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Neoplatonic Influence in the Writings of Robert Grosseteste

Robert Grosseteste was appointed the first chancellor of Oxford University in 1221. He lectured in theology there from 1225 to 1230, and became the first reader to the Greyfriars or Franciscans in 1230. In 1235 he became the Bishop of Lincoln, which he remained until his death in 1253.[1] He wrote several treatises which contain Platonic and Neoplatonic influences, most notably *De luce*, on the metaphysics of light; *De lineis, angulis et figuris*, on mathematical reasoning in the natural sciences; *Hexaemeron*, a commentary on *Genesis*; and *Commentary on the Posterior Analytics*, all written between 1228 and 1235. The Neoplatonic influences probably come from Latin translations of Arabic commentaries on Aristotle, most notably the *al-Madina al-Fadila*, or *Virtuous City*, of Alfarabi; and the *Shifa: De anima* and *Commentary on the Theology of Aristotle* of Avicenna, or Ibn Sina.

Grosseteste's first studies were probably at the cathedral school in Lincoln in the late 1180s, after which he was active at the cathedral school of Hereford in the 1190s, which was a center for Arabic learning at the time. He then studied at Oxford from around 1199 to 1209. Grosseteste is seen by some scholars as continuing the Neoplatonic views found in the Arabic commentaries on Aristotle, in particular those of Avicenna. The Neoplatonic content of Avicenna's writings was introduced to the Latin West by Dominicus Gundissalinus, who translated Avicenna's *De anima* in the twelfth century, along with the *Fons Vitae* of Avicebron, or Ibn Gabirol, another source of Neoplatonic ideas. This essay will examine in particular concepts in the *Enneads* of Plotinus as they are related to concepts in Grosseteste's writings, as they were filtered through these sources. This involves concepts of light and matter, perception, imagination, and intellection.

Light and Matter

In *De luce*,[2] considered the first scientific cosmology written since the *Timaeus*, *lux*, or incorporeal light, emanates into separate forms or intelligibles, and

[1] For biographical information see R. W. Southern (1986).
[2] C. C. Reidl (1942), 10–12.

multiplies itself infinitely from a single point through rarefaction and condensation as *lumen*. Light diffuses through straight lines, as in *Enneads* IV.6.1, into atomic particles, as in the *Timaeus*, from point to line to surface to solid. As in an emanation from the One, the *lux spiritualis* becomes the *prima forma substantialis*, as described in the *Fons Vitae* of Avicebron. Matter is seen as deprivation in relation to higher forms, as in *Enneads* II.4.5. According to Plotinus, matter does not exist in Intellectual Principle. Matter exists in the partial thing, without form, which is in darkness. Darkness lies below light; light, which is Reason Principle itself, is visible to mind, in the same way that light and color are visible to the eye. Light and color are what give things form and existence, and the matter of things lies below light and color as being inaccessible to reason as it participates in an idea. Matter cannot be an object of intellection, in *Enneads* V.9.5, because ideas are only projected onto matter, and forms in matter can only be derivatives and traces of an original which is a product of intellection itself.

Matter is thus a recipient of the Form Ideas in intellection. The substratum of matter is indeterminate and shapeless, while everything in intellection is determinate and has shape; thus matter cannot exist in the Intellectual Principle, or the intellectual. There is no necessity for matter in the intellectual, because there are no elements or compounds there, no shifting or derivatives, as in matter. Matter has no identity nor permanence, and is in constant flux. Because it is already everything in the intellectual, there is no possibility of flux or impermanence, as described in II.4.3. The particulars of sensation are necessarily products of universals in intellection, and universals in reason are in turn derived from the particulars of reflected Form Ideas in sensation.

In the *Commentary on the Posterior Analytics* of Grosseteste, *lux* is without dimensions but causes all spatial dimensions and change. As light emanates from the sun, *vis* emanates from *virtus* in bodies, and intelligibles are illuminated in the mind in the *oculus interior*. In the *al-Madina al-Fadila* of Alfarabi, active intellect is compared to the sun, and light imprints *species* in the material intellect. Active intellect transforms sense perceptions into principles, which are the first intelligible thoughts, as in *Enneads* I.3.5. In *Enneads* V.5.7, the intellectual is able to see a light which is not an external, corporeal light, or reflected light, as in *lumen*. The internal light is a *lux*, an incorporeal, undiffused or rarefacted light. The intelligibles, which are themselves incorporeal, are illuminated by the *lux*. The intellectual is able to see both the intelligible and the light which illuminates the intelligible. The intellectual sees without seeing; it sees light itself, not as reflected off of bodies, in a vision of an incorporeal reality. In *Enneads* VI.4.7, Plotinus describes the diffusion of light. A luminous mass is at the center of a transparent sphere, illuminating the surface of the sphere. The illumination is not by any bodily magnitude or corporeal quality. Once the light is diffused, it occupies no specific location and can have no corporeal presence. The light is simultaneously present everywhere, like sunlight, the presence of which is uninterrupted by the bodies it illuminates.

