

Green Versus Gold: Sources in California's Environmental History

Edited by Carolyn Merchant

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Green Versus Gold is a fine collection of 62 primary documents and 42 scholarly essays, drawn from previously published articles, monographs, and books, that explore California's environmental history from approximately the mid-nineteenth century to the present. Carolyn Merchant ties the collection together with insightful introductory and concluding essays. The documents and essays are divided into 13 roughly chronological chapters, each concluding with a helpful list of further readings. The book's title, Merchant writes, "characterizes the many changes and tensions between environment and economy and between nature and humanity that took place in California's natural and human history" (xvii). The pervasive theme of the collection is the conflict between alternative visions of California: an early one based on immediate returns from resource extraction and exploitation of the environment, and a later, ecologically-minded one based on sustainability. Paralleling this theme, and driving the uneven transition from the former view to the latter, are changing human perceptions of the meaning and value of nature and of our relationship to it. The book is intended for a wide audience, including high school, college, and university students, as well as policymakers, restoration ecologists, and citizen activists. It is therefore both a valuable educational tool and a call to action.

The book opens with a focus on California's geological history and natural environment and the ways in which that environment has been altered since Anglo-American contact. Raymond Dasmann discusses the extinction or drastic reduction of once-abundant wildlife, including the grizzly bear, elk, pronghorn antelope, bighorn sheep, whale, sea lion, and otter. Felix E. Smith and Anne Sands concentrate on changes in the San Joaquin Valley, the southern half of California's Great Central Valley, especially in terms of the destruction of riparian habitat in the wake of the Gold Rush of the 1850s.

Speaking through the works of ethnographers, the Wintu, Karok, Modoc, and Maidu peoples describe their traditional, spiritual relationships with this rapidly disappearing natural world. Arthur McEvoy complements these primary sources with a description of aboriginal fishing practices,

including how, "unlike modern fishers, the Indians sustained whatever yields they did take for centuries" (52). Kat Anderson clearly describes sustainable Native American harvesting and burning practices and concludes that: "A future challenge for us all will be to develop viable land-management strategies for California which sustain both the resource base and the cultural integrity of indigenous peoples" (49).

Spanish missionaries and settlers and Russian hunters of sea lions, seals, and whales left their mark on California's environment prior to the arrival of Anglo-Americans, of course, and it is appropriate that a chapter is devoted to the Spanish and Russian frontiers. Norris Hundley's essay provides an incisive explanation of Hispanic water rights during the Spanish period. Under the Plan of Pitic, water was to be allocated with "equality and justice" by the local *ayuntamiento* or town council whose members were elected by local residents (82). Such an arrangement reflected the Hispanic commitment to *bien comun*, the common good. Documents and essays that appear later in the book make quite clear the profound differences between this Hispanic notion of water rights and the various notions upheld by Anglo-Americans who later settled the West. During the Spanish period, there was limited contact between the missions and presidios and the Native Americans who lived much beyond the coastal regions. Albert Hurtado points out that during the Mexican period, Hispanic influence spread to the interior of California; Indians in that region were increasingly drawn into an international fur trading system, increasing both their dependence and their vulnerability.

The Gold Rush permanently altered California's landscape, not only by the massive influx of new settlers, but also by the impact of hydraulic mining, which quickly replaced placer mining as surface deposits were exhausted. Selections from the Sawyer Decision of 1884 and an essay by Robert Kelley highlight the legal struggle between the hydraulic mining interests, whose blasting away of entire hillsides caused debris flows and downstream flooding, and the proprietors of farms, orchards, and vineyards, who watched as their property was repeatedly inundated. Kelley writes that in the wake of Sawyer, "By 1895, the hydraulic mining industry in the northern Sierra was no longer a major element in the state's economy. Bustling mining towns died, schools closed, and much of the mountain country lapsed into drowsy somnolence, a region of ghost towns and quiet forest. The long struggle was over, and the farmer was dominant in the Sacramento Valley" (125).

The next three chapters of *Green Versus Gold* turn toward three of California's most valuable resources: its forests, rangelands, and water, respectively. Although most of the chapter on forests focuses on the nineteenth century, Judi Barry's brief account of the recent Timber Wars in Northern

California is a useful tie to contemporary struggles. Her account of that conflict, which has pitted environmentalists in a fierce battle against Maxxam Corporation, provides a nice complement to Tamara Whited's essay on the Humboldt forests, in which she argues against the historical "inevitability" of the wholesale logging of the redwood forests (159). Instead, she contends that during the first three decades of Humboldt County's existence, settlers conceived of their locale as supporting a mixed economy of "farmers..., fruit growers, raisers of livestock, and fishers in addition to the loggers" (162).

Despite decades of wholesale logging of its forests, perhaps no part of California has been transformed more than its rangelands. Raymond Dasmann discusses how grazing—first by cattle and, after the floods and droughts of the 1860s, increasingly by sheep—altered the grasslands. Native perennial grasses of two principal forms, bunch grasses and sod-forming grasses, succumbed to the pressures of overgrazing and were gradually replaced by exotic annuals such as wild oats and mustards. Yet, Paul Starrs argues that it was ranching that first provided a base for California's economy and an incentive for subsequent settlement. California's initial success during the *Californio* (Mexican) period rested upon "the blossoming relationship between the hide and tallow industry, the rise of California ports and cities from which these commodities were shipped, and the role of ranching society in bringing newcomers to California in the 1830s and 1840s" (203). When taken together, these two essays point to a central, recurring theme in California's environmental history. Exploitation of the natural environment has brought economic success, but at the same time has threatened the resource base of that success.

