1 Darwin's Anthropomorphism

CHARLES DARWIN'S work was of pivotal significance for the biological study of behavior. His arguments for evolution established the phylogenetic continuity between humans and animals, thereby irreparably undermining the credibility of the religious doctrines of the fixity of species, of special creation, and of the unique status of human beings. The link between human and animal worlds made possible by the notion of common ancestry, accepted widely as an incontestable fact shortly after the publication of Darwin's *On the Origin of Species,* opened the twin conceptual possibilities of naturalist approaches to human behavior and of inquiry into phenomena of mind, will, and language in the animal world. After Darwin, the domains of humans and animals were no longer separated by the barrier of a metaphysical-religious doctrine of essential difference (Mayr 1982). Besides the shift in worldview concurrent with the discovery of evolutionary continuity, Darwin's evolutionary perspective provided the study of animal behavior with its most fundamental theoretical framework. The adaptive role of different behaviors could now be conceived under the auspices of the theory of natural selection: like morphological features or physiological processes, behavioral patterns could be appreciated as vital for the survival and reproduction of animals. The final seminal contribution of Charles Darwin to behavioral science was his virtual inception of the field of the biological study of natural behavior (which came to be called "ethology") with his 1872 work *The Expression of Emotions in Man and Animals.* In this work Darwin inaugurated the scientific study of human and animal behavior and mind in light of an evolutionary viewpoint (Lorenz 1965; Burkhardt 1985).

Despite his crucial contribution to the study of behavior, there is a profound discrepancy between Darwin's depictions of animal life and those of much twentieth-century behavioral inquiry. From a contemporary perspective, Darwin's language has been evaluated as "anthropomorphic." The ethologist Samuel Barnett, for example, criticizes Darwin's depiction of animal life as anthropomorphic, and thereby in need of correction

(1958). Michael Ghiselin, a Darwinian scholar, attempts to downplay Darwin's anthropomorphic style by claiming that his language was largely intended as metaphorical rather than literal representation (1969). For the most part, however, Darwin's representation of animals has been greeted with silence. According to the historian Richard Burkhardt, at least one reason for the relative neglect of Darwin's work on animal behavior has been "the anthropomorphic cast of many of [his] discussions of behaviour" (1985: 328). Overall, Darwin's predilection for rendering animal life in what have been widely regarded as "human" terms is dismissed as a quaint relic of a past epoch, reappraised as metaphorical, or ignored as irrelevant next to his major contributions.

However, Darwin intended his anthropomorphic portraiture of animals as a realistic, veridical appraisal. Rather than assessing his anthropomorphism as either error, metaphor, or undeserving of serious attention, I argue that his understanding of animal life reflects his view of evolutionary continuity. I show that Darwin's language embodies a coherent and powerful understanding of animal life, one that is at odds with mechanomorphic and skeptical views widespread in behavioral thought during the twentieth century.

First I survey Darwin's characterizations of animals, so as to give a flavor of his anthropomorphic language. To show that his portrayal of animal life was aligned with his understanding of evolution, I then discuss his explicit standpoint on the continuity among all animals with respect to behavioral traits and mental qualities. In the section that follows, I focus on Darwin's understanding of animal mentality, examining his work *The Expression of Emotions in Man and Animals*. Then, in contrast to the idea that Darwin's anthropomorphic style is either erroneous or metaphorical, I show that his representational language reflects his perception of subjectivity in the animal world; his premise is that living is experientially meaningful for animals and that their actions are authored. Finally, I investigate the anecdotal method in Darwin's behavioral writings in order to assess what kind of knowledge anecdotes about animals can foster. Darwin's representation of animals, deeply rooted in evolutionary reasoning, calls for the suspension of the sweeping indictment of anthropomorphism as a distorted perspective on the reality of animal being. Setting aside the deep-seated, a priori suspicion of so-called anthropomorphic language allows an appreciation of the knowledge that Darwin's perspective on animal life embodies.

Darwin's Language of Continuity

Darwin's language for representing animals is a resounding affirmation of the evolutionary continuity between animals and humans. His argument for continuity takes shape through a generous, unabashed use of the commonplace terms of (human) mind and action as resources through which to witness and understand animal life. As Carl Degler argues, "underlying Darwin's anthropomorphism was his determination to demonstrate as often and as thoroughly as possible the continuity between the so-called lower animals and human beings" (1991: 8). In the same vein, Ghiselin admits that for Darwin "to attribute 'higher' mental processes to 'lower' animals was one way of arguing for evolution" (1969: 202).

