

The Expansion of the Boundaries of the Rational in Robert Grosseteste and Hugh of St. Victor

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Abstract

In this paper, I will argue that Western philosophy and theology in the twelfth and thirteenth century saw an expansion of the notion of rationality, such that beings who were previously seen as lying at or beyond the borders of the rational - women, and, even more so, non-human animals - are accorded a fuller participation in reasoning. In particular, I will focus on the work of Robert Grosseteste and Hugh of St. Victor, each of whom, I will argue, expands the notion of who or what properly counts as being rational. The first half of the paper examines Hugh and Grosseteste's interpretations of the figure of Eve as a symbol of feminine rationality. The second half of the paper argues that Grosseteste's account of inductive reasoning contains within it the possibility of extending to non-human animals a kind of proto-rationality.

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Paper

It is well known that the Aristotelian tradition defines human beings as rational animals. It is rationality, on the Aristotelian view, that sets humans apart from all other animals; rationality is the defining characteristic of humankind. Part of what this view entails, of course, is the claim that no animals other than humans are rational. In the work of some medieval philosophers and theologians we further find rationality in its fullest sense being restricted to human men. In their Biblical scholarship and commentaries, particularly on the book of *Genesis*, some medieval philosophers argue that in fact, some humans, namely women, possess a deficient form of rationality. In this paper, I will argue that despite this tradition in Biblical commentary, the twelfth and thirteenth centuries saw an expansion of the notion of rationality in Western philosophy and theology, such that beings who were previously seen as lying at or beyond the borders of the rational - women, and, even more so, non-human animals - are accorded a fuller participation in reasoning. In particular, I will focus on the work of Robert Grosseteste and Hugh of St. Victor, each of whom, I will argue, expands the notion of who or what properly counts as being rational. The first half of the paper examines Hugh and Grosseteste's interpretations of the figure of Eve as a symbol of feminine rationality. The second half of the paper argues that Grosseteste's account of inductive reasoning contains within it the possibility of extending to non-human animals a kind of proto-rationality.

A place to which many medieval philosophers and theologians turn to provide grounds for their views concerning the differences between men and women are the passages in *Genesis* that discuss the creation of male and female human beings. Two passages in particular are cited: "So God created man in his own image: in the image of God he created him; male and female he created them,"² and, later in *Genesis*, "And the Lord God caused a deep sleep to fall upon Adam, and he slept: and he took one of his ribs... and the rib, which the Lord God had taken from man, made he a woman, and brought her unto the man."³

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²Genesis 1:27, King James Version.

³Genesis 2:21-22.

It is the second passage in particular that seems to some to provide grounds for holding women to be ontologically unequal to men, that is, the very existence of the first woman is secondary to, and dependent upon, the prior creation of the man; Eve is created from Adam's rib. Based on this passage, Isidore of Seville argues, for example, that because the woman is made from man's side, she is made in the image of man, and not, like the man, in the image of God.

Gratian arguessimilarly, and Thomas Aquinas claims that woman is made from man in order to signify that "man is the head of the woman," he is "her beginning and end" and "her principle."⁴ Robert Grosseteste, in his *On the Six Days of Creation*, sees the two aforementioned passages in *Genesis* as posing something of a puzzle. How can it be the case that God, on the sixth day of creation, "created man in his image... male and female he created them," while only later, according to the *Genesis* narrative, God created the woman out of the man? Grosseteste, following Augustine, argues that both the man and the woman were made on the sixth day of creation, but, he adds, it was only "in their causes and potentialities... such as to be [later] formed at the right time, like a seed or a root."⁵ He explains: In one way, then, the woman and the man were created on the sixth day, i.e. either *both of them* according to their perfect form, or *both of them* in their causes and potentialities only... On the sixth day, then, as we touched on above, the man and woman were made only in their causes. Then when time was flowing, they were made formally and perfectly according to the visible form of their bodies.⁶ Remarkably, Grosseteste appears to come to this conclusion, at least in part, because he sees this interpretation as necessary if one is to maintain the ontological equality of the creation and development of the man and woman. He argues that there are two possible ways of interpreting the passage stating that male and female were created on the sixth day: either one can read this as saying that they were both created "according to their perfect form," or one can read this as saying that they were both made "in their causes and potentialities only," the latter interpretation being the one which he himself accepts, as already seen. Note that Grosseteste does not suggest a line of interpretation where, say, the man is made in perfect form on the sixth day, and the woman is only made according to causes and potentialities, later to be made in perfect form out of the man. Grosseteste makes it very clear that the creation and development of *both* sexes, in his view, must have occurred in the same manner: "But the woman was perfected as time went on, according to this manner of expounding... Therefore, Adam, too, was not made perfect on the sixth day according to the visible form of his body."⁷ We see, then, that Grosseteste bases his interpretation of the *Genesis* passage on the simultaneity of the creation of man and woman.