For Grosseteste in *De luce*, light is the first corporeal form, and the cause of all becoming of natural things. Light is corporeity itself, that which produces dimensions in matter, because material things only exist in that they are illuminated, either by *lumen* in the physical world, or by *lux* in the mind. Grosseteste attempts to explain the formation of the natural world by the auto-diffusion of light in mathematical and geometrical structures. Following Augustine, *lux* is seen as the intermediary between spirit and matter, and is that which connects mind and body. Through *lux*, the mind is able to know the *principia essendi*, the intelligibles, as for Plotinus. As illuminated, the *principia essendi* become the *principia conoscendi*, the principles upon which reason is based. As *principia essendi*, intelligibles are *ante rem*, and as *principia conoscendi* they are *in re* as particulars derived from universals. The internal light of Plotinus is visible to the mind for Gosseteste by the eye of the mind, the *oculus mentis*, which corresponds to the interior eye in vision, which translates intelligibles to forms or *species*, as for Plotinus.

Grosseteste's theory of light is influenced primarily by the account of light in *Genesis*, and the *Hexaemeron* of Basil. In the *De luce* of Grosseteste, as the first corporeal form, light is the closest thing in matter to the immaterial. The infinite multiplication of light as *lux* produces a finite quantity of matter as given by light as *lumen*, because *lux* itself is infinite. The multiplication and diffusion of light produces a sphere, as in Plotinus, and the closer to the surface of the sphere, the more rarefied is matter. The more the light is multiplied, the more corporeal bodies become. Light is diffused through nine celestial spheres and four sublunary spheres. In the process, the creative *lux spiritualis* becomes the uncreative reflected *lumen*, in the creation of both forms and intelligibles.

In the *Hexaemeron* of Grosseteste, light is the instrument by which bodily sensation occurs, and by which body interacts with mind. All judgments of beauty are made according to the principles of light, in its harmony and distribution. Light is the instrument by which the form or *species* apprehended by the particular sense, the *species sensibilis*, corresponds to the form apprehended in the common sense, *sensus communis*, as *species apprehensibilis*. Imagination is the process of making that correspondence. The *species apprehensibilis* is a phantasm which creates a corresponding form in memory, as a mnemic residue. Light is the instrument by which mind is connected to matter.

In his *Commentary on the Posterior Analytics*, Grosseteste compares the *lux spiritualis* that illuminates intelligible objects in the *oculus mentis* to the sun which illuminates the bodily eye and corporeal objects. The intelligible objects that are receptive to the *lux spiritualis* are made visible to the *oculus interior*. The more similar an object is to the *lux*, the more receptive it is to it, and the more it can be apprehended by mind, which also acts as a spiritual light, in an *irradiatio spiritualis*. The proximity to the *lux spiritualis* in both perceived object and operation of mind leads to greater clarity and certitude in thinking. The operation closest to the *lux* in mind is the "first visible" in interior sight, or *visus interior*, just as a colored

body is the first thing receptive of the light of the sun, though the actual first visible is the spiritual reflected light, the *lumen spiritualis*.

In the *al-Madina al-Fadila* of Alfarabi, the light of the sun is also compared to the illumination of the active intellect, which establishes the basic principles of thought, as in the mathematics and geometry of light of Grosseteste. According to Alfarabi, the light of the sun enters the eye and turns potential vision into actual vision, as potential thoughts in passive intellect are turned into actual thoughts in active intellect. The light of the sun then renders potential colors visible, then becomes visible itself, along with its source. The potentially intelligible thoughts in the material or passive intellect are "sense perceptions stored in the imaginative faculty" in *al-Madina al-Fadila* 200–203,[3] which become intelligible through illumination, as in *Enneads* I.3.5 of Plotinus.

Perception

In *De lineis*,[4] the *species*, or *eidos*, incorporeal virtue or likeness of matter, is transmitted by light in perception, and is reflected and doubled, and dissipated, as in the imprint of Plotinus in *Enneads* I.1.7, IV.7.6, and V.3.2. According to Plotinus, the light of reason forms principles, which are the Animate, and it is in the principle that sense perception is formed. Sense perception projects form and idea onto matter, rather than the reverse. Perception is not capable of an "immediate grasping of sensible objects" in I.1.7; it grasps rather the "impressions printed upon the Animate by sensation."[5] The Animate can be seen as the imagination, and objects can only be perceived once they have been filtered through a process of reason. The matter of objects is inaccessible to perception and reason, as it is in darkness and is not illuminated by the light of reason.