The documents and essays of the chapter, "Building the Hydraulic Empire," provide important information about the fascinating history of Anglo-American water law in California and the massive Central Valley and State Water Projects. David Iglar presents the infamous *Lux v. Haggin* case not only as the seminal battle between advocates of "riparian" water rights and "appropriation" water rights, but as a window into nineteenth-century representations of nature. Both riparians and appropriators, he argues, "largely portrayed nature as orderly, consistent, and definable — a socially constructed nature both adaptable to the permanency of human law and amenable to the preservation of private property rights" (240). By holding this view, both groups failed to take into account the autonomy of nature. "Reimagining" nature, Iglar suggests, requires such an understanding (245). Whether one accepts Donald Worster's hydraulic thesis, based on the domination of common citizens by giant water bureaucracies, or Norris Hundley's position that control of California's water has resulted from a

complex interaction of individuals, local organizations, and state and federal agencies, it is clear from the selections of this chapter that the underlying theme of California's water development has been the "control of nature," rather than a recognition of its autonomy.

The plight of California's agricultural laborers, past and present, is vividly portrayed in poignant selections from John Steinbeck's *The Grapes of Wrath* and Cesar Chavez's "Farm Workers at Risk," as well as in Sucheng Chan's essay which argues that Chinese tenant farmers and laborers were integral to the development of the Sacramento-San Joaquin Delta as one of the richest agricultural areas in the world. Donald Pisani provides the context for the plight of farm laborers in his essay, which argues that by the early 1930s "most Californians acknowledged, though not always directly, that the health of their economy and society did not depend on the existence, perpetuation, or proliferation of the family farm" (276). He contends that, especially after World War II, irrigation ceased to be an agent to transform society, and became an ally of the agricultural establishment.

The latter nineteenth century witnessed the rise of the conservation movement, in many ways the precursor of modern environmentalism. A chapter on preserving parks points not only to shifting value judgments about nature, but also to specific examples of the schisms within the conservation movement over conflicting views of the appropriate "use" of nature. Roderick Nash's essay discusses the well-known split between John Muir and Gifford Pinchot over the damming of Hetch-Hetchy. Susan Schrepfer discusses the ideological fracture that emerged in the early 1960s between the Save-the-Redwoods League and the Sierra Club over the establishment of Redwood National Park.

The last four chapters of *Green Versus Gold* have a decidedly contemporary flavor, as they focus on battles over energy, the growth of California cities, the rise of environmental science, and contemporary environmental movements, respectively. Unobtrusively, the tone of the documents and essays becomes less purely historical and takes on an increasing sense of urgency, subtly calling on the reader to become involved.

The chapter on energy presents both the history of California's energy development and some of the contested views of the state's energy future. James Williams shows how California twice diverged from the national course, first in the 1910s, when Californians pioneered hydroelectric power development, and again in the 1970s, when residents promoted renewable energy industries as an alternative to reliance on fossil fuels and nuclear power. Thomas Wellock relates the early 1960s battle over Pacific Gas and Electric's plan to build a nuclear power plant on California's Bodega Head peninsula. The plant was never built, defeated largely by

decentralized public activism. Wellock argues that this struggle marks a turning point in the environmental movement, a precursor of “a resurgent desire for participatory democracy” (349).

The title of the chapter “Second Nature: California’s Cities” points to a growing consensus among environmental historians that our cities, built by humans who are ourselves part of the natural world, are also part of nature. Documents in this chapter describe the mostly successful campaign of the 1960s to reverse, or at least halt, the environmental degradation of San Francisco Bay caused by pollution and by landfill for development. Essays address other issues of pressing importance to many Californians. Barry Commoner describes Los Angeles smog, William P. McGowan explores the political legacies of governors Ronald Reagan, Jerry Brown, and George Deukmejian to explain why the state’s freeways and bridges are being seismically retrofitted at such a painfully slow pace, and Mike Davis argues that the “new urban environmentalism”—the politics of slow-growth—is essentially a “reassertion of social privilege” that simultaneously ignores the plight of the inner cities (389).

Practitioners of environmental history are increasingly realizing the importance of both environmental science and ecology to their discipline. It is therefore most fitting that the collection contains a chapter entitled “The Rise of Environmental Science.” Documents address the topics of agricultural experiment stations, biological pest management, the maturation of state forestry, and the protection of biodiversity. Michael Smith’s essay discusses nineteenth-century California scientists whose goal and social vision was “to complete an inventory—and, they hoped, construct a design—for the entire planet and everything living on it” (410). In this short piece, the reader is rewarded with glimpses of Josiah Dwight Whitney, John Muir, Joseph Le Conte, and Alice Eastwood, among others. Smith points out how the grand social vision of these early scientists and naturalists was superseded by the more practically-minded nascent discipline of ecology early in the twentieth century. John Perkins’ essay provides a useful overview and summary of the principles of integrated pest management (IPM) as it has evolved since the 1950s. The chapter concludes with an essay by Michael Barbour et al., in which the authors offer an economic and ethical argument for the preservation and restoration of California’s vegetation.

The last chapter of the book focuses on contemporary environmental movements. The documents in this chapter are particularly rich. Beginning with an excerpt from Ernest Callenbach’s 1975 novel *Ecotopia*, additional documents read like primers on bioregionalism, deep ecology, and ecofeminism. There are also selections on African-Americans and social justice, and on how Hispanic farmworkers stopped

the construction of a toxic waste incinerator near their homes in Kettleman City, California. Robert Gottlieb’s essay on grassroots environmentalism highlights once again the power of groups of local citizens to resist the destruction of their environment. “Since the 1970s, there has emerged, distinct from the mainstream groups, a powerful current in contemporary environmentalism focused on issues of empowerment, environmental justice, equity, and urban and industrial restructuring” (457). The remaining two essays in the chapter relate, in different ways, to how we “know” nature. Mike Davis’ piece complements an earlier selection from John McPhee’s *The Control of Nature*, by a discussion, informed by ecological theory, of the “chaos” inherent in nature. Gary Snyder, in the concluding essay, offers a suggestion relevant to all those who work—or play—in some capacity with nature. He writes: “Beyond all this studying and managing and calculating, there’s another level to knowing nature....One must be tuned to hints and nuances” (460).

