With the growth of economic globalization, marked by the trade policies of the WTO, World Bank, and IMF, more and more corporations are taking over what used to be considered common resources. Under the neo-liberal economic model, privatization of fresh water will solve the problems of water scarcity and pollution. The market will repair the decaying pipes that cause waste and expand infrastructure in order to make water available to areas that could not receive it. Moreover, according to this model, water will be priced consistent with its "true" value, therefore reducing over-consumption, pollution, and waste. However, this is an illusion. It is clear that because of water's vital role in sustaining life, it has an extremely high use-value. The goal of a capitalist enterprise is not to supply use-value, but to accumulate the surplus-value that comes from exchange, i.e. profit.

The primary goal of private corporations is to serve their shareholders, not to meet public needs. Prices will be set to ensure profits. This can only lead to increases in prices that will price the poor out of the market, as was the case in the city of Chochabamba, Bolivia where water giant Bechtel purchased the city's public water utility. In two years Bechtel raised water rates by nearly 35%. In addition, corporations will not promote water conservation. As with all capitalist enterprises, their continued prosperity depends on growth, not conservation. This "growth imperative" is environmentally disastrous and ultimately unsustainable.

In the final section of *Blue Gold*, "The Way Forward," the authors propose an approach toward meeting the world's fresh water needs while conserving supplies. Their solutions include more "sustainable, equitable, and efficient technologies," implementing "green taxes" as well as raising corporate taxes in order to fund water accessibility and reduce waste, institutional restructuring such as changing the way food is produced, and the expansion of organizations and social movements that promote water sustainability.

Their solutions point to the structural contradictions within the capitalist economic system. While these solutions are commendable, they are unlikely to take hold under the current economic model. Corporations will use all of their political power to thwart any changes that will increase their tax burden or reduce their ability to commodify the commons. It might be said that this economic model is what is causing not only the degradation of fresh water supplies but the degradation of the environment as a whole. As Barlow and Clarke themselves note, "In fact, almost everything we do in modern industrialized societies is guaranteed to deepen the global fresh water crisis...our leaders have entrusted our lives to those solely driven by profit" (p. 206).

In all, Blue Gold is a valuable book that informs the reader on a variety of issues surrounding the scarcity and commodification of the earth's fresh water supplies. It will give the reader a broad look at the drive toward privatization of this precious resource. In doing so, it may point more to the inevitability of this development in a capitalistic society than to the possibility of progressive solutions within it.

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Natural Enemies: People-Wildlife Conflicts in Anthropological Perspective

Edited by John Knight
London: Routledge, 2000
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Human relationships with wildlife are complex and multifaceted. It is not uncommon for conservationists, in an effort to raise awareness and build support for biodiversity conservation, to focus on the positive side of human relations with wildlife such as the role of wild species in controlling pests and pollinating crops, sacred and totemic associations, and aesthetic and ethical values. Not surprisingly, a book on human-wildlife conflicts titled *Natural Enemies* takes a different approach, focusing in on a narrow range of human-wildlife relationships — those of intense conflict. This narrow focus should not be confused with one-sidedness, however, since the contributions to this volume provide many broader social and cultural insights into human-nature relationships. This book convincingly shows that human relationships with wildlife go beyond the material, and illustrates some of the many ways in which wildlife play a role in social relations and discourse. It does this by bringing together papers by 10 social and cultural anthropologists (mostly European in either origin or training) to examine people-wildlife conflicts, focusing the major themes of: 1) the socially constructed character of pestilence discourse, 2) relationships between wildlife pestilence and conservation, 3) symbolic dimensions of wildlife threats, 4) moral specification of dangerous animals, and 5) the variety of ways that wildlife conflicts overlap with conflicts among people. These case studies reveal the social and cultural complexity of wildlife

discourse and human-wildlife relationships, showing how human-wildlife conflicts can be strongly influenced by the cultural symbolism of the animal in question and linked to social relationships and conflicts.