The impressions or imprints which are perceived are intelligibles, separate from matter. The perception of them is a form of sensation, which is a doubling or phantom of the act of sensation in reason itself. Perception in reason is of "Ideal Forms," intelligibles prior to their association with forms in matter. All sense knowledge, discursive reason and intellection are the product of the perception in reason of Ideal Forms. Discursive reason, in V.3.2, involves the observing, judging, combining and distinguishing of the impressions of the Ideal Forms in the intellectual, that part of intellect inaccessible to reason, which appear as the representations imprinted in sense perception. Some of the imprinted representations become mnemic residues, memory traces, which are absorbed and recollected, and combined with representations in conscious thought.

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[3] H. A. Davidson (1992), 51.
[4] B. S. Eastwood (1964).
[5] Plotinus (1991).

In *Enneads* IV.7.6, Plotinus distinguishes between perception and what might be called apperception, or multiple perceptions. Actual perceptual experience is multiple and diversified, as for Grosseteste; perceived objects have no necessary connections in size or position, and can be perceived in a variety of ways by the different senses. But in human perception, in reason, all objects and acts of perception are unified to form a coherent whole which structures the world around us. In the *Enneads*, 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 through the mechanisms of language. Reason and knowledge depend on the materials of sense experience, but are not dictated by the objects or processes of sense perception.

The discerning of impressions printed upon the intellect by sensation for Plotinus is the function of discursive reason, not immediate sense perception. Since the sensual impressions in perception are copies and derivatives of intelligible forms, perception itself is a copy and derivative of reason. Reason in Plotinus is composed of mnemic residues of perceived objects, what Plotinus calls "imprints" in "recollections" in *Enneads* V.3.2. Thoughts are propelled by the desire created by the multiple and fragmented images of perception as reconstructed in reason. "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 dialectical and discursive reason, mathematics and geometry, and abstract concepts, in what Grosseteste will call the *virtus scitiva* and the *virtus intellectiva*.

In *Enneads* IV.7.6, sense perceptions merge together in reason like "lines coming together from the circumference of the circle," from multiplicity to unity, subject to the ruling principles, the archetypal, genus and species: what will be for Grosseteste the *intelligentia*, divine intelligence; and what Grosseteste will call the *principia essendi* and the *principia conoscendi*. In reality, sense objects are variable and differentiated in terms of size and location; they are multiple and fragmented, and it is only the reason of the perceiver which allows them to be apprehended as whole and congruent. Sense objects themselves cannot be immediately perceived as a congruent whole. Once the diverse and multiple sense objects have been transformed into a whole by apprehension in sense perception, they cannot return to their original state, for Plotinus. Apprehension permanently transforms sensual reality in conformance with the principles of reason.

Perception, according to Plotinus, divides, multiplies, and otherwise organizes sensual reality; in other words, perception is an intellective process, the most basic exercises of which are mathematics and geometry. Perceived objects are divided and organized into parts which correspond directly to the organizational capacities of reason. The relation of parts and subdivisions to the whole and to infinity is the same in the sense object as it is in reasoning capacity. Geometry and mathematics are the mechanisms by which sensual reality is represented by perception to rea-

son, though sense objects do not inherently contain geometrical and mathematical properties; those properties are applied to them, in the *species apprehensibilis*.

In the *Commentary on the Posterior Analytics* of Grosseteste, universals (*principia*) exist in intellect potentially, and are activated to actuality, as in the *De anima* of Aristotle the potential, material intellect, *intellectus passibilis*, is activated by the *intellectus agens* towards the active, cosmic intellect. For Grosseteste, sense knowledge plays a role in the activation of the *intellectus passibilis*. In sense knowledge a particular object is apprehended in a particular space and time, not as the object itself but in the signification of the object as *species*, or *eidos*, as imprinted on the faculty of sense perception. The individual *species sensibilis* is determined by its position in space and time, and is apprehended as an individual signified, a sign or *species* rather than the thing itself, while the corresponding *species apprehensibilis*, the form as understood, is not determined by a particular space and time, and is apprehended as a collective signified: "…sensus talis est quod ipse est apprehensivus rei alicuius signate et non est simul apprehensivus rei alterius, quia necesse est scire rem signatum in loco signato et tempore signato, quare non sentit nisi rem unam signatam" (I.18, 135–138).[6]

Sensible experience, as defined by space and time, which are intelligibles in the *virtus intellectiva*, not *principia essendi* of the material world, is predetermined by space and time as a priori *principia*. Space and time do not exist outside of thinking, *intellectus*; they are not qualities of the physical world, but they determine the object as it is perceived individually, according to Grosseteste, in sense experience, through the *species apprehensibilis*.