Merchant’s concluding essay on environmental ethics points toward one way of arriving at an understanding of nature and how best to protect it. She suggests that we transcend egocentric, homocentric, and even ecocentric ethics, and adopt a partnership ethics that “considers the human community *and* [italics in original] the biotic community to be in a mutual relationship with each other” (471). Such a partnership ethic entails “a new consciousness about nature as an actor and equal subject” (472). Our distant ancestors, perhaps more than our recent ones, would have recognized the wisdom of this view.

When compiling any collection of primary and secondary sources, an editor is always faced with the challenge of rendering the final product into a coherent whole. Carolyn Merchant has met this challenge admirably. Her book emerges not as a history of environmentalism, but as a clear and multilayered story of the history of California’s environment. While each of the 13 chapters ostensibly focuses on a different topic, they are held together by the book’s recurrent themes of attitudinal changes toward nature and of the interrelationship between resource use and human ecology. The plight of agricultural workers, for example, cannot be understood without an understanding of the hydraulic empire and, in turn, of how the presumptions of that empire differed from earlier concepts of water rights. Therefore, while the chapters can be read—or taught—independently, they speak to each other in such a way that readers will come away from the book with a distinct sense of change over time, and of a holistic picture of the state of California’s environment at distinct points in time. The chapters on mining, forests, rangelands, and water define the central issues of the second half of the nineteenth century, for example, while the chapters on energy battles, cities, environmental science, and contemporary

environmentalism define the most pressing issues of the second half of the twentieth, including a taste of the cultural diversity issues inherent in the modern movement.

The documents and essays are excerpted from longer works, and, for the most part, Merchant has successfully edited them without diminishing their intelligibility. In only a few instances do ellipses cloud meaning. Within the individual chapters, there is generally a strong correlation between these primary and secondary sources. In many cases, such as Adele Ogden's essay on Russians and sea otters, and Hans Jenny's essay on Eugene Hilgard and the birth of soil science, the essays parallel the content of particular documents. In other cases, the documents and essays address a variety of issues relevant to the chapter topic, but do not necessarily have a one-to-one correspondence. This is not a criticism, as both approaches work effectively, and the book would appear too forced if Merchant had tried to match each document with an essay, even if this were possible. Still, while conscious of Merchant's attempt to "make the collection accessible and cost-effective," I think the reader—especially the

non-specialist—would have benefited from a very brief historical introduction to the content of each chapter (xxi).

In her introduction, Merchant writes: "No collection can cover every region, resource, and subculture in a place as vast and diverse as California" (xxi). This statement, of course, is absolutely true, and excuses omission of a full treatment of topics such as the infamous water wars between the City of Los Angeles and the Owens Valley. Merchant does include a document on Mono Lake, however, and it is difficult to resist wishing she had included excerpts from the 1994 California State Water Resources Control Board Decision 1631, which ordered the protection of Mono Lake based on the public trust doctrine, a promising avenue of future legal redress for environmental degradation. These criticisms and suggestions are minor, however. Overall, the work stands as an extremely valuable contribution to the burgeoning fields of both California history and environmental history. Students, scholars, and general readers alike will gain insights into the contested and complex history of the "Golden" State.

Good Natured: The Origins of Right and Wrong in Humans and Other Animals

By Frans de Waal

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Frans de Waal, the author of *Good Natured: The Origins of Right and Wrong in Humans and Other Animals*, is a primatologist who has done much of his research at the Yerkes Regional Primate Research Center. This book, together with *Chimpanzee Politics* (1982) and *Peacemaking Among Primates* (1989), is testimony to his wealth of knowledge about primate behavior. The anecdotes and accompanying photo essays in *Good Natured* give the book a popular appeal and will keep nonspecialists who are interested in animals engaged in the text. De Waal's inquiries into the origins of right and wrong are of a piece with other contemporary writers who have urged on us the biologicising of morality, in particular, Richard Alexander (1987) and E.O. Wilson (1975). In this review essay I single out and comment on those remarks by de Waal that bear on the issue of morality.

In a number of places de Waal describes morality in a metaphorical way as the sort of thing that is composed of building blocks (3), or component parts (211), or as a tower made up of floors, the bottom floors occupied by animals and the top floors or "summit" occupied by humans (212). I focus first on what de Waal takes morality to be beyond these parts to whole metaphors of morality. Second, I suggest that de Waal's investigation into the origins of morality have something in common with what Darwin says about the evolution and development of human moral psychology, or the "moral sense." By specifying what is essential to human morality de Waal also apparently believes that we learn something about the morality of animals. His project is, as he puts it, to investigate whether the "building blocks of morality are recognizable in other animals" (3, 39). So there is a kind of extrapolation from human capacities that he believes are morally relevant to seeing that these very same capacities are shared by humans and animals. So, my third task here is to clarify the sense in which de Waal believes animals are moral and to evaluate the plausibility of such a claim.

