

CHAPTER 55

RELATIONS
BETWEEN *HOMO*
SAPIENS AND
OTHER ANIMALS:
SCIENTIFIC AND
RELIGIOUS
ARGUMENTS

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Science and theology artfully negotiate the relationship between *Homo sapiens* and other animals, speaking sometimes about the continuity of humans with other animals and other times about the distinguishing characteristics of humans and animals. At stake for both science and religion is the compelling question, What makes humanity unique among living beings? The problematic issues for both fields are discernment and expression of what constitutes similarity and difference.

The contention here is that science and theology in dialogue recommend a nuanced understanding of both similarity and difference in the relationship of *Homo sapiens* to other animals. The essay begins by identifying anthropomorphism, the projection of human traits on to animals, as a pivotal issue around which

scientists debate human uniqueness and the relationship of humans to other animals. Similarly the essay reviews the historical anthropocentric focus of Christian theology, which Rosemary Radford Ruether describes as humanocentrism, 'making humans the norm and crown of creation in a way that diminishes the other beings in the community of creation' (1983: 20). Contemporary animal science, however, poses some challenges for anthropomorphism and anthropocentrism, and ethologist Marc Bekoff informs the essay with observations about how the best practices in science undertake comparison of humans and animals and understand the relationship of *Homo sapiens* and other animals. Finally, the essay concludes with concrete proposals to shift the anthropocentric focus of theology by adopting updated science to inform Christian thought and emphasizing some existing theological options.

SIMILARITY AND DIFFERENCE: ANTHROPOMORPHISM AND SCIENCE

Science cautions against drawing too close an analogy between *Homo sapiens* and other animals and follows a methodological principle that resists anthropomorphism. The prohibition of anthropomorphism guards against inappropriate projection of human qualities, emotions, and motivations on to non-human animals. Sociobiology best exemplifies resistance to anthropomorphism by rather strictly attributing animal behaviour to genetic predispositions and survival-based actions, which favour reproduction and well-being of species.

Some scientists, however, argue for carefully qualified forms of anthropomorphism when the method enhances the process of learning and discovery. For example, Gordon Burghardt (1985: 917) argues for critical anthropomorphism, which depends upon diverse forms of information ranging from descriptive anecdote and imaginative identification with the animal to prior experimentation and observation. The claims of critical anthropomorphism are, of course, subject to the rigours of science, which entail testable hypotheses, reliable predictions, and replicable results (Bekoff 2002: 49; de Waal 1996: 64).

Other scientists propose appropriate anthropomorphism moderated by an animal-centred rather than an anthropocentric orientation towards observation and description of animal behaviour. Marc Bekoff (2002: 48) advocates biocentric anthropomorphism, which makes other animal emotions and behaviours more accessible to human observation and scientific interpretation. Bekoff's biocentric anthropomorphism does not permit scientists and other humans simply to collapse or assign identity to human and other animal behaviour and feelings, but our modes of expression, understanding, and language are human and, therefore, must depend on analogy between *Homo sapiens* and other animals. Biocentric anthropomorphism

does require that the observed animals and the interpretations of their behaviour and emotions remain focused on the animals' points of view.

Frans de Waal similarly advocates a fresh examination of anthropomorphism. In the book *Good Natured: The Origins of Right and Wrong in Humans and Other Animals*, de Waal observes how difficult anthropomorphism is to avoid even for scientists most dedicated to preserving anthropomorphism as a methodological idea. De Waal observes that sociobiologists appear comfortable attributing negative motivations and behaviours to non-human animals, and he writes that 'current scientific literature routinely depicts animals as "suckers," "grudgers," and "cheaters" who act "spitefully," "greedily," and "murderously." There is really nothing lovable about them!' (1996: 18). If kinder emotions and behaviours appear among animals, de Waal notes that some scientists use quotation marks to qualify altruistic behaviours or qualify the behaviours with negative terms, such as *nepotism* rather than 'love for kin' to note positive relations with family members (1996: 18). The same scientists, who betray their own anthropomorphism by attributing negative human characteristics to other animals, criticize de Waal and other scientists for ascribing reconciliation or friendship to non-human animals. De Waal wants us to see that non-human animals capable of negatively valued behaviours, emotions, and motivations are likewise capable of positive actions and motivations, and obscuring similarities between human and other animal behaviour results from manipulation of language and values (1996: 19). Nevertheless, de Waal is clear that science must wrestle with human language, the only common expression at our disposal, because we use human language precisely to describe behaviours in other animals that are not identical with human behaviours and motivations, even though the language reminds us of human interactions, emotions, and intentions (1996: 63).