Sense perception is thus not the cause of knowledge, but rather is the condition by which knowledge is possible, as Grosseteste explains in the *Commentary on the Posterior Analytics*: "Similiter neque contingit scire sensibilia neque sensus est causa scientie, sed occasio…" (I.18, 133–134). Reason results from sense perception because reason is the apprehension of the thing signified, the *species apprehensibilis* in relation to the *species sensibilis*: "Huius autem ratio est quod sensus talis est quod ipse est apprehensivus rei alicuius signate…" (I.18, 134–136). Reason, the *virtus cogitativa* or *virtus scitiva*, apprehends the signification or *species apprehensibilis* still as a singular or individual, as it is connected with material things and determined by space and time, while the *virtus intellectiva*, as illuminated by the *lumen spiritualis*, the reflected spiritual light, of *intelligentia*, apprehends the signification in its totality, as universal knowledge: "et non est simul apprehensivus rei alterius…" (I.18, 136), "cum sola demonstrabilia et universalia sciantur…" (I.18, 164–165).

That which perceives is not contingent with that which is perceived; what is perceived is the *species sensibilis*, the form of the object, not the object itself, as determined in its singularity by the preconditions of space and time, of which the

[6] P. Rossi (1981).

perceiver is aware in *virtus cogitativa*, but unaware in *virtus intellectiva*, as *intelligentia* is not wholly accessible: "…manifestum est quod non contingit sentire per sensum." In that what is perceived is the *species sensibilis* and not the object itself, sense perception already consists of a process of abstraction, in the role of the *species apprehensibilis*. As the individual sense perception is determined by space and time, there is no possibility of immediate sense perception, or of an immediate knowledge of objects in the physical world outside of intellection. Sense perception is a spiritual operation rather than a physical operation, as Grosseteste says in the treatise *De lineis, angulis et figuris*: "In sensu enim ista virtus recepta facit operationem spiritualem quodammodo et nobiliorem."[7]

The abstractions made by sense perception are primitive in nature, confused and relative. The *species sensibilis* in perception is corrupted, indeterminate, and in flux, while the *species apprehensibilis* in *intellectus* is integrated and clear, as an archetype or intelligible. In the *Commentary on the Physics* of Grosseteste (*Summa Lincolniensis Physicorum*): "Racio vero diiudicat integritatem atque veras prosequitur differencias, sed sensus invenit quedam proxima et confusa veritati, accipit vero racio integritatem. Racio…accipit vero a sensu confusam ac veri proximam similitudinem."[8] Sense perception receives reality as multiple, undifferentiated and incomplete, in what Plotinus saw as apperception, but the sensible object generates the singular image of it which is perceived, the *species sensibilis*. Sensation and intellection thus engage in a dialectical process involving the sense object and the perception of it, as in Plotinus.

In the *Commentary on the Posterior Analytics*, *species sensibilis* is apprehended without matter, as illuminated by *intellectus*; *species apprehensibilis* creates a likeness in understanding, as in Plotinus' *Enneads* V.3.2, where "reasoning-principle in the soul," discursive thought, "acts upon the representations standing before it," the *species apprehensibilis*, "as the result of sense perception," the *species sensibilis*. For Plotinus, discursive reason approaches *nous* when reason recognizes its recent sense impressions and "adapts them, so to speak, to those it holds from long before," the mnemic residues or memory traces of previous sense impressions, in a process of reminiscence. This is also described in the *Hexaemeron* of Grosseteste. The same process is described in the *Theology of Aristotle*, a paraphrase of the *Enneads*. *Ratio* is seen by Grosseteste in the *Commentary on the Posterior Analytics* as a mirror reflecting the *virtus intellectiva*, as in *Enneads* I.1.8 and I.4.10. In *Enneads* I.1.8, the soul "appears to be present in the bodies by the fact that it shines into them." The *principia conoscendi* in intellect or soul become the *principia essendi* of the thing or living being "not by merging into body but by giving forth, without any change in itself, images or likenesses of itself like one face caught by many mirrors."

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[7] L. Baur (1912), 60:25.
[8] R. C. Dales (1963), 4–5.

Bodies and things in sense experience, as *principia essendi*, are mirror reflections of the *principia conoscendi* in intellect, as it is projected onto the sensible world through sense experience. Just as in Grosseteste's theory of vision, which requires the combination of the intromission of light as reflected off of sensible objects, and the extramission of light as projected from intellect, so the existence of bodies and objects in the world requires a dialectic of their essential being and their definition as projected onto them by intellect. This dialectic can be found again in Plotinus. In *Enneads* I.4.10, *ratio*, or discursive reason, the lower part of the soul, "becomes like the reflection resting on the smooth and shining surface of a mirror." The sense impression itself of the sensible body or object exists in intellect as a reflection of the *principia conoscendi*, formed in the *virtus intellectiva*. There can be no immediate sense perception of an object, without the mediation of the abstraction of the object in intellect, the formation of the *specie*s of the object, based on prior perceptions, in the process of intellection.

