The Justice of Bees and Absurdity of Apes

An appreciation of Edward Topsell

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To a modern reader, Edward Topsell's *The history of four-footed beasts and serpents and insects* might seem more like a work of human history or culture than science. He includes such peculiarities as a fable illustrating the ape's fear of snails, and a traditional Turkish recipe consisting of an egg stuffed inside a goose, inside a sow, inside an ox. This reader might conclude that Topsell is merely a bad natural historian, since he seems so confused about what belongs to the field and what does not, but that would be a mistake. For if one adopts an alternate view of nature, with its own method of natural history, Topsell's work begins to make more sense. William Ashworth calls this alternate framework the "emblematic worldview,"[1] which, simply, sees animals as symbols of spiritual ideas. In his two articles on this subject, Ashworth focuses mainly on Conrad Gesner, who published *Historiae Animalium* in 1551.[2] However, this essay will focus on Topsell, whose 1607 work is mainly an English translation of Gesner, with a few additions by the former. The emblematic method of natural history is wholly different than the scientific method of natural history (which is understood in this essay as induction based on empirical observation). The emblematic method should not be understood as an underdeveloped science, but rather a complete and separate system. The emblematic method of natural history is not scientific.

Peter Harrison's book *The Bible, Protestantism, and the rise of natural science* deals with the emblematic worldview and its connection to Christianity. Topsell was a cleric, and his natural history was deeply tied to his faith, as he believed that God had imparted these spiritual meanings onto animals so that humans could learn how to live more ethically. Spiritual growth was the main purpose of natural history for Topsell. He covered a range of topics in *Four-footed beasts*, among them physiology, etymology, and myths. These topics all belong to the emblematic method of natural history, if not always the scientific. As a Renaissance thinker, Topsell often drew on the classical authors, and unlike a scientist, he valued reading over observation. His natural history is close to the humanities and history, and like those disciplines he treats 'truth' in a different way than science. The emblematic worldview was challenged by the natural historian and antiquarian Thomas Browne along with Francis Bacon, though both ground their criticisms on scientific presuppositions. In the end their scientific worldview has triumphed. However, in his comparison of the two views, Gordon Miller suggests the concept of an emblematic nature still has value.

In the emblematic worldview, animals are read as material symbols of intangible ideas. Gordon Miller explains that just as a painting is more than merely oil on canvas, and a eucharistic

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[1] William B. Ashworth, "Natural history and the emblematic world view," in *Reappraisals of the Scientific Revolution*, ed. David C. Lindberg et al. (New York: Cambridge University Press, 1990), 305.

[2] Ibid.

wafer more than bread, in the same way, "animals were seen as more than just material entities."[3] Thus natural history for Topsell was not about simply describing an animal's physical characteristics, for that would be missing the greater part of the animal's significance. As an emblematic thinker he would have believed that "every kind of thing in the cosmos has myriad hidden meanings and that knowledge consists of an attempt to comprehend as many of these as possible."[4] Animals were symbols which stood for higher truths, in a more immediate way than language. Ashworth writes, "[T]hey were symbols, but even more, they were Platonic ideas, whose meaning the mind could immediately perceive. Animals were living characters in the language of the Creator..."[5] These 'myriad hidden meanings' are not ascribed by humans, but are inherent in animals themselves. In the emblematic worldview, knowledge of a more abstract divine truth could be communicated directly through animals.

For these meanings to be inherent, the symbolic worldview presupposes the existence of a superior spiritual realm, which for the Christian world meant God. Christianity supported the emblematic practice of looking beyond the natural and material world towards the intangible divine. Peter Harrison describes the long-standing Christian belief that God had imbued the material world with meaning, with the express purpose of guiding humans towards knowledge of the divine. In the Bible God commands Job to look towards animals: "But ask now the beasts and they will teach thee; and the fowls of the air, and they shall tell thee. Or speak to the earth, and it shall teach thee, and the fishes of the sea shall declare unto thee (12.7f.)."[6] Thus we know that God desires humans to study the natural world, but to appreciate its true meaning and gain real knowledge one has to look beyond outer appearances, to the inner symbolic significance. In other words, one must look at nature emblematically. Through an emblematic view one can learn about the Incarnation, Death, and Resurrection of Christ in how a lion covers his tracks (Christ hiding his divinity), and sleeps with his eyes open (Christ's body dies yet he does not), and in how a young cub is woken by its father's roar (as God revived Christ).[7] The empirical truth of these behaviours was not as important as the spiritual meaning. The emblematic worldview, which takes animals as signs left by God to guide humans towards the divine, belongs to the Christian tradition of valuing the spirit over the body.

