

2010

# Philosophy of Intellect and Vision in the *De anima* and *De intellectu* of Alexander of Aphrodisias

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## Recommended Citation

Hendrix, John S., "Philosophy of Intellect and Vision in the *De anima* and *De intellectu* of Alexander of Aphrodisias" (2010). *School of Architecture, Art, and Historic Preservation Faculty Publications*. Paper 15.

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## Philosophy of Intellect and Vision in the *De anima* and *De intellectu* of Alexander of Aphrodisias

Alexander of Aphrodisias (fl. c. 198–209) was born somewhere around 150, in Aphrodisia on the Aegean Sea. He began his career in Alexandria during the reign of Septimius Severus, was appointed to the peripatetic chair at the Lyceum in Athens in 198, a post established by Marcus Aurelius, wrote a commentary on the *De anima* of Aristotle, and died in 211. According to Porphyry, Alexander was an authority read in the seminars of Plotinus in Rome. He is the earliest philosopher who saw the active intellect implied in Book III of the *De anima* of Aristotle as transcendent in relation to the material intellect. He connected the active intellect with the incorporeal and eternal cause of the universe described by Aristotle in Book XII of the *Metaphysics*. Plotinus would make a similar connection, between the One as First Cause and the Intellectual in which it participates.

In the *De anima* 3.7 of Aristotle, the human intellect thinks the form or *species*, processes it conceptually, as an image, which must be imprinted in the imaginative faculty. In 3.4, the sensible object is related to sense perception as the form of the object is related to intellect, as what Robert Grosseteste would call a *species apprehensibilis*, the intelligible form, in relation to the *species sensibilis*, the sensible form as it is imprinted in the imagination through sense perception. Thus the intellect is to what is intelligible as sense perception is to what is perceptible. The intellect is receptive of the form as an intelligible; it must think the form in order to perceive it, as an intelligible, as Plotinus would say. The sensible object might be perceived as a *species sensibilis* alone, but in that way the objects of sense would only be fragmented and disconnected; they would make no sense in relation to each other, or to the perceiving subject, as Plotinus would say. It is only as a *species apprehensibilis*, the form perceived as an intelligible, or the form as thought by intellect, that the form in the sensible world might make sense or participate in a congruent whole of experience.

In Aristotle's *De anima* 3.5, knowledge is identical with its object: the object only exists because it is known, or thought, as a *species apprehensi-*

*lis* or intelligible. Intellect is identical with the thought it thinks, and the thought it thinks is identical with the object that it perceives. The relation between intellect and thought and thought and object is not accessible to discursive thought, or *dianoia*; an understanding of the relation requires *nous*, intuitive or “unconscious” thought. In *De anima* 3.4, although the intellect receives a form as an imprint in sensation and becomes identical in thought with the form, the intellect is not affected or altered in any way by the form or the sense object connected with it. Sense perception is also not affected or altered by the sense objects which it perceives, but intellect is free of the affection and alteration to a higher degree than sense perception. As Grosseteste would say, sense perception is more subject to variation, alteration, and deception or misconstruction, or fragmentation and disconnection in Plotinus’ terms, because it is connected to the corporeal. As discursive reason or *dianoia* is connected to sense perception and the corporeal, it is also more subject to those shortcomings, while intellect or *nous* is not connected to sense perception or the corporeal, and is free from the limitations and affections.

In *De anima* 3.5, Aristotle compared the “active” intellect to light, because light makes potential colors actual, as the active intellect might lead the potential, material intellect to actuality, or the *species sensibilis* to the *species apprehensibilis*, the sensible object to the intelligible, in the images presented by the imaginative faculty. The active intellect would thus lead *dianoia* to *nous*, the corporeal intellect to the incorporeal intellect. The potential, material intellect becomes actual when it can see the *species apprehensibilis*, the intelligible, because it is illuminated by the active intellect, in the same way that light illuminates colors. This is suggested in the *Republic* of Plato, wherein “philosophers have the capacity to grasp the eternal and immutable,” and those without such a capacity “are lost in multiplicity and change” (484b).<sup>1</sup> As will be seen, it will be found in Alfarabi, Avicenna and Averroes that the active intellect illuminates the image in the imaginative faculty, transforming the sensible to the intelligible, and it illuminates the potential intellect to see the intelligible, as light illuminates colors. The active intellect is also seen as eternal and immutable, and is accessible to discursive reason only sporadically and ephemerally, depending on the extent to which the capacities of intellect are developed, as in the philosopher of Plato.

In his commentary on the *De anima* of Aristotle, Alexander of Aphrodisias described matter as a potential receptor of things which are generated in

it by an agent. Intellect is capable of distinguishing between matter and agent, between matter as potential and matter as actual in intellection. Thus intellect must be seen as consisting of both a material and active element. The active intellect is seen as the cause of the “*habitus*” of the material intellect (Alexander’s *De anima*, 88), its habit or appearance, form or perfection (85).<sup>2</sup> Through the cause of active intellect, the material intellect develops from the potential intellect “through instruction and habituation,” to varying degrees, depending on the individual. The *habitus* develops in the material intellect “from its activity in apprehending the universal and in separating forms from their matter,”<sup>3</sup> in other words, from its dianoetic process of the exercising of abstraction and conceptualization in *dianoia*, in combination with the extent to which it is illuminated by active intellect in order to see itself from outside itself in its mechanisms, and to understand the extent to which its mechanisms are manipulated and determined by the processes of perception in relation to intellect. The development of the *habitus* in material intellect thus requires the element of the self-consciousness of thought.

There is a third intellect, productive intellect, according to Alexander, which operates through material intellect in order to make material or potential intellect actual by “producing a state where thought is possessed,”<sup>4</sup> as Alexander explained in his *De intellectu* (107), which was written between 198 and 209. The *De intellectu* was available to scholars in the twelfth century in a Latin translation by Gerard of Cremona. The productive intellect corresponds to that which Aristotle described as “the cause or agent which makes all things” (*De anima* 3.5.430a12).<sup>5</sup> According to Aristotle, the intellect is passive in that it becomes all things, and active in that it makes all things. In that thought is possessed, for Alexander productive intellect “is that which is in its own nature an object of thought and is such in actuality...” (*De intellectu* 107). In order to be in actuality, thought must have itself as an object of its own activity, that is, be self-conscious. The thought which is an object of thought is immaterial, or active, while the thought of which immaterial thought is an object is material. In the same way, the “enmattered forms that are potentially objects of thought,” that are material, become objects of thought, immaterial, through intellect, as intellect separates them from their matter, as it separates itself from its matter, and in that way the enmattered forms become actual just as thought becomes actual, because the enmattered form as object of thought is identical to thought itself: “intellect in actuality is nothing other than the form that is thought of” (108), the *species apprehensibilis* of the object, which is the object as immaterial object of

thought. Knowledge, then, “in actuality is identical with the actual object of knowledge.”

In the same way, “perception in actuality is identical with the actual object of perception,” because the act of perception requires the identification of the sensible form of the object, the *species sensibilis*, with the intelligible form of the object, the *species apprehensibilis*, as the sensible object, or enmattered form, is actualized by intellect. The sensible object only exists insofar as an idea of it exists, which is the result of the influence of active intellect on material intellect, through productive intellect. Thus intellect is “in actuality identical with the actual object of thought and the actual object of thought identical with the actual intellect.” Active intellect, as both intellect in actuality and object of thought, is “the cause of the material intellect’s separating, imitating and thinking with reference to such a form,” the enmattered form made actual as object of thought. Active intellect is the cause of the mechanisms of discursive and dialectical reasoning, the dianoetic or *dianoia*, on the part of material intellect as productive intellect. The functions of discursive reason are subject to active intellect as they are subject to the formation of the intelligible, thought as the object of thought.

The productive intellect is “called from without,” and “comes to exist in us from outside,” because it is immaterial, and because it is itself an object of thought, as thinking “occurs through the reception of form,” as *species apprehensibilis*, in perception. Actualized thought is able to separate the sensible object as enmattered form and the idea of the object as intelligible form, as it separates the mechanisms of discursive reason in material intellect from the role of the intelligible in perception, the material from the immaterial. Because of this, there must be something at work in thought, in the activity of intellect, for which “what it is to be intellect does not lie in its being thought by us,” a part of intellect which is inaccessible to intellect, as would be in the classical *nous*, the Intellectual Principle of Plotinus, or the subconscious in psychoanalysis. This is particularly developed in Plotinus, called the first philosopher of the unconscious.