The Nature of Morality

Although de Waal does not argue for any particular moral theory his views fall clearly into the tradition of David Hume and Adam Smith. Benevolence, he believes, "... nourishes and guides all human morality. . . Moral sentiments come first; moral principles, second" (87). The relevant sentiment, of course, in keeping with Hume and Smith is sympathy and this is taken up by de Waal in Chapter Two. De Waal begins this discussion by mentioning examples of leviathan care, cases where dolphins have saved companions by biting through harpoon lines and whales have come to the defense of other injured whales being hunted by capsizing the hunter's boat. De Waal asks whether such behavior is correctly described as sympathetic. This leads him to distinguish animal succorance from sympathy. The cases he describes involving dolphins and whales do count as cases of animal succorance in virtue of satisfying the following definition: "... helping, caregiving, or providing relief to distressed or endangered individuals other than progeny" (41). In contrast, sympathy is characterized as "concern about another's situation." To claim that dolphin and whales sympathize with others is a harder case to make, admits de Waal.

To his credit de Waal is careful to distinguish two kinds of explanations of behavior. Evolutionary or causal explanations of behavior are designed to explain why a behavior is present by reference to how beneficial it is to the survival or reproduction of an individual or group. In contrast, "vernacular" explanations are those that make reference to motivation, emotions, and intentions on the part of the agent who acts. When de Waal claims the "Human moral judgment always looks for the intention behind the behavior" (15), he has in mind distinctions we make in attributing moral praise and blame to a person on the basis of whether or not she intended to perform an act. Our moral appraisals depend in many cases on the motivation of the agent.

... perceived intentions are the stuff of moral judgment
... With praise and blame being meted out on the basis of our reading of other people's intentions, it is important to know if animals recognize knowledge or intention behind the behavior of others (73).

For the same reason it is important for us to recognize the intention behind the animal's behavior in order to know whether or not that animal is deserving of moral praise or blame.

One way of interpreting de Waal's part to whole metaphors of morality is to suppose that these parts are cog-

nitive capacities that are necessary conditions for being a moral person. De Waal says, for example, that "It is hard to imagine human morality without the following tendencies and capacities found also in other species" (211). Included in the list of ingredients for human morality are "sympathy-related traits," norm-related characteristics, such as prescriptive social rules," "reciprocity," "peace-making, and avoidance of conflict" (211). De Waal seems to appreciate that these traits or characteristics can be defined in a number of ways. For example, the definition of succorant behavior makes no reference to intentional states, while sympathy does entail that the subject to whom this state is attributed has a conception of another's situation and feels concern for another. Likewise for the distinction between cognitive empathy and learned adjustment. A dog may learn that his owner is disabled from the loss of a limb and adjusts by bringing the ball only to that side of his owner that can catch and throw. But this behavior, de Waal suggests, does not imply that the dog understands the disability of his owner in the sense that the dog can picture himself in his owner's position (48). De Waal also says that "conscious community concern is at the heart of human morality" (208). He then goes on to define "community concern" as "The stake each individual has in promoting those characteristics of the community or group that increases the benefits derived from living in it by that individual and its kin" (207). By de Waal's own admission this definition makes no reference to motives or intentions on the part of the subject to whom community concern is attributed. But one might add that what is morally relevant about each capacity that de Waal lists as an ingredient of morality are the intentions and motivations to act on the part of the agent. For example, it is precisely in virtue of those intentional states that motivate a human being to act for the sake of the community that makes us want to say that community concern is morally relevant to begin with.

What evidence do we have that it is concerned to attribute either cognitive empathy or conscious community concern to animals? At least this much seems to follow from de Waal's explicitly stated views about morality. According to de Waal, moral appraisals depend on knowing the intentional states of the agent. He also believes that in many cases these states cannot be read off straightforwardly from the behavior displayed by the animal. The intentionality of animals is not available to us without additional experimentation (96). So what de Waal should conclude on the basis of this is that we do not yet know whether or not animals have the sort of intentionality required to regard them as the proper subjects of moral appraisal. Instead, what de Waal concludes is that animals have the components of morality, one or two bottom floors of morality, an element, or the origins of morality. The last of these claims is on a slightly different footing that

the part to whole metaphors of morality de Waal favors. I explore one interpretation of what de Waal might mean by the "origins of morality" in the next section.

The Origins of Morality

De Waal's investigation into the "origins of right and wrong" is an attempt to explain the biological and causal origins of human moral psychology, or perhaps the causal origins of certain moral principles like reciprocity or altruism. Darwin's views about the origins of morality are close to the surface in de Waal's book, enough so as to serve as an instructive framework for understanding de Waal's project. The debt to Darwin is explicit, for example, when de Waal asserts that "... anyone adopting an evolutionary perspective ... would argue that there must be continuity between the behavior of humans and that of other primates. No domain, not even our celebrated morality, can be excluded from this assumption" (1).

Here de Waal appears to endorse a principle that Darwin also holds, one that I will refer to as the "continuity thesis." This is the thesis that there is "... no fundamental difference between man and the higher mammals in their mental faculties" (Darwin 1930, 66). On Darwin's account, mental development is gradual ranging in degrees of complexity from the lower animals, to higher apes, barbarians, and finally to civilized men. Darwin attempted to demonstrate a continuous and gradual mental development between the lower animals, apes, savages, and civilized men by examples of animals having human-like characteristics which included emotional states. The continuity thesis seems to imply that there is no psychological state that humans have and animals lack, though there are some states that humans have quantitatively more of, or to a greater degree than animals. Darwin suggested that this was so even with respect to moral disposition. So, if there is a gradual development of a "moral sense" that culminates in civilized man, then there must be traces of this moral sense in beings who are lower on the phylogenetic scale that Darwin believed characterized evolutionary development. In other words, to claim that the origins of morality can be found in animals when seen through the lens of the continuity thesis is to imply that animals literally have a share in morality, though this moral sense would be less developed than in savages, and even less so than in civilized man.