De Waal's extensive discussion of anthropomorphism is developed in *The Ape and the Sushi Master: Cultural Reflections of a Primatologist*, where he posits the problem of anthropo-denial and proposes the method of animal-centric anthropocentrism. Anthropo-denial is a facile and rigid rejection of anthropomorphism, which overlooks the possibility that some appropriate analogies between *Homo sapiens* and other animals might actually generate reliable scientific knowledge (2001: 69). Both anthropomorphism and anthropo-denial entail risk, which de Waal expresses by addressing why scientists cannot quite rid themselves of anthropomorphism: 'Isn't it partly because, even though anthropomorphism carries the risk that we overestimate animal mental complexity, we are not entirely comfortable with the opposite either, which is to deliberately create a gap between ourselves and other animals?' (2001: 68). Make no mistake; de Waal is not an opponent of unsupportable, simplistic, or naïve anthropomorphism, which results from 'insufficient information or wishful thinking' (2001: 68). The issue with anthropo-denial and naïve anthropomorphism is that our thinking is self-referential or anthropocentric, serving human purposes and biases and reflecting little knowledge of the other animals themselves. In light of tendencies towards anthropocentric anthropomorphism, de Waal proposes a more scientifically credible form of anthropomorphism, which he labels animal-centric anthropomorphism. Animal-centric anthropomorphism works within accepted

information about animals and requires the scientist to adopt the observed animal's point of view (2001: 77). Properly conceived, anthropomorphism supports scientific method and experimentation by permitting human identification with or shared characteristics with animals to generate hypotheses and predictions subject to testing (2001: 78).

Before leaving discussion of how the scientific community understands the relationship between *Homo sapiens* and other animals, genetic and evolutionary bases for analogy should be mentioned alongside the issues of anthropomorphism in terms of behaviour, emotions, and motivations. While genetic and evolutionary connections account for expected similarities in behaviour, emotions, and motivations, genetic and evolutionary similarities between humans and other animals also form the basis for research and medical achievement. Animal testing and experimentation are common techniques for establishing the safety and effectiveness of commercial products, therapeutic drugs, and medical procedures. In addition, the physiological and functional analogy of humans and other animals supports using animals as effective teaching models for students and research models for disease and treatment.

Understanding other animals as analogous to humans for the sake of education and experimentation invites contention in the scientific community similar to the debates about anthropomorphism. Jane Goodall, for example, asserts that research using animals must be held accountable to knowing the whole animal subject. To accept that chimpanzees are appropriate analogues of human physiology and immune systems appropriately grounds medical research (in such diseases as hepatitis and AIDS), but morally obligates researchers to concede similarities in brain and central nervous systems between humans and chimpanzees. Goodall is compelled to ask, 'If physiological similarities between chimpanzees and man [*sic*] mean that a disease pattern is likely to follow a similar course in our two species and be affected by similar preventative or curative agents, is it not logical to infer that similarities in the central nervous systems of chimpanzees and ourselves may have led to corresponding similarities in cognitive abilities?' (in Goodall and Berryman 1999: 214). Goodall contends that scientists must count the mental and physical costs of research exacted from chimpanzees. In addition to the point that similarity suggests both promise and concern about animal experimentation, Roger Fouts illustrates the point that similarity may not guarantee successful results or applications to human curative therapies. Fouts reports that AIDS research found human studies much more effective than chimpanzee models for understanding the disease and discovering genetic bases for AIDS resistance. In AIDS research, the fundamental differences in human and chimpanzee immune systems prevented animal research from generating useful information (in Fouts and Mills 1997: 362).

Negotiating similarity and difference in the sciences entails discernment about appropriate and demonstrable shared characteristics of humans and other animals. The quality of scientific investigation and theory depends on avoiding the extremes of naïve anthropomorphism and anthropo-denial. Generally the concern is not to decide whether humans and other animals are related, but how humans and other animals are related.

SIMILARITY AND DIFFERENCE: ANTHROPOCENTRISM IN CHRISTIAN THEOLOGY

The conventions of Western science are situated in a world-view and history shaped and inhabited by Christian thought. Because the scope of the essay prevents explorations of multiple religious traditions, Christian theology offers a reasonable example of the ambivalence in religious traditions on the question of the relatedness of *Homo sapiens* and other animals. Christian theology suggests grounds for affirming the relationship of humans and other animals at the same time as anthropocentric Christian doctrines preserve human uniqueness. Certainly, Stephen Jay Gould's *Ever since Darwin* asserts that 'we are so tied to our philosophical and religious heritage that we still seek a criterion for strict division between our abilities and those of chimpanzees' (1977: 51).

Supported by companion philosophical influences, Christian thought, not surprisingly, established a history exploring the natures and relationship of God and humans, so that Christian anthropocentrism is a matter of neglect of other animals as well as a product of human arrogance intentionally guarding human superiority over and difference from other animals. John Cobb and Charles Birch's *The Liberation of Life* characterizes the dominant Christian model of humans, other animals, and nature by highlighting a few central Christian themes. First, Christian doctrine entails recognition that humans are part of a larger creation, including other animals and living creatures, but emphasizes the distinction of humans as creatures made in the image of God. Second, as a consequence of defining humans in relation to the soul and a Fall that distorted the image of God, Christian thought tends to envision a destiny for humans ultimately different from the destiny of other animals. Third, Christian theology, easily hospitable to Cartesian dualism and a mechanistic world-view, further separates humans from other animals and nature—sometimes characterizing nature as a mere stage for the human historical drama (Birch and Cobb 1981: 99).

Moving away from biblical theological statements that animals are valued by God, founders of Christian faith addressed the riddle of the image of God, generally arguing from a strict demarcation between humans and other animals. Engaging a philosophical debate of his time, St Augustine, for example, supported anthropocentrism and argued for human superiority over other animals: 'Among the many ways in which it can be shown that human beings surpass animals in reason, this is obvious to all: beasts [*beluae*] can be tamed by human beings, but human beings cannot be tamed by beasts' (Augustine, n.d.; Clark 1991: 68; her translation from *83 Questions on Various Topics*, Corpus Christianorum, ser. Latina 44A: 20). Augustine further argued that the lack of reason in animals absolved humans of any responsibility with regard to animal suffering (Birch and Cobb 1991: 147).