Interpretative difficulties also arose with reference to the other passage referring to the creation of the sexes, "So God created man in his own image: in the image of God he created him; male and female he created them." Here the question was whether or not this passage implies that both sexes are "made in the image of God." Augustine, in his *On the Literal Interpretation of Genesis*, sets out some of the issues at stake. Augustine struggles to reconcile the fact that, "In the original creation of man, inasmuch as woman was a human being, she certainly had a mind, and a rational mind, and therefore she also was made to the image of God," with St. Paul's claim that only the male is "the image and glory of God."⁸ Augustine provides a gloss of what he takes to be Paul's view: There is of course the subtle theory that the mind of man, being a form of rational life and precisely the part in which he is made to the image of God, is partly occupied with the contemplation of eternal truth and partly with the administration of temporal things, and thus it is made, in a sense, masculine and feminine.⁹ For Augustine, the human mind is the part of the human being which is made in the image of God, and according to this "subtle theory," the human mind may be divided into two parts: a "masculine" part which is "occupied with the contemplation of eternal truth," and a "feminine" part which is occupied with "the administration of temporal things." Augustine then notes that, were this "subtle theory" to be true, only humans "occupied with the contemplation of unchanging truth" could truly be said to be made in the image of God.

⁴ See Angela Lucas, *Women in the Middle Ages* (New York: St. Martin's Press, 1983), p. 5-7 for references to Isidore and Gratian, and Thomas Aquinas, *Summa Theologica*, trans. Fathers of the English Dominican Province (Allen, TX: Christian Classics, 1981), Ia, q. 92, art. 2 and q. 93, art. 4 ad 1.

⁵ Robert Grosseteste, *On the Six Days of Creation*, trans. C.F.J. Martin (Oxford: Oxford University Press, 1996), Part 10, Chap. V, sec. 4.

⁶ *Ibid.* Italics mine.

⁷ *Ibid.*, Part 10, Chap. VI, sec. 1-2.

⁸ Augustine, *On the Literal Meaning of Genesis*, trans. John Hammond Taylor, S.J. (New York & Ramsey, NJ: Newman Press, 1982), Bk. III, Chap. 22.

⁹ *Ibid.*

This, he claims, is perhaps Paul's intended meaning when he says that only man is truly made in the image of God: "But it is not in this double function that the image of God is found, but rather in that part which is devoted to the contemplation of immutable truth."¹⁰ Thus, the reason why Paul claims that only man is in the image of God, Augustine concludes, is because it is only in the "masculine part" of the human mind, "that part which is devoted to the contemplation of immutable truth," where we find God's image, since, it is presumed, the "administration of temporal things" is not an appropriate concern for an eternal God.

So, according to the "subtle theory" reading of this passage in *Genesis*, God's image is only found in the masculine part of the mind: "With this symbolism in mind, Paul the Apostle declares that only man is the image and glory of God, *But woman*, he adds, *is the glory of man.*"¹¹ At the same time, however, Augustine himself seems to suggest that Paul may be mistaken here: Although the physical and external differences of man and woman symbolize the double role that the mind is known to have in one man, nevertheless a woman, for all her physical qualities as a woman, is actually renewed in the spirit of her mind in the knowledge of God according to the image of her Creator, and therein there is no male or female... By the same token, in the original creation of man, inasmuch as woman was a human being, she certainly had a mind, and a rational mind, and therefore she also was made to the image of God.¹² Augustine, then, when examining this passage in *Genesis*, provides two routes which may be taken by an interpreter: (1) an interpreter may provide a "subtle story," according to which the minds of the man and the woman differ: the "male" mind being directed toward "the contemplation of unchangeable truth," and the "female" mind being concerned with "the administration of temporal things," and (2) an interpreter may claim that the woman's mind has "the same reason" as the man's, and given that the rational mind is the way in which humans resemble God, both man and woman thus are made in God's image. While Augustine claims that Paul is proponent of the first route of interpretation, it is not evident which interpretation Augustine himself prefers. In these passages he seems to recommend the second, so as to be able to make the claim that woman is made in the image of God, since Augustine makes the assumption that only a mind directed toward "the contemplation of unchangeable truth" could be truly in the image of God.¹³

