all knowledge begins with conceptualization, and what is conceptualized are essences.

Second, and more substantively, although for Avicenna essences exist only either in a concrete particulars or in conceptualization, he also believed that they could be considered in *three*, not just two, respects: they can be considered as they exist in concrete particulars and in conceptualization *as well as in themselves*. Avicenna has been criticized for his doctrines of the three respects on the grounds that if, as he maintained, essences exist *only* as concrete particulars or conceptualized, then there is no way left that they could exist in themselves.<sup>6</sup> Of course the objection only works if one assumes that when something can be considered in one way, it must be able to exist in that exact way, an assumption that just seems to be false. Consider natural or counting numbers. Any instance of such a number can only ever exist as either odd or even, but certainly natural numbers can be considered just as natural numbers independent of any features that follow upon being odd

or even. In similar fashion, I maintain that for Avicenna essences in themselves *do exist*, even though they only exist *as* a concrete particular or *as* something conceptualized, just as natural numbers exist only *as* odd or *as* even, even though they can be considered in themselves.

The third point concerns how one should understand, first, the *particularized* existence of essences both in concrete particulars and in conceptualization and, second, the relation of these modes of existence to essences considered in themselves. Inasmuch as essences exist, whether in concrete particulars or in conceptualization, one or another set of accidents follows upon that given mode of existence. The accidents that follow upon being in concrete particulars are owing to the matter in which the essences occur and include such things as a determinate magnitude, position, place as well as certain qualities such as color, external appearance, ordering of the bodily parts and the like. These accidents are in effect the features that make something sensible or perceptible.<sup>7</sup> As for the accidents that follow upon conceptualization, Avicenna listed such things as being a logical subject and predicate, universality and particularity as well as essentiality and accidentality in predication. In effect these are the features that give our thinking a logical component and allow us to use logic in scientific inquiry.<sup>8</sup> For Avicenna it is the presence of one or the other set of these accidents that particularize (*yakhuṣṣu*) the essences so that they exist either as a concrete particular or as something conceptualized.

What is implicit in Avicenna's point about the essences' being particularized by these accidents is that essences in themselves are a common element in both concrete particulars and objects of conceptualization.<sup>9</sup> The same essences exist in both, albeit particularized by different sets of accidents. This point is suggested forcefully in the *Najāt*, where Avicenna writes about 'thingness' (*shay'riya*); for there he seems to take thingness as closely related to, if not identical with, essences considered in themselves. Thus he writes:

There is a difference between the thingness and the existence in concrete particulars; for the account [of what something is] has an existence in concrete particulars and in the soul [i.e., as conceptualized] and is something common [to both]. That common thing, then, is the thingness.<sup>10</sup>

In short, on the interpretation I am suggesting concrete particulars and objects of conceptualization have one factor that is identical to both, namely, the essence considered in itself, and another factor that makes them different from one another, namely, the set of accidents that follows on whether the essence exists as material or as conceptual.

This long digression concerning essences was needed if we are to understand fully Avicenna's psychological theory of abstraction to which I now turn. The first thing to note about Avicenna's conception of abstraction is that there are different kinds of abstraction depending upon the type of perception (*idrāk*) involved, whether sensible perception, imaginative perception, intelligible perception or the like.<sup>11</sup> Avicenna identifies the kinds of abstraction by the degree to which the essences are

extracted or removed from the material accidents.<sup>12</sup> Thus in sensation the sensible object is not wholly abstracted from the matter itself; for as long as one is sensible perceiving a given material object sensible perception requires the very presence of that object, whereas once the object is removed from the sensory field, the correlative sensation ceases. Between sensation and imagination there is a higher degree of abstraction, since the imagined object is wholly abstracted from the matter itself and so can be perceived even in the absence of the material object. Still the imagined object is not abstracted from the accidents of matter, “since the form that is in the imagery faculty depends upon the sensible form and on a certain quantification, qualification and position.”<sup>13</sup> The degree of abstraction is even greater between the imagery faculty and the estimative faculty, since the estimative faculty perceives the non-sensible aspects of material things, as for example good and evil as well as motion, space and time. The final degree of abstraction, when all associations with matter and its accidents are removed, occurs in the case of intellectual perception, upon which I shall now focus.