One feature of Augustine's reasoning entailed defining the *imago Dei* based on human reason as a distinction from other animals. Starting with the Genesis text, Augustine affirmed that humans are created in the image of God and are instructed to have dominion over animals, and then concluded that the image of God must reside in a part of human nature not shared with animals (Augustine 1982: 3, 20, 30). Because humans share embodiment with other animals, and especially because God is not embodied, the image of God cannot be found in the body and must reside in the reason or rational soul. In *The Literal Meaning of Genesis*, Augustine wrote: 'If, therefore, He Himself formed man from the earth and the beasts from the earth, what is the basis of man's greater dignity except that he was created in the image of God? This was not, however, in his body but in his intellect . . . And yet he does have in his body also a characteristic that is a sign of this dignity in so far as he has been made to stand erect' (1982: 6, 12, 22). Augustine concluded that the pre-eminence of humans in creation is due to human endowment with the *imago Dei* or rational soul, which surpasses the intellect of other animals.

St Augustine, as Gillian Clark observes, did not discuss animals in and of themselves, but mentioned animals, as his arguments required, to establish larger points about human nature, morality, and spirituality or about God. Clark characterizes the shape of Augustine's thought with regard to animals: 'So the implications of the rule of reason are, according to Augustine, that animals, animal behaviour, and animal suffering are all for the physical or spiritual benefit of human beings; that God's providence is concerned (within limits) for the physical survival of animals, but animals are not in spiritual contact with God, lack knowledge, and cannot experience happiness' (1991: 78). The shape of Augustine's arguments and theology clearly exemplifies anthropocentrism in Christian thought, and significantly so because of Augustine's continued influence on Christian theology and ethics.

Thomas Aquinas's theology is equally formational in defining human relationships with other animals in the Christian tradition. St Thomas, like St Augustine, upheld a strict, anthropocentric distinction between humans and other animals. Thomas's world-view conceived creation as hierarchical, reflecting relative positions of creatures by virtue of spiritual, rational being or material being. The composite of spirit and body defines humans as closer participants in the divine life than animals, who are not in the image of God.

As Paul Badham notes, however, Thomas followed Aristotle in asserting that animals have souls. The word *animal* itself establishes, by definition, that other animals have souls because the Latin *anima* translates as 'soul'. But the souls of other animals must not be confused with human souls, because the human immortal, rational soul is distinct from the mortal, sentient soul of other animals (Badham 1991: 181). Badham represents the importance of Thomas's distinction between human and animal souls with the following quotation from the *Summa Theologiae*:

Aristotle established that understanding, alone among the acts of the soul, took place without a physical organ . . . So it is clear that the sense-soul has no proper activity of its own, but every one of its acts is of the body-soul compound. Which leaves us with the conclusion that since souls of brute animals have no activity which is intrinsically of soul alone, they do not

subsist... Hence though man is of the same generic type as other animals, he is a different species. (1970: 17)

The difference between humans and other creatures is upheld in the threefold understanding of the soul, which attributes a vegetative soul to creatures that grow and develop (such as plants), a sense soul, or sensitive soul, to creatures that move and feel (such as animals), and a rational soul to creatures that reason, which is reserved for humans. The rational soul of humans is immortal, surviving death because it is immaterial; the animating sense soul is mortal, dying with the animal because it is physical (Badham 1991: 182).

Dorothy Yamamoto interprets St Thomas's theological understanding of animals as contributing to the maintenance of social, moral, and political boundaries. At one level, animals function to mirror moral truths to humans. While God embodies moral ideals in animals, the irrational animals possess no critical awareness of the morality they mirror. The moral truths divinely imprinted or coded in animal bodies must be interpreted by human intellect. Yamamoto observes that this physically encoded morality establishes a role for animals in Thomas's hierarchy, which simultaneously establishes the *status quo* as the divinely created order:

Thus, if the template of animal society is held up to the human one, it can be seen that the precepts extracted from the former will be those that favour order, stability—in other words, the *status quo*. . . . So it can be seen that if animals are presented to humans as social exemplars a heavily weighted message is likely to emerge. It is one which will privilege things as they are and will censure nonconformity or attempts to change old practices for new ones. (1991: 82–3)

In Thomism, the absolute difference between humans and other animals demarcates a borderline useful for distinguishing some humans from others in the social order and hierarchical *status quo*. Because animals operate by instinct and humans think and act by reason, according to some Thomistic and medieval thinkers, the place of some humans (women and Jews, for example) in the social order could be determined by similar distinctions (Yamamoto 1991: 86).

The ambivalence of the Christian tradition towards animals is best expressed by exceptions to the rule of anthropocentrism, and three widely recognized exceptions occur in Chrysostom, Saint Francis of Assisi, and Albert Schweitzer. Birch and Cobb's *The Liberation of Life* reminds us that the Christian tradition is not limited to anthropocentrism. Chrysostom advocated Christian gentleness toward animals. Saint Francis, according to some interpretations of legend and biography, expressed extraordinary regard for nature, including animals. Albert Schweitzer's reverence for life, though flawed and incomplete as an ethic perhaps, resists valuing animals exclusively in proportion to the standard of humanity (Birch and Cobb 1981: 148–9).