Grosseteste, however, very clearly adopts, the second line of interpretation, namely, that the woman possesses the same mind as the man. After citing and summarizing both the lines of interpretation laid out by Augustine, he goes on to state without qualification that, "it is *only* with regard to the body that there is a distinction of the sexes... we have to understand that the woman too was made in the image of God."¹⁴ He quotes Basil as providing the fullest statement of his own view: "The woman comes to be according to the image of God as much as does the man. For their natures are of the same dignity, their virtues are equal, their struggles are equal, and their rewards are equal."¹⁵ He concludes his commentary on this passage in *Genesis* by claiming that, "in all things that have to do with true virtues, the woman can be equal to the man, if she wants."¹⁶ When it comes to Augustine's interpretation of the Fall, we see him leaning more toward the view that there must be something fundamentally different about the female mind. Although Augustine is willing to attribute rationality to women, in the end, he only does so with the caveat that a woman possesses "limited understanding."¹⁷ One of his reasons for doing so concerns a puzzle that Augustine and others raise with regard to this story. Namely, how is it that Adam, existing in Paradise and in a perfect human state, was tricked into disobeying God?

¹⁰Ibid.

¹¹Ibid.

¹²Ibid.

¹³Bonner argues that Augustine supports this view, and that he attempts to "defend the spiritual equality of the sexes in the face of St. Paul's language." See Bonner, Gerald. "The Figure of Eve in Augustine's theology," *Studia Patristica*, Vol. 33, p. 26. See also TeSelle, Eugene. "Serpent, Eve and Adam: Augustine and the allegorical tradition," in *Augustine: Presbyter Factus Sum*, ed. Joseph Lienhard, Earl Muller, and Roland Teske (New York: Peter Lang Publishing, 1993) for a discussion of the sense in which Augustine holds that the female mind signifies "lower reason."

¹⁴Grosseteste, *On the Six Days of Creation*, Part 8, Chap. XVIII, sec. 3-4.

¹⁵Ibid.

¹⁶Ibid.

¹⁷Augustine, *On the Literal Meaning of Genesis*, Bk. XI, Chap. 42.

Augustine puts the question as follows: If Adam was a spiritual man, in mind though not in body, how could he have believed what was said through the serpent, namely, that God forbade them to eat of the fruit of that one tree because he knew that if they did they would be gods in their knowledge of good and evil? As if the Creator would grudge so great a good to his creatures! It is surely strange if a man endowed with a spiritual mind could have believed this.¹⁸ The answer that Augustine gives to this puzzle, and once again his authority in this matter will be cited by later medieval philosophers and theologians, is this: "Was it because the man would *not* have been able to believe this that the woman was employed, on the supposition that she had limited understanding, and also perhaps that she was living according to the spirit of the flesh and not according to the spirit of the mind? Is *this* the reason that St. Paul does not attribute the image of God to her?"¹⁹ While Augustine poses the thesis that woman's understanding is lesser than man's as a question, and not as an assertion of his own view, passages in other works of his may be taken as evidence that this view appeals to him. In *The City of God*, Augustine provides a few examples of how men are led into sin, not by a fault in their own understanding, but rather by feminine persuasion. To provide one such example, Augustine claims that, "it is unbelievable that Solomon mistakenly supposed that he ought to serve idols; he was induced to such acts of sacrilege by feminine cajolery."²⁰ He cites this example again in *On the Literal Meaning of Genesis*: Can we imagine that Solomon, a man of incredible wisdom, believed that there was any advantage in the worship of idols? But he was unable to resist the love of women drawing him into this evil, and he did what he knew should not be done lest he should inhibit the deadly delights in which he was being wasted away. So it was the case with Adam.²¹ As suggested here, it is Augustine's view that the same thing must have occurred, in the case of Adam and Eve: It was the same with that first man and his wife. They were alone together, two human beings, a married pair; and we cannot believe that the man was led astray to transgress God's law because he believed that the woman spoke the truth, but that he fell in with her suggestions because they were so closely bound in partnership. In fact, the Apostle was not off the mark when he said, "It was not Adam, but Eve, who was seduced," for what he meant was that Eve accepted the serpent's statement as the truth, while Adam refused to be separated from his only companion, even if it involved sharing her sin.²² Evidently, Augustine is in agreement with Paul's claim that Eve's rational capabilities must differ from those of Adam. Adam, according to him, could not have believed that serpent was telling the truth, but Eve, in her limited capacity for understanding, does accept the serpent's lie as truth. Eve's limited understanding is thus what enables the serpent to succeed; Adam would not have taken the fruit from the serpent, but he will from Eve, in order, according to Augustine, "not to make her unhappy."²³

