

AQUINAS AND EVOLUTION: A COMPATIBLE DUO

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Victor Brezik says that "evolution considered as a total accounting of human origin, resulting in a materialist concept of man is incompatible with [. . .] the anthropology of Aquinas." ("The Descent", 85). Brezik assumes that evolution entails that the human being is entirely material in nature. This assumption springs from the central tenet of evolution that the human has evolved from lower life forms. Combining this aspect of evolution with Aquinas' view that the souls of animals are material would entail, Brezik reasons, that humans also must have material souls. But since Aquinas insists that human beings have immaterial souls, the two accounts are incompatible.

On the other hand, Aquinas indicates that the souls of higher animals have some share in immateriality. If animal souls have, to a certain extent, an immaterial nature, then human evolution from non-human animals would not entail that "the human being is entirely material in nature." With further evolutionary development, the immateriality inherent in the non-human animal may have become more pronounced, giving way to the human animal.

Aquinas' arguments regarding the nature of animal life present a dilemma. Either, as some of his texts suggest, animal souls are completely

material, or, as some of his other texts suggest, animal souls manifest immaterial activity, indicating at least in part an immaterial nature. The importance of resolving this dilemma is that if the first kind of texts are more coherent with his teachings, evolution will be incompatible with his anthropology whereas this will not be the case if the second kind of writings are more congruous. This paper will argue that Aquinas' writings supporting an immaterial aspect in the animal soul is more harmonious with some basic features of his metaphysics and epistemology than his arguments that animals have completely material souls. A consideration of Aquinas' embryology, his hierarchy of being, and his analysis of sensitive knowledge will support this conclusion.

First it must be admitted that nothing seems further from Aquinas' thought than the evolutionary teaching that inanimate nature could generate life itself. However, the possibility that life could arise from a material organization is not excluded by Aquinas' metaphysical thought for he teaches that in primary matter there is a tendency toward life:

Certain grades are to be found in the acts of forms. For primary matter is in potentiality,

first of all, to the elemental form. While under the elemental form, it is in potentiality to the form of a compound; wherefore elements are the matter of a compound. Considered under the form of a compound, it is in potentiality to a vegetative soul; for the act of such a body is a soul. Again the vegetative soul is in potentiality to the sensitive, and the sensitive to the intellective (*Summa Contra* III, 22).

Aquinas explains that the living thing is only a new state of matter already existing under the forms of the elements. On this account, the developing complexity of matter is a sequence of actions determined by the ultimate act which is their goal. But the sequence of mechanical processes is requisite if the sequence of actions is to reach its goal. On this point, Aquinas' views and evolutionary theory come together. Nothing in Aquinas' thought precludes a living thing from arising out of inanimate matter. If inanimate matter has a tendency to live, it must go through the evolutionary process. If it must go through the process, it has a tendency to live.

In *De Veritate*, we find Aquinas' concept that a specific nature may be modified through the accidental modification of a particular nature. Based on the distinction between the primary tendency of nature and the secondary tendency, Aquinas teaches that a natural body primarily tends to produce its own kind, but if there should be an indisposition to this in the matter, it would secondarily produce something as similar to itself as possible.

It is by the primary intention of nature that a perfect animal is produced, but the production of an imperfect animal is by the secondary intention of nature, which gives to the matter what it is capable of receiving, since it is unable because of the indisposition of

the matter to give it the form of the perfect state (*De Veritate*, 23, 2).¹

Through the secondary tendency of nature to modification, new specific types may emerge.

On this point, Aquinas parts company with Aristotle, who held that species are immutable. Attempting to integrate Aristotelian physics with Augustine's explanation of seminal principles as active creative powers residing within all matter, Aquinas says

Species that are new [. . .] existed beforehand in various active powers; so that [. . .] new species of animals, are produced by putrefaction by the power which the stars and elements received at the beginning. Again, animals of new kinds arise occasionally from the connection of individuals belonging to different species, as the mule is the offspring of an ass and a mare; but even these existed previously in their causes, in the works of the six days (*Summa Theologica* I, 73, 1).

Consequently, Aquinas contends that there are cases of new species added to an already existing species by means of spontaneous generation. Synthesizing Aristotelian and Augustinian thought, Aquinas maintains that new species preexist in the active power of the original species.