The relationship of *Homo sapiens* and other animals in Christian thought generally sets human nature, uniqueness, and interests at the centre of reflection, with animals a more marginal concern. The result of anthropocentrism is a variety of ethical perspectives assessing different values for humans and animals and different values among humans. Christian perspectives attentive to the relationship of humans and

other animals, especially establishing a caring or non-hierarchical relationship, are considered outside the mainstream.

SIMILARITY AND DIFFERENCE: SCIENCE LESSONS FOR THEOLOGY

Building on ideas originally presented to the American Academy of Religion in 2004, the final sections of the essay advocate critical reflection on the meaning of similarity and difference, and proposes a theological alternative to anthropocentrism. Because Marc Bekoff's writing is careful in interpreting similarity and difference, his scientific perspective is the framework that urges a theology of human and animal relationship responsive to studies of animal behaviour, emotions, and motivations.

The value of Marc Bekoff's observations lies in careful attention to the unnoticed, ordinary behaviours of dogs, which can be a window to the occurrence of important social behaviours, such as fair play. Bekoff's eye for complex canid social behaviours challenges assumptions about animals and humans common in earlier scientific research and still present in much theological scholarship. The purpose of my theological reflection is to explore assumptions about animals and humans, perhaps demonstrating that centred focus on animals might be fruitful for theological reflection. The following argument is that lessons in continuity, comparison, variation, and uniqueness from Bekoff's scholarship recommend theological reflection about method, personhood, God, and justice.

Marc Bekoff's empathy for dogs and other animals gives him a discerning eye for the complexity and importance of behaviours which are unnoticed, ordinary, and unremarkable from the standpoint of most theological scholarship. Theologians are virtual novices in the realm of the ordinary, and I suggest that when theologians begin the project of theologizing the ordinary, we must form partnerships with scholars such as Bekoff, whose expertise can tutor us in seeing and interpreting beauty in the world made invisible by theological commentary. To focus the experiment in theologizing the ordinary, I enter dialogue with Bekoff on the research question: What difference does difference make? I propose that Bekoff's observations and reflections instruct us in vital lessons about similarity, difference, continuity, and uniqueness. The resulting focus moves animals from the margins to the centre of theological reflection.

The first lesson is that *all similarities and differences between species (especially between humans and other animals) must be understood in light of the scientific basis for continuity*. Bekoff writes, 'Although there are numerous differences between humans and other animals, in many important ways "we" (humans) are very much one of "them" (animals), and "they" are very much one of "us"' (2002: 142). As news reports have made listeners aware, comparative studies of genes and proteins

show continuity and similarity between humans and chimpanzees. In addition to genetics, evolution is an important theoretical basis for asserting the continuity of humans and other animals. In his consideration of emotions in animals, for example, Bekoff proposes the unlikelihood that human love emerged in nature ‘with no evolutionary precursors, no animal lovers’ (2002: 20). Further, Bekoff reminds us that the continuity or similarity of other animals with humans provides the rationale for some scientific and medical research involving animals as objects of study: “We” versus “them” dualisms do not work. The similarities rather than the differences between humans and other animals drive much research in which animals’ lives are compromised. If “they” who are used in research are so much like “us,” then much more work needs to be done to justify certain research practices’ (2002: 55). Bekoff contends that the justifications for some research programmes are deficient because the argument for continuity is paired with human/animal dualism that objectifies animals.

A similar irony is the speciesist linear hierarchy of species, which ranks some species as ‘higher’ and others as ‘lower’. The hierarchy in some ways reflects the continuity of animal species, yet neglects a careful understanding of evolutionary continuity and intra-species diversity, which, in fact, contradict a simple linear hierarchy and undermine simple determinations of the value of individuals and species (2002: 54).

If I interpret Bekoff appropriately, I conclude that genotypic and phenotypic evidence and evolutionary continuity require theology to take account of a more complex profile of the animal continuum, which includes humans. As Bekoff (citing Patrick Bateson) suggests, continuity between humans and other animals must be supported by empirical evidence, but without specific evidence ruling out certain similarities, science (and, I add, theology) cannot assume that particular continuities do not exist (2002: 95).

A second lesson is that *any comparisons between species or observations of characteristics within species must be described and evaluated within the species context* (2002: p. xx). As Bekoff notes, even scientists tend to make comparisons of animal behaviour and abilities without situating the comparisons within the particular animals’ or species’ habitat. For example, to paraphrase Bekoff, observations support proposals that some chimpanzees have a sense of self, dogs plan for the future, and many animals experience emotions, pleasure, and pain (2002: 86). However, Bekoff writes, ‘In addition to learning about the cognitive abilities of animals, some researchers are interested in making comparisons between the cognitive abilities or cognitive “levels” of animals and humans’ (2002: 86). Bekoff asserts that such comparisons are not always helpful in learning about animals or humans because the abilities of all animals, including humans, are matters of appropriate fit and adaptation to the species’ context. Bekoff concludes:

I am not sure that it is very useful to claim that a chimpanzee can reach the ‘intellectual’ level of a two-and-a-half-year-old human infant. Neither will we learn much by continuing to rear chimpanzees as if they are human. These so-called cross-fostering studies tell us little if anything about the behaviour of normal chimpanzees and raise numerous ethical questions.