Material intellect, in discursive reason, does not think objects of thought; rather, it thinks objects of perception, which are only potentially objects of thought. The object of perception, the *species sensibilis*, becomes an object of thought, the *species apprehensibilis*, “by the agency of the intellect” (110), productive intellect as an agency of active intellect. The activity of intellect is to “separate and abstract by its own power objects of perception that are such in actuality” from the sensible object which accompanies the

object of perception, and to define the object of perception as such. The activity of intellect is caused by productive intellect, which makes potential intellect capable of being active, capable of thinking, capable of understanding forms in perception. Active intellect does not produce intellect of itself, but completes intellect which already exists. It enables potential intellect to develop and come to completion, without being affected, or “coming into existence through something else” (111). When potential intellect is developed and completed, it is capable of independently thinking objects of thought.

The development of the *habitus* in material intellect through the self-consciousness of thought in intellection would play a key role in the dialectic of Georg Wilhelm Friedrich Hegel in the *Phenomenology of Spirit* in 1807. In order to become self-conscious, *Geist* or Spirit doubles itself as object in its implicit state (*an sich*), as material intellect, achieves externality, and then transcends that externality, objective form. It is in the self-consciousness of Spirit or *anima rationalis* that all universals operate, and it is through self-consciousness that all universals develop from self-containment, potentiality, to objective form, actuality, and participation (in *nous*, or the Intellectual Principle of Plotinus). Self-consciousness itself is self-contained, being-in-itself, independent of desire (body), thus the medium through which consciousness experiences Absolute Spirit, like the *intelligentia* of Grosseteste. In the *Phenomenology of Spirit* of Hegel, “It is in self-consciousness, in the Notion of Spirit, that consciousness first finds its turning-point, where it leaves behind it the colorful show of the sensuous here-and-now and the nightlike void of the supersensible beyond, and steps out into the spiritual daylight of the present” (177),<sup>6</sup> that is, where the *anima rationalis* leaves behind the mechanics of reason in perception in material intellect and is illuminated by the *lumen spiritualis* in intellection brought about by active intellect, by seeing itself in self-consciousness.

For Hegel it is in the self-consciousness of mind, or Spirit, that the absolute is most completely manifested and understood, in the independent activity of mind, as if it were participating in active intellect, and in that state intellect can produce philosophy and art. The self-consciousness of mind contains the ideas of the universal as archetypes for reason and perception, in the same way as the Intellectual Principle of Plotinus, which is participated in by the absolute, and which dictates forms to Reason Principle, or *dianoia*, in the *anima rationalis*, as the blank slate of a writing tablet. Self-consciousness allows mind to translate sense experience in perception into idea, as manifestation of the absolute. Perception alone, without the partici-

pation of self-consciousness, can only present a limited picture of the real to mind, a picture determined by appearances and inchoate forms. The understanding in self-consciousness or intellection makes perceptible a deep structure of signification in relation to perceived forms and appearances, which allows the experience of the real in perception to be integrated with mind to form an experience which synthesizes the real and the ideal, the objective and subjective, and the individual thinking subject and universal principles as manifestations of the absolute.

The sensory world for Hegel must be seen as an imperfect and incomplete mode of being, as it is given by mind, but not all of mind, in the tradition of the neoplatonic philosophers. That aspect of mind which tells itself that the sensory world is a reflection of mind, that is, self-consciousness, is not present in the sensory world. The self-consciousness of mind reveals the presence of mind in sensory perception, the presence of the *species apprehensibilis* in the *species sensibilis*; both mind and sensory appearance thus participate in the absolute, which is the unity of mind and sensory perception, of the ideal and real, of which material intellect is unaware in its corporeal state. The self-consciousness of mind reveals the necessity of the absolute, or the active intellect, in existence, of the grounds of the relation between the perceiving mind and what is perceived. The absolute is present in what is perceived as the intelligible form, but it is not revealed by perception itself, perception being a function of reason, a dissemination of the absolute in logic which thus cannot participate in the absolute, as intellection cannot participate in the One of Plotinus.

Consciousness is replaced by self-consciousness in Hegel's system, and logic or discursive thought is replaced by a higher form of philosophical reason, the *virtus intellectiva*, combining logic with intuition, material and active intellect, in the dialectical development of thought in the Philosophy of Spirit. This requires the highest possible development of reason in consciousness, a systematic and scientific understanding in philosophy (*Wissenschaft*) which leads to the understanding of the relation between consciousness and the absolute, and thus self-consciousness. For Grosseteste it required the exercising and purifying of the *virtus intellectiva* by the *intelligentia*. As the Intellectual Principle (of Plotinus) or active intellect exists independently of the sensible world, it relies on a different kind of vision, an archetypal or intelligible paradigm of vision not dependent on sensible forms or images, as in the light of the Good in the *Republic* of Plato. As the *anima rationalis* turns inward toward the Intellectual Principle, or active intellect or

*intelligentia*, the vision of the Intellectual Principle is an inward vision which does not see in the conventional sense; vision and the object of vision are identical in self-consciousness, as knowledge and the object of knowledge are identical for Hegel, following Aristotle and Alexander. In the intellectual “the vision and the envisioned are a unity; the seen is as the seeing and seeing as seen,” in the words of Plotinus in *Enneads* V.3.8.<sup>7</sup>

For Alexander in *De anima*, the *habitus* in material intellect develops according to the ability to apprehend the universal in abstraction and to separate forms from matter, to know the *species sensibilis* for what it is. The apprehension of the universal requires the ability to separate form from matter. The acquiring of the *habitus* begins with the perception of sensible objects, which develops into an intellectual perception or vision in the form of a “concept,” thus the concept is a product of the experience of mind in relation to the sensible world. Universals are first intuited by material intellect in relation to the sensible objects which are perceived, then as the *habitus* of the material intellect develops, it is able to intuit universals without any connection to sensible objects, and at that point it becomes pure intellect, the *virtus intellectiva* or Intellectual Principle. While material intellect is passive in relation to the sensible objects in perception, intellect in *habitus* is active in relation to the concepts which it forms. This can be seen in the fact that different sensible objects are perceived in different levels of clarity and intensity, while intelligible concepts have no variation in relation to clarity or intensity.

Because the intellect in *habitus* can apprehend the intelligible *species* in independent intellectual activity, and the intelligible *species* is identical to the act of the intellect in *habitus*, the intellect in *habitus* has the ability to “know itself” (*De anima* 86), to be self-conscious. The intellect in *habitus* has the ability to know itself habitually in the same way that it can know the *species apprehensibilis* habitually. The intellect becomes the object in its act of knowing; the knower becomes the known, and the seer becomes the seen. As Plotinus would have it in *Enneads* V.8.11, in intellect in *habitus* the subject, “must give himself forthwith to the inner and, radiant with the Divine Intellections (with which he is now one), be no longer the seer, but, as that place has made him, the seen.” For Plotinus the self-consciousness of thought requires the illumination of the divine intellection in *nous*; for Grosseteste it requires the illumination of the *intelligentia* in the *irradiatio spiritalis*; it cannot be a mere product of habituation or practice on the part of material intellect in relation to the sensible world. For Alexander, the appre-

hension of the *species apprehensibilis* is the product of the cognitive act on the part of the material intellect in *habitus*, and the apprehension is a result of the identity between the intellect itself and the object which it knows, the self-consciousness, and not the actual knowledge of the object, which is only “*per accidens*” (*De anima* 86). Following Aristotle, the intelligible is a product of sense knowledge, and not something given to intellect from without as an archetype.