Imagination

In his *Hexaemeron* (VIII, IV, 7),[9] Grosseteste described imagination as a process which combines the sense object, and the imprint of the *species* of the sense object in the senses, in intellection. The union of the *species sensibilis* and the *species apprehensibilis* is the union of the corporeal and incorporeal, and the first step in intellection from the passive intellect of sense peception, weighed down by the corporeal, to the active intellect of the *virtus intellectiva*, freed from the corporeal. The best example of the correspondence between *species sensibilis* and *species apprehensibilis* is color, which is visible in the corporeal object and in the *oculus mentis*. Because in the act of perception the color in the sense object is not distinguished from the color in the *oculus mentis*, the "begetter and the begotten" are united, the color in the sense object and in the *oculus mentis*, and the perceiver is united with the sense object in the act of intellection in perception.

Through the corporeal experience of sense perception, the knowledge on the part of the *anima rationalis* of the *phantasmata* as mnemic residues in the *imaginatio* of the *oculus mentis* is clouded or forgotten, and the *anima rationalis* is not aware of the correspondence being made in intellection in the process of perception, and takes the sense perception to be immediate of the sensible object, as the *anima rationalis* is weighed down by its corporeity. In the *Hexaemeron* (VIII, IV, 12), "Our memory, when it has received and retained a memory form [mnemic residue], is not always actually remembering," as it is in a state of passive intellection, tied to its corporeity. But then "when it passes from not actually remembering to actually remembering," that is, when it has been activated by an agent intellect

[9] C. F. J. Martin (1996).

in the *irradiatio spiritualis*, "it begets and expresses from itself the actual intellection or understanding that is in every way like to itself," in the activity of active intellect, *virtus intellectiva*. Through intellection, and the aspiration of the *anima rationalis* to see clearly the *intelligentia* through the *irradiatio spiritualis* in the *oculus mentis*, in the *virtus intellectiva*, the *anima rationalis* becomes aware of the *species apprehensibilis* in relation to the *species sensibilis* in the process of perception, and it becomes aware of the relation between human intellect and the sensible world. Intellect goes from being a functional intellect, in the gymnastics of discursive reason in the *virtus scitiva* or *virtus cogitativa*, to being a creative and generative, productive intellect in the *virtus intellectiva*.

The *aspectus mentis* is the ability of the mind to grasp ideas through the perception of visual forms, the ability of the *oculus mentis* to "see" the concept, the intelligible connected with the *species apprehensibilis*, which is related to the *species sensibilis*, in that the *species sensibilis* is always already a product of the *species apprehensibilis* in intellection in perception. The mind sees the intelligible in the *irradiatio spiritualis* of the *intelligentia*. Grosseteste explained in the *Hexaemeron*, "the species begotten in the fantasy [*imaginatio*] of the common sense," the *sensus communis*, "begets of itself a species that is like it in the memory" (VIII, IV, 9), as a trace or mnemic residue, which corresponds to the presently perceived sensible object. Perception appears to be a learned process for Grosseteste, a product of the perceiver learning how to recognize objects and relationships in relation to previously perceived objects and relationships, in order to process them in perception. Then, in the *Hexaemeron*, "the species that can be apprehended by the reason, intellect or understanding" (VIII, IV, 10), the *species apprehensibilis*, projects its likeness (*similitudo*) in the *virtus intellectiva* in the process of perception, illuminated by the inner light, the *irradiatio spiritualis*, and the mind connects the begotten likeness with the form perceived, the *species sensibilis*. As a result, "effective apprehension" is achieved.

In the *Commentary on the Posterior Analytics* (II.6), memory receives the *species* as integrated and synthesized in the *sensus communis*, and it receives the *intentiones* connected with the *species*, as detected by the *vis aestimativa*. *Memoria* involves *imaginatio* or *phantasia*, the retention of the *species sensibilis*, and the *memoria proprie dicta*, the retention of the *intentiones aestimatae*, in the integration of the concept formed in the *virtus intellectiva* to produce the *species apprehensibilis*. Reason is stimulated to form concepts by the memory traces, which constitutes experience: "sed in rationabilibus iam contingit ex multis memoriis excitata ratione fieri experientiam…" (II.6, 35–37). Memory is created from sense experience, and universals in experience result from memory, but not as separated from particulars: "Ex sensu igitur fit memoria, ex memoria multiplicata experimentum, ex experimento universale, quod est praeter particularia, non tamen separatum a particularibus…" (II.6, 37–39).