Each organism does what it needs to do in its own world, and surely a young human (or most humans at any age) could not survive in the world of a chimpanzee. (2002: 86)

The questionable importance of comparisons of human and other animal behaviour suggests biases about human superiority. Bekoff offers a second example, which begins with an anecdote about the cleverness of a dog Skipper to retrieve a stick floating downstream by running ahead of the stick to catch it. Noting that young children might not possess the cognitive abilities to anticipate and intercept the stick similarly, Bekoff comments, 'While there may be other explanations for Skipper's behaviour, I am not sure what I would discover if I were told that children of a certain age usually develop the same ability that Skipper displayed and that Skipper was as smart as a child of that age, but no smarter' (2002: 86). The comparisons that we tend to make often select intelligence as the point of reference, and perhaps misinterpret the real significance of differences in behaviour. One final reference to Bekoff again emphasizes the importance of understanding behaviour in context: 'To claim that variations in the behaviour of different species are due to members of one species being less intelligent than members of another species shifts attention away from the various needs of the organisms that may explain the behavioural differences. Dogs are dog-smart and monkeys monkey-smart. Each does what is required to survive in its own world' (2002: 91).

The lesson that theologians take from Bekoff is that we must beware of comparisons between humans and other animals that neglect contextual awareness of behavioural characteristics. Behaviours are situated in ecological and evolutionary contexts.

The third lesson is that *accounts of animal behaviour should remember that individuals within a species exhibit variations in behaviour and personality*. Bekoff's research is attuned to individuals, which means that he is interested in individual behavioural variation and in the evolution of behavioural variation (2002: p. xviii). While speciesism is content to characterize individuals and their relationship to other animals by a species label, Bekoff's non-speciesism recognizes that individual differences within a species should not be dismissed. Attention to individuals may be especially important when similarities in behaviours cross species lines because, as Bekoff writes, 'it is possible that individual members of different species may be "equivalent" with respect to various traits or that individuals of a given species may possess characteristics that are exclusively theirs' (2002: 54). Individual variations suggest that ecology plays a role in behavioural variation because genetics alone is insufficient to explain variation that may be more appropriately linked to ecology or social factors (2002: 61).

Bekoff encourages awareness that variations in intelligence and adaptability should be expected among individuals of a single species (2002: 91). The problem is that generalizations about intelligence and cognition may reflect more about the limitations of observations and research than about the cognitive limitations of animals. Scientific conclusions, Bekoff notes, 'are based on small data sets from a small number of individuals who may have been exposed to a narrow array of behavioral challenges' (2002: 98). Primatologist Barbara Smuts likewise notes that the limitations

of observers have much to do with perceived limitations of animals, and Bekoff cites her reflection that 'limitations most of us encounter in our relations with other animals reflect not their shortcomings, as we so often assume, but our own narrow views about who they are and the kinds of relationships we can have with them' (2002: 99).

Common methods in so-called objective behavioural sciences advocate treating unnamed animals as objects of study and discourage attention to individual personalities (including references to animals using grammar reserved for persons), yet Bekoff, Jane Goodall, and some other ethologists argue that naming individual animals is appropriate and no less effective than numbering animal subjects (Bekoff 2002: 45–7). I would guess, in following Bekoff's thinking, that naming animals and attending to individual personalities might be a more effective methodological approach when attention to individual behavioural variations and social and family relationships are central to the research project at hand.

Just as he points us to the diversity within animal species behaviour, so Bekoff similarly reminds us of the diversity in human behaviour, personhood, and morality, which makes comparison of species with humans even more complicated (2002: 15, 122). The lesson for theologians is that both our method and our constructions require attention to difference in very particular and concrete details as a guard against inappropriate generalizations about all animals and species, including humans.

A fourth lesson is that *human uniqueness must make room for dog uniqueness (and, of course, dolphin uniqueness, elephant uniqueness, chimpanzee uniqueness, etc.)*. Human uniqueness is something of a moving target. Some claims about human uniqueness have been slowly dismantled by observations of diverse animal abilities with tools, language, culture, aesthetics, and reason; yet Bekoff speculates that such concepts as contemplation of mortality may still be defensible as uniquely human behaviour (2002: 13). When we claim that animals use tools or language, we do not necessarily mean that animals and humans are identical, which is a claim empirically unsupported, but we mean that humans cannot be absolutely separated from animals by evidence of specified behaviours, and that animals have complex languages or communication within their social groups, although the language is not human language (2002: 138).

Further, even where similarities appear, the 'uniquenesses' of species must be acknowledged. For example, similar emotions in animal species may entail difference. Bekoff calls for more attention to research in species differences in expression of emotions and experiences of feeling: 'Even if joy and grief in dogs are not the same as joy and grief in chimpanzees, elephants, or humans, this does not mean that there is no such thing as dog-joy, dog-grief, chimpanzee-joy, or elephant-grief. Even wild animals (for example, wolves), and their domesticated relatives (dogs), may differ in the nature of their emotional lives' (2002: 119).

Unique behaviour, emotions, contexts, and social interactions are grounds for acknowledging that the word 'unique' is an appropriate adjective for all animals. Bekoff asks, 'Are humans unique? Yes, but so are other animals. The important

question is “*What differences make a difference?*” (2002: 138). The lesson for theologians is twofold: (a) theology needs revision in its claim that only human animals are unique, and (b) theology needs a method of reflection that attends carefully to differences among animals.