But this interpretation is inconsistent with other remarks Darwin makes explicitly denying morality to animals. Darwin says,

A moral being is one who is capable of comparing his past and future actions or motives, and of approving or disapproving of them. We have no reason to suppose

that any of the lower animals have this capacity; therefore, when a Newfoundland dog drags a child out of the water, or a monkey faces danger to rescue its comrade, or takes charge of an orphan monkey, we do not call its conduct moral. But in the case of man, who alone can with certainty be ranked as a moral being, actions of a certain class are called moral, whether performed deliberately, after a struggle with opposing motives, or impulsively through instinct, or from the effects of slowly-gained habit (Darwin 1930, 113).

Only certain kinds of beings have a moral sense, namely civilized humans, because only civilized humans satisfy a number of other conditions that are necessary for a thing to have a moral sense. Anything that has a moral sense must also have social instincts. What we do apparently share with animals are these social instincts. These include a rather wide range of emotional states like affection, sympathy, courage, fidelity, obedience, and love. For Darwin the moral sense is only partly constituted by a psychological state or a feeling of right or wrong in the agent. In addition, anything with a moral sense must have suitably developed intellectual powers, in particular, the capacity to remember past actions and motives, and to compare these with future actions and motivations for acting. Having a language is also a necessary condition for having a moral sense since it is through language that the wishes of the community and the nature of the common good are communicated to individuals. Moreover, a moral agent must be capable of forming habitual practices in conformance to the wishes of the community who act as judges of permissible and impermissible actions (Darwin 1930, 99-100). So what Darwin means by the moral sense is a collection of complex intellectual capacities and social practices that situate an individual.

The continuity thesis says that there is no difference in kind between the mental powers of animals and humans. This allows Darwin to claim with some plausibility that there are gradations or degrees of human psychological traits that can be attributed to animals. But the continuity thesis does not imply a corresponding conclusion about the presence of a moral sense in animals because the moral sense is not merely a psychological state. According to Darwin, the moral sense does develop out of certain affective instincts found in animals and savages. But since animals can have these social instincts without having a moral sense, having these instincts is not sufficient for morality, nor would it seem that emotional states like sympathy or fidelity literally entail the moral connotations ordinarily associated with them. While this may provide something of an explanation of the causal origins of human moral psychology as Darwin conceives it, it does not imply that animals have a less developed or a lesser degree of a moral sense. Darwin says,

The moral sense perhaps affords the best and highest distinction between men and the lower animals; but I need say nothing on this head, as I have so lately endeavored to show that the social instincts, — the prime principle of man's moral constitution — with the aid of active intellectual posers and the effects of habit, naturally lead to the golden rule, "As ye would that men should do to you, do ye to them likewise;" and this lies at the foundation of morality (Darwin 1930, 128-129).

De Waal's apparent endorsement of the continuity thesis suggests that he is aiming for an explanation of the evolutionary development of our moral psychology. In this respect his project coincides with Darwin's, but does not offer anything innovative to this line of argumentation that has had many recent advocates. But de Waal does seem to part company with Darwin on the issue of the morality of animals.

The Morality of Animals

In the conclusion of *Good Natured* de Waal claims that he "hesitates to call the members of any species other than our own moral beings," although he believes that the "... cognitive abilities underlying human morality antedate the appearance of our species on this planet" (210). This remark is reminiscent of Darwin's explanation of the origin of the moral sense in humans. As we have seen Darwin is willing to say that the social instincts which are necessary for the evolution of the moral sense are present in nonhuman animals, but for Darwin the presence of social instincts in an animal is not itself sufficient for morality. Animals are not a little bit moral, according to Darwin, nor are they moral in some derivative sense. However, de Waal goes on to say,

The question of whether animals have morality is a bit like the question of whether they have culture, politics, or language. If we take the full-blown human phenomenon as a yardstick, they most definitely do not. On the other hand, if we break the relevant human abilities into their component parts, some are recognizable in other animals (210).

The abilities relevant to the moral appraisal of human behavior are those that make reference to the intentions and motivations of the agent who acts. So the morality of animals should be gauged by whether or not their behavior is explicable by reference to intentions and motivations for acting. But it is here that de Waal misses the mark entirely. He not only fails to establish that animals have those intentional states that are necessary to regarding an animal as the proper subject of moral appraisal, he at times suggests that this issue is uncontroversial or that it is merely a semantic prejudice to deny to animals those morally relevant intentional states.

Animals, particularly those close to us, show an enormous spectrum of emotions and different kinds of relationships. It is only fair to reflect this fact in a broad array of terms. If animals can have enemies they can have friends; if they can cheat they can be honest, and if they can be spiteful they can also be kind and altruistic. Semantic distinctions between animal and human behavior often obscure fundamental similarities; a discussion of morality will be pointless if we allow our language to be distorted by a denial of benign motives and emotions in animals (19).

To establish that animals have the right sorts of intentional states to warrant moral praise or blame requires more than merely pointing out that animals behave in ways that are similar to the ways in which humans behave when we extend moral praise and blame to humans. At times de Waal seems to appreciate this point insofar as he recognizes that cognitive ethologists have an important contribution to make by investigating what “motivates” animals to act, whether they “realize” how their behavior affects others, and whether they “know,” “want,” or “calculate” (3). Nonetheless, de Waal ignores this issue when discussing actual examples, preferring instead to interpret the animal’s behavior in such a way that the case is already made that animals have the morally relevant intentionality. For brevity I cite only three examples.

Attachment underlies sympathy, and the capacity for sympathy is a morally relevant intentional state according to de Waal (53). If so, then attachment to loved ones who have died will be evidenced by grief. Do animals have the emotional state of grief? De Waal explains that monkeys react to the death of another monkey in ways that are outwardly similar to human grieving. De Waal describes the following anecdote. The wild chimpanzee Flint, who was only 8½ years, died 3 weeks after the loss of his mother upon whom he was unusually dependent. As quoted by de Waal, Jane Goodall suggests that perhaps Flint died of grief since, “His whole world had revolved around Flo, and with her gone life was hollow and meaningless.” De Waal correctly suggests that there may be an alternative explanation namely, that Flo and Flint fell victim to the same disease and Flint had merely held out a little longer (54). But de Waal goes on to add,

Seeing the termination of a familiar individual’s life, chimpanzees may respond emotionally as if realizing, however vaguely, what death means — or at least that something terrible has befallen the other (55).