The *intellectus* abstracts the universal idea from sense knowledge and experience, both external and internal; universals do not exist separate from particulars or sense experience. While universals like the Platonic archetype are connected to the particulars of sense experience, they transcend them or go beyond them in a dialectical process in intellect, and they are the source of all particulars of sense experience as well, as intelligibles in *virtus intellectiva*. In the *Commentary on the Celestial Hierarchy* of Grosseteste, "Ponebant enim platonici rationes quasdam in mente divina, aeternas, per se subsistentes, divinas, intellectuales, ad quas dicebant omnia esse et fieri, quas et species et ideas vocabant, et tota et universalia, separatas autem a creatis omnibus, et idea dicta universalia et tota…".[10] As in the One of Plotinus, all particulars in *species* and *idea* grow and become visible from the universality and totality of the transcendent whole.

The relation between the universal and particular is similar to the relation between *lux*, the source of light, and *lumen*, generated light. The universal is in the *irradiatio spiritualis* in the *oculus mentis*, in the illumination which is the source of the perception and cognition of particulars as *phantasmata*, illuminated by the *lumen spiritualis*. The unity of the universal exists in the multiplicity of particulars as the unity of *lux* exists in propagated light, in the *Commentary on the Posterior Analytics*: "universale non est figmentum solum, sed est aliquid unum in multis" (I.17, 121–122), and "puto quod unitas universalis in multis particularibus assimilatur unitati lucis in luce gignente et genita. Lux enim que est in sole gignit ex sua substantia lucem in aere, nec est aliquid novum creatum ut sit lux in aere, sed lux solis est multiplicata et propagata…" (I.17, 114–118).

The unity of the singular intelligence exists in the multiplicity of natural things in the universe. The universal intelligence exists in particulars as the quiddity or essential quality of particulars, through the means of the form discovered by Aristotle, so the ubiquity of the universal intelligence is the same as the existence of the intelligence in a particular place: "universalia rerum naturalium sunt minus entia quam singularia intelligentiarum" (I.17, 125–126), and "Si autem intelligimus universalia per modum Aristotelis formas repertas in quidditate particularium, a quibus sunt res particulares id quod sunt, tunc universale esse ubique nihil aliud est quam universale esse in quolibet suorum singularium" (I.18, 144–147). The universal form or *species*, as the *principia essendi*, is *in re* as a particular, and *ante rem* and *post rem* as a universal. In intellection, the *irradiatio spiritualis* allows the *intelligentia* to exist as a quiddity or the *principia essendi* in the particulars of the *principia conoscendi* of sense experience and *virtus scitiva* and *cogitativa*.

Species, and genus, only exist in mind, as composed of particulars in *virtus cogitativa* or *scitiva*, and as abstracted as universals in *virtus intellectiva*. Universals are potential in reality, but only actual in mind. In apperception, the *species* is composed of particulars, as *res inventa in multitudine*, and is determined by the

[10] J. McEvoy (1982), 342.

intelligibles of space and time, which precondition all particulars of sense perception. In the *Commentary on the Posterior Analytics*, "Universale autem, cum sit res inventa in multitudine, non est possibile sentire, quia quod reperitur in multis non est in tempore aut loco signato, quia si esset in loco et tempore signatis non esset idem inventum in omnibus, universale namque est semper et ubique" (I.18, 138–142). The universal is not possible in perception, in sensible reality, because of the multiplicity of particulars. Because the universal is always and everywhere, and no particular place and time, that which is perceived in a signified place or time cannot be a universal. At the same time, that which is perceived in multiplicity cannot be a particular signified place or time.

The universal concept in *intellectus* is derived from the memory traces of particulars in *phantasia*, but at the same time the particulars of the locations in space and time are only possible within the framework of the universal concept, which only exists in *intellectus*, as illuminated by *intelligentia*. The particulars of the multiplicity of apperception are always already conditions of the universal in intellect, and there is an impossibility of there being at any moment or in any way a particular element in sensible reality that is present in and of itself. As in the thought of Plotinus, for Grosseteste *intellectus* has complete access to neither sensible reality nor the intelligibles of *intelligentia*, the two spheres of phenomena which form a dialectical process on which *virtus cogitativa* and *virtus intellectiva* are based, involving the corporeal and incorporeal.

The concept itself in *intellectus* is not subject to the change and variability of particulars in sense experience, as seen in the *Commentary on the Posterior Analytics*. The universal in concept is related to the particular in the process of *inductio*, where the universal is derived from the particular, and the process of *abstractio*, through which the *principia essendi* of the particular are apprehended as separate from its singularity. The *principia essendi* are the "unum et idem secundum iudicium suum in multis…" (I.14, 249–250), in the dialectic of the particular and universal, sense object and concept. The *intentio animae* takes the *species apprehensibilis*, as formed from the *species sensibilis* in *intellectus*, and balances it in a process of *iudicium*; the universal is derived from the particular. The *iudicium* of the *intentio animae* is necessary for both *virtus scitiva* and *virtus intellectiva*; science cannot be based on the particulars of sense experience alone.