SIMILARITY AND DIFFERENCE: THEOLOGICAL RESPONSES TO SCIENCE

In the remainder of the essay I will sketch some existing options in theology that promise constructive dialogue with the lessons generated by Bekoff’s scientific reflections on animals.

First, Sallie McFague has already proposed a methodological option in theology that calls for greater awareness of the intrinsic value of animals. Attention epistemology, as McFague defines it, is ‘a rather abstract term for a very concrete and basic phenomenon: the kind of knowledge that comes from paying close attention to something other than oneself’ (1993: 49). Attention epistemology means setting aside assumptions about human uniqueness and superiority in order to place other creatures in focus. The assumptions of attention epistemology are that animals (and plants and elements of nature) have intrinsic value and unique perspective. In an extended description of attention epistemology, McFague writes:

An attention epistemology is central to embodied knowing and doing, for it takes with utmost seriousness the differences that separate all beings: the individual unique site from which each is in itself and for itself. Embodiment means paying attention to differences, and we can learn this lesson best perhaps when we gauge our response to a being very unlike ourselves, not only to another human being (who may be different in skin color or sex or economic status), but to a being who is *indifferent* to us and whose existence we cannot absorb into our own—such as a kestrel (or turtle or tree). If we were to give such a being our attention, we would most probably act differently than we presently do toward it—for from this kind of knowing-attention to the other in its own, other, different embodiment—follows a doing appropriate to what and who that being is. (1993: 50–1)

Attention epistemology works against the dominant tendency in theology to generalize about nature, and challenges us to look deeply and empirically at the unique value in and differences among species and individuals.

Attention epistemology is evident in Bekoff’s approach to research, which takes the animal’s point of view. When Bekoff uses the phrase ‘minding animals’, in part he means ‘caring for other animal beings, respecting them for who they are, appreciating their own worldviews, and wondering what and how they are feeling and why’ (2002: p. xvi). Bekoff argues that field study requires ‘taking the animal’s point of view’ in order to make sense of animal behaviour, emotions, and purposes (2002: 60).

Both McFague and Bekoff conclude that the observer is transformed by close attention to another creature, and that the transformation is evident in the evocation of compassion or love, which generates urgency for justice and advocacy (Bekoff 2002: 135–6; McFague 1993: 50). Attention epistemology conforms to the orientation of Bekoff's approach, about which he claims, 'My research has taken me in many different directions. Most important, it has led me deep into the minds, hearts, spirits, and souls of many other animals. It has also led me deeply into my own mind, heart, spirit, and soul. Animals have been my teachers and healers' (2002: 9). The transformation that occurs in humans who decentre themselves in relation to animals is not a sentimentality for similar creatures, an infatuation with the exotic, or a self-aggrandizement from charitable openness, but the transformative incarnation, if you will, of the different other for the difference made in human knowing and doing.

A second option is to develop a theology of nature that includes the personhood of non-human animals. Philosopher Alfred North Whitehead influences a number of theologians who consider animals to have continuity with humanity. Whitehead encouraged scholars not to make judgements about similarities and differences between humans and other animals apart from empirical evidence (Cobb 1965: 58). In Whitehead's *Modes of Thought*, the continuity of other animals and humans is based on the concepts of novelty, language, and religion. While acknowledging that humans have a more complex relationship with novelty, Whitehead noted that animal intelligence responds to 'conventional novelty with conventional devices' (1938: 35). Humans have conventional moments, too, but with humanity, Whitehead asserts that nature crossed a boundary permitting beings in nature to entertain unrealized possibility: 'In this way, outrageous novelty is introduced, sometimes beatified, sometimes damned, and sometimes literally patented or protected by copyright' (1938: 36). Concerning language, Whitehead observed that humans and other animals engage in communication (at least, in the embryonic form of speech) that 'varies between emotional expression and signalling' (1938: 52). While understanding that religion is comprised of ritual, emotion, belief, and rationalization, Whitehead attributed ritual and emotion to animals including humans, but he reserved belief and rationalization for human development of religion (1926: 20–1).

Given the continuities and differences among humans, Whitehead suggested that the more advanced capacities for freedom and creativity in humans and vertebrates and the presence of a central organizing principle to co-ordinate organic and social relationships in humans and other animals are grounds for extending the definition of *person* to include at least some animals other than humans. Whitehead defined persons as individuals whose life history of experience is co-ordinated by a 'presiding occasion of experience' (1978: 107). The presiding occasion of experience is the natural phenomenon that Whitehead called the psyche or soul, which means that Whitehead included non-human animals among persons, who by definition are endowed with souls that preside over behaviour (Cobb 1965: 48).

Like Whitehead, Bekoff hopes to convince us that non-human animals should also be designated as persons. Bekoff defines persons using several criteria: 'being

conscious of one's surroundings, being able to reason, experiencing various emotions, having a sense of self, adjusting to changing situations, and performing various cognitive and intellectual tasks' (2002: 14). Bekoff notes that humans vary considerably in their abilities to meet the criteria, yet we still appropriately consider humans (such as infants) who cannot meet all the criteria to be persons (2002: 14). Claiming that humans have nothing to lose by sharing personhood with animals, Bekoff suggests that animals as persons have much to gain. Calling animals persons 'would mean that animals would come to be treated with respect and compassion that is due them, that their interests in not suffering would be given equal consideration with those of humans' (2002: 15). Bekoff's research programme promises the empirical evidence that Whitehead required and theologians need to develop an adequate theology of and for animals—a theology of animal personhood.