Augustine's interpretation of the Fall, along with its implications concerning the intellectual capabilities of women, was adopted and expanded upon by later medieval philosophers and theologians. To provide just a few examples, the thirteenth-century theologian, Adam of Courlandon, argued that, in the story of the Fall, the serpent tempted Eve before Adam because Adam's rationality would have enabled him to resist the temptation.²⁴ Eve, he goes on to say, is far more dependent on her senses and lacks the same level of reasoning abilities. Abelard accepts that women possess reason, but he insists that men possess more complete rationality and wisdom.²⁵ Grosseteste, as I have shown, provides an alternative view that claims ontological and rational equality for both man and woman. One such alternative view concerning both the ontological and rational equality of man and woman has already been presented: that of Grosseteste. I will now discuss of Hugh of St. Victor, who offers an alternative reading of the story of the Fall. Hugh accepts the view that the serpent's success in tempting Eve was due to in some part to a difference between the man and woman: "Man, therefore, was the image of wisdom, woman the form of prudence, but the beast [was] the likeness of sensibility and concupiscence. On this account, the serpent, in persuading sin, deceived woman."²⁶ However, Hugh does not follow Augustine's claim that Eve possesses "limited understanding," or that her intellectual capacities are lesser, but rather holds the view that they are differently oriented.

¹⁸Ibid.

¹⁹Ibid.

²⁰Augustine, *City of God*, trans. John O'Meara (London: Penguin Books, 1972), Bk. XIV, Chap. 11.

²¹Augustine, *On the Literal Meaning of Genesis*, Bk. XI, Chap. 42.

²²Augustine, *City of God*, Bk. XIV, Chap. 11.

²³Augustine, *On the Literal Meaning of Genesis*, Bk. XI, Chap. 42.

²⁴See Lucas, *Women in the Middle Ages*, p. 3-12, and for more examples of the later medieval adoption of Augustine's view.

²⁵Ibid.

²⁶Hugh of St. Victor, *On the Sacraments of the Christian Faith*, trans. Roy J. Deferrari (Cambridge, MA: The Medieval Academy of America, 1951), Bk. 1, viii, 13.