Darwin's aversion to a mechanistic view of animals—a legacy of Descartes' philosophy—is evident in his portrayals.[1] A mechanistic rendering of behavior is not necessarily incompatible with either evolutionary theory or a mental continuity between animals and humans, as is clear in the views of Darwin's close ally, T. H. Huxley, who regarded animals, including human beings, as "conscious automata" (1874), but Darwin did not share Huxley's ideas. In his last letter to his friend, with tenderness and not without irony, Darwin wrote, "I wish to God there were more automata in the world like you" (1958: 347). Though Darwin rarely discussed philosophical issues explicitly, he was not unfamiliar with the philosophical debates of his day, and his disinclination from a mechanistic perspective may also be seen in his favorable citation of Humboldt in *The Descent of Man:* "The muleteers in S. America say, 'I will not give you the mule whose step is easiest, but Las mas racional,—the one that reasons best;' and Humboldt adds, 'this popular expression, dictated by long experience, combats the system of animated machines better perhaps than all the arguments of speculative philosophy'" (1981, 1: 48).

Ghiselin wants to defend Darwin against the charge of anthropomorphism by arguing that there "has been a confusion of his language with his real meaning: there is a world of difference between his metaphorical use of anthropomorphic terms and the propositions which he actually asserts" (1969: 188). But Ghiselin also acknowledges that Darwin "lapses into anecdotal evidence and genuine anthropomorphism" (1969: 203). Yet the ubiquity and consistency of Darwin's depiction of animal life do not support the reading of an occasional lapse into anthropomorphism. His view is not simply at odds with a mechanistic conception of ani-

mal behavior, but advances an alternative understanding of animal life. Darwin did not doubt that animals have rich mental lives, and throughout his writings animals emerge as subjects—agents who experience the world and author their actions. I provide a brief sampling from Darwin's writings as a snapshot of his language of continuity—a language commonly denigrated with the label "anthropomorphic."[2]

Contemporary behavioral writings rarely refer to "love" and "attachment" among animals. Darwin, however, uses these terms even in reference to animals that among contemporary behavioral scientists are sometimes regarded as "mindless automata"—invertebrates, for example.[3] Darwin writes that among Lamellicorn beetles "some live in pairs and show mutual affection." Regarding crustaceans, he cites an anecdote from a naturalist about a male and female of a pair that were separated. When "the male was again put into the same vessel he dashed into the crowd, and without any fighting at once took away his wife"; Darwin concludes from this that "the males and females recognize each other, and are mutually attached." Recounting that "in many parts of the world fishes are known to make peculiar noises," he conjectures that fishes may possibly use sounds "as a love-call or as a love-charm." With respect to birds, Darwin writes of males and females "exciting each other's love," and says that parrots "become so deeply attached to each other that when one dies the other for a long time pines." Noting that dogs and monkeys show jealousy, he comments that "this shews that animals not only love, but have the desire to be loved." Just as "we long to clasp in our arms those whom we tenderly love," so "with the lower animals we see the same principle of pleasure derived from contact in association with love." Cats express affection by rubbing themselves on objects, which perhaps originated from "the young themselves loving each other." And in "the deep love of the dog for his master," Darwin discerns an evolutionary echo of "the feeling of religious devotion."

Regarding intense and passionate emotions, Darwin states that "even insects express anger, terror, jealousy, and love by their stridulation." The beetle Chiasognathus produces this shrill, grating noise "in anger or defiance," while others do so "from distress or fear." Darwin cites Wallace on certain male beetles fighting "apparently in the greatest rage." The male Ateuchus beetle "stridulates to encourage the female in her work and from distress when she is removed"; the male of a certain species of locust, "whilst coupled with the female, stridulates from anger or jealousy when approached by another male"; and it is probable, according to Darwin,