Aquinas' embryology, based on Aristotle's teaching, parallels this interpretation. His approach to embryology is adaptable to evolutionary theory since he teaches that the human embryo goes through a biologically continuous development. Aquinas maintains that what, by

¹ R. J. Nogar, O.P., has identified this passage as manifesting one of the ways in which a higher species can be generated by a natural process. (*The Wisdom*, 322).

a process of evolution, becomes the human body develops in stages, advancing from the two lower orders of life, the vegetative and the sensitive, to the higher one during prenatal life (*Summa Theologica* I, 76, 3 ad 3).² Not only does the structural development of the growing embryo correspond to a plant body, then an animal body, and finally a human body but the operational development of the embryo passes through the same series of transitional stages. According to Aquinas' principle of proportionality, the organizational structure of the body must be adapted to the kind of life appropriate to the species. For instance, in order for a body to become canine, it must have the necessary organs, including brain matter, requisite for activating the potential of the sensitive soul.

In proportion to its elementary state of organization the fertilized egg first manifests itself in vegetative functions —such as the circulation of blood and the beating of the heart. As organization advances far enough to make the fetus capable of sensitive activity, it acquires a sensitive life. Ultimately, with further organization, the animal soul yields to a rational soul that takes over all the life-giving tasks performed by the lower life forms. In sum, the embryonic development of the human being is that of a gradual evolution during which the future rational being goes through a series of successive stages.

For Aquinas, the evolution of the embryo is a microcosm of the stages of life in general, an evolution that can be discerned in the ontological continuity of creatures. He asserts that there

is a "marvelous connection of things" which nature reveals to our view. In many of his works, Aquinas explains that nature does not proceed by leaps and bounds but in a gradual, orderly succession. The gradations of being, extending from the lifeless to vegetative life and from vegetative life to animal life, are continuous to the point that at certain levels, they are almost indistinguishable from each other. Aquinas held that the continuity of creatures is simply a fact of nature, for if one "observes the natures of things" he will find "that the diversity of things is accomplished by means of gradations. Indeed he will find plants above inanimate bodies, and above plants irrational animals, and above these intellectual substances" (*Summa Contra*, III, 97). Explaining that creatures overlap in such a way that there are no unaccounted for spaces in the structure of being, Aquinas adds, "And among individuals of these types he will find a diversity based on the fact that some are more perfect than others, inasmuch as the highest members of a lower genus seem quite close to the next higher genus; and the converse is also true; thus, immovable animals are like plants" (*Summa Contra*, III, 97). In other words, the highest form of inanimate being borders on and is almost indistinguishable from the lowest form of plant, the highest form of plant closely resembles the lowest form of animal, and the highest form of animal is contiguous with the lowest form of human being (those with overwhelmingly diminished capacities). The general metaphysical principle underlying the hierarchy of being is this: the higher the form, the more it resembles and approaches higher principles.

The notion of a hierarchy of being complements the views of evolutionary theorists.

² Cf. 118, 2 ad 2; *Commentary on the Second Book of the Sentences*, Dist 18, q. 2, art. 1 and 3; *Summa Contra Gentiles* 86-89; *Quaestiones Disputatae de Potentia*, q. 3, art. 9 to art. 12.

Observing that "most evolutionists have been thinking hierarchically ever since Darwin," Ernst Mayr, a renowned zoologist, writes

No other component of Darwin's thinking was as [. . .] widely adopted as his theory of common descent, a strictly hierarchical theory. And most of the paleontological literature, largely devoted to an elucidation of common descent, was strongly hierarchical in its approach (*Toward*, 417).

Citing recent studies, Mayr adds that "there has been a new enthusiasm for a hierarchical approach to evolution" (*Toward*, 417).³ Though Aquinas' teachings on the hierarchy of being are not based on common descent, they can be seen as antedating contemporary theories of evolution. The hierarchies found throughout nature are essential factors to both Aquinas' thought and evolutionist thought.

Aquinas observes that as we ascend the hierarchy of being from the non-living to the living and from vegetative life to animal life, it can be observed that the higher one is positioned on the hierarchy, the more the subject is self-directed, and the less it has recourse to outside forces (*Summa Contra* IV, 11). Employing this criterion of comparison, Aquinas contends that a plant acts more independently than a stone because its growth involves absorbing substances from its environment and metamorphosing them into its own substance. It becomes much harder to enumerate all the kinds of activities an animal can do, for an essential characteristic of an animal, as opposed to a plant is mobility from place to place that seems to be purposive. A plant does not move from place to place, but only moves its

components in reaction to various stimuli. Since the lowest species of animals are continuous with the highest species of plants, the least developed animals may be expected to move in a manner similar to plants.