A third option in theology is to develop explicitly a panentheistic concept of God that takes account of the rich and complex diversity of experiences in the animal world. A panentheistic world-view understands that God's experience encompasses the world's experience. Sallie McFague proposes that God's radical transcendence and immanence are expressed in the panentheistic metaphor describing the universe as God's body, which entails all bodies, all embodiments (1993: 134).

Pantheism suggests a creative reciprocity between cosmic experiences and divine experiences, and the attendant world-view holds that God acts creatively and persuasively in the world and that the experiences of the world are creative events in the body of God (Whitehead 1978: 348). The experiences that make up the world take on a sacramental character when the world's embodiments directly constitute God's embodiment. In technical Whiteheadian language, God's inclusive experience of the experiences of the world is called 'intensity', a term which refers generally to the ability to entertain the variety, depth, and breadth of experiences without loss of personal integrity (1978: 83).

We might then imagine two ways to contribute experience to God's body. One way points toward complex individuals, such as humans, whose freedom and creativity enable them to contribute rich and intense experience to God's experience. The first way inclines theologians and philosophers to maintain gradations of value in nature that give greater importance to creatures who individually contribute rich experience to God's body. However, if closer examination of animal behaviour leads to appreciation of the intensity of non-human individuals, then hierarchical interpretations of experience may give way to genuine recognition of the intrinsic and sacramental value of non-human animal behaviour and experience. The second way points toward diversity and community, the volume of life in total, as the truly inclusive source of intensity and rich experience in the body of God. With the second way, no experience is unimportant in contributing to the intensity of divine experience. As an ecological interpretation of depth and breadth of experience, the second approach values all experience—human and non-human, animal and plant, living and non-living—as sacred in the experience, body, and being of God.

In dialogue with Bekoff (and other ethologists), theological perspectives can be enriched by deeper understanding of the rich diversity of animal behaviour, experi-

ence, and emotions, which characterize individuals, species, and animal life. With theological imagination, we might expect that a better understanding of the beauty and intensity of animal experience (including varieties of difference and similarity) might generate and support a deeper and more interesting concept of God.

A fourth option for theology is to continue our work to establish justice and compassion. Theology is not always tolerant of difference, and the problem of diversity is addressed with repeated and recognizable habits of thought. *Mujerista* theologian Ada María Isasi-Díaz criticizes traditional theology in terms of its habits of mind that define difference 'as absolute otherness, mutual exclusion, categorical opposition' (1996: 80). Making one group of humans the norm against which other persons are measured, traditional theology is essentialist with regard to difference. Defining difference in essentialist terms 'expresses a fear of specificity and a fear of making permeable the boundaries between oneself and the others, between one's ideas and those of others' (1996: 80). Cuban American theologian Luis G. Pedraja adds one further characteristic of theological habits of mind: traditional theology creates hierarchies that place some groups of humans closer to God, hence justifying superiority over and domination of groups who are deemed inferior (2003: 120).

To be clear about the context of Isasi-Díaz's and Pedraja's observations, I must note that their characterization of theology addresses human differences—the difference between dominant culture and Latino/a culture brought to light by consciousness of marginality and by engagement of *mulatez* and *mestizaje* diversity within Latino/a culture. Isasi-Díaz asserts that one challenge to traditional theology is the *mujerista* theologian's claim that embracing diversity is a moral obligation for theology (1996: 80).

For some, the connection between Latino/a theology and concern for animals may not be apparent. However, I have cited Isasi-Díaz and Pedraja to demonstrate that theological injustice is committed toward diverse humans and other animals when we fail to attend to intrinsic value and particularity. Theologians use the same habits of mind to justify exclusion, dehumanization, and exploitation of all not-quite-human beings and animals. Just as Isasi-Díaz challenges theology to attend to specificity for the sake of justice toward the Latino/a community, so Bekoff challenges us to attend to the particularity of individuals and species, so that our awareness of the remarkable behaviour and intrinsic value of animals might convince us that justice toward animals is not an extraordinary expectation.

A deep sense of relationship attends both particularity and value. The tendency in some historical theology is toward universal and homogeneous interpretations of nature and humanity, and the result is neglect of the particular. Resistance toward universalism appears in contemporary theology that forces the issues of gender, race, and class into central place and that decentres the theological imagination away from humans and toward creation (for example, in ecological theologies). What theologians have learned, however, with a good deal of struggle, is that even general theories about gender, race, and nature are insufficient.

Theology cannot be based on some abstracted concept of woman because the ethnic, cultural, social, religious, national, and class contexts of diverse women demand a more sophisticated and plural interpretation of gender. Likewise, a theology that generalizes about issues of race still dangerously holds dominant (white) racial motifs as normative until the cultural, social, and economic diversity among races and within races informs deeper and broader developments in theological anthropology. Similarly, then, theology might expect to discover that a broad theology of creation or nature is inadequate to interpret the particularity of species and within species. Ultimately, theological reflections on humanity and nature are distorted and even unjust when particularity is neglected.