Hugh begins by establishing a threefold division within the intellect: first, wisdom, which is “reason concerned with divine things”; second, prudence, which is “reason directed toward human things”; and third, sensibility, which is “desire concerned with earthly things.”²⁷ Hugh uses this division to claim that the male is the symbol of wisdom, the female of prudence, and the beast of sensibility, while at the same time he asserts that all three of these faculties – wisdom, prudence, and sensibility – exist in every human being.²⁸ It may appear that Hugh is merely repeating a version of Augustine’s “subtle theory” line of interpretation of *Genesis*, namely that the masculine mind possesses the capacity for the contemplation of unchanging truths while the feminine mind is directed toward the administration of temporal matters. But this is not the case. First, according to Augustine, if the “subtle theory” is correct, then only the masculine mind could rightly be said to be made in the image of God. Because of this, Augustine appears to reject the theory, claiming that the woman must possess, “a rational mind, and therefore she also was made to the image of God.”²⁹ The implication here is that a mind directed toward “the administration of temporal things” could not count as fully rational. Hugh, on the other hand, explicitly rejects this. He calls wisdom a kind of “reason, governing only and not itself governed,” and he calls prudence “reason, governed by the higher and governing what was below it.” What should be noted here is that *both* are forms of rationality; only sensibility is not called a kind of reason, and only sensibility is “governed only, and does not govern.”³⁰ The second major difference between Hugh and Augustine follows from the first. While Augustine goes on to reject the “subtle theory” on the grounds that it denies the feminine mind the possibility of being truly in the image of God, and instead attributes the same rational mind to the woman as to the man, he is then stuck with the puzzle of why the serpent is successful in tempting Eve. Augustine, in *On the Literal Interpretation of Genesis*, argues that if Eve’s rationality is of the same kind as Adam’s, the only possibility solution to this puzzle is that her use of that rationality must be limited. Hugh, on the other hand, takes the opposite approach, namely, he claims that Eve is the symbol of a different kind of rationality. He makes use of his own “subtle theory” to walk a narrow path of remaining faithful to what he sees as an authoritative interpretation of Eve’s role in the story of the Fall, while at the same time allowing Eve to maintain her full rationality. That is, Hugh accounts for how she could make an unintelligent choice without thereby denying her a full share of reason. Eve’s reason is not lacking, but given the *Genesis* narrative of the Fall, and the assumption that Adam could not be tempted but Eve could,³¹ Eve must represent a *different kind* of reason, one that is not as oriented toward divine concerns. Thus, the serpent would have more success in getting her to disobey a divine command.

A final point that ought to be raised as noteworthy in Hugh’s account of the Fall is that feminine prudential reasoning is portrayed as governing a kind of middle ground between wisdom and sensibility: And thus these three things were found in man: wisdom, prudence, and sensibility... the first, namely reason, governed only and was not governed. The last, sensibility, was governed only and did not govern. But the middle, reason, was governed by the higher and governed what as below it... Man, therefore, was the image of wisdom, woman the form of prudence, but beast the likeness of sensibility and concupiscence. On this account the serpent, in persuading sin, deceived woman. But woman on being deceived inclined man to consent, because concupiscence first suggests the delight of sin to the prudence of the flesh; then the prudence of the flesh, deceived by the delight of sin, draws reason to consent in iniquity.³² Woman’s prudential reasoning, on Hugh’s account, occupies a middle ground between masculine wisdom and animalistic sensibility; it is capable of “listening to” and being persuaded by the senses in a way that wisdom alone is not. It is only when prudential reasoning passes on what is suggested by sensibility to be appraised by wisdom that wisdom may “consent to” what is sensed. Eve, then, bridges the gap between wisdom and the senses, just as she does between Adam and the serpent. The portrayal of Eve as a kind of bridge between Adam and the serpent became widespread in the twelfth century. In his *Historia Scholastica*, Peter Comestorgives an explanation of why the serpent was successful in tempting Eve that became widely accepted.

²⁷Ibid.

²⁸Ibid.

²⁹Augustine, *On the Literal Meaning of Genesis*, Bk. 3, Chap. 22.

³⁰Hugh of St. Victor, *On the Sacraments of the Christian Faith*, Bk. 1, viii, 13.

³¹And Hugh does assume this. See Hugh of St. Victor, *On the Sacraments of the Christian Faith*, Bk. 1, vii, 10.

³²Hugh of St. Victor, *On the Sacraments of the Christian Faith*, Bk. 1, viii, 13.