Adopting the distinction first made by Albert the Great between the lower animals and the higher animals, Aquinas differentiates higher animals from "immovable animals, such as shellfish," explaining that animals possessing "locomotive powers [. . .] require many things for their life, and consequently movement to seek necessities of life from a distance" (*Summa Theologica* I, 78, 2). Relating increased mobility to a higher level on the hierarchy of being, Aquinas indicates that there is an important relationship between mobility and consciousness. When a flash flood damages an animal's den, he must select a new abode from several alternatives. The immobility of a plant would restrict its exposure to the new and unexpected. Consciousness, therefore, would not be stimulated in a plant as it is in very mobile animals. Unlike the animal, the plant is unconscious. The mobility of animals results from the consciousness or apprehension of objects, thereby presupposing the mediation of desires, experiences and images. Contemporary theorists also teach that mobility, requiring a certain complexity in the sensory-motor system, stimulates consciousness.⁴ The more complex the sensory-motor system becomes, the more numerous and more precise become the movements among which an animal can choose, enabling him to have greater self-determination. Corre-

³ Mayr cites the 1984/85 studies of Eldredge and Salthe.

⁴ Florian von Schilcher and Neil Tennant explain this relationship between mobility and consciousness, "The sensory-motor system is essentially a means of mediating between sensory input and motor output. The more complexity there is on both sides the more pressing the

spondingly, the consciousness that accompanies these movements becomes more lucid. As animal life develops, the sensory-motor system becomes more complex and the animal becomes increasingly capable of consciousness. Accordingly, there are degrees of continuity within the animal realm itself, most interestingly, a continuity of consciousness.

In his *Commentary on the Metaphysics*, Aquinas elaborates on this continuity by distinguishing three levels of animal life ranging from immobile animals lacking a capacity for memory to those whose capacities allow a broader scope of behavioral adaptation through learning. "The first level is that had by animals having neither hearing nor memory, and which are therefore neither capable of being taught nor of being prudent" (I, Lectio 1, n, 13).⁵ For Aquinas, the possession of memory is crucial in allowing an animal to have a cognitive capacity beyond sense. In another text, he explains, "Animals, in which a trace of such an impression [of sensible objects] remains, are capable of having some *knowledge in the mind beyond sense*, and these are the animals that have memory" (*Commentary Posterior II*, Lect. 20.

need for hierarchical or modular control, and the more scope there is for consciousness to emerge as a central control function, or as an aspect of states thus involved" (*Philosophy*, 201).

⁵ Aquinas' attribution of prudence to animals may be found in several texts. For example, he explains that Aristotle differentiates between sensation and wisdom because "sensation belongs to all animals, but wisdom is found in only a few." Connecting this animal wisdom with prudence, he continues, "And he [Aristotle] allows wise judgment to a few animals, and not exclusively to man, because even animals have a sort of prudence or wisdom" (*Commentary on De Anima III* 3, n. 629). The reason that not every animal is capable of prudence is because "prudence does not reside in the external senses

The emphasis is mine). Continuing his distinction of animal life, Aquinas states that "The second level is that of animals which have memory but are unable to hear, and which are therefore prudent but incapable of being taught. The third level is that of animals which have both of these faculties, which are both prudent and capable of being taught" (*Commentary Metaphysics I*, Lect. 1, n.13).

Based on Aquinas' distinction, John Deely attributes instinct to those animals at the lowest levels of existence that respond only to immediate sensations and intelligence to those animals that are capable of adapting themselves to diverse circumstances.

What Aquinas is getting at [. . .] is the distinction between *instinct* strictly so-called, i.e., between a species dominated by a pattern of behavior that is "species-predictable" [. . .] and *intelligence*, i.e., species the behavior of which does not seem to be dominated by a gene-determined pattern (Deely, "Animal", 62).

Higher animals do not always respond in a uniform way to identical stimuli, and conversely, quite disparate stimuli often evoke a uniform response. Aquinas' distinction between the three levels of animal life means that only

[. . .] but in the interior sense, which is perfected by memory and experience so as to judge promptly of particular uses" (*Summa Theologica II-II* 47, 3 ad 2). Again, discussing how bodies exercise two kinds of action, Aquinas describes the second kind as "action inasmuch as they [bodies] are in contact with the order of the separated substances and enjoy some participation in which properly belongs to the superior nature; this is manifest in some animals which possess a faculty akin to prudence, although prudence properly belongs to men" (*De Potentia*, 5, 8. Cf. *Summa Theologica I-II* 13, 2 ad 3).

those animals who are at the lowest levels of existence possess instinct in the sense of a completely determinate mechanical operation whereas higher animals are capable of intelligence. Some animals use their intelligence to take advantage of their individual experience and to modify their behavior accordingly. Animals who are both prudent and can learn from experience manifest a wide range of behavioral adaptation in response to new situations.