Rosemary Ruether names the connection between particularity and value, and the following remarks repeat and extend a quotation cited early in the essay:

Women must also criticize humanocentrism, that is, making humans the norm and crown of creation in a way that diminishes the other beings in the community of creation. This is not a question of sameness but of recognition of value, which at the same time affirms genuine variety and particularity. It reaches for a new mode of relationship, neither a hierarchical model that diminishes the potential of the 'other' nor an 'equality' defined by a ruling norm drawn from the dominant group; rather a mutuality that allows us to affirm different ways of being. (1983: 20)

Attending to particularity is a part of attributing appropriate value to persons and relationships. Forms of instrumental value tend to interpret groups or species as valuable for the sake of their usefulness to dominant groups or individuals. Instrumental value may limit relationship to subject–object interaction. Intrinsic value recognizes that Washoe the chimpanzee and Jethro the dog have value in and for themselves, without regard to their utility for human purposes; but intrinsic value is rendered invisible by theological reflection that understands Washoe and Jethro as functionally and objectively indistinguishable from others of their species or from non-human animals in general. Theological imagination accountable to empirical evidence and observations is adequate only when the particularity and intrinsic value—the diverse personalities, emotions, cultures, behaviours, motivations, and uniqueness—of other animals inform how we think about relationships among animals and between humans and specific animals.

In conclusion, an empirical and specific understanding of similarities and differences blurs boundaries and eliminates borders. To speak of humankind and otherkind (language I have used in other writing) perpetuates the idea of unsubstantiated, absolute difference. Hierarchical and value-burdened categories of the unique Self and the Other create too much separation and too much temptation to exploit and marginalize the Other—other animals and other humans. Theology must recast uniqueness, equating uniqueness with the intrinsic value and differences evident in all species and individuals, as well as the cosmic community embodied in the divine.

REFERENCES AND SUGGESTED READING

- AQUINAS, THOMAS (1970). *Summa Theologiae*, ii, trans. Timothy Suttor. London: Eyre & Spottiswoode.
- AUGUSTINE (1982). *The Literal Meaning of Genesis*, in J. H. Taylor (trans.), *Ancient Christian Writers*, 41–2. New York and Ramsey, NJ: Newman Press.
- (n.d.). ‘83 Questions on Various Topics’, in G. Clark (trans.), *Corpus Christianorum, Series Latina*, 44A: 20.
- BADHAM, P. (1991). ‘Do Animals Have Immortal Souls?’, in A. Linzey and D. Yamamoto (eds.), *Animals on the Agenda*, Urbana, Ill., and Chicago: University of Illinois Press, 181–9.
- BEKOFF, M. (2002). *Minding Animals: Awareness, Emotions, and Heart*. Oxford: Oxford University Press.
- BIRCH, C., and COBB, JOHN B., jun. (1981). *The Liberation of Life: From the Cell to the Community*. Cambridge: Cambridge University Press.
- BURGHARDT, G. M. (1985). ‘Animal Awareness: Current Perceptions and Historical Perspective’, *American Psychologist*, 40: 905–19.
- CLARK, G. (1991). ‘The Fathers and the Animals: The Rule of Reason?’, in A. Linzey and D. Yamamoto (eds.), *Animals on the Agenda*, Urbana, Ill., and Chicago: University of Illinois Press, 67–79.
- COBB, J. B., jun. (1965). *A Christian Natural Theology: Based on the Thought of Alfred North Whitehead*. Philadelphia: Westminster Press.
- DE WAAL, F. (1996). *Good Natured: The Origins of Right and Wrong in Humans and Other Animals*. Cambridge, Mass.: Harvard University Press.
- (2001). *The Ape and the Sushi Master: Cultural Reflections of a Primatologist*. New York: Perseus Books Group, Basic Books.
- FOUTS, R., with MILLS, S. T. (1997). *Next of Kin: My Conversations with Chimpanzees*. New York: Avon Books, Inc.
- GOODALL, J., with BERRYMAN, P. (1999). *Reason for Hope: A Spiritual Journey*. New York: Warner Books.
- GOULD, S. J. (1977). *Ever since Darwin: Reflection in Natural History*. New York: W. W. Norton.
- ISASI-DÍAZ, A. M. (1996). *Mujerista Theology*. Maryknoll, NY: Orbis Books.
- MCFAGUE, S. (1993). *The Body of God: An Ecological Theology*. Minneapolis: Fortress Press.
- PEDRAJA, L. G. (2003). *Teología: An Introduction to Hispanic Theology*. Nashville: Abingdon Press.
- RUETHER, R. R. (1983). *Sexism and God-Talk: Toward a Feminist Theology*. Boston: Beacon Press.
- WHITEHEAD, A. N. (1926). *Religion in the Making*. New York: Macmillan Company.
- (1938). *Modes of Thought*. New York: Macmillan Company.
- (1978). *Process and Reality*, corrected Edn., ed. D. R. Griffin and D. W. Sherburne. New York: Free Press.
- YAMAMOTO, D. (1991). ‘Aquinas and Animals: Patrolling the Boundary?’, in A. Linzey and D. Yamamoto (eds.), *Animals on the Agenda*, Urbana, Ill., and Chicago: University of Illinois Press, 80–9.