De Waal’s interpretation seems to be that Flint’s dying implicitly credits him with exactly those intentional states that capture what is morally relevant about the emotion of grief as experienced by humans. This is surprising in the case described since de Waal provides the reader with no addi-

tional evidence to support the attribution of these intentional states beyond the fact that Flint died.

Recall de Waal’s distinction between learned adjustment and cognitive empathy. Does de Waal believe that any animals experience cognitive empathy? Yes, but again he does not actually argue for this view. In describing chimpanzees who tend the wounds of other chimpanzees de Waal says that he “intuitively agrees” that when chimpanzees tend wounds by licking they are motivated by empathy where this implies that they are “aware of the needs of the wounded and demonstrate empathy for the pain resulting from such wounds.” But shortly following this de Waal concedes that the “tending of wounds, per se, tells us nothing about the underlying mental processes” (58). Of course, it is exactly the presence of those underlying intentional states that makes being motivated by empathy morally relevant in the first place. We are not tempted to extend either moral praise or blame to things whose behavior is merely explicable by what de Waal calls learned adjustment.

De Waal might reply that psychological states like empathy come in different degrees, and that there is a range of psychological states from mere agitation at the distress of others to full understanding of another’s predicament that might count as experiencing empathy. In de Waal’s words, “empathy is not an all or nothing phenomenon.” So, if some “element” or degree of human empathy is recognizable in animals, and if the attribution of empathy to humans is relevant to the moral appraisal of their actions, then it is sometimes appropriate to extend our moral appraisals to animals. But this argument suffers from lack of precision about the concept of empathy in which we are interested. Suppose the attribution of empathy in the morally relevant sense necessarily requires the attribution of the “full understanding of another’s predicament”? Then it won’t be true that cases of mere agitation are instances of empathy in the *morally relevant sense* at all. And if so, it will not turn out that animals are the proper subjects of moral praise and blame *because* they are motivated by empathy.

In Chapter Three, titled “Rank and Order,” de Waal directs our attention to the group organization of primates. What is striking about bands of chimpanzees is the social regularity and hierarchies that govern the activities of individuals in such groups. What is morally relevant about the hierarchical organization of groups, according to de Waal, is that they are rule-governed. The sorts of rules we are interested in from a moral point of view are prescriptive rules, rules that specify how one ought to behave (90). But to refer to behavior as rule-governed is ambiguous between two kinds of explanations of this behavior — one intentional, the other not. Chimps (or humans) may behave as if an individual of the group has transgressed a rule that we, as observers,

believe is operative in the organization of that group. In this case a rule that individuals seem to conform to is superimposed on the behavior by the observer herself in order to explain that behavior. It is in this sense, for example, that computers are said to follow rules insofar as they instantiate an algorithm in the program running. But what is *morally* relevant to the notion of rule-governed behavior is that the individuals who appear to conform to a prescriptive rule do so by virtue of recognizing that there is a rule that ought to be followed. This is a very different kind of explanation because it makes reference to how or in what way a rule is represented in the mind of the rule-follower. One might wonder additionally what sort of cognitive representation of the rule is required in order to say that one follows a *moral* rule, as opposed to a rule of etiquette, or a rule of prudence. De Waal does not tackle this difficult conceptual issue, but he does correctly remark that when we, as observers, judge that a rule is enforced in a monkey group we do not know if the rule “exists as a rule” in the animal’s head. This is just the sort of thesis that may be proven in the course of additional experimentation.

De Waal is certainly right to distinguish the morally relevant description of rule-governed behavior, one that makes reference to the intentional state of the animal, from descriptions of behavior that make no such references. Given this distinction the appropriate conclusion to draw is that without additional experimentation or evidence to reveal that monkeys are aware of rules that ought to be followed we just do not know whether animals follow rules in the sense that matters to morality. But without bothering to supply the reader with a substantive reason for doing so de Waal goes on to suggest an interpretation of an anecdote that implies that animals do, in fact, have the morally relevant cognitive states.

A high-ranking female, Puist, took the trouble and risk to help her male friend, Luit, chase off a rival, Nikkie. Nikkie, however, had a habit after major confrontations of singling out and cornering allies of his rivals, to punish them. This time Nikkie displayed at Puist shortly after he had been attacked. Puist turned to Luit, stretching out her hand in search of support but Luit did not lift a finger to protect her. Immediately after Nikkie had left the scene, Puist turned on Luit, barking furiously. She chased him across the enclosure and even pummeled him.

If Puist’s fury was in fact the result of Luit’s failure to help her after she had helped him, the incident suggests that reciprocity in chimpanzees may be governed by obligations and expectations similar to those in humans (97).

This last remark strongly suggests exactly what de Waal earlier had disavowed that a morally laden explanation of an animal’s behavior can be read off the behavior alone. But the evidence for the presence of the right sorts of intentional states, namely, those involving some awareness of obligations of reciprocity prescribed by rules of conduct is nowhere to be found. De Waal provides the reader with no warrant for describing Puist as a rule-follower where this reflects cognition of the rule’s prescriptive character in the mind of the chimp.