The senses, both exterior and interior,⁶ are responsible for this adaptive flexibility. Yet it is Aquinas' analysis of sensation that supports Brezik's claim that evolution requires a materialist concept of the human being. Aquinas says that the sensitive soul is intrinsically dependent on matter since "The action of sensation cannot proceed from the soul except by a corporeal organ" (*Summa Theologica* I, 77, 6). More generally, Aquinas claims that "The souls of brutes are incapable of any operation that does not involve the body" (*Summa Contra* II, 82). Continuing along the same lines, Aquinas explicitly denies animals any share in immaterial existence for they have "no being whatever which is independent of the body" (*Summa Contra* II, 82). These texts show that Aquinas thought animals to have an entirely material nature.

On the other hand, Aquinas' analysis of sensation attests further to the continuity of all animals, both human and non-human. Commenting on Aquinas' account of the senses, Robert Brennan explains:

Despite the overflow of reason into man's sensitive channels of activity, there are no grounds for making human senses distinct in kind from the corresponding cognitive powers of the animal. The differences here, according to Aquinas, are not differences of nature or species, but of excellence or nobility (*Thomistic*, 146).⁷

One cannot help but compare this comment on Aquinas' views with the famous quote from Darwin, "The difference in mind between man and the higher animals, great as it is, certainly is one of degree and not of kind" (*The Descent*, chapter IV). I shall go on to argue that Aquinas' claim that all knowledge begins in sensation and his ensuing explanation of how it operates is compatible with the aspect of evolutionary thought that is concerned with non-human and human continuity.

Reflecting the continuity in the hierarchy of being, Aquinas also notes that there is continuity between the highest achievements of animal intelligence and the birth of primitive concepts in the human being.

Not only in the apprehensive powers but also in the appetitive there is something which belongs to the sensitive soul according to its own nature and something else according as it has some measure of participation in reason, coming into contact at its highest level of activity with reason at its lowest (*Disputed* 25, 2).

Aquinas tells us what this "something" is in his *Commentary on the Posterior Analytics*.

⁶ The interior senses, common to both human and non-human animals, are the central sense, the imagination, the memory and the estimative sense. (See *Summa Theologica* I, 78, 4).

⁷ The passage Fr. Brennan is referring to is *Summa Theologica* I, 78, 4 ad 5 where Aquinas says that the internal senses in the human being "are not distinct powers, but the same, yet more perfect than in other animals."

Having concluded that some animals have memory, Aquinas adds

From remembrance many times repeated in regard to the same item but in diverse singulars arises experience, because experience seems to be nothing else than to take something from many things retained in the memory. However, experience requires some reasoning about the particulars, in that one is compared to another; and this is peculiar to reason (*Commentary Posterior*, Lect. 20).

It is in reasoning about particulars that animal intelligence and human intelligence overlap. However, Aquinas adds that human beings possess a power above reasoning about particulars, namely, universal reason:

Now since animals are accustomed to pursue or avoid certain things as a result of many sensations and memory, for this reason they seem to share something of experience, even though it be slight. But above experience, which belongs to particular reason, men have as their chief power a universal reason (*Commentary Metaphysics I*, Lect. 1, note 15).

Since it is clear that Aquinas allows animals the ability to reason about particular things, while humans have the ability to reason about universal things, isn't this a further indication that the difference between humans and other animals is one of degree and not of kind?