Prior to the act of knowing on the part of the material intellect in *habitus*, “the knowing faculty and the thing known stand apart,” separate and unconnected. There is no consciousness on the part of the subject of the relationship between intellect and sensible objects as they are perceived. When the *habitus* is actualized, the distinction between sensible object and the thought of it dissolves. The sensible object no longer has a relation to the intelligible thought, because they can be seen to be identical. The sensible object is no longer seen as matter, but as *species*, incorporeal and intelligible. Sensation is only capable of perceiving objects as matter, as particular existents, thus sensation is not capable of sensing itself in the way that intellect is capable of knowing itself. The perception of the sensible object and the sensible object remain separate in sensation, because sensation on its own cannot discern the relation between matter and form. This is because the sense faculty cannot receive a form in the way that matter receives a form. The sense faculty is only capable of perceiving a form as it has already been received by matter, as indistinguishable from matter. The composite of form and matter can only be perceived in sensation as a particular existent, not as a universal quiddity or intelligible.

Intellect, material intellect in *habitus*, receives the form of the thing, the *species sensibilis* and the *species apprehensibilis*, as if imprinted on a writing tablet, and is able to see the sensible object as matter in relation to form, as particular in relation to universal. In intellection or the development of concept, intellect is able to see the relation between the particulars themselves, in discursive reason, and is able to distinguish the particulars in their interrelationships from what it is that they have in common, their quiddity or essence, which allows them to be seen to participate in a universal. Then, when intellect is able to see the form or *species*, which is a universal, in relation to the matter, as a particular itself in relation to other forms, then the form can be understood as distinct from the matter, as incorporeal. This resembles the dianoetic process of Proclus.

Proclus defined mathematical and geometrical thought as dianoetic, be-

ing composed of dialectical and discursive processes. Dianoetic thinking is different from thinking associated with *nous*, or the Intellectual Principle of Plotinus, which is “perfect and self-sufficing, ever converging upon itself,” as Proclus described in the *Commentary on the First Book of Euclid’s Elements* (18).<sup>8</sup> Mathematics in dianoetic thought corresponds to the type of thinking which exists between sense perception and intelligibles, as for Plato in the *Republic* the thought of mathematicians and geometers is like “reason but not intelligence, meaning by reason something midway between opinion and intelligence” (511), and for Proclus it “traverses and unfolds the measureless content of *nous* by making articulate its concentrated intellectual insight, and then gathers together again the things it has distinguished and refers them back to *nous*” (*Commentary* 4). As opposed to perceptions of sensible objects, which “fix their attention on external things and concern themselves with objects whose causes they do not possess” (*Commentary* 18), where the known and the knower are distinct, dianoetic mathematical thinking begins with numbers, which are copies of eternal ideas in the material world, and then proceeds by dialectical processes, as for Alexander, towards the “ideas that it has within; it is awakened to activity by lower realities, but its destination is the higher being of forms.” The motion of understanding in mathematics is not a physical motion given by the senses, but a different kind of motion which “unfolds and traverses the immaterial cosmos of ideas, now moving from first principles to conclusions...referring its results back to the principles that are prior in knowledge,” the intelligible of the *species apprehensibilis*.

In contrast, for Plotinus, the circular motion of the Intellectual Principle reflects the self-sufficiency of being, and deviation from circular motion reflects deviation from the Intellectual Principle, as it is only the Intellectual Principle which is “perfect and self-sufficing, ever converging upon itself.” All other forms are moved rather than self-moved, and because they are changeable and impermanent, as in dianoetic and discursive thinking, they constitute a lower form of reality. In the *Enneads* (II.1.8), “we must recognize that the changes that take place in bodies,” in sense perception and even intellection, “here represent a slipping-away from the being and take place at the dictate of a Principle not dwelling in the higher regions,” in discursive or dianoetic reason, “one not powerful enough to ensure the permanence of the existences in which it is exhibited,” though they might be apprehended by intellect in *habitus*, “one which in its coming into being and in its generative act is but an imitation of an antecedent kind,” as would be the nature of ma-

terial intellect in *habitus*, “and, as we have shown, cannot at every point possess the unchangeable identity of the Intellectual Realm,” in its participation in the One or divine intelligence, or the *intelligentia* of Grosseteste.

The active intellect is the productive intellect, according to Alexander, in contrast to the material intellect, or the material intellect in *habitus*, in a developmental state. In the *De anima* (3.5.430a14–15), Aristotle distinguished between the quality of mind which is “what it is by virtue of becoming all things,” and the quality “which is what it is by virtue of making all things,” the making of the actual from the potential. The productive intellect is independent from matter, and is the cause of the existence of the sensible object as form or *species*. That which is most purely intelligible is the cause or producer of all objects of knowledge. The production of an intelligible from a sensible object requires an intelligible cause, which is prior to the sensible object. The productive intellect is impassible and unmixed; obviously it has none of the qualities of material existence, of the relations between particulars, as for Plotinus. The productive intellect is impassible because the passive recipient of its action is substrate matter, that which is subject to change and effect. The productive intellect is thus incorruptible, not subject to the change and effect of which it is the cause. Singular sensible objects are cognized by productive intellect in singular acts, not because of the relation between particulars in productive intellect, but because of the role of discursive reason in material intellect, before the intelligible *species* has been separated from the material substrate in intellect in *habitus*.

This is the process that Plotinus might call apperception, or the combination of multiple perceptions. In the *Enneads* IV.7.6, actual perceptual experience of sensible objects is multiple and diversified; perceived objects have no necessary connections in size or position in their relations between particulars, and can be perceived in a variety of ways by the different senses, in the lack of clarity and intensity to which material intellect is subject in sense experience. But in productive intellect, all objects and acts of perception are unified to form a coherent whole which structures reality. When the fragmented and variable objects of perception “reach the ruling principle they will become like partless thoughts...”; they are organized in a conceptual process in material intellect in *habitus* by productive intellect. The perception of forms in matter is determined by the self-consciousness of reason. In *Enneads* I.1.7, “the faculty of perception in the soul [*anima rationalis*] cannot act by the immediate grasping of sensible objects, but only by the discerning of impressions [*the species sensibilis*] printed upon the animate

[intellect] by sensation: these perceptions are already intelligibles [the *species apprehensibilis*]...,” as for Alexander and Grosseteste.

The discerning of the impression or *species sensibilis* printed upon the intellect by sensation is the function of discursive reason, material intellect in *habitus*. Since the sensual impressions, or mnemonic residues, in perception are copies and derivatives of intelligible forms, the *species apprehensibilis*, perception itself is a copy and derivative of reason for Plotinus, as for Alexander. Thought in Plotinus is composed of mnemonic residues of perceived objects, what Plotinus calls “imprints” in “recollections” in *Enneads* V.3.2. Our thoughts in discursive reason are composed of the relations between the particulars of the multiple and fragmented images of perception reconstructed as mnemonic residues in memory. “The reasoning power in soul makes its judgment, derived from the mental images present to it which come from sense perception, but combining and dividing them...”

In *Enneads* IV.7.6, sense perceptions merge together in the subject like “lines coming together from the circumference of the circle,” from multiplicity to unity, subject to the ruling principle, that is, productive intellect. In reality, sense objects are variable and differentiated in terms of size and location as particulars; they are multiple and fragmented, and it is only the reason of the subject, the material intellect in *habitus* as developed by active intellect as productive intellect, which allows them to be apprehended as whole and congruent, as intelligibles in the *species apprehensibilis*. Plotinus remarks that once the diverse and multiple sense objects have been transformed into a whole by apprehension in sense perception, through the self-consciousness of reason, they cannot return to their original state. Apprehension caused by active intellect permanently transforms sensual reality in conformance with the principles of material intellect in *habitus*.

Similarly, according to Alexander, “at the moment when [material] intellect comprehends this supreme [active] intellect in its act of intellectual vision—when, I mean, it is actually knowing it—it becomes in some way that supreme intellect” (*De anima* 89), and it would be impossible for objects to return to their original state in sense perception, where the object and the form, and the form (*species sensibilis*) and intelligible (*species apprehensibilis*) are undifferentiated, and only perceived as multiple particulars, and only cognized as such in material intellect. In the same way, once material intellect knows that it knows the perceived sensible objects as multiple particulars, it can apprehend them as intelligibles taking part in universals, and cannot return to the limited form of knowledge according to which it operat-

ed previously. At that point it is apparent to material intellect that “there exists no intellect at all with respect to material forms unless they are being actually cognized, because their entire reality as intelligible objects consists in their being the objects of a present cognitive act,” in contrast to their previous identity as singular sensible objects, as multiple and fragmented particulars.