In the *De anima* (3.7.431b, 2), Aristotle wrote that the human intellect thinks the forms in the images, that the *species sensibilis* is given by the *species apprehensibilis*, in Grosseteste's terms, which is formed in the imagination or *phantasia* and is presented to discursive reason in the process of perception. According to Avicenna, or Ibn Sina, in the *Shifa: De anima* (235),[11] also known as the *Metaphyisica*, in the eleventh century, the image or *species* is formed in the *sensus communis*, as for Grosseteste, and is then received by the imaginative faculty, the

[11] H. A. Davidson (1992), 93.

phantasia, which combines the images in different configurations. Discursive reason then receives an "abstraction" of the *species* from the *phantasia*, a representation of the *species apprehensibilis* which corresponds to the *species sensibilis*.

The *species apprehensibilis* of Grosseteste is a *similitudo* of the *species sensiblis*, as a mnemic residue, and is thus a representation of the *species sensibilis*, which is itself a representation of the object to which its form corresponds. For Grosseteste in the *Hexaemeron* (VIII, IX, 11), the *virtus* of the retentive memory must be proportionate to the *virtus intellectiva* in order for the *species apprehensibilis* to be formed. Memory is not always active (VIII, IX, 12), but when it is active it produces a *similitudo* of intellection, as the *ratio*, the lower intellect, or discursive reason (as in the conscious process of memory) mirrors the *virtus intellectiva*, the higher intellect, or *nous* (as in the unconscious process of memory), as Grosseteste described in the *Commentary on the Posterior Analytics*.

In the *Enneads* of Plotinus, while perception grasps the "impressions printed upon the Animate by sensation" (I.1.7), through the mnemic residue, "nothing will prevent a perception from being a mental image for that which is going to remember it, and the memory and the retention of the object from belonging to the image-making power" (IV.3.29), or the imagination (*phantasia*) of Grosseteste. In the representation in the mnemic residue, the *species apprehensibilis*, "what was seen is present in this when the perception is no longer there. If then the image of what is absent is already present in this, it is already remembering, even if the presence is only for a short time." Through memory, "an image accompanies every intellectual act," as described in *Enneads* IV.3.30. Through the *species apprehensibilis*, "the intellectual act is without parts and has not, so to speak, come out into the open, but remains unobserved within…". The *species apprehensibilis* functions as a kind of hieroglyph, communicating the elements of intellect which cannot be communicated by words, and are not accessible to discursive reason in language.

The function of language, or the extent to which language can function, is as the mirror reflection of the *virtus intellectiva* in *ratio*, or discursive reason, in the facilitation of memory. As Plotinus says, "the verbal expression unfolds its content and brings it out of the intellectual act into the image-making power, and so shows the intellectual act as if in a mirror, and this is how there is apprehension and persistence and memory of it." The mechanism of perception mediates between the sensible world of objects in nature and the inaccessible intellectual, or *nous*, in a dialectical process between the subject and the world. There must be an "affection which lies between the sensible and the intelligible" as Plotinus puts it, "a proportional mean somehow linking the two extremes to each other" (IV.6.1), the *species sensibilis* and the *species apprehensibilis*. In the perception of an object, "we look there where it is and direct our gaze where the visible object is situated in a straight line from us…". The object which is being perceived is already apprehended by the perceiving subject in relation to the perceiving mechanism, the construction of intellect involving the mnemic residue and the *species apprehensibilis*, through the

use of geometry, as vision is understood in relation to geometry and mathematics, the intelligible mechanisms as the underlying structure, as for Grosseteste.

Intellection

In the *Commentary on the Posterior Analytics* of Grosseteste, the *intellectus* or *nous* in mind abstracts universal ideas or *principia* from the particulars of sense to form principles, but *intelligentia*, divine or cosmic intelligence in human intellect, functions without a corporeal agent. Logic or *ratio*, Plotinus' Reason Principle, is knowledge of the forms of material things. This is also described in the *Hexaemeron*, and commentaries on the *Celestial Hierarchy* and *Mystical Theology* of Pseudo-Dionysius which Grosseteste began in 1235.[12]

The same process is described in the distinction between active intellect and material intellect in the *Theology of Aristotle*, a paraphrase of the *Enneads*, based on *Enneads* I.3.5, V.1.3, V.9.4. Plotinus distinguishes between intellection, or *nous*, and dialectic, or between Intellectual Principle and Reason Principle, between the intellectual and discursive reason, or *dianoia*. Intellection can be seen as active intellect, being beyond the individual mind, and continuous and impassible, that is, not connected to sensation, while dialectic can be seen as material intellect, being connected to forms in matter, sensation, and individual thought processes. While this analogy can be made, Henry Blumenthal warns against actually equating *nous* and *dianoia* with the active and passive intellects of Aristotle.[13] For Alfarabi and Avicenna, active intellect is a second intelligence; for Grosseteste, it is divine and angelic; for Thomas Aquinas, it is an agent within human thinking.