In *Kitāb al-Burhān*, III.5, Avicenna limned his theory of intellectual abstraction, adding quickly that the specific details would need to await his discussion in his psychological works.<sup>14</sup> Although we shall turn to those details shortly, the substantive outline presented in this logical work is important, since in it Avicenna drew attention to what he believed were the essential elements of his theory of intellectual abstraction. In what follows I consider the various points that Avicenna mentioned as occurring during the process of abstraction as they appear in this logical work.<sup>15</sup> I in turn develop those points in light of comments that he made in his psychological writings.

First, Avicenna was emphatic that knowledge—or more exactly the conceptualizing aspect of knowledge—requires sensation. That is because through sensation the imagery faculty acquires the sensible forms and, when in the imagery faculty, these forms or essences are the potential intelligibles.<sup>16</sup> The sensible forms presented to the imagery faculty are the likenesses of essences as those essences exist in concrete particulars or sensible objects.<sup>17</sup> As we have seen, however, the forms or essences in the imagery faculty, although abstracted from the very matter itself of the sensible object, have not been abstracted from the material accidents or concomitants that follow on the essences’ being in the concrete particulars. It is precisely because they have not been abstracted from these material concomitants that the forms in the imagery faculty are only potentially intelligible. In order that they become actually intelligible, they must be abstracted completely or perfectly from all the material accidents.

Second, in the outline from *Kitāb al-Burhān*, Avicenna notes that it is the human’s own speculative intellect (*‘aql nazari*) that carries out this final process of abstraction whereby the essence in itself is extracted from all the material accidents or concomitants. Far from being anything mysterious, however, abstraction as it is characterized in this logical work turns out to be just like ‘setting [the accidents] to one side’ (*yaṭraḥuhā min jānib*) and ‘isolating’ (*yufridu*) what belongs to the essence itself. In other places, Avicenna likewise describes the process of abstraction in deflationary terms, such as ‘focusing on’ (*yata’ammalu*)<sup>18</sup> or ‘reviewing in order to

familiarize oneself with something' (*yattali'u*).<sup>19</sup> In short, abstraction for Avicenna simply seems to be a process of selectively attending to certain essential features of the sensible object, as that object appears in the imagery faculty, to the exclusion of other accidental features.

What is conspicuous by its absence from Avicenna's outline of the process of abstraction in the passage from *Kitāb al-Burhān* is any mention of the Active Intellect (although he would mention It later in the same chapter when discussing methods of acquiring assent (*taṣdiq*)). I do not think that the absence of the Active Intellect in Avicenna's account of abstraction in this logical work is because he has a different view here than the one he will present in his psychological works; rather, it is because the Active Intellect simply plays no role in the process of abstraction itself, although, as I shall argue, It does play a vital role in conceptualization inasmuch as It illuminates that which the human intellect has abstracted. In other words, although abstraction and the illumination from the Active Intellect are closely related, nonetheless, they are really distinct activities, each which with its own unique role in Avicenna's noetic.

In order to appreciate the close relation and yet distinct natures of Avicenna's theories of abstraction and illumination we must return to the doctrine of essences and then next consider how Avicenna understood the model upon which he based thinking, namely, seeing. I have argued that for Avicenna abstraction involves the intellect's selectively attending to certain essential features of the essence of a thing as that essence exists in the imagery faculty, in which case the essence is in a particular image belonging to a particular individual and as such is a concrete particular. In this respect the intellect sets to one side those accidental features that belong to the essence as a result of its existence in matter. Again those things that particularize the existence of an essence as a concrete particular simply are the accidents that follow upon the matter, and so once the human intellect is no longer attending to any of the accidents and concomitants that follow upon the matter what exists in the intellect cannot be considered as something existing as a concrete particular; for all the accidents that particularize its existing as a concrete particular have been removed. Consequently, since, as we have seen earlier, essences for Avicenna always and only exist either as concrete particulars or as conceptualized, what the human intellect is considering when all the material accidents have been set to one side must have an existence as something conceptualized. Moreover, as conceptualized the essence must have those intelligible accidents that particularize its existing as such, as for example universality and particularity in predication as well as essentiality and accidentality in predication. These accidents that particularize the essence as existing in conceptualization (or what Avicenna would call the 'intellectual forms' (*ṣuwar 'aqlīya*) as opposed to the material forms)<sup>20</sup> do not come to be *ex nihilo*; rather, they are, I maintain, what emanate from the Active Intellect when it illuminates the *abstracta* of essences in the human intellect.