As with Aristotle, the universal and intelligible are potentially present in the sensible particular, but they are only actual when they are known and apprehended by material intellect in *habitus*. At the same time, material intellect in *habitus* is only actual when it apprehends the intelligible in relation to the sense object. If the material intellect in *habitus* did not apprehend the intelligible (*species apprehensibilis*) in relation to the sense object, the sense object would not exist, and material intellect would not know itself. In contrast to Proclus, for whom numbers are copies of eternal ideas in the material world, for Alexander “the objects of mathematical thinking,” and forms that result from abstraction in general in discursive thought, are subject to the same conditions as material forms in sense perception: corruption, inconsistency, lack of clarity, fragmentation.

Thus for Alexander material intellect is corruptible, while intelligibles continue to exist whether or not they are presently cognized. The material intellect perishes as the *anima rationalis* perishes, in its attachment to the corporeal. If the *anima rationalis* goes out of existence, then the capacity for discursive reason is exhausted, as is the *habitus* for material intellect, and the sensible object, if apprehended in a complicity with matter, is destructible. The imperishable intellect, active intellect, comes from outside, but the intelligibles which the active intellect allows the material intellect in *habitus* to understand, are only the products of cognition. The intelligible, the *species apprehensibilis*, is thus not fully corporeal and not fully incorporeal, but requires the participation of both sensible perception and active intellect. The material intellect apprehends the intelligible, the *species apprehensibilis*, by conforming itself to the intelligible, and it is through the apprehension of the intelligible that potential, material intellect becomes actual intellect. The *anima rationalis* has the potential to be both corporeal and incorporeal.

There are thus three intellects: material, in *habitus*, and productive. Matter is defined as the substrate which can become a particular being through the presence of a form, as potential intellect can become actual intellect through the presence of an intelligible. According to Aristotle in the *Metaphysica*, the substratum of matter “is that of which everything else is predi-

cated, while it is itself not predicated of anything else” (7.3.1028b36),<sup>9</sup> meaning that matter can be seen as participating in anything which can be affirmed as a quality, but matter itself cannot be affirmed as a quality. Matter can be seen as neither a quality nor a particular (7.3.1029a20–21); it is a vocabulary element of neither the apprehension of the intelligible nor discursive thought. Matter can only be seen as a potentiality, and anything which can be described as material is so only as potentiality. Material intellect is thus potential intellect, and not an actual intellect. The material intellect has the potential to become actual intellect to the extent to which “existents are possible objects of knowledge” (*De anima* 106), according to Alexander. The faculty in material intellect which can apprehend an intelligible cannot be an intelligible itself, because then its own intelligible form would appear and interfere with the grasping of the intelligible. The faculty of intellect to know intelligibles can only be a potentiality, able to conform to the intelligible from without, in the same way that matter can only be a potentiality able to conform to the form of an object as it is perceived.

Alexander compares the second intellect, the material intellect in *habitus*, which is capable of apprehending intelligibles, to artisans who can perform a task of their own resources through an acquired mastery of the craft. Intellect in *habitus* is acquired through practice and experience, in discursive reason and intellection, to the point that the reason is not entirely conscious or deliberate, but at times intuitive or automatic, as it participates in intellect, and is able to see itself in practice, become self-conscious, as the artisans are advanced enough to be able to observe themselves as they work, to be able to be aware of the framework within which their developed skills are operating, as material intellect is able to see from outside the relation between form and matter in a sensible object, the framework within which sense perception operates. Material intellect is compared to the apprentice who only has as yet the aptitude for acquiring the skill necessary to perform a task.

The third intellect, the productive intellect, leads the material intellect to actual intellect as intellect in *habitus*, in the same way that light makes potentially visible colors actually visible. The productive intellect is “the intelligible in act” (*De anima* 107), which produces the “activity of knowing” in material intellect, the self-consciousness on the part of reason. The productive intellect is not the intelligible itself, but actualizes the intelligible, by developing the *habitus* of the material intellect. The intelligible, in turn, is an intellect, because it is incorporeal. The intelligible is the form, the *species apprehensibilis*, which has been separated from matter in the imprint, *species*

*sensibilis*, of the sensible object in sense perception, so the intelligible can also be called “intellect in act,” and is itself intellect. The form of the sensible object, the *species sensibilis*, can only become an intelligible and an intellect “when it is actually being cognized,” by material intellect in *habitus*; otherwise it is only potentially intelligible. The intelligible is thus the product of material intellect in sense perception, and at the same time of something from without, which is the active intellect.

In *De anima* 110, “there must necessarily exist an intellect that, because it is in act, can function as active agent to make intellect, heretofore only potential, capable of acting—that is, of thinking. But such precisely is the intellect that enters...from outside,” though Alexander does not elaborate on how that might occur, except to say that it is the result of a prior activity, of an essential property. The metaphor of fire is invoked to suggest that active intellect is some kind of natural force that is capable of transforming while it is being acted upon. The active intellect transforms sensible objects into intelligible objects by a quality that only exists in active intellect itself, the intelligible, in the same way that fire can ignite and burn a material object by a quality that only exists in fire, but the material object is transformed to fire. The active intellect “makes intelligible things that, as they exist, are not actually intelligible. There does not in fact exist any intelligible other than the subsistent intellect that is in act” (*De anima* 111). The intelligible only exists because of intellect, and only exists at the moment of intellection, “when the cognitive activity is going on.”

In the *De intellectu* of Alexander, the active intellect produces intellectual thinking and leads the material intellect to actuality. The active intellect, in contrast to the material intellect, is intelligible, as it is incorporeal. Alexander follows the suggestion of Aristotle in describing active intellect as analogous to light (*De intellectu* 107), as light makes potentially visible colors actual. The active intellect therefore illuminates potential objects of intellect, the *species sensibilis*, and transforms them to actual objects of intellect, the *species apprehensibilis*. Again, the active intellect illuminates the potential intellect by creating a *habitus* for intellectual thought, by putting material intellect in the particular state in which it can see the intelligibles of the active intellect, which are eternal and immutable.

The active intellect allows the material intellect to abstract and conceive material form, and it is an acquired intellect from without, from outside the material intellect; it is not an inherent part of material intellect, the capacity of intellect on its own (*De intellectu* 108). In that active intellect is to materi-

al intellect as sense perception is to the material form, each productive relation must contain three elements: that which is affected, the activity of being affected, and something generated from the affection. Material intellect is affected as is the sense faculty, both tied to corporeal matter. The active intellect from without acts on material intellect, bringing it to actuality, making it capable of thinking, in the same way that a form is made perceptible in sense perception, as a *species apprehensibilis*. In that way all things are made intelligible. Intellection is generated from the interaction of active and material intellect in the same way that perception is generated from the senses. Averroes interpreted that which is sense perceptible, in the generation of perception from sense experience, as light, that which makes forms visible to perception.

The human material intellect, according to Alexander in *De intellectu* 110, is both passive and active, in the same way that fire is both passive and active. As active, fire destroys matter, and as passive fire feeds on matter, and is passively affected. The material intellect is active when it separates forms, when it exercises its discursive and dialectical functions, and it is passive when it takes hold of the form, when the form is given to it as the *species apprehensibilis* by active intellect. The material intellect acts both independently of its own corporeal functions, and as assisted by the active intellect. The active intellect assists the material intellect as light assists the process of vision, perfecting the object of thought and establishing the *habitus* for material intellect to operate. As the object of thought is perfected in material intellect, as the *species apprehensibilis*, the active intellect becomes identical to the object of thought in material intellect, in the same way that light becomes identical to the object of sight in sense perception. The object of sight in vision is not distinguished from the *species sensibilis*, or the *species apprehensibilis*, by material intellect; material intellect is not conscious of the existence of the perceived form as an intelligible, as active intellect is a form of unconscious thinking.