For Aquinas, the ability to receive forms without matter is a basic criterion that distinguishes unknowing things, such as plants and inanimate bodies, from knowing beings. Aquinas says, "Intelligent beings are distinguished from non-intelligent beings in that the latter possess only their own form; whereas the

intelligent being is naturally adapted to have also the form of some other thing" (*Summa Theologica I*, 14,1).⁸ It is the capacity for sensation that distinguishes a material being from a spiritual one. Contrasting the two types of being, Aquinas says, "A sense receives form without matter, the form having, in the sense, a different mode of being from that which it has in the object sensed. In the latter it has a material mode of being, but in the sense a cognitional and spiritual mode" (*ibid.*, Lect. 24, n. 553). A spiritual being is distinct from a material being because of its capacity to have the form of another. The capacity to have the form of another entails an *absence of limitation with respect to form*. Only that which is itself immaterial, to some extent, can receive the forms of other things. Immateriality is the quality of a thing that allows it to have the form of another in addition to its own. A subject must be immaterial if a form is to be received without being limited to and determined by the subject. Insofar as the forms of the known objects are limited to the matter of these objects, they remain individual and are incapable of being united to any other thing. Not only does matter limit form but matter is undifferentiated except by the form with which it is united. Form makes a thing to be what it is. If union with a form makes something become what it is materially, union with dematerialized forms makes the knower become other things immaterially. To be united to other things the forms must be dematerialized. Consequently, freedom from matter, or im-

⁸ *Cognoscentia a non cognoscentibus in hoc distinguuntur, quia non cognoscentia nihil habent nisi formam suam tantum; sed cognoscens natum est habere formam etiam rei alterius.*

materiality, is the essential condition of knowledge.

An animal receives forms in a partly material and partly immaterial way.⁹ For example, a cat knows certain features of his human companion, such as her shape, smell and hair color. The cat abstracts from matter a shape he apprehends but does not apprehend this shape in a way that is completely independent from material conditions. The process of abstraction is incomplete since the cat only knows this shape as it characterizes a particular object and not in general. Nevertheless, the cat could not know his human companion at all if he had to receive her entire physical being into himself. It is necessary, therefore, that the cat be to some extent immaterial, like the shape that he abstracts (*Disputed*, 22, 3).

The kind of abstraction an animal can attain may be called a particular universal concept. It is formed inductively¹⁰ by the cooperation of the estimative sense with the memory and the external senses. This act of thought is at once sensitive, because it grasps the material individual, and intellectual, because it grasps the nature of this individual. Aquinas says, "For sense knows Callias not only so far forth as he is Callias, but also as he is this man" (*Commentary posterior* II, 20). The nature is grasped as a concept and is grasped in the individual — "Callias as man." Explaining this expanded role of sensing, Aquinas notes "sensing is properly and per se of the singular, but there is some how even in sensing of the universal" (*Commentary Poste-*

rior II, 20). In the following passage Aquinas provides the foundation for distinguishing between a particular universal concept and an abstract universal concept:

If many singulars are taken which are without differences as to some one item existing in them, that one item according to which they are not different, once it is received in the mind, is the first universal, no matter what it may be, i.e., whether it pertains to the essence of the singulars or not (*Commentary Posterior* II, 20).¹¹

The process of forming an abstract concept presupposes the processes of forming the particular concept. Discussing the necessity of sense to know the nature of an individual, Aquinas argues

If it were in the very nature of things that sense could apprehend only that which pertains to particularity, and along with this could in no wise apprehend the nature in the particular, it would not be possible for universal knowledge to be caused in us from sense-apprehension (*Comentary Posterior* II, 20).

After grasping "Socrates as white" and Plato as white," the intellect frees the nature "white" from the individual conditions in which it was originally presented, and makes it an abstract universal concept.

That a particular universal concept can be attained by animals can be shown by the following example. Stating that dolphins "have

⁹ See Paul Hoffman's excellent article "St. Thomas Aquinas on the Halfway State of Sensible Being."

¹⁰ Aquinas explains that it is "by way of induction that the sense introduces the universal into the mind" (*Commentary Posterior*, II, 20).

¹¹ "Si enim accipiantur multa singularia, quae sunt indifferentia quantum ad aliquid unum in eis existens, illud unum secundum quod non differunt, in anima acceptum, est primum universale, quidquid sit illud, sive scilicet pertineat ad essentiam singularium, sive non."

been shown to be capable of relatively abstract thinking," an animal researcher tells of an experiment in which dolphins were trained to perform a new trick for a reward of fish. The researcher relates, "After several days of training they exhibited ever-different types of leaps and contortions, apparently 'realizing' that the forms of behavior they had displayed previously would not be rewarded" (Wursig, "Dolphins", 86). The process by which the dolphins come to regard all new tricks as meriting rewards of fish is the way in which human conceptual knowledge originates. Besides perceiving individual rewards, the dolphins must be able to abstract from individual cases, form a concrete universal concept and apply this concept to the particular situation. Lacking the mechanism for speech, the dolphins reached a conclusion similar to the proposition "All new tricks issue in rewards." In another case, Eleanor Gibson, reporting Kluver's studies with monkeys, recounts an incident in which they are trained to the larger of two rectangles. When the size of the rectangles is modified, the monkeys persist in responding to the larger of the two—whatever their absolute size happens to be. Kluver concluded that they "abstracted" the LARGER THAN relation.¹²