that female cicadas, "like birds, are excited and allured by the male with the most attractive voice." "Bees express certain emotions, as of anger, by the tone of their humming, as do some dipterous insects"; and again, "everyone who has attended to bees knows that their humming changes when they are angry." Further, "with birds the voice serves to express various emotions, such as distress, fear, anger, triumph, or mere happiness"; male macaws use their loud voices "when they are excited by strong passions of love, jealousy and rage." Hummingbirds are characterized as "quarrelsome," and one hybrid goldfinch as having an "irascible disposition." With respect to frogs and toads, Darwin writes that "though cold-blooded, their passions are strong"; "chameleons and some other lizards inflate themselves when angry," and snakes "have some reasoning power and strong passions." Darwin also writes of "the intense grief of the female monkeys for the loss of their young." Cats express "terror combined with anger," as well as "rage or anger." "Porcupines rattle their quills and vibrate their tails when angered"; rabbits "stamp loudly on the ground as a signal to their comrades" and "when made angry." Male stags use their voice "under the strong excitement of love, jealousy and rage."

With respect to notions encompassing what are often referred to as higher mental qualities, Darwin argues that animals have powers of imitation, attention, memory, imagination (seen in animals' dreaming), and reason. He observes that where fur-bearing animals have been pursued with traps "they exhibit, according to the unanimous testimony of all observers, an almost incredible amount of sagacity, caution and cunning"; and, quoting the naturalist Swinhoe, Darwin suggests that "the victory of the common rat over the large Mus coninga [is due] to its superior cunning." He comments that "the mental powers of Crustacea are probably higher than expected," as "anyone who has tried to catch shore-crabs will have perceived how wary and alert they are." Darwin notes that spiders "exhibit much intelligence." He finds in the worm "attention and some mental power," as well as "some degree of intelligence." "There can be no doubt," he writes, "that birds closely attend to each other's song." Dogs have five different kinds of barks, expressing eagerness, anger, despair, joy, and demand. Darwin implicates a capacity for judgment in the dog when he notes that "a young shepherd-dog delights in driving and running round a flock of sheep, but not in worrying them"; "dogs," he writes, "possess something very like a conscience." Porcupines are "so fully conscious of the power of their weapons, that when enraged they will charge backwards with their spines erected, yet still inclined backwards." Citing

another naturalist, Darwin writes that when hyenas fight "they are mutually conscious of the wonderful power of each other's jaws, and are extremely cautious. They well know that if one of their legs were seized, the bone would instantly be crushed." With regard to monkeys and other animals, Darwin notes that "many anecdotes, probably true, have been published on [their] long-delayed and artful revenge." He says that "one horse shows another where he wants to be scratched, and they then nibble each other." Generally, among social animals "gestures and expressions are to a certain extent mutually intelligible. Anyone who has watched monkeys will not doubt that they perfectly understand each other's gestures and expression."

Darwin makes frequent reference to animals' showing feelings of satisfaction and pleasure. He writes of "the deep grunt of satisfaction uttered by a pig, when pleased with its food." He notes that "even cows when they frisk about from pleasure, throw up their tails in a ridiculous fashion." Horses show eagerness to start on a journey by "pawing the ground [which] is universally recognized as a sign of eagerness." A foxhound "delights in hunting a fox"; a dog can be "cheerful" and in the "highest spirits." When ewes and lambs reunite, "their mutual pleasure at coming together is manifest." In general, "under a transport of Joy or vivid Pleasure," there is a tendency to "purposeless movements," as seen in young children, dogs, and horses. Among birds, the bowerbirds create "curious structures" (bowers), "solely as halls of assemblages, where both sexes amuse themselves and pay their court." Darwin observes that "we can plainly perceive, with some of the lower animals, that the males employ their voices to please the females, and that they themselves take pleasure in their own vocal utterances." Later I discuss the epistemic consequences of Darwin's understanding of animals acting for the sake of pleasure.

As these examples show, Darwin's anthropomorphic vocabulary of animal action and mind is characteristic of his writing. It exemplifies a use of language that differs profoundly from that of more recent behavioral writing. For instance, in contrast to writings in the wake of the twentieth-century schools of behaviorism and ethology, Darwin never places quotation marks around any concepts, even though much of his vocabulary refers to phenomena widely assessed as "human" or "subjective." The practice of enclosing mental predicates (such as love, anger, jealousy, grief, understanding, pretending, knowing, and so forth) in "scare-quotes," which function as markers of skepticism, is corollary to the assumption