Alexander described the material intellect as a “tablet on which nothing has been written” in *De anima* 84, as it is a “kind of propensity suitable for the reception of intelligible forms,” as in the *species apprehensibilis*. According to Aristotle in *De anima* 3.4.429b30–430a10, what mind thinks “must be in it just as characters may be said to be on a writing-tablet on which as yet nothing actually stands written...” The suggestion is that all intelligible thoughts are eternally present, that the intellectual development or creativity of mind is defined by the extent to which the material intellect can

acquire knowledge and understanding of the intelligibles of active intellect. Human thinking participates in a cosmic intellect which is infinite in scope in relation to it and which contains all possibilities of thought, which might be realized if a thousand monkeys were given a thousand typewriters.

Alexander prefers to compare the material intellect not to the writing tablet itself, but to the blank surface of the tablet. The tablet is mind, the surface of the tablet is the *anima rationalis* or individual mind, and the material intellect is the propensity of the blank surface to receive intelligible forms. If intelligible forms are inscribed on the surface of the tablet, the *anima rationalis* as the surface would be changed and affected, but the disposition or propensity of the surface to receive the inscriptions, the material intellect, would not be changed or effected. The material intellect does not experience any change or effect in the inscription of intelligible forms because it does not actually exist, or cannot be seen as any of the “things which actually exist.” The “things which actually exist” can only be seen as identical to objects of thought, which are the product of active intellect, in the same way that sensible objects cannot be seen to exist in their material constituency, which is only a potential substratum, but as intelligible forms as they are thought. The inscription or imprint of the sensible form in the *phantasia*, the *species sensibilis*, likewise cannot be seen to exist unless in relation to the inscription of the intelligible form in the *species apprehensibilis*.

In *De anima* 429a27–28, Aristotle called the *anima rationalis* the “place of forms,” what Alexander called the “depository of form.” According to Aristotle, this only applies to the “intellective soul,” as to the soul as it is engaged in discursive logic; the forms in the soul can only be potential and not actual; and the forms are only in the soul figuratively, and only in the highest part of the soul, the highest capacity of intellection, the *virtus intellectiva* of Grosseteste. Thus, for Alexander, the material intellect cannot be a “locus of actual forms,” because it cannot possess them, although it is capable of apprehending them, through the *irradiatio spiritualis* of the *intelligentia* as Grosseteste would describe it, the influence of the active intellect on the material intellect. The soul can thus be called a “potential seat of forms,” in its attachment to the body, just as sensible objects in their material substrate are potential forms that can be apprehended in sense perception.

In the *De anima* of Alexander, the enmattered form (*noëta ta enula*, *De anima* 87) or *species sensibilis* of Grosseteste is contrasted to the immaterial or transcendent form (*aïlon eidos*, *De anima* 88) or *species apprehensibilis*.<sup>10</sup> The immaterial form is eternal, as an archetype or intelligible, and is

identical with the act of thinking, thus inaccessible to material intellect, or the consciousness of the subject in discursive reason, but is the cause of all enmattered form in discursive reason and sensation. The enmattered form does not exist in intellection until it is abstracted, until it is subjected to the processes of discursive and dialectical reasoning, or what Proclus would call the dianoetic, as illuminated by active intellect. Human intelligence is the locus of the juxtaposition or dialectic of the immanent and transcendent, the corporeal and incorporeal, sensible and intelligible, as Giovanni Pico della Mirandola would describe in the *Oration on the Dignity of Man* in the Renaissance.

Alexander described the content of imagination or *phantasia* as “traces that endure as a result of actual sensation” (*De anima* 68–69), as the mnemonic residue of sense perception, the *species sensibilis* which becomes the *species apprehensibilis* through the interaction of intellect, and “representations which are perceptible to it even when the real sensibles have disappeared.” In that the real sensible is a representation to begin with, a *species sensibilis*, the trace in *phantasia* is a representation of a representation, what Freud would call the *Vorstellungsrepräsentanz* in imagination and dreams. The trace should only be called an impression in the metaphysical sense, according to Alexander, because the sensible object does not make an imprint in vision like the traces in wax of a signet ring, for example. The initial apprehension of the *species sensibilis* does not involve an imprint of a form, nor does the mnemonic residue of the *species sensibilis* in the *phantasia*, as Alexander says “even the initial apprehension of sensibles does not involve any kind of shape or figure” (72), as for example color or odor. The word “impression” is used to describe the residual trace remaining in the *oculus mentis* only in a metaphorical sense, and for lack of a better term.

The shape or figure of a perceived object, the *species sensibilis* as an imprint or form, requires the participation of intellectual activity to give it shape or form. Otherwise, as Plotinus would have it in *Enneads* IV.7.6, perceived objects are unconnected and incomprehensible, and only recognizable as formed in reason, which combines together the varied sensations, the “imprints” and “recollections” (V.3.2), which are already functions of intellection in a process inaccessible to conscious reason, until they have “become like partless thoughts” and have reached the “ruling principle.” The *species apprehensibilis* is a partless thought as discernible by *virtus cogitativa*, though it is in fact composed of the object as given to sensation, the form of the object as given to it by intellection, and the form of the object as un-

derstood in reason which is based on the form of the object as given to it by intellection. In *Enneads* V.3.2: “The reasoning power in soul makes its judgment, derived from the mental images present to it,” which are already products of intellection, form projected onto matter, the underlying substrate, “which come from sense perception, but combining and dividing them,” subjecting them to discursive reason. Thus in *Enneads* IV.7.6, sense perceptions come together in reason like “lines coming together from the circumference of the circle,” subject to the ruling principle, or the *principia essendi* of Grosseteste as given by *intelligentia*.

In the *De anima* 72 of Alexander, imagination is “accompanied by an assent,” and therefore “desire usually results from imagination.” Alexander seems to be saying that desire is a product of the assent, the acceptance or concurrence on the part of reason of the *species sensibilis* in relation to the perceived object, as given by intellection in imagination, and the *species apprehensibilis* in relation to the *species sensibilis* in intellection. Plotinus described perception itself as a function of desire, as a mechanism of the conceptual process, and memory in particular. In *Enneads* IV.3.28, desire accompanies memory, or retention of the mnemonic residues, the traces of perception: “the desiring power is moved by what it enjoyed when it sees the desired object again, obviously by means of the memory.”

In *Enneads* V.3.2, imagination is a process which engenders desire in the process which Alexander calls assent: “as for the things [*species apprehensibilis*] which came to it [*anima rationalis*] from Intellect [*intelligentia, nous*], it observes what one might call their imprints [metaphorically, like Alexander]...and it continues to acquire understanding [assent] as if by recognizing the new and recently arrived impressions and fitting them to those which have long been within it: this process is what we should call the ‘recollections’ of the soul,” or the imagination. The assent is the agreement reached in reason in the *anima rationalis* between the *species sensibilis* which is the product of sense perception (and intellection, though undetectable by reason), and the *species apprehensibilis* which is given to reason by Intellect, in the process of organizing sensible experience. Desire is the product of the relation between the multiple and fragmented objects of sense perception and their organization in reason, a gap which needs to be filled, and the relation between the objects as understood in reason and the objects as defined in intellection, another gap which needs to be filled. Desire is the product of the impossibility of filling those gaps in human thought, but it is that impossibility which propels the function of the imagination, and defines the human

condition.

In *De anima* 73, Alexander identifies sight or vision as the most important power of the senses, because sight depends on light, and “the name ‘imagination’ is therefore derived from the name for ‘light,’” referring to Aristotle in *De anima* 3.3.429a2–3, where the word *phantasia* comes from the word for light, *phôs*. The light of the imagination is a metaphorical light, the internal light of the *oculus mentis*, which was described by Plotinus, and would be called by Grosseteste the *irradiatio spiritualis*, or *lumen spiritualis*, the reflected light which illuminates the *species apprehensibilis*. The *lumen spiritualis* of Grosseteste, light produced by the *lux spiritualis*, allows the mental sight, the *visus mentalis*, to apprehend the intelligibles in the *virtus intellectiva*, as the light of the sun, the *lumen solare*, makes vision possible, as it illuminates the objects of sense perception. The *lumen spiritualis* is the “first visible” in interior sight, *visus interior*, as the colored body is the first thing receptive of the light of the sun. The more receptive the intelligible object, the *species apprehensibilis*, is to the *lux spiritualis*, the more visible it is to the *oculus mentis*, and the better it can be understood by reason as a kind of archetype among the *principia essendi*. The object which is most similar to the light in sense perception, the least material, is the most receptive of it. The power of the mind, the *acies mentis*, is a spiritual light, the *irradiatio spiritualis*, as imagination is seen by Alexander as a light, which operates in the *virtus intellectiva* to illuminate the *species apprehensibilis*, and the *virtus* is strongest when the object is the least material and conforms most easily to the immaterial *species*.