The ability to form a particular universal concept indicates an immaterial activity characteristic of the higher animals. Humans differ from other animals because they can form an abstract concept. But it is not the ability to form an abstract concept alone that leads Aquinas to claim that humans have an immaterial intellect. Aquinas argues that the human intellect is

immaterial based on its potential to know "all corporeal things" (*Summa Theologica* I, 75,2). To know particular things the knower "cannot have any of them in its own nature, because that which was in it would impede the knowledge of anything else" (*Summa Theologica* I, 75, 2). A corporeal organ cannot know all corporeal things because the nature of the organ would preclude its knowing them. If the intellect were corporeal, it would not know all other bodies, since all bodies have their own determinate nature. Therefore, the intellect's capacity to know all sensible things shows its immateriality.

But Aquinas also maintains that the interior senses have the capacity to know all corporeal things (*Summa Theologica* I, 78, 4). Referring to the range of objects of the sensitive soul, Aquinas says that it has "a more universal object—namely, every sensible body, not only the body to which the soul is united" (*Summa Theologica* I, 78, 1). But if the sensitive soul can know every sensible body, then there must be something in this soul which transcends the merely corporeal and particular for otherwise it could not know all other sensible bodies. And if the ability to know all sensible bodies is proof that the human soul is immaterial, a similar ability in the non-human animal should indicate that his soul is similarly immaterial in nature.

Moreover, the estimative sense, operating much like the intellect, is able to apprehend in the object perceived by the external senses certain characteristics that escape these senses. Animals need to perceive things as advantageous or disadvantageous, and this is a capacity beyond that of the exterior senses. Discussing the estimative sense Aquinas says, "Animals, therefore, need to perceive such intentions which

¹²This case was cited by Fred Dretske in his article "Conscious Experience." He is referring to Gibson's *Principles of Perceptual Learning and Development* (New York: Appleton Century & Crofts, 1969, 284).

the exterior sense does not perceive" (*Summa Theologica* I, 78, 4). The apprehension of intentions which are not received through the exterior senses points to a kind of thinking in an animal. Aquinas allows animals the ability to think certain kinds of thoughts "because of the need for action" (*Commentary Metaphysics* I, Lect. 1, n. 14).¹³ If animals were not able to think in any way, it would be difficult to see how they could learn anything or plan their own actions with some knowledge of what will result.

Just as the knowing abilities of the human being are grounded in his soul, so do the cognitive powers of other animals originate in their souls. In the ability to receive a form without matter, in the construction of a particular concept, and in being able to know all sensible things, an animal manifests immaterial activity. And, as Aquinas repeatedly asserts, a thing's mode of operation is proportionate to its mode of existence. Since the nature of each thing is revealed by its activity, the souls of animals are not completely material, but, at least to some extent, spiritual. If the souls of non-human animals resemble those of human animals in their mode of activity, they must resemble them also in their mode of existence. Just as human intelligence indicates an underlying spiritual existence, so is animal intelligence a sign of an underlying spiritual dimension.

This does not mean that the soul of human and non-human animals are the same. Human intellectual activity is more abstract, implying greater immateriality, than non-human cog-

itive activity. Applying the principle *operatio sequitur esse*, it follows that the human soul has a greater share in immateriality than the animal soul. But it remains the case that the higher animals manifest activities suggestive of immaterial being.

The extent to which the animal soul is immaterial parallels the continuity between the animal and the human in Aquinas' embryology and hierarchy of being. The evolutionary tenet that non-human and human animals are continuous poses no threat to Aquinas' anthropology if animal souls, not wholly depending on matter, are not entirely material. Without entailing a materialist conception of human beings, the evolution of the human being from lower life forms is compatible with the anthropology of Aquinas. Aquinas' teachings show us that evolution and an anthropology involving immateriality can be reconciled.

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¹³ Aquinas says, "But by the fact that he [Aristotle] establishes the truth about the cognition of animals with reference to the management of life, we are given to understand that knowing belongs to these animals [. . .] because of the need for action."

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