In order to justify my suggestion, we must consider Avicenna's explanation of how illumination takes place. His account, which is rich, is an extended comparison between the interaction among the Active Intellect, the abstracted essences and the

human intellect and the interaction among the Sun, sensible objects and the faculty of sensation.<sup>21</sup> What is clear from Avicenna's discussion about the Active Intellect is that he thought that the act of thinking is similar to the act of seeing. The question is whether he intended this comparison to be only a colorful metaphor, which simply sparks our imagination, or he intended this comparison more robustly, namely, that vision is the model upon which one should understand cognition. I assume he intended the model in the more robust sense, and thus getting a grip on how Avicenna understood the act of seeing will shed light on how he understood the act of thinking.

In *Kitāb an-Nafs* III.7, Avicenna defended his own preferred intromission theory of vision against certain objections.<sup>22</sup> What is important for our purposes about his discussion there is that he was quite explicit about what does *not* happen in the case of vision as well as summarizing what does happen. He was adamant that vision is not “*only* by extracting (*nazʿ*)<sup>23</sup> the form from the matter, that is, taking the form itself from the matter and transferring it to the sensing power.”<sup>24</sup> In other words, vision is not simply an act of abstraction such that the visible object is stripped of its material and then impressed on the sensing faculty. In fact, he went on to say that nobody believes that. By parity of reasoning, then, thinking cannot simply be either a mere act of abstraction or the Active intellect's impressing the abstract intelligibles into the human intellect, at least not if thinking takes place anything like seeing.

Instead, Avicenna insisted that vision is a type of affection (*infīʿāl*). “Now we say that sight in itself receives from the object of sight a form common to the form that is in [the object of sight], not [the object of sight's] very own form . . . and so the one sensing that [form] does not lose its [own] form, but rather there is found in it only the likeness of [the object of sight's] form.”<sup>25</sup> It is worth noting that in this description it is the sensible object—not the Sun, which has not even been mentioned at this point—that acts on the sensing faculty so that it sees. Avicenna next immediately qualified this account of vision and said that unlike such sense modalities as touch and smell, which occur by direct contact with the object of sensation, vision requires a certain minimal distance between the visual apparatus and the object of vision in order that what has the sensible form may project a ray (*shuʿāʿ*) that conveys a sensible image (*shabah*) of itself to whatever is turned towards it (*mā yuqābiluhū*); however, in order for the object of vision to project this ray the intervening distance must be transparent, and it is the Sun that causes the transparency of the medium.

This is Avicenna's theory of vision in a nutshell. Let us now see if we can map on the various features of vision mentioned here with the various features of human cognition that appear in Avicenna's discussion of the Active Intellect. Three points of comparison are obvious: the forms or essences in the imagery faculty function like the objects of vision; the rational soul or human intellect, which will be impressed by the forms or essences, is comparable to the faculty of vision itself; and finally the Active Intellect plays the role of the Sun. Despite these obvious points of comparison, there are two other factors required for vision that have not been assigned their cognitive counterparts, namely, one, the perceiver's facing the

object of vision and, two, the transparent medium. If we take Avicenna's language describing abstraction literally, that is, as a type of 'attending to' and 'reviewing,' then abstraction corresponds with the perceiver's turning towards and facing the object of vision. In fact, during Avicenna's discussion of the Active Intellect's role in cognition, he explicitly likens the perceiver's facing (*muqābil*) the visible object to the rational soul's reviewing (*tāla'at*) the form in the imagery faculty, where again 'reviewing' was one of Avicenna's preferred explanations for abstraction.<sup>26</sup>

Thus we are left only with assigning the cognitive counterpart corresponding with the transparent medium. Again, in vision it is the light emanated from the Sun that causes the medium to be transparent, and above I claimed that it is the intelligible accidents emanated from the Active Intellect that cause the *abstracta* to be intelligible, or we might say, to be transparent to the intellect. Now at *Kitāb an-Nafs* III.1, Avicenna maintained that there is one sense in which light is the transparency of the medium.<sup>27</sup> Thus if light can be considered the transparency of the medium in vision, so analogously the intelligible accidents or intellectual forms that emanates from the Active Intellect into the rational soul can play the role of the transparency of the medium in cognition.