Intellection "furnishes standards" for dialectic in *Enneads* I.3.5, providing the models by which dialectic operates. This idea perhaps originated with Aristotle in the *Posterior Analytics*, 2.19.100b, 12, where intellect or *nous* is identified as the source of the principles of thought. The term "*nous*" can be applied to Plotinus' concept of intuitive intellect or the intellectual, and it can also be applied to the concept of an active intellect in the Arabic tradition leading to Alfarabi. Through its combining and dividing, dialectic aspires to intellection, but can only mimic it in a degraded form as connected to sensation. In *Enneads* V.1.3, discursive reason or material intellect can only be a secondary image of Intellectual Principle.

Discursive reason, or Reason Principle, is reason as enunciated or spoken, and perceived by itself, which in Plotinus is required for perception. The intellectual, on the other hand, is not spoken or perceived; it is unconscious reason, as it were. The "uttered reasoning" is the *logos prophorikos*, while the "reason stored within" is the *logos endiathetos*, in the Stoic distinction. Discursive reason is a form and

[12] J. McEvoy (2003).
[13] H. J. Blumenthal (1990), 314.

derivative of intellection, and can only operate in its knowledge of the intellectual, but it is limited by its connection to sensation. Reason in sensation for Plotinus would be impossible without a consciousness of reason without sensation. The intellectual being prior to reason, it is more powerful, as described in *Enneads* V.9.4. The intellectual produces reason, and not vice versa, as it also produces sensation and perception. Reason is weaker because it is also passible, being connected to sensation, and is therefore ephemeral and subject to decay, not to mention being subject to error and misunderstanding.

Ratio is seen by Grosseteste in the *Commentary on the Posterior Analytics* as a mirror reflecting the *virtus intellectiva*, as in *Enneads* I.1.8 and I.4.10. For Plotinus in I.1.8, intellect shines into matter and becomes present in it, as it does in reason. Bodies in matter become living beings, but intellect does not participate in matter or adapt to it in any way, nor is it affected by matter in any way, nor by the operations of reason; it is only present in matter in "images or likenesses of itself like one face caught by many mirrors." Perception is limited and governed by the mechanisms of intellection in reason; the perceived world conforms to what is determined in thought. Material images are only reflections, as in Plato. The concentrated, impassible oneness of the intellectual is "unrolled and separate" in reason, and reason is "present to bodies in division," in multiple reflections of a singular source. If reason is operating well, in *Enneads* I.4.10, then the mirror reflection in it of intellect is clear. If the mirror in reason is "out of gear," that which produces the reflection still exists, actively and unceasingly, as in active intellect, it is just not properly reflected in the lower part of the mind. A clear reflection of the intellectual in reason and sensation requires a state of peace and equilibrium in mind, and it is in that state that reason becomes most like intellection, as for Grosseteste in beatitude, in the cleansing of the lens of the *oculus mentis*.

In the *Shifa: De anima* of Avicenna, forms emanate from active intellect as differentiated in material intellect; intelligibles are differentiated in the compositive imaginative faculty, as in *Enneads* IV.3.29 and IV.3.30. According to Plotinus, "every mental act is accompanied by an image," *species sensibilis*, and the mental act or thought is retained as a perceived mnemic residue in the imagination, which allows for memory. The retention of the mnemic residue is not possible without a conjunction between the word in the dialectic and an image, as in IV.3.30 "memory would be the reception, into the image-making faculty, of the verbal formula which accompanies the mental conception…," what would be the *species apprehensibilis*. The conjunction is in the intellectual, as it "never rises to the exterior of the consciousness…". The perceived image which is retained in the imagination is the product of the conception of the image as Ideal Form reflected onto matter, the conflation of *species sensibilis* and *species apprehensibilis*, but is perceived by reason only as image, or representation.

Conclusion

From this brief discussion, it can be seen that the philosophies of intellect and vision of Grosseteste owe much to the Neoplatonic conceptions of Plotinus in the *Enneads*, as filtered through works such as the *Theology of Aristotle*, *Liber de Causis*, or the *al-Madina al-Fadila* of Alfarabi and the *Shifa: De anima* of Avicenna. It can also be seen that Grosseteste combines the Neoplatonic concepts with Christian concepts from Augustine or Basil, Aristotelian and Arabic concepts, and mystical concepts, from Pseudo-Dionysius, for example, to form a new and original philosophy, the influence of which can be seen in Renaissance Neoplatonism, eighteenth and nineteenth-century Idealism, and in philosophies of cognition and vision in the twentieth century.

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