Comestor claims that Lucifer chooses a particular kind of serpent to tempt the woman, namely, a serpent "which had the countenance of a virgin," because, he goes on to add, "like favors like."³³ The *Historia Scholastica* would go on to become one of the three standard texts, along with the glossed Bible and Peter Lombard's *Sentences*, to be required study for all theologians-in-training in the thirteenth century.³⁴ In fact, Comestor's account of the serpent gained such popularity, not just among the religious, but also among the lay, that the serpent is frequently portrayed in later medieval plays, as well as in its iconography, as having a woman's face.³⁵ While Comestor refers to a blending of the feminine with the animal specifically in an attempt to account for the temptation of Eve, his description of a woman-headed serpent was part of a widespread interest in linking, not just Eve, but women in general, with animals. In Joyce Salisbury's *The Beast Within*, she argues that while a strict division between humans and other animals was maintained from the fifth through eleventh century, it is in the twelfth century that this begins to change: [In the twelfth century,] the increasing popularity of the metaphoric linking of humans and animals seems to have opened up the possibility for redefining humanity in a way that eliminated the categoric separation of the species.³⁶ With increasing exposure to stories and fables that portray humans and animals as sharing characteristics, Salisbury argues, "people were more prepared to see comparable blurring of the lines in life."³⁷ It seems that people in particular were more prepared to see a blurring of the line between *women* and animals, as Salisbury goes on to document in detail. In the thirteenth and fourteenth centuries, for example, women are alternately described as being like wild cats, peacocks, horses, and hares, and, in one poem, "The Vices of Women," as snakes, lions, leopards, foxes, bears, dogs, cats, rats, and mice.³⁸ But it was not only the figure of Eve that was at the center of the expansion of the boundaries of the rational that took place during this time. Robert Grosseteste, following Ibn Sina's interpretation of Aristotle's epistemology, made room for the possibility for animals to participate in a kind of proto-reasoning about practical principles. Aristotle divides reasoning into two kinds: theoretical and practical. Both kinds of reasoning have the possibility being codified into Aristotle's logical paradigm, namely, the syllogism. In Aristotle's *Posterior Analytics*, he claims that while in some cases the premises of a syllogism may have been acquired through an earlier syllogism, not all premises can be obtained in this way, since this would result in an infinite regress. Rather, the truth of some premises is made evident through a process he calls induction (*epagoge*).

Grosseteste, in his *Commentary on Aristotle's Posterior Analytics*, provides an extensive discussion of how human beings come to know a first principle, that is, a proposition that can serve as a premise in an argument, without itself requiring any prior argument for its proof. A paradigmatic example of such a principle would be an axiom, such as, "A whole is greater than its part." However, Grosseteste holds that many propositions, and not all of them axioms, can serve as first principles in an argument. Another, clearly non-axiomatic example that he gives of such a principle is, "Scammony purges bile."³⁹ Our interest here is Grosseteste's account of how we come to know such principles, given that, according to him, we do not come to know them through any prior argument or demonstration (since this would result in a regress). According to him, human beings come to know first principles through the Aristotelian process of induction. Grosseteste explains that the apprehension of such a principle begins with the sensation of two objects that stand in some kind of relation to each other, oftentimes a causal one: When sensation frequently apprehends that, of two sensible things, one is the cause of the other, or is related to it in some other way, and does not apprehend this middle relation, such as when someone frequently sees that consuming scammony is accompanied by the purging of red bile and does not see that scammony attracts and draws out red bile, then from the frequent vision of these two sensible things, it begins to estimate a third invisible one, namely, that scammony is the cause of the drawing out of the red bile.⁴⁰ By making this estimation (*estimatio*) a number of times, and retaining it in the memory, reason is incited to discover whether the estimation can be accurately expressed as a universal proposition.

³³Nona Flores, "Effigies Amicitiae... Veritas Inimicitiae': Antifeminism in the Iconography of the Woman-Headed Serpent in Medieval and Renaissance Art and Literature," in *Animals in the Middle Ages*, ed. by Nona Flores (New York & London: Garland Publishing, Inc., 1996), p. 167-169.

³⁴*Ibid.*

³⁵Brian Murdoch, *The Medieval Popular Bible: Expansions of Genesis in the Middle Ages* (Cambridge: D.S. Brewer, 2003), p. 38-39.

³⁶Joyce Salisbury, *The Beast Within: Animals in the Middle Ages* (New York and London: Routledge, 1994), p. 138.

³⁷*Ibid.*

³⁸*Ibid.*, pp. 157-158.

³⁹Robert Grosseteste, *Commentarius in Posteriorum Analyticorum Libros*, ed. Pietro Rossi (Florence: Olschki, 1981), pp. 214-215, ll. 254-261. Translation my own.