We now have all the pieces to see the parallels between vision and cognition in Avicenna's philosophical system. Through sensation the imagery faculty is supplied with a number of forms or essences of things, which exist in particular images, and so exist together with certain material accidents or concomitants. These images correspond with the colored bodies in the world, which are potentially visible. These partially material images in the imagery faculty project an intelligible 'image' or likeness of themselves that is analogous to the projected visible images of the visible objects. It is these intelligible likenesses that are impressed on and affect the rational soul such that there is thought. However, in order for these intelligible images to be efficacious the rational soul must be turned towards them, which occurs as a result of the human intellect's act of abstraction. In addition, the Active Intellect must illuminate these intelligible images, which occurs as a result of its emanating intelligible accidents so that the essences exist as something conceptualized. The parallelism between Avicenna's theories of vision and cognition turn out to be almost exact, which is what we wanted.

The above completes the psychological aspect of the role that Avicenna assigned to the Active Intellect. There is, however, another role related to the generation and corruption of material things that Avicenna assigned to the Active Intellect, but now under the guise of the 'Giver of Forms' (*wāhib aṣ-suwar*). Although the relation of the Active Intellect's role in generation and corruption to his overall theory of cognition may not be immediately apparent, it is, I believe, essential to explaining how Avicenna might have accounted for the puzzle concerning the inter-subjective unity of scientific discourse.

Since our concern is with the role of the Active Intellect in cognition, we need only briefly consider its role in generation and corruption.<sup>28</sup> According to Avicenna every material substance has an elemental configuration suitable to the essence informing it. Moreover, elemental configurations are constantly undergoing alterations

as a result of the motions of the heavenly bodies. When in a given material substance these alterations in its elemental configuration are significant enough, the matter no longer is suitable to the essence informing it, and so the matter receives a new essence that is suitable to its new elemental configuration. Again it is the motions of the heavenly bodies that are the causes for the changes in a material substance's elemental configurations; however, as such the heavenly bodies are only preparatory or auxiliary causes for the occurrence of the new essence. The cause that imparts the new essence, that is, the new form, is 'The Giver of Forms,' which Avicenna identified with the last of the separate substances or Intellects, and indeed is the Active Intellect mentioned in his psychological work. The Giver of Forms, then, causes the suitable elemental configuration to receive the new form by emanating the appropriate form into the prepared matter.

The parallelism between the Giver of Forms' emanating forms into the matter and the Active Intellect's emanating intelligible accidents into the rational soul is significant in explaining how Avicenna might account for the inter-subjective unity of scientific discourse. A general principle of Avicenna's philosophical system is that whatever is received is received according to the mode of the receiver. Now given that the Giver of Forms and the Active Intellect are one and the same it seems reasonable to assume that what it emanates are essences of things in themselves together with the intelligible accidents. Now when these emanated essences encounter suitable elemental configurations, the matter is suitably disposed to receive only the essences or forms themselves, not the intelligible accidents. The intelligible accidents, then, are not received when essences inform the matter in the generation of new substances; for the reception of the intelligible accidents occurs only in the case where the recipient is immaterial. Humans in the act of sensibly perceiving in turn receive these essences together with the accompanying material accidents and concomitants that have become associated with them through their existence in matter. It is precisely because humans do receive the essences together with the material accidents and concomitants that the process of abstraction is required. When the material accidents and concomitants are stripped away, however, the essences are then themselves prepared to re-receive the intelligible accidents that are again being emanated by the Active Intellect. Consequently, when the intelligible accidents are rejoined with the essences, the essences' existing as something conceptualized in various human intellects truly are the very likenesses of those essences existing in the Active Intellect. Thus, despite the fact that the intelligibles are in *this* human intellect or *that* human intellect, it is the very same likenesses in both. It is this fact that accounts for the inter-subjective unity of scientific discourse in Avicenna's philosophical system, or so I contend.

To conclude briefly, abstraction is not a mere metaphor for emanation from the Active Intellect, but neither is it some dangling feature in Avicenna's philosophical system. Abstraction understood as a process internal to the human intellect is a systematically, well-integrated element not only in Avicenna's psychology, but also his logic, natural philosophy and metaphysics. In fact, it is in understanding the intertwined operations of both the human speculative intellect and the Active



intellect, namely, abstraction and emanation respectively, as they play out in Avicenna's philosophical system as a whole that one comes to understand their irreducibly distinct and yet affiliated roles in that system.