Conclusion

De Waal’s conclusions about the origins of right and wrong depend on a number of assumptions. First, is a view about the nature of morality itself. De Waal does not argue for any particular moral theory. The Humean tradition of moral sentiments has its adherents but de Waal does little to convince us that this is, in fact, the right approach to understanding human morality given the plethora of normative ethical theories to choose from. Second, de Waal’s own contribution is to propose a list of ingredients or “component parts” of morality which are then construed as capacities or behavioral characteristics displayed by humans and animals. One might take issue either with the arbitrary collection of “ingredients” that de Waal believes are central to morality, or his interpretation of what counts as a behavior that is, in fact, morally relevant. De Waal is on the right track by singling out definitions for sympathy, community concern, prescriptive rule-following, and cognitive empathy that specify the intentional states that matter to our moral appraisals of agents. But in discussing actual cases he fails to establish that animals have these morally relevant intentional states. So I venture to add that he has failed to establish what I believe he wishes to show namely, that animals are moral.

De Waal may believe that if an animal’s behavior is describable as an instance of “animal succorance,” “learned adjustment,” or as being “rule-governed,” then he is entitled to claim that animals “occupy a few of the bottom floors of morality.” This metaphor is seriously misleading if it implies that animals have a share in morality, or a little bit of morality, or morality in some literal but derivative sense. For what is missing from such an argument is some reason for believing that animal succorance, for example, when defined without reference to the intentional states of the animal is sufficient for moral appraisability. By de Waal’s own admission we need to know what an animal believes, knows, or understands in order to extend moral praise or blame to that animal, and this is information about the animal’s mental states that we do not presently have.

De Waal believes that expressions like “primate culture,” “ape language,” and “chimpanzee politics” are innocuous ones. This way of talking, he suggests, “. . . stimulates debate about how much or little animals share with us” (212). But what he fails to note is how such expressions also function to disguise or gloss over differences between animals and humans. De Waal apparently believes that a reluctance to talk this way constitutes an overzealous commitment to “academic” questions of semantics, which he regards as a waste of time (212). I believe otherwise. There is a semantic issue here but it is not *merely* a semantic issue as the pejorative use of that term implies. What is at stake is whether or not animals should be regarded as having some enhanced moral status in virtue of sharing with humans those cognitive capacities that have moral implications, such as sympathy or empathy. The reason why such emotions have moral connotations in the first place is because they figure into the moral evaluation of human agents who act when they are motivated to act from sympathy or out of empathy. We might, for example, follow Aristotle in taking these motivational states to reflect something about an agent’s virtuous character. So to suggest that animals literally do have these emotional states and that they function as motivations for acting is a substantive philosophical claim about what the concepts of character and moral virtue entail, and the sorts of things that are capable of forming virtuous characters. These questions are only obscured by the use of metaphors.

De Waal may think that it is an asset of his investigation that it invokes no philosophical discussion of morality at all since in the concluding chapter he writes, “We seem to be reaching a point at which science can wrest morality from the hands of philosophers” (218). I believe this is a premature assessment. Ideally, philosophers and biologists can collaborate in an investigation of the empirical and conceptual issues that surround the question “Are animals moral?” The issues that de Waal tackles in *Good Natured* are interesting and difficult. But for this very reason there is a need to do the kind of precise conceptual analysis of moral issues that philosophers have traditionally undertaken.

References

- Alexander, R. D. 1987. *The Biology of Moral Systems*. New York: Aldine.
- Darwin, C. 1930 (1871). *The Descent of Man, and Selection in Relation to Sex*, 2nd Edition. New York: D. Appleton and Company.
- de Waal, F. 1982. *Chimpanzee Politics: Power and Sex among Apes*. London: Jonathan Cape.
- de Waal, F. 1989. *Peacemaking Among Primates*. Cambridge, Mass.: Harvard University Press.
- Wilson, E. O. 1975. *Sociobiology: The New Synthesis*. Cambridge, Mass.: Bellknap Press, Harvard University Press.

Guns, Germs, and Steel: The Fates of Human Societies

By Jared Diamond

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What explains the history of conquest in the world? Why was it that Europeans and Asians decimated, subjugated or exterminated the Native Americans, Africans and Aboriginal Australians instead of the other way around? Diamond's catchy title — *Guns, Germs, and Steel* — turns out to be only part of the answer.

Diamond advances the remarkably bold argument that “the striking differences between the long-term histories of peoples of the different continents have been due not to innate differences in the peoples themselves, but to differences in their environments” (405). Dr. Diamond, a professor of physiology at the UCLA School of Medicine, is a highly regarded scientist and theorist in the field of evolutionary biology. Given the nature of his research he is well positioned to identify and draw linkages between the variability in human development as influenced by geographical and environmental factors. Diamond claims that three sets of factors lay behind Eurasian dominance. The first relates to continental differences in the wild plant and animal species suitable for domestication. Areas blessed with rich access to such resources could move from the hunter-gatherer stage to agriculture and sedentary living more rapidly. And it was sedentary living that produced the agents of conquest: guns, germs, writing, technology and central political organization.

Ecological and geographical barriers make up the second set of factors Diamond identifies. He reasons that the east-west axis of Eurasia made intercontinental spreading of crops, livestock and technology easier than in Africa and the Americas, where the north-south axis created major geographic and ecological barriers. Diamond writes: “The cool highlands of Mexico would have provided ideal conditions for raising llamas, guinea pigs, and potatoes, all domesticated in the cool highlands of the South American Andes. Yet the northward spread of those Andean specialties was stopped completely by the hot intervening lowlands of Central America” (187). In the case of Africa, the tsetse flies hampered the spread of domestic animals and in terms of agriculture, “the 2,000 miles of tropical conditions between

Ethiopia and South Africa posed an insuperable barrier” (186). North America was hampered not only by the north south axis, but also by barriers on the same latitude. Crop diffusion was slow and selective between U.S. Southeast and Southwest mainly because of the intervening area of Texas and the southern Great Plains, which was unsuitable for agriculture. Consequently, “No waves of native grain ever stretched from the Atlantic to the Pacific coast of North America, from Canada to Patagonia or from Egypt to South Africa, while amber waves of wheat and barley came to stretch from the Atlantic to the Pacific across the spacious skies of Eurasia” (190-191).