Through the emblematic worldview Topsell found moral truths hidden in the natural world. Revealing the moral lessons found in animals was one of the main goals of Topsell's natural history. By studying animals, one could learn the correct way to behave as a human. Thus not all of the symbolic meanings held by an animal were complex biblical allegories like the examples noted above, but simple moral messages. Topsell writes that Scripture names three uses for animals: sacrifice, eating, and "reproof and instruction."[8] He says that one should be persuaded not to commit murder by the behaviour of animals, which (he claims) do not kill their own kind. Topsell

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[3] Gordon L. Miller, "The Fowls of Heaven and the Fate of the Earth: Assessing the Early Modern Revolution in Natural History," *Worldviews: Global Religions, Culture & Ecology* 9.1 (2005): 6.

[4] Ashworth, "Natural history and the emblematic world view", 312.

[5] Ibid., 308.

[6] Peter Harrison, *The Bible, Protestantism, and the rise of natural science* (Cambridge: Cambridge University Press, 1998), 22.

[7] L.M. van der Meer and R.J. Oosterhoff, "God, Scripture, and the rise of modern science," in *Nature and Scripture in the Abrahamic Religions: 1700-Present.* Vol.1, ed. Jitse M. van de Meer et al. (Boston: Brill, 2008), 78.

[8] Topsell, Edward, preface to *The history of four-footed beasts and serpents and insects. With a new introduction by Willy Ley.* Vol.1. (New York: Da Capo Press, 1967).

continues, "Who is so unnatural and unthankful to his Parents, but by reading how the young Storkes and Wood-peckers do in their parents old age feed and nourish them, do...amend his folly, and be more natural?"[9] This was not a matter of 'anthropomorphizing' for Topsell, for God had intended animals to serve as examples for humans to follow. On this purpose of animals, Topsell writes, "[S]urely it was so that man might gain out of them much Divine knowledge, such as imprinted in them by nature, as a type or spark of that great wisdom whereby they were created..."[10] Seeing 'justice' in the behaviour of a bee, that gathers pollen from a flower without harming it,[11] is not a projection, therefore, but a recognition of an innate characteristic put there by God. Topsell did not think it necessary to try to adopt an 'objective' point of view, as later natural historians would. Objectivity and separating oneself from nature is a practice of science. In the emblematic worldview, the correct way of looking at nature is not objectively, but symbolically and morally.

Having discussed what the emblematic worldview is and given some general ideas about the purpose and method of Topsell's natural history, I now want to look at his book *The history of four-footed beasts* more closely and show how it is not a scientific work, particularly in Topsell's treatment of physiology, his inclusion of epithets and myth, and his attitude towards empirical evidence and 'truth.' Topsell's emblematic worldview is evident in how he writes about the animals' physical characteristics. Though a physiological description is also a practice of science, Topsell's descriptions contain a certain amount of anthropomorphizing, which science seeks to avoid. Topsell's description of the ape is based on the differences and similarities between it and a human.[12] This is consistent with the emblematic belief in the hidden connections between all living things, especially between the human and animal world, and it is this belief that underlies Topsell's anthropomorphic descriptions. He describes how the bear's nature is to avoid cold, "and therefore in the Winter time do they hide themselves, choosing rather to suffer famine than cold."[13] He speculates that this long hibernation in the cold without any food is responsible for the bear's 'phlegmatic constitution,' which is why the bear is often angry.[14] It is characteristic of Topsell's method of natural history to describe animals as if they are somehow rational, so that they 'choose' to do this or that behaviour and are also capable of feeling emotion. This belongs to the emblematic practice of anthropomorphizing animals, which is valid because it is how God intended animals to be seen, as was discussed earlier. Thus even though a scientist would in this case approve of the inclusion of a physiological description, Topsell's version of a physiological description is not a scientific one.