⁴⁰*Ibid.*

In order to determine this, reason conducts a kind of controlled experiment, in which, for example, some animal is given scammony to eat after all other possible causes of the purging of bile have been removed. If the bile is purged, then reason forms the universal proposition that all scammony, by its nature, purges red bile. This, Grosseteste concludes, is how induction enables one to attain a universal first principle.⁴¹

Grosseteste's epistemology contains the possibility of making room for yet another category of reasoning, one that could possibly extend some reasoning capabilities to non-human animals. This possibility is spelled out more explicitly by Ibn Sin. Ibn Sina (known in the medieval west as Avicenna), expanding upon the Aristotelian account of the soul, claims that in addition to external perception (i.e., the faculties of the five senses), the soul also contains faculties of internal perception. Besides the faculties of imagination, common sense (which compiles the information about an object received through the five external senses into a unified, perceived object), and memory, Ibn Sina includes an additional internal faculty of perception: the "faculty for perceiving connotational attributes."⁴² He describes this faculty in part by providing an example of a sheep perceiving a wolf as possessing an attribute connoting its dangerousness: For example, the sheep perceives the form of the wolf – I mean its shape, pattern, and color... [but] the connotational attribute is something that the soul perceives from the sensible without the external senses first perceiving it, for example, the sheep's perceiving the connotational attribute of enmity in the wolf or the connotational attribute of having to fear it and flee from it, without the external senses perceiving it at all. So, what perceives something about the wolf first is the external senses, and then the internal senses. [What the external senses perceive] should here be restricted to the term "form," whereas what the internal faculties – not the senses – perceive should here be restricted to the term "connotational attribute."⁴³ The name that he gives to this internal faculty is "the estimative faculty," which "perceives the connotational attributes not perceptible to the senses but that are nonetheless in particular sensible objects," for example, "the faculty in the sheep that judges that this wolf is something to flee and that this lamb is something to love."⁴⁴ Ibn Sina claims that, because the perceiving animal is not reacting to the accidental forms of the wolf, that is, its shape, pattern, or color, what it must be reacting to is its perception of something substantial, or something of the essence of the wolf, i.e., its "predatoriness."⁴⁵ Grosseteste seems to be thinking along the lines of Ibn Sina's "estimative faculty" when he speaks of an *estimatio* as an essential step in the Aristotelian process of induction.

Grosseteste's *estimatio* clearly is not something that can be gained merely by observing the external features of an object; simply looking at an herb is not going to produce any notion that it might be good at curing fevers, for example. Additionally, if the *estimatio* is to truly provide one with a principle that can serve as a premise in a demonstrative syllogism, it must grasp an essential, non-accidental feature of the object or state of affairs under observation, since, following Aristotle, these medieval philosophers will claim that there can be no scientific knowledge of the accidental. Finally, the example that Grosseteste provides of an *estimatio*, namely, that a certain plant is good for the health, is one that some kinds of animals do have; animals are able to distinguish what vegetation is poisonous and ought to be shunned, and what is good to eat. If this is the case, and Grosseteste does have in mind something like Ibn Sina's "estimative faculty" when speaking of an *estimatio*, then Grosseteste must also be committed to the claim that at least some animals can at least begin the process of acquiring a kind of proto-principle. Thus, on Grosseteste's view, the dividing line between humans and other animals is not a sharp demarcation, with humans possessing full reasoning capacities and animals possessing none, but rather a series of gradations, with animals possessing information received through the senses, and then processing this information through their estimative power so as to build up a collection of information to help them survive their environments. Given Grosseteste's account of the human acquisition of first principles, perhaps the sharpest dividing line he could draw between the human and animal is not the ability to form an *estimatio*, but rather the human ability to test our *estimaciones* and to judge them to be true or false.

⁴¹Ibid.

⁴²Ibn Sina, *The Cure: The Soul*, in *Classical Arabic Philosophy: An Anthology of Sources*, trans. by Jon McGinnis & David C. Reisman (Indianapolis & Cambridge: Hackett Publishing Company, 2007), p. 181.

⁴³Ibid, p. 182.

⁴⁴Ibid.

⁴⁵Ibid.