When Plotinus, in *Enneads* V.5.7, distinguishes between “the form perceptible to the sense,” the *species sensibilis*, and “the medium by which the eye sees that form,” he distinguishes between the *species sensibilis* and the *species apprehensibilis*, between the object as it exists in the corporeal realm, and the object as it is conceived in the imagination, as given by light in vision. The *lumen solare*, the light of the sun, is perceptible to the eye, and is distinct from the *species*, the form which it makes possible, thus the light is the cause of the seeing, as the imagination is the cause of the seeing. The light of the sun is within the eye as well as without, as the *lumen spiritualis*, the reflected light projected in the *oculus mentis*, as a spark from a flame, what would be called the *scintilla della divinità*. As Plotinus describes it, “the eye is not wholly dependent upon an outside and alien light; there is an earlier light within itself, a more brilliant...,” which illuminates the imagination, or is equivalent to it in the case of Alexander. The inner light of the eye,

the *irradiatio spiritualis*, for Plotinus is the equivalent of the Intellectual Principle, the *virtus intellectiva* of Grosseteste which receives the illumination from the *intelligentia*. In the *Enneads*, “The Intellectual Principle, hiding itself from all the outer, withdrawing to the inmost, seeing nothing, must have its vision—not of some other light in some other thing but of the light within itself, unmingled, pure, suddenly gleaming before it,” the *lumen spiritualis* illuminating the *virtus intellectiva*, in order for intellection to occur, as made possible by the *imaginatio* or *phantasia*.

For Alexander in the *De anima*, imagination is not the impression itself, but the “vital activity of the imaginative power,” the *virtus* of the *phantasia* in Grosseteste’s terms, focused on the impression, as the activity of the imagination is separate from the activity of the senses. The trace in sensation, which is a product of imagination, is an internal sensible object, as opposed to the sensation itself, which is an external sensible object. According to Alexander, it is impossible to receive external sensible objects alone in sensation without the activity of the imagination, without the presence of the traces or mnemonic residues of sensible objects already processed in what Grosseteste would call the *virtus intellectiva*, in an interaction between sense and intellect. “For to be actually sensing means, in effect, that the agent possesses within himself these impressions of sensible objects that lie outside him” (*De anima* 68). Theoretically, a newborn baby can have no sense impressions until it has memories of sense impressions. The imaginative power is nothing other than the sensory power in the act of reason. The traces of sensations are no different from the sensations themselves, except that they are permanent or archetypal as opposed to fleeting and ephemeral: “imagination will contain truth and falsity in the same measure as do the sensations on which it depends” (70). Imagination is reliable to the extent that sense perception is reliable, but if the senses are deceived by “residual impressions which derive from common sensibles” or “objects that are only incidentally perceptible,” which contain falsity, then imagination can be prone to error as well, and unreliable. Thus “imaginative representations are very unreliable when they are based on residual impressions which have been only imperfectly preserved, and which have been partly formed by the activity of imagination itself.”

In relation to Grosseteste, the imaginative faculty is seen here by Alexander as a cognitive faculty, a function of the *anima rationalis*, the rational soul, which, because of its attachment to the corporeal in sense perception, is limited in its ability to see the intelligibles as distinct from the sensory traces

in the *oculus mentis* in the process of imagination. This distinction is also found in the *De anima* of Gundissalinus, following the *Fons Vitae* and *De anima* of Avicenna. In the *Commentary on the Posterior Analytics* of Grosseteste, the *species apprehensibilis*, or the mnemonic residue of the sense perception, the *species sensibilis*, can only be discerned as an intelligible by the *anima rationalis*, and not subject to the errors of sense perception, if it is illuminated by the *irradiatio spiritualis* of *intelligentia*, the divine intellect which is a kind of classical *nous*. This can be accomplished through the process of intellection, or intellectual activity, which purifies the *anima rationalis* of its corporeal connections and unclouds the lens of the *oculus mentis*, in the *visus mentalis* of the *acies mentis*.

While the newborn baby can have no sense impressions until it has memories of sense impressions, the human being is born with the powers of sense perception, in Alexander's *De anima* 83, and as the senses are used, sense perception and the imagination develop. As each individual sense experience leaves an impression on the individual, the memory of sense experience develops, and the individual builds a catalogue of the *species sensibilis* experienced, and the *species apprehensibilis* thought, forming a vocabulary for the imagination. The discursive functions in the *anima rationalis* of abstraction and conceptualization result from sense perception and memory, forming a cumulative process in imagination, so that individual particulars are incorporated into collective universals. The individual "takes a kind of step upward from the 'this particular something' to the 'something of this general kind'," as in the ascent from physical love to the idea of love in the *Symposium* of Plato. The result is a "comprehensive perception," which develops the universal from the particular, and which is equated with an "intellective act." As described by twentieth century cognitive science, "Human visual perception is a cyclical process in which the brain constructs, tests, and modifies perceptual hypotheses. In order to have a percept, we must construct it."<sup>11</sup>

Alexander's model of perception as an intellective act which is developed from individual sense experiences is true to Aristotle, and brings to mind the model of George Berkeley in the eighteenth century. In *An Essay Towards a New Theory of Vision* in 1709, Berkeley asserted that the quality of distance, as in the qualities of space and time for Immanuel Kant, cannot be immediately perceived of itself, but must be a judgment which is learned through an accumulation of sense perceptions in relation to discursive thought. Judgment, according to Berkeley, as in the ascent of Alexander, or

acquired understanding, is the product of experience rather than immediate sense perception; it is therefore necessarily the product of memory, of the mnemonic residue or *species sensibilis* in perception, the accumulation of which leads to the development of the imagination, as for Alexander.

Berkeley wrote in the Fourth Dialogue of the *Alciphron*, “we perceive distance not immediately but by mediation of a sign, which has no likeness to it or necessary connection with it, but only suggests it from repeated experience, as words do things” (§8).<sup>12</sup> The sign is an abstraction from a particular, a product of discursive reason, which is itself a product of the intervention of the *intelligentia*, unconscious reason as it were, in the formation of the *species apprehensibilis*. The *species apprehensibilis* itself can be seen as a sign, as a kind of hieroglyph of the *species sensibilis* in the *visus mentalis* of the *oculus interior*, in the words of Grosseteste. For Berkeley, in the same way that signs or signifiers, that is, words, in language immediately and unconsciously produce ideas or meanings, signs in the act of perception, such as distance relationships, immediately and unconsciously produce ideas and judgments about the perceived sensible world, as would be given in the interaction of the *species sensibilis* and the *species apprehensibilis*, in a process inaccessible to discursive reason, but which can be understood by discursive reason through the illumination of the *intelligentia*, or the active intellect. For Berkeley, perception functions as a language of signs.

The sign would correspond to the imprint of Plotinus, which is constructed by reason in intellect, and which has no necessary relation to the sense perception of the object. As Berkeley explains in the *New Theory of Vision*, we are “exceedingly prone to imagine those things which are perceived only by the mediation of others to be themselves the immediate objects of sight” (§66),<sup>13</sup> just as in language we experience the immediate recognition of an idea, and not the mechanism by which the word conveys the idea. In Grosseteste’s terms, when we perceive an object, we are unaware that what we are perceiving is the *species sensibilis* of the object, which has no immediate connection to the object itself, and that the *species sensibilis* is formed in relation to the *species apprehensibilis*, the idea of the form of the object, by the inaccessible *nous* or *intelligentia*. In the *Alciphron*, Berkeley asks, “may we not suppose that men, not resting in but overlooking the immediate and proper objects of sight as in their own nature of small moment, carry their attention onward to the very thing signified...?” (§12).