Topsell devotes a section to explaining the various names each animal can have. These names and epithets hold relevant information about an animal's symbolic significance. The epithets of the ass—"burden-bearing, cart-drawing, vulgar...stubborn"—reveal the ass's relation to humans and human culture.[15] With their anthropomorphism they also impart a moral lesson, as discussed earlier, in this case advising one not to be vulgar and stubborn lest one be taken for an ass. Topsell explains the etymology of the ass's name. In Greece, he says, it is called *ono*s or *killos* because it can carry things, in other places *megamucos* because of its braying voice, and in other

[9] Topsell, Preface to *Four-footed beasts*.
[10] Ibid.
[11] Ibid.
[12] Ibid., 3.
[13] Ibid., 29.
[14] Ibid., 31.
[15] Ibid., 16.

places *cochutous* or *canthon*, from the flies which are bred from its dung.[16] Although these different names do not suggest any particularly lofty meaning, Topsell's inclusion of them reveals the importance of language for the emblematic worldview. Topsell is writing before Bacon, who would point out how human language is arbitrary.[17] In the symbolic worldview of Topsell, animals are like letters in a divine language, and so human language itself is also inherently meaningful. Just as the connection between the animal and the symbolic idea is inherent, because it was made by the Divine, so is the connection between the name and the animal, or between words and the things they stand for in general. In his preface, Topsell reminds the reader of how the naming of animals was Divine, "in respect that Adam out of the plenty of his own divine wisdom, gave them several appellations..."[18] The names of animals were handed down from Adam and they are significant for understanding its place within human culture; therefore they are part of the symbolic meaning of the animal.

Rather than learning through scientific empirical observation, as an emblematic natural historian Topsell draws much of his information from ancient writers. Among the authors he references are Pliny, Aristotle, Ovid, Herodotus, and Cicero, as well as certain uncited myths and fables. The focus on ancient texts was a practice central to the Renaissance, based on the belief that in the ancients one could find true knowledge. Harrison writes, "Thus the exploration of the physical world was carried out at one remove, as a scholarly investigation.... For the scholastics, nature existed primarily in books."[19] Topsell's method of natural history was one of reading, not observing, which is consistent with the emblematic worldview, for an animal's symbolic meaning is more likely to be discovered through books. Topsell relates the story of how when Dido was searching for a place to found Carthage, she did not build in the place where an ox's head was found, because the ox signifies labour and misery, but where a horse's head was found, for horses stand for "honour, magnanimity and pleasure."[20] Myths were thus a useful way of teaching the reader about the symbolic meaning of animals, for they often are meant to impart an allegorical or spiritual truth, rather than an empirical one. In his entry on the ape, Topsell tells the story of Athenaeus the Philosopher, who while attending a banquet did not laugh at any of the jesters, but only the ape, for "men do but faign merriments, whereas Apes are naturally made for that purpose."[21] Merriment and absurdity belong naturally to the ape, being a flawed representation of the human form. Topsell uses these stories in the way of empirical evidence, to support his overarching claims about the animal's symbolic meaning. In the symbolic worldview, stories and myths are valid means of evidence because of the greater emphasis on human language and reason over objective observation. Moreover, the symbolic meaning which is the central purpose of Topsell's work cannot be conveyed through simple empirical description, so Topsell's symbolic natural history requires stories and myths.

Topsell's emblematic natural history is closer to history than science in terms of encompassing historical content in the form of the ancient commentaries, but also in terms of methodology. Most important is the difference in between science and history's relationship to 'truth.' At the time of *Four-footed beasts*, natural history was classified under the category of

[16] Topsell, *Four-footed beasts*, 16.
[17] Ashworth, "Natural history and the emblematic world view", 323.
[18] Topsell, preface to *Four-footed beasts.*
[19] Harrison, *The Bible*, 65.
[20] Topsell, *Four-footed beasts*, 66.
[21] Ibid., 2.