The third set of factors is related to continental differences in population density and total population size. Higher population density is closely connected to sedentary living, which was introduced with agriculture and the domestication of animals. The domestication of animals in combination with sedentary living is thought to be a key factor behind the development of diseases such as measles and small pox in Eurasia. “The continental difference in harmful germs resulted paradoxically from the difference in useful livestock. Most of the microbes responsible for the infectious diseases of crowded human societies evolved from very similar ancestral microbes causing infectious diseases in the domestic animals with which food producers began coming into daily contact with around 10,000 years ago. Eurasia harbored many domestic animal species and hence developed many such microbes, while the Americas had very few of each” (357). Since smallpox, measles, influenza, plague, tuberculosis, etc. visited Eurasia regularly, parts of the population developed immune or genetic resistance, contrary to the Native Americans, who without such built-in resistance, were extremely vulnerable to the influx of these germs, when introduced by the Europeans.

The three sets of factors come together in Diamond's hypothesis, that the spread of agriculture and sedentary living may be the prime factor behind the Eurasian dominance. Together they made it possible for the Eurasian continent, not only to develop agriculture and sedentary living, but also the right societal organization to promote technological inventions and spur outward expansion. Although aspects of the three factors can be found in several areas of the world, it is the striking combination that gave the Eurasian continent its advantage. In the words of Diamond, “Thus, we have identified three sets of ultimate factors that tipped the advantage to European invaders of the Americas: Eurasia's long head start on human settlement; its more effective food production, resulting from greater availability of domesticable wild plants and especially of animals; and its less formidable geographic and ecological barriers to intracontinental diffusion” (370).

Diamond does not rule out factors such as culture, strong and/or intelligent individuals, religion or economic systems, but he states that they are of secondary importance. In the case of technological development, he writes, "All human societies contain inventive people. It's just that some environments provide more starting materials, and more favorable conditions for utilizing inventions, than do other environments" (408). There are obviously areas in the world where the environmental conditions are similar, but where the development has taken different paths. Here, the influence of culture, political organization, and great men/women may have played a significant role.

One could ask why Diamond places geographical factors before social and cultural factors. The answer may lie, in part, in his professional agenda. Diamond's intention with *Guns Germs and Steel* is to further an historical science — a science that would be able to learn from and complement evolutionary biology, geology, and climatology. He declares, "I am thus optimistic that historical studies of human societies can be pursued as scientifically as studies of dinosaurs — and with profit to our own society today, by teaching us what shaped the modern world, and what might shape our future" (425). Hence, Diamond sees culture, religion and market systems as less deterministic than physical environment. Human ecologists will find much to agree with in Diamond's analysis, however, many of us will disagree with his dismissal of the importance of social, cultural, economic and psychological factors that shape intersocietal relations as well as relations between humans and nature.

While reading *Guns, Germs and Steel*, I was reminded of *Global Rift, the Third World Comes of Age* by L. S. Stavrianos (1981). That book also attempted to tackle the question of how the world order has developed, although Stavrianos takes a social science perspective. Just as Diamond did, Stavrianos recognizes geographical accessibility and interaction as essential factors explaining the western dominance. There is one main difference, however, Stavrianos sees capitalism as the major influence. The development of a strong merchant class in Europe in the mid 1400s was part of the evolution of a body of economic theories and practices known as mercantilism, a new and inherently expansionist commercial order that stimulated the discovery of new lands, and the acquisition of colonies, overseas. Diamond does not connect capitalism with expansionism.

Diamond analyzes the differences in development between China and Europe, which both seemingly had the "right" prerequisites for being world conquerors. He concludes that the political disunity of Europe is the reason. China's unity was disadvantaged by despotic rule. A decision by one despot could and repeatedly did halt innovation and

progress. Diamond asks how this could happen; and again he finds the answer within the realms of geography. "Europe has a highly indented coastline, with five large peninsulas that approach islands in their isolation, and all of which evolved independent languages, ethnic groups, and governments" (414). China on the other hand, had a smooth coastline, few barriers in form of mountains, and long navigable rivers. As a result, China very early became dominated by two huge geographic core areas of high productivity, themselves only weakly separated from each other and eventually fused into a single core.

This is a book with an anthropocentric focus, and hence, it deals very little with the environmental consequences that the development and usage of certain tools have had on ecosystems around the world. However, this should not be seen as a weakness since the author never set out to do anything but explain human history.

Guns, Germs, and Steel attempts to be objective and describe human history without judging the historical development as right or wrong. Diamond states: "My motive for investigating these geographic differences in human societies is not to celebrate one type of society over another but simply to understand what happened in history" (18). This (post) positivistic approach makes the book easy to buy into, although it would have been interesting if the author would have included a more subjective analysis of the ecological and social consequences of human development.

To conclude, the book is very well written and it is worth reading. *Guns, Germs and Steel*, which won the Pulitzer Prize 1998, can be of interest for human ecologists as it gives a thorough and innovational rationale for the development of the human environment. There are dimensions to human history that Diamond does not emphasize, and although the geographical emphasis is both relevant and interesting, it may not be sufficient. Hence, I think that it should be seen as one of several contributions to the discussion about human history.

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References

- Diamond, J. 1997. *Guns Germs and Steel: The Fates of Human Societies*. New York: W. W. Norton.
- Stavrianos, L.S. 1981. *Global Rift: The Third World Comes of Age*. New York: William Morrow.