In Plotinian terms, it is the idea of the object as given by intellect which is immediately grasped, the *species apprehensibilis*, rather than the image

itself of the object, the *species sensibilis*, which is imprinted on memory as a seal or sign. The objects themselves, according to Berkeley, “are not seen, but only suggested and apprehended by means of the proper objects of sight, which alone are seen.” The proper object of sight is the seal or sign, the imprint or mnemonic residue, the *species apprehensibilis*, which are constructed in intellect and language, memory and imagination. Alexander, Plotinus, nor Grosseteste would go so far as to say that the sensible object is not seen at all. In the *Alciphron*, the language of vision “is the same throughout the whole world, and not, like other languages, differing in different places,” thus “it will not seem unaccountable that men should mistake the connection between the proper objects of sight and the things signified by them to be founded in necessary relation or likeness...” (§11). It is thus “easy to conceive why men who do not think should confound in this language of vision the signs with the things signified,” the *species sensibilis* and the *species apprehensibilis* (in this sense the thing signified), in discursive reason which has not advanced to intellection, not been illuminated by active intellect, the source of the *principia essendi* which constitute the universals or intelligibles which formulate the universal language of vision.

The comprehensive perception of Alexander, which is an intellectual act, “lays hold of the universal by means of the likeness that exists among particular sensible objects” (*De anima* 83), bringing them together in unity, as in Plotinus a comprehensive perception forms a congruent unity of experience out of multiple particulars, in the dialectic of the *species sensibilis* and the *species apprehensibilis*. “Actual sensation” is that which “takes place by means of the apprehension of the forms of sensible objects without their matter,” which “must be conceived of as taking place in the way in which a piece of wax takes on the impress of a signet ring...” The material substance of the signet ring is irrelevant to how it is apprehended, except insofar as its quality can be understood conceptually, “i.e. in what ratio its constituents are combined,” in intellectual activity. Objects of sense are only understood in relation to the concept of form which is projected onto them, onto the underlying substratum of matter, by intellect.

For Plotinus, the arts can only represent an understanding of the sensible world when they “give no bare reproduction of the thing seen but go back to the Ideas from which Nature itself derives” (*Enneads* V.8.1), including the ratio in which constituents are combined, which can be understood intellectually, as an intelligible or archetype, but not perceived. Intellect is capable of both understanding the form of a sensible object as it is related to but sep-

arate from matter, according to Alexander, and of understanding the form of a sensible object as it is not related to matter in any way: intellect “not only grasps its forms in a different way than matter, but has for its object forms that do not exist in matter nor under any material conditions” (*De anima* 83). It is only within the framework of the immaterial forms that the forms can be grasped in relation to matter.

In the *De anima* 3.4.429b30–430a10 of Aristotle, mind is “thinkable in exactly the same way as its objects are,” either “in the case of objects which involve no matter,” or “in the case of those which contain matter.” Mind is identical to the objects of thought in thought because objects of thought are products of thought. The object of thought is only potentially present in relation to the object which contains matter, because discursive reason cannot see the material object as an object of thought, because it does not have immediate access to the construct of the *species apprehensibilis* in *virtus intellectiva* in relation to the *species sensibilis* in *dianoia* which is necessary for the perception of the material object. The potentiality of thought in the material object is made possible by the active intellect, or by the illumination of the *lumen spiritualis* in the *intelligentia* of Grosseteste, which can reveal the hidden mechanisms of thought to discursive reason.

This brings to mind the constructs of Immanuel Kant in the eighteenth century. Kant announced, in the *Critique of Pure Reason* in 1781, “I apply the term *transcendental* to all knowledge which is not so much occupied with objects as with the mode of our cognition of these objects, so far as this mode of cognition is possible *a priori*” (p. 15).<sup>14</sup> The Kantian *a priori* in intuition can be seen in relation to the intellectual of Plotinus. In opposition to Berkeley, “space,” for Kant, “is not a conception which has been derived from outward experiences” (p. 23). Space is not learned, like a language; it is purely conceptual. Berkeley denied the separate existence of the object in space, but accepted the existence of space. Kant denied the existence of space, but accepted the existence of the separate object. Any experience of space, Kant explained, is only possible through the conceptual representation of space, as Berkeley would say that any experience of an object is only possible through its conceptual representation.

In the *De anima* of Aristotle (3.8.432a1–10), there is nothing outside and separate in existence from sensible spatial magnitudes, as the objects of thought are in the sensible forms, both the abstract objects and all the states and affections of sensible things. As with Kant, everything that can be known as a product of sense experience can only be known within the

framework of the objects of thought, which include the spatial magnitudes, and as Kant would add, temporal magnitudes. According to Kant, space and time do not exist outside their conceptualization; according to Berkeley, sensible objects do not exist outside their conceptualization. Alexander wrote, “intellect separates its forms from any possible material circumstance, and thus, apprehending them as they are in themselves, it beholds them in their complete isolation” (*De anima* 84). In the *De anima* of Aristotle, it is held that concepts can only be formed through the perception of sensible objects, through sense perception, but at the same time it is suggested by Aristotle that the perception of sensible objects is determined by the conceptualization of them, in the form of intelligibles, which is the closest that Aristotle comes to the Platonic metaphysics of archetypes, though the intelligibles are only products of thought, and do not exist outside of thought, as for Kant. Alexander explained that “intellect makes no use of any bodily organ in its apprehension of its intelligible objects, since it is totally self-sufficient for the act of knowing the intelligible.”

Kant finds proof of his assertion in the fact that it is impossible to conceive or imagine the non-existence of space, while it is easy to imagine the non-existence of an object. If space cannot not exist, its existence is entirely dependent on the presence of the thinking subject. Space must therefore necessarily be seen as “the condition of the possibility of phenomena, and by no means as a determination dependent on them...” (*Critique of Pure Reason*, p. 24). It is thus *a priori* to experience, and *a priori* to reason itself, if the sensible object is conceived by reason. Space is “no discursive or, as we say, general conception of the relations of things...” Space is not a construct of discursive reason, as the object would be for Berkeley, but “pure intuition,” the Intellect Principle of Plotinus or the *principia essendi* in the *virtus intellectiva* of Grosseteste. The *a priori* intuition of space is also prior to perception; there is thus no construction of space for Kant by human reason; it is not defined by geometrical or mathematical relations, as it was for Plotinus or Grosseteste. Geometry and mathematics are applied to space in Kant’s thinking, but cannot be qualities of space; space must ultimately be seen as separate from “spatial magnitude,” though without the concept of spatial magnitude there could be no concept of space.

While Kant does not deny the existence of objects in space, he follows Alexander and Plotinus in arguing for the necessity of the form of objects existing prior to the perception of them; the *species apprehensibilis* is necessary to be conceived for the *species sensibilis* to be perceived. Objects are

determined in intuition, *virtus intellectiva*, or material intellect insofar as it is illuminated by active intellect, *intelligentia*, as the shape of objects is given by intellect for Plotinus: “because the receptivity or capacity of the subject to be affected by objects necessarily antecedes all intuitions of these objects, it is easily understood how the form of all phenomena can be given in the mind previous to all actual perceptions, therefore *a priori*...” (p. 26). The intuition of Kant suggests the unconscious, as does the Intellectual Principle of Plotinus, and the *virtus intellectiva* of Grosseteste; the Berkeleian process of learning a language of signs through experience, or even the understanding of the quiddity of the object for Aristotle, or the *principia essendi* for Grosseteste, occur somewhere outside of conscious or discursive reason for Kant.

As in Plotinus, the shape of an object as perceived corresponds to a pre-determined form as its imprint, the *species apprehensibilis* as the *species sensibilis*, which makes the object possible to exist in relation to human thought. According to Alexander, “everything that exists is a possible object of the intellect, since existents are divided into intelligible and sensible objects; and intellect makes even sensibles into objects suitable for its own cognition by separating them from matter and considering them in their essence” (*De anima* 84). Therefore the material intellect, corresponding to the material substrate of sensible forms, “is not actually any existing thing, but is potentially all existents,” as if to say that material reality is only a potential reality, and becomes a reality when it is perceived, or conceived by intellect.