Recently, some biologists, psychologists, and philosophers doing research in areas of animal cognition have proposed that it is precisely the human ability to revise our thinking and to be aware of whether or not we have good reasons for holding something to be the case that may be what sets human cognitive abilities apart from those of other animals.⁴⁶

I would like now to bring out the uniqueness of Hugh's and Grosseteste's expansions of the notion of reason which we found throughout the works of Grosseteste, and in Hugh of St. Victor's account of the Fall, by contrasting both of them with the views of Thomas Aquinas, specifically where he addresses questions concerning animal intelligence, and the ontological and rational inequality of men and women. Aquinas maintains a strict division between the status of the male and female, both ontologically and in terms of rational capacity. Aquinas, rather notoriously, cites with favor Aristotle's claim that "the female is a misbegotten male." Although necessary for the continuation of the species, and so not misbegotten "as regards human nature in general," a woman in her "individual nature" is a "defective"; it is only because of a biological fluke that a female is born instead of a male: "the production of woman comes from defect in the active force or from some material indisposition."⁴⁷ Aquinas draws out the implications of the ontological inequality of man and woman by assigning a reason for why, according to the *Genesis* narrative, the woman was made from the man, namely, as a sign of the position she should occupy in the family: "the human male and female are united, not only for generation, as with other animals, but also for the purpose of domestic life, in which each has his or her particular duty, and in which the man is the head of the woman."⁴⁸ We see no hint in Aquinas, not only of Grosseteste's insistence that men and women are equally capable of intellectual virtue, or of Hugh's position that masculine and feminine rationality may be *different* but nevertheless are equally *rational*, but even Augustine's Pauline "subtle story" that a female mind, while lacking the orientation toward the contemplation of unchanging truths, is nevertheless suited toward the prudential reasoning oriented toward temporal affairs seems unappealing to Aquinas. Management of the family would certainly be classified by Aquinas as an area of human endeavor properly governed by prudential reasoning, and, according to him, the reason of a man in such matters is superior to that of a woman: For good order would have been wanting in the human family if some were not governed by others wiser than themselves. So by such a kind of subjection woman is naturally subject to man, because in man the discretion of reason predominates.⁴⁹

When it comes to interpreting Aristotle's account of induction, Aquinas makes it explicitly evident that he believes that the behavior of animals is due to instinct, and that reasoning of any form belongs to human beings alone. Aquinas presents the following objection to his own view: "But prudence is found in irrational animals... we see this plainly, in wonderful cases of sagacity manifested in the works of various animals, such as bees, spiders, and dogs."⁵⁰ Aquinas's reply to this is that while animals may appear to be prudent insofar as they "set about their actions in a most orderly manner," this is not "not because they reason or exercise any choice about things," but rather is due to "divine art."⁵¹ On Aquinas's view, animals exercise nothing resembling rational thought; any apparent feats of intelligence that we may be tempted to attribute to them ought instead to be attributed to the intelligence of the divine artist who organized the animal so perfectly. In conclusion, Hugh of St. Victor and Robert Grosseteste each push the boundaries of the view that rationality is possessed only by human beings and that it is possessed in the fullest sense only by human men. Each philosopher challenges these views by broadening and expanding the notion of what counts as reasoning. Hugh of St. Victor argues that women are the very "image" or symbol of prudential reasoning. We can read Robert Grosseteste as making a parallel move to that of Hugh. Given Grosseteste's epistemology, when it comes to practical principles that pertain to what ought to be pursued or feared, some animals may be capable of making something like an *estimatio*. Thus, these animals must be understood to participate in reasoning to some extent. In each case, by insisting on an expansive notion of rationality, these philosophers broaden the category of who and what can be said to be rational.

⁴⁶See Fred Dretske, "Minimal Rationality," Ruth Garrett Millikan, "Styles of Rationality," and Joelle Proust, "Metacognition and Animal Rationality," all in *Rational Animals?*, ed. Susan Hurley and Matthew Nudds (Oxford: Oxford University Press, 2006).

⁴⁷Aquinas, *Summa Theologica*, Ia, q. 92, art. 1, ad 1.

⁴⁸*Ibid.*, Ia, q. 92, art. 2.

⁴⁹*Ibid.*, Ia, q. 92, art. 2.

⁵⁰*Ibid.*, I-II, q. 13, art. 2, obj. 3.

⁵¹*Ibid.*, I-II, q. 13, art. 2, ad 3. See also Gary Steiner, *Anthropocentrism and Its Discontents: The Moral Status of Animals in the History of Western Philosophy* (Pittsburg, PA: University of Pittsburgh Press, 2005), pp. 126-131 for a discussion of Aquinas's response to the claim that animals may possess prudential reasoning.