history, but they came to diverge later in the seventeenth century.[22] Barbara Shapiro argues that the division occurred when science began to employ empirical observation and induction, which led to the idea that it had a greater claim to 'truth' than history.[23] However, Topsell employed the methodology of history—reading and subjective observation—along with including historical content while still claiming that what he wrote was true. He was able to do this because in the symbolic worldview, 'truth' is not based on empirical proof. While describing the dragon, Topsell says, "[T]he foolish world is apt to believe no more than they see."[24] For Topsell, truth could be based on sources other than empirical observation. For example, Topsell claimed that the unicorn must exist because it is mentioned in Scripture, and though it seems fantastic, one will accept it if one truly believes in the miraculous power of God.[25] Similarly, the Sphinx is included in Topsell's natural history, though he admits he does not believe in its bodily existence, because it has a symbolic meaning. Topsell believed that humans acquired knowledge by two powers: the light of reason and the light of faith. Thus Topsell says one must look "with the eyes of grace and illumination."[26] This light of faith was a matter of illumination, of sudden inspiration bestowed by God.[27] The symbolic idea of an animal, Topsell's true aim, was more clearly lit by the light of faith. In the emblematic tradition of natural history, truth is not determined through empirical observation.

The shift away from the emblematic worldview is evident in the respective works of Thomas Browne and Francis Bacon. In 1646 Browne published *Pseudodoxia Epidemica* in which he systematically disproved a number of beliefs pertaining to natural history. To do so, he employed empirical observation and experimentation. For example, he tested the myth that a dead kingfisher hung from its feet would always point north, and found it to be false.[28] He also denied the existence of animals such as unicorns, explaining that people who have claimed to see unicorns over the ages have in reality merely sighted rhinos, oryxes, or narwhals.[29] Ashworth suggests that Browne was influenced by his interest in antiquarian research, which is based on empirical observation and induction. Because manmade antiquities were placed alongside natural objects such as unicorn horns and fossils, Browne began to look at the natural world in the same way.[30] However, in "The Doctor Quarrels with Some Pictures," Kevin Killeen argues that Browne was perhaps intentionally misinterpreting the emblemist tradition by judging it by empirical measures, which were not applicable. Killeen's argument is based on that of Alexander Ross, a contemporary of Browne who criticized Browne's work. Ross has typically been judged by modern scholars as old-fashioned and backwards-thinking compared to Browne. But Killeen argues that Ross was in

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[22] Laurent Pinon, "Conrad Gessner and the historical depth of Renaissance natural history," in *Historia: Empiricism and Erudition in Early Modern Europe*, ed. Gianna Pomata and Nancy Siraisi (Cambridge: MIT Press, 2005), 242.

[23] Shapiro, Barbara, "History and Natural History in Sixteenth and Seventeenth Century England," in *English Scientific Virtuosi in the 16th and 17th Centuries* (Los Angeles: William Andrews Clark Memorial Library, 1979), 37.

[24] Harrison, "*The Bible",* 89.

[25] Ibid., 76.

[26] Miller, "The Fowls of Heaven", 11.

[27] Ibid., 11.

[28] R. Robbins, ed., *Sir Thomas Browne's Pseudodoxia epidemica* (New York: Oxford University Press, 1981), 186.

[29] Ibid., 237.

[30] Ashworth, "Natural history and the emblematic world view", 318.

fact criticizing Browne of being "a bad exegete, an unsubtle reader of the literature on animals and of failing to distinguish between the literal and the figurative in the natural historians he reads."[31] According to Ross, Browne's subjection of symbolic truths such as the unicorn to empirical analysis was a misunderstanding of the method and purpose of emblematic natural history, the main way natural history had been practiced up until that point. Browne was not 'disproving' the emblematic worldview, but merely applying scientific thinking to a non-scientific tradition.

Browne's work led to a separation of 'words' from 'things,' an innovation incompatible with the emblematic worldview. Although he may have been misinterpreting the emblematic view, Browne's work did raise disturbing ideas for emblematic thinkers. It implied, writes Harrison, that "the things of nature bore no universal, God-given significance, but instead had been arbitrarily allocated meanings by human agents."[32] This is very similar to what Francis Bacon wrote in 1620, before Browne and just thirteen years after Topsell. A proponent of a science based on empirical observation and experimentation, Bacon was also one of the first to separate natural history from the humanities.[33] Bacon described how the human mind was naturally inclined to leap towards grand abstract conclusions (such as the symbolic meanings of animals), but that these conclusions were likely to be false when not based on a process of induction.[34] Human observation can be biased in many ways, he said, including through ideas inherited from the ancients,[35] and through the inability of words to properly describe things.[36] For Bacon, the emblematic worldview was all a product of the human mind, which, he said, has a tendency to mix "its own nature with the nature of things."[37] Modern science is based on Bacon's ideas of the separation of humans from nature and of words from things, ideas that do not belong to the emblematic worldview.