*University of Missouri at St. Louis*

## Appendix: Translations of Relevant Texts

Text 1: *Introduction* (ed. al-Hudayri), I.2, 15.1–8:

### Essences' Three Respect

The essences of things might be in the concrete particulars of the things or in conceptualization, and so they can be considered in three respects. [One] is the consideration of the essence inasmuch as it is that essence without being related to one of the two [ways] of existence [i.e., either in the concrete particulars or conceptualization] and whatever follows upon it insofar as it is such. [Two] it can be considered insofar as it is in concrete particulars, in which case certain accidents that particularize its existing as that follow upon it. [Three] it can be considered insofar as it is with respect to conceptualization, in which case certain accidents that particularize its existing as that follow upon it, as, for example, being a subject and predicate, and also, for example, universality and particularity in predication, as well as essentiality and accidentality in predication; for being essential and being accidental are not in things existing in the external [world] by way of predication, nor is something a logical subject (*mubtada'*) and a logical predicate (*khavar*), nor [is something] a premise and a syllogism and the like.

Text 2: *The Soul*, (ed. Rahman), II.2, 58–61:

### Investigation of the Kinds of Perception That Belong to Us

[58] Let us now discuss the sensory and perceptible powers and do so comprehensively. So we say: it seems that all perceiving is only to take in the form of the perceptible in one way or another. So if the perception is of something material, it takes its form abstracted from matter in a certain way. The kinds of abstraction, however, are different and their degrees are dissimilar; for owing to the matter, the material form happens to have certain states and factors that do not belong to it essentially from the perspective of what that form is. So sometimes the extraction (*naz'*) from matter is together with either all or some of those associations, whereas at other times the extraction is perfect, that is, in that the formal aspect (*ma'nā'*) is abstracted from the matter and from the concomitants that it has on account of the matter. An example of it is that the human form and essence (*māhiya*) is a nature with respect to which all the individuals of the species are without doubt equally common. In its definition it is a single thing, whereas it is accidental to it that it

existed in this and that individual and so was multiple, where that [i.e., existing in this and that individual] does not belong to it on the part of its human nature. If the human nature were to have in it what requires multiplicity, then human would not be predicated of something one in number, whereas if humanity belonged to Zayd so that it is his humanity, then it would not belong to Amr. Hence one of the accidents that happens to belong to humanity owing to [59] the matter is this species of multiplicity and divisibility. Accidents other than this also belong to it, for instance, when it is in a given matter, it occurs with a certain degree of quantity, quality, place, position and all of those things foreign to its nature. That is because if humanity were according to this or some other degree of quantity, quality, place and position so that it is humanity, then every human would necessarily be common to another in those accounts, while if it is so that humanity is according to some other degree and manner of quantity, quality, place and position, then every human would necessarily be in common with respect to it. Hence the human form essentially is not something deserving that any of these concomitants, which are accidental to it, attach to it; rather, [they] are due to the matter because the matter to which [the human form] is joined had these concomitant attached to it. So sensation takes the form from the matter together with these concomitants and together with an occurrence of a relation between [the form] and matter which when that relation ceases, that taking [of the form from the matter] stops. That is because [sensation] does not thoroughly extract the form from matter, but rather it needs the existence of the matter too, in that that form belongs to it.

The imagery faculty and imagination free the form extracted from matter even more so. That is because [the imagery faculty] takes [the form] from the matter inasmuch as [the form] does not need the existence of its matter for its existence in [the imagery faculty and imagination], because even if the matter were to vanish or cease, the form is something whose existence remains in the imagery faculty. So [the imagery faculty's] taking [the form] destroys the association [60] between [the form] and matter; nevertheless, the imagery faculty has not abstracted it from the material concomitants. So sensation neither abstracts it completely from the matter nor abstracts it from the concomitants of matter, where the imagery faculty has abstracted it completely from matter, but it did not abstract it altogether from the concomitants of matter, since the form that is in the imagery depends upon the sensible form and on a certain quantification, qualification and position. Also in the imagery faculty it is wholly impossible to imagine in any way a form in which all the individuals of that species are common, whereas it is possible that there are existing and imaginable people who are not in the way that the imagery faculty imagines that human.