According to Aristotle, in *De anima* 3.5.430a10–12, sensible objects can be divided into potential matter, as defined by their particulars, and a productive cause which makes them reality, in the same way that art can be seen in relation to its material. The productive cause of sensible objects must be human intellect, by which the objects exist. The same division can be found, according to Aristotle, in the *anima rationalis*, as potential and productive intellects. At the instant that the material intellect knows a sensible object, according to Alexander, “it becomes the object that is known—for its act of knowing consists in its possessing the form that is cognized” (*De anima* 84), following Aristotle in *De anima* 3.5. An object can only be known if it exists as a thought, and is identical to that thought.

Similarly, for Plotinus, when the sensible object is known by the material intellect, or when it is “seen” in perception, seen in terms of understanding the essence of the object, then the seer becomes the seen as the knower becomes the known. This is possible for Plotinus in intellection, when the reason principle is informed by the intellectual principle; in Grosseteste’s terms,

when *virtus intellectiva* is informed by *intelligentia*; or when material intellect is activated by active intellect, as it were. The perceiver, or thinker, therefore, in *Enneads* V.8.11, “must give himself forthwith to the inner and, radiant with the Divine Intellections (with which he is now one), be no longer the seer, but, as that place has made him, the seen.” In *Enneads* I.6.9, “when you perceive that you have grown to this, you are now become very vision,” as perception is equated with intellection.

In the *Republic* of Plato, this is made possible by the light of the Good, which “gives the objects of knowledge their truth and the knower’s mind the power of knowing...” (508), as the active, cosmic intellect might activate material intellect. It is through the light of the Good that the quiddity of the sensible object might be known, that it might be understood as a form, as “the good therefore may be said to be the source not only of the intelligibility of the objects of knowledge,” as active intellect, “but also of their being and reality; yet it is not itself that reality, but is beyond it, and superior to it in dignity and power” (509). The Good causes the being of the sensible object because it causes the ability to know the sensible object, because it causes the essence of the sensible object, the conception of it in intellection. For Grosseteste, the Good would be only accessible itself to *intelligentia*, while its *principia essendi* are accessible to *virtus intellectiva*, through the *irradiatio spiritualis* of the light of the Good. The vision of the *anima rationalis* in the *oculus mentis* operates like the vision of the eye, as the intellectual corresponds to the visual in the *Republic*; the *oculus mentis* can only see clearly when it is illuminated by the light of the Good, the *lux spiritualis*, which allows the *intellectus* to be illuminated by the *intelligentia*, in the projection of the archetypes and intelligibles.

Kant follows Plotinus in defining perception as the combination of the physical reception of a visual representation of an object, the imprint or *species sensibilis*, and the role that that representation plays as the basis for cognition, as the material for the *species apprehensibilis*, in a process of picture-thinking, where the image becomes the word as it is conceived in cognition. In the *Critique of Pure Reason*, “our knowledge springs from two main sources in the mind, the first of which is the faculty or power of receiving representations; the second is the power of cognizing by means of these representations” (p. 44). A concept is spontaneously produced from the representations, as they are retained as traces or mnemonic residues, as in Alexander, by intuition, *virtus intellectiva*. As with Plotinus, in Kant intellect takes a variety of fragmented and disconnected visual stimuli in apperception

and combines them into a totalizing, synthesized whole. “The understanding, therefore, does by no means *find* in the internal sense any such synthesis of the manifold, but *produces* it, in that it affects this sense” (p. 89).

The synthesis or totalization of the fragmented, manifold reality as given by apperception is the transcendental idea for Kant, just as it would be the Platonic idea in the intellectual of Plotinus. Transcendental ideas “must be products of pure reason, for they regard all empirical cognition as determined by means of an absolute totality of conditions” (p. 205). Transcendental ideas are “natural and necessary products of reason”; they form the basis of reason in the construction of a representation of the world, and they are inaccessible to the sensible world itself, as the form of the sensible object would be inaccessible to the object in its material substrate. Transcendental ideas “overstep the limits of all experience, in which, consequently, no object can ever be presented that would be perfectly adequate to a transcendental idea,” as for Alexander intellect must transform sensible objects “into objects suitable for its own cognition by separating them from matter...”

It is impossible to know an object outside its conception as an intelligible in intellect; perception in intellection ultimately transcends the experience of the sensible world in perception. In order to experience the world, reason by necessity must make itself inaccessible to the world. For Kant, the coherence and totality of the sensible world are necessary for perception, as perception is a basis for reason, but such totality is impossible in perception itself; thus reason exists on an impossible premise. As Kant wrote, “the absolute totality of all phenomena is only an idea, for as we never can present an adequate representation of it, it remains for us a *problem* incapable of solution” (p. 206). Reason is unrepresentable to itself, and requires the inaccessible *nous*, active intellect, or *intelligentia*, in order for it to explain itself to itself. Imprints of sensible objects in perception “are mere representations, receiving from perceptions alone significance and relation to a real object, under the condition that this or that perception—indicating an object—is in complete connection with all others in accordance with the rules of the unity of experience” (p. 280). There is a disjunction in the relation between the *species sensibilis* and the sensible object, and between the *species sensibilis* and the *species apprehensibilis*, as there is for Plotinus. “Reason never has an immediate relation to an object; it relates immediately to the understanding alone” (p. 360), the intellection of the object. The transcendental idea, then, is not just an idea of an object, but a “conception of the complete unity of the conceptions of objects...” (p. 361). The idea of an object is not possible outside

the totality of the unity of objects: the sensible is not possible without the intelligible. The object is singular while the idea of it is synthetical, thus the idea of the object cannot possibly correspond to the object.

<sup>1</sup> Plato, *The Republic*, trans. Desmond Lee (London: Penguin Books, 1955).

<sup>2</sup> Herbert A. Davidson, *Alfarabi, Avicenna, and Averroes, on Intellect* (Oxford: Oxford University Press, 1992), p. 21.

<sup>3</sup> *The De Anima of Alexander of Aphrodisias*, trans. Athanasios P. Fotinus (Washington, D. C.: University Press of America, 1979).

<sup>4</sup> Alexander of Aphrodisias, *De intellectu*, trans. Frederic M. Schroeder, in Frederic M. Schroeder and Robert B. Todd, trans., *Two Greek Aristotelian Commentators on the Intellect* (Toronto: Pontifical Institute of Mediaeval Studies, 1990).

<sup>5</sup> Athanasios P. Fotinus, "Commentary," in *The De Anima of Alexander of Aphrodisias; Aristotle, On the Soul (De anima)*, trans. J. A. Smith, in *The Works of Aristotle* (Chicago: Encyclopaedia Britannica, 1952).

<sup>6</sup> George Wilhelm Friedrich Hegel, *Phenomenology of Spirit*, trans. Arnold Vincent Miller (Oxford: Oxford University Press, 1977).

<sup>7</sup> Plotinus, *Enneads*, trans. A. H. Armstrong (Cambridge, MA: Harvard University Press, 1966); Plotinus, *The Enneads*, trans. Stephen MacKenna (London: Penguin Books, 1991).

<sup>8</sup> Proclus, *A Commentary on the First Book of Euclid's Elements*, trans. Glenn R. Morrow (Princeton: Princeton University Press, 1970).

<sup>9</sup> Aristotle, *Metaphysics (Metaphysica)*, trans. W. D. Ross, in *The Works of Aristotle* (Chicago: Encyclopaedia Britannica, 1952).

<sup>10</sup> Frederic M. Schroeder and Robert B. Todd, trans., *Two Greek Aristotelian Commentators on the Intellect*, pp. 17–18.

<sup>11</sup> David Layzer, *Cosmogogenesis: the growth of order in the universe* (New York: Oxford University Press, 1990), pp. 261–262.

<sup>12</sup> George Berkeley, *Works on Vision*, ed. Colin M. Turbayne (New York: The Library of Liberal Arts, 1963).

<sup>13</sup> George Berkeley, *An Essay Towards a New Theory of Vision*, in *Works on Vision*.

<sup>14</sup> Immanuel Kant, *Critique of Pure Reason*, trans. J. M. D. Meiklejohn (Amherst: NY: Prometheus Books, 1990).