The scientific worldview affords one a greater degree of truthfulness and practical effectiveness than the emblematic worldview. However, there are valuable ideas which were lost in the shift away from emblemism. Under the emblematic worldview, nature was seen more holistically, for Topsell believed that one could not study natural beings in isolation when their meaning lies in their connections to the rest of nature. Nature also had an inner spiritual worth, which afforded humans a deeper connection to it. According to Gordon Miller, a completely objective and empirical worldview results in "the loss of a sense of depth in nature—and thus the loss of an inherent link to human inner life."[38] This "disenchantment" of nature has had harmful psychological effects.[39] Miller argues that bringing back a way of symbolic thinking could help reaffirm people's connection to nature and aid the modern environmental movement.[40] He quotes Henry David Thoreau, who says the early natural historians "sympathize with the animals they describe."[41] Thoreau points to a particular passage of Topsell on the antelope. He writes,

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[31] Kevin Killeen, "'The Doctor Quarrels with Some Pictures': Exegesis and Animals in Thomas Browne's 'Pseudodoxia Epidemica'," *Early Science and Medicine*, BRILL 12. 1 (2007): 14.
[32] Harrison, *The Bible*, 91.
[33] G. Wylie Sypher, "Similarities Between the Scientific and the Historical Revolutions at the End of the Renaissance," *Journal of the History of Ideas*, University of Pennsylvania Press 26.3 (1965): 365.
[34] Francis Bacon, *Selected Philosophical Works*, ed. Rose-Mary Sargent (Indianapolis: Hackett, 1999), 92.
[35] Ibid., 103.
[36] Ibid., 102.
[37] Sypher, "Similarities", 363.
[38] Miller, "The Fowls of Heaven", 6.
[39] Ibid., 9.
[40] Ibid., 19.
[41] Ibid., 16.

"[Topsell] says of the antelopes that 'they are bred in India and Syria, near the river Euphrates,' and then...he adds, 'and delight much to drink of the cold water thereof.' The beasts which most modern naturalists describe do not delight in anything, and their water is neither hot nor cold."[42] Thoreau thought that Topsell captured the 'vital force' of the animal, which contemporary scientists miss. Miller suggests that the emblematic worldview as compared to the scientific stands for the humanities versus the sciences, contemplation versus action, the spiritual versus the material, and heart versus head.[43] There is value in trying to accommodate both sides of these dualities. An awareness of nature's inner vitality affords one a deeper spiritual connection to the entirety of creation, but this connection is not offered by a scientific worldview, only by the emblematic.

The emblematic method of natural history has a different value and set of purposes than the scientific. It is based on symbolic significance and its purpose is to teach moral truths through contemplation of God's divine work. The emblematic method is not scientific. As an emblematic natural historian Topsell saw etymology and myth, along with faith and the writings of the ancients, as valuable sources of natural history, for all of these contain clues to an animal's deeper meaning. The emblematic way of study holds more 'truth' than the objective empirical study, because the spiritual meaning, written into nature by God, is what is most true. This faith in God allows one to anthropomorphize nature to a certain extent, to see human features reflected back at one. Francis Bacon succeeded in convincing us that language is arbitrary, that there is no inherent connection between 'words' and 'things', and that nature is a separate, alien entity to the human. However the emblematic view of nature still stands as a complete and coherent, if neglected, system of thought. The emblematic worldview allowed a thinker like Topsell to feel at one with all of creation and to hold a deeper spiritual understanding of nature. By reading Topsell and looking at nature through his eyes, one can enjoy a brief glimpse into a completely different, and perhaps more beautiful, world.

[42] Miller, "The Fowls of Heaven", 16.
[43] Ibid., 14.

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