The act of the estimative faculty exceeds this level a little in abstraction because it grasps the formal aspects that are not in themselves material, although they happen to be in some matter. That is because shape, color, position and the like are things that cannot but belong to corporeal matters. As for good, evil, harmony, strife and the like, they in themselves are not material things, but sometimes are accidentally material. An indication that these things are not essentially material is that if they were, then good, evil, harmony and strife would not be intellected save

as some accident of a body, whereas that [i.e., that good, evil, harmony and strife are not intellectuated as some accident of a body] is frequently intellectuated and in fact exists. So it is clear that these things in themselves are immaterial and their being material is accidental to them. Estimation grasps and perceives only the likenesses of these things, and hence estimation frequently perceives certain immaterial things and takes them from the matter just as it [61] likewise perceives insensible accounts, even though they are material. So then this extraction is more thorough and closer to simplicity than the first two [kinds of] extraction. Still despite that it does not abstract this form from the concomitants of matter, it takes it as a singular and in according to one matter after another and in relation to it and as something associated with a sensible form that is surrounded by the concomitants of matter and by whatever is common in it in the imagery faculty.

As for the faculty in which there are the permanent forms—whether forms of existents that are not at all material and being material is not accidental to them or forms of material existents but which are in every way free of the associations of matter—clearly [that faculty] perceives the forms in that it takes them as something wholly abstracted from matter. [This] is obvious with respect to what it essentially separated (*mujarrad*) from matter. As for what belongs to matter—either because of its material existence or [because] that [existence] is accidental to it—[the faculty] abstracts it from the matter and from the concomitants of matter together with it, taking it as something abstracted until there is the likeness of the human that is said of many and until the many has been taken to be a single nature, and it isolates it from every material quantity, quality, place and position. Were it not to abstract it from that, it would not turn out that it is said of all. So by means of this the perception of judging based on sensing, imagining, estimating and intellectuating are distinguished. We have now urged the discussion in this chapter to this account.

Text 3: *Book of Demonstration* (ed. Badawi), III.5, 160.7–17:

#### Outline of Avicenna's theory of abstraction

Essences perceptible in existence are not in themselves intelligible, but perceptible; however, the intellect makes them so as to be intelligible, because it abstracts their true nature from the concomitants of matter. Still, conceptualizing the intelligibles is acquired only by means of sensory perception in one way, namely that sensory perception takes the perceptible forms and presents them to the imagery faculty, and so those forms become subjects of our speculative intellect's activity, and thus there are numerous forms there taken from [for example] perceptible humans. The intellect, then, finds them varying in accidents such as it finds Zayd particularized by a certain color, external appearance, ordering of the limbs and the like, while it finds Amr particularized by other [accidents] different from those. Thus [the speculative intellect] receives these accidents, but then it extracts them, as if it is peeling away these accidents and setting them to one side, until it arrives at the formal aspect (*ma'nā*) in which [humans] are common and in which there is no variation and so acquires knowledge of them and conceptualizes them. The

first thing that [the intellect] inquires into is the confused mixture in the imagery faculty; for it finds accidental and essential features, and among the accidents those which are necessary and those which are not. It then isolates one formal aspect after another of the numerous ones mixed together in the imagery faculty, following them along to the essence [of human].

Text 4: *The Soul* (ed. Rahman), V.5, 234–236:

The Active Intellect and emanation

[234] The human soul is at one time something intellecting potentially and thereafter becomes something intellecting actually. Now whatever emerges from potency to act does so only by means of a cause in act that causes it to emerge, and so in this case there is a cause that causes our souls to emerge from potency to act with respect to the objects of intellection. Since it is the cause with respecting to providing the intellectual forms (*suwar 'aqlīya*), it is nothing but an actual intellect in whom the principles of the intelligible forms are separate (*mujarrada*) [from matter], and whose relation to our souls is the relation of the Sun to our vision. Just as the Sun is actually visible in itself [235] and through its light it makes actually visible what is not actually visible, so likewise is the state of this intellect vis-à-vis our souls; for when the intellectual faculty reviews the particulars that are in the imagery faculty and the light of the aforementioned Active Intellect shines into us [and] upon them, the things abstracted (*mujarrada*) from matter and its concomitants are altered (*istihālat*)<sup>29</sup> and impressed upon the rational soul . . . in the sense that reviewing them prepares the soul in order that the thing separate (*mujarrad*) from matter [coming] from the Active Intellect [i.e., the intellectual forms or intelligible accidents] emanates upon them. . . . So when a certain relation to this form befalls the rational soul by means of the Active Intellect's illumination, then from [the form] there comes to be in [the soul] something that in one way is of its genus and in another way is not. It is just like when light falls on colored objects; it produces an effect in seeing them that is not in every way [reduced] to their sum. So the images that are potentially intelligible become actually intelligible—not themselves but what is acquired from them. In fact, just as the effect resulting from the sensible forms by means of the light is not itself those forms, but rather something related to them that is engendered by means of the light in the recipient facing [the light], so likewise when the rational soul reviews those forms in the imagery faculty and the light of the Active Intellect comes into a type of contact with them, then they are prepared [236] so that from the light of the Active Intellect they come to be the abstract version of those forms free from [material] taints within [the rational soul].

Text 5: *The Soul* (ed. Rahman), III.7, 141–142:

Outline of Avicenna's theory of vision

[141] Let us now resolve the aforementioned sophism. That to which they adhere, namely that proximity precludes seeing and that it is impossible to derive

colors and shapes from their matters, would turn out to be true for them only if it were said that seeing, or any of the [other] sensations, is *only* by extracting the form from the matter, that is, taking the form itself from the matter and transferring it to the sensing power. Now this is something that no one affirms; rather, they said that is by way of being acted upon, where being acted on is not that what is acted on strips away the power or quality of the agent. Quite the contrary, [what is acted upon] receives from [the agent] either the likeness (*mithal*) of [the agent's power or quality] or something generically different from [that power] (*jinsan ghayrahā*). Now we say that sight in itself receives from the object of sight a form *common* to the form that is in [the object of sight], not [the object of sight's] very own form (and equally that which is sensed by immediate proximity such as what is smelled and touched), and so the one sensing that does not lose its form, [142] but rather there is found in it only the likeness of its form. Some things, however, can be acted upon by [the agent] through direct contact (*mulāqa*), whereas when others are in direct contact, then something that is required (so that [the agent's] impression has an effect) is suspended [from acting]. In this context, it is the ray (*shu'ā'*) whose being connected with the visible form that is required in order that what possesses the form might from its form project into another a sensible image (*shabah*) corresponding with what we see [as a result] of its projecting its corroborative sensible image when the light is intensely upon it so that it colors whatever is in front of it with its color. So [the ray] conveys [the image] accurately when what is in front of it is receptive to that (even through the intermediacy of a mirror as well) assuming that that visible object is duly illuminated. Furthermore it needs some intermediary, such as the tool to assist it in it, namely, the transparent, and that its magnitude has a delimited limit with respect to which nothing smaller than it occurs.

### Notes

1. Dag Nikolaus Hasse, "Avicenna on Abstraction" in *Aspects of Avicenna*, ed. R. Wisnovsky (Princeton, NJ: Markus Wiener Publishers, 2001), 39–72, 40.
2. *Middle East Studies Association Bulletin* 39 (2005): 180–182, esp. 182.
3. Hasse notes the importance of essences to Avicenna's theory of abstraction and briefly discusses them as well; see "Avicenna on Abstraction", 49–51.
4. See text 1 of the appendix, which taken from *Madkhal*, ed. al-Hudayri, al-Ahwani and Anawati (Cairo: The General Egyptian Book Organization, 1952), I.2, 15.1–8.
5. See *Madkhal*, I.3, 17.7–17.
6. See E. Gilson, *Being and Some Philosophers* (Toronto: Pontifical Institute of Medieval Studies, 1952), 75–76.
7. See *Kitāb al-Burhān*, ed. Badawi (Cairo: Dār an-Nahḍa l-'Arabīya, 1966), III.5, 159.8–9; 160.12–13; *Kitāb an-Naf* ed. F. Rahman (London: Oxford University Press, 1959), II.2, 59.2–4.
8. See *Madkhal*, I.2, 15.5–8.

9. A similar point has been made by Meryem Sebti, “Le statut ontologique de l’image dans la doctrine avicennienne de la perception,” *Arabic Sciences and Philosophy* 15 (2005): 109–140. Sebti further observes that the essences in themselves are common also to the representations in the faculties of sensation, imagination and estimation. As for the significance of this point for understanding how Avicenna understood the relation between logic and the sciences see my “Logic and Science: The Role of Genus and Difference in Avicenna’s Logic, Science and Natural Philosophy,” *Documenti e Studi sulla tradizione filosofica medievale* 18 (2007): 165–186.

10. *Najāt*, ed. M. T. Dānishpazhūh (Tehran: Dānishgāh-yi Tihārān, 1985), 519–520.

11. See *K. an-Nafs*, II.2. 58.

12. See Text 2 of the appendix.

13. See *K. an-Nafs*, II.2. 60.

14. *K. al-Burhān*, III.5, 160.7–17.

15. See Text 3 of the appendix.

16. *K. an-Nafs*, V.7, 235.

17. Thus Avicenna says about the visible form, although the point can be generalized to all sensible forms: “Now we say that sight in itself receives from the object of sight a form *common* to the form that is in [the object of sight], not [the object of sight’s] very own form (and equally that which is sensed by immediate proximity such as what is smelled and touched), and so the one sensing that does not lose its form, but rather there is found in it *only the likeness (mithal) of its form*” (*K. an-Nafs*, III.5, 141–142).

18. See *K. an-Nafs*, III.5, 235, where he speaks of ‘focusing on’ as being preparatory for illumination by the Active Intellect; and again *K. at-Ṭabī‘iyāt*, ed. Zayed (Cairo: The General Egyptian Book Organization, 1983), II.9, 142.4–6, and although the topic of discussion there is ‘analysis’ (*taḥlīl*), since in its proper technical sense analysis for Avicenna involves a breaking down of a thing into its constitutive parts for the purposes of defining or definition, at the very least it would seem that Avicenna conceives of abstraction as related to analysis inasmuch as abstraction is the primary cognitive process by which one acquires definitions.

19. Throughout *K. an-Nafs*, III.5, where Avicenna discusses abstraction and the Active Intellect, especially 235.

20. *K. an-Nafs*, V.5, 234. It may be worth noting that Avicenna most frequently used the past participial adjective, *ma‘qūla*, to modify form, and thus the sense is ‘intellected form’. The use of the nisba adjective, *‘aqlī*, is rare in *K. an-Nafs* and the only other occurrences of it in this text of which I am aware is at V.6, 243, 245 and 250, where all the references either explicitly or implicitly seem to refer to what emanates from the Active Intellect or exists only in an intellect; it might also be worth noting that this adjective would appear frequently in Suhrawardī’s *Ḥikmat al-ishrāq* (The Wisdom of Illumination), where it always refers to what exists only in an intellect. In light of these considerations, I suggest the phrase *suwar ‘aqlīya* is indicating a special kind of form, an ‘intellegizing form’ or even ‘intentional form’ (if you will), namely, the accidental forms that make the abstracted forms in the human intellect to be ‘intellected forms.’

21. See Text 4 of the appendix.

22. See Text 5 of the appendix.

23. *Naz'* is a common term that Avicenna used when discussing abstraction and indeed he may have considered the two terms mere synonyms, although more research would be needed before such a conclusive identification could be made.

24. *K. an-Nafs* III.7, 141.

25. *Ibid*, 141–142.

26. *K. an-Nafs*, V.5, 235.19–20.

27. *K. an-Nafs* III.1, 92.

28. See Avicenna, *K. al-kawn wa-l-fasād*, XIV and *Ilāhīyāt* IX.5 for discussions of the role of the 'Giver of Forms' (*wāhib aṣ-ṣuwar*) in the processes of generation and corruption.

29. *Istihāla* is Avicenna's preferred term for change with the respect to *qualitative accidents*, or alteration. Throughout Avicenna's *Physics* and *K. an-Nafs* when Avicenna uses *istihāla* alone without an additional preposition, he takes it intransitively, and so should simply be translated as 'is altered'. When he intends it transitively he adds the preposition *ilā*; see, for example, II.1, 52, II.2, 66 and III.5, 127. Hasse misses this point when he translates this sentence "[the particulars] are transformed into something ABSTRACTED" ("Avicenna on Abstraction," 54), which ironically gives the impression that that Active Intellect transforms the images in the human intellect into *abstracta*, the very position that Hasse rejects.