The dominant theme of the volume is that wildlife species may play social and cultural roles in human society well beyond their material importance. Several chapters deal with shapeshifting, or the attribution of wildlife damage to humans who have taken animal forms. Köhler interprets the *Mòkìlà*, people with the power to shapeshift into elephants, as described by the Baka of the Congo as embodying human-elephant sharing relationships. The Baka portray the killings and kidnappings attributed to *Mòkìlà* as collective revenge and use them to reconstruct community. Köhler disputes a political economy interpretation of *Mòkìlà* tales as reflecting recent western anxiety about wildlife commoditization and conservation, arguing instead for deeper historical roots that include the 19th century ivory trade and represent a local sharing problematic. As such, *Mòkìlà* tales lay out a moral structure that express the potential to either continue or to fail at sharing. Rye discusses wild pigs and "pig-men" in Sumatra. When wild pigs destroy the Javanese migrants' gardens, this damage is attributed to pig-men associated with forest people. This interpretation reflects the transmigrants notion that they are not welcome in Sumatra and that native forest people would like them to give up and leave. In both these cases, the stories are grounded in real instances of wildlife damage to crops, but also tell larger stories about social relationships.

Many of the papers in the book expand on Claude Levi-Straus's observation that animals are "good to think" as well as to eat. That is, animals provide symbolic vehicles for representing or working through social relationships and cultural ideas. For Richards, "chimpanzee business" (also involving shapeshifting) is an instance of humans using animal behavior to model social conflict or to pursue political projects. Similarly, the pig-men of Sumatra reflect larger themes of longstanding anthropological interest in relationship to "the other," including ascription of inferior traits to the other, symbolic construction of otherness in terms of civilization and savagery, and the use of derogatory constructions in relationships of power and dominance.

Several papers deal with the role of wildlife pests in structuring thoughts and social relationships between the rural and the urban, and between the economic center and the periphery, in developed countries. The case of a community pigeon shoot in a rural Pennsylvania town is in many ways more exotic and shocking than shapeshifting in other cultures. Song convincingly shows that the pestilence discourse around pigeons is poorly grounded in actual problems with pigeons and that the importation of pigeons for the shoot actually increases the number of pigeons in the community. Song sees the pigeon shoot as an enactment of the hostility that rural residents feel towards the urban and what they see as its contagious culture and disease. Similarly, Marvin presents fox hunting, and the controversy surrounding it in the English countryside, not as a reflection of actual pest problems, but rather as the dramatization of a social conflict in which the fox is the focal point of a larger debate about legitimate and illegitimate forms of killing in the rural countryside and appropriate and inappropriate relationships between humans and wild animals. Lindquist finds strong symbolic associations on both sides of the conflict between Sami herders and urban neoshamans over wolves in Sweden. The neoshamans use the wolf as an abstract symbol in their search for spiritual truth and an authentic self, while, for the Sami, the issue of wolves goes beyond their real experiences with real wolves as livestock predators to encompass their efforts to defend their cultural identity from encroachment.

Several papers deal with conservation. Milton's case of conflict over control of the non-native ruddy duck in Europe signifies an ideological conflict between caring for individual animals (animal rights) versus a more ecologistic approach focusing on species and ecosystems. In rural Japan, Knight finds that, in addition to being a physical threat to farms, timber plantations, and people, bears are also a symbolic threat. Bears have traditionally been associated with the uncivilized, and the presence of bears has called into question the fitness of an area as a place for human settlement. Yet, as bears are increasingly displaced by people, urban notions of it as a cuddly victim are ascendant, with conservationists portraying violence towards bears as uncivilized. Campbell examines indigenous stories of animals behaving badly in Nepal, finding that they present relationships between species as characterized by dispute and difficulty over their differences. He contrasts this explicit acknowledgment of conflict to what he terms "the desocialized vision of nature held by conservationists." Milton argues that the ruddy duck issue in Europe is fundamentally about boundary maintenance. Conservationists, she suggests, need to maintain the distinction between what is natural and what is human, because this distinction underpins conservation itself. If conservationists were to abandon this distinction, they would lose an important source of value and justification of their work. However the distinction is ultimately contradictory, since the objective of nature conservation is to conserve what is natural through unnatural means (human action). Finally, Richards argues that, in the case of chimpanzees in Sierra Leone, conservationists need to be aware that the species they are seeking to conserve has cultural meaning that reflects historical social and economic tensions. Richards suggests that if conservationists try to apply an economic solution that relies on the

chiefs for implementation (who the egalitarian communities already suspect of antisocial behavior associated with "chimpanzee business"), the result could be perverse — angry young people might kill chimpanzees or oppose their conservation as social protest.

This book provides a broad and full understanding of the social and cultural aspects of human wildlife relationships for human ecologists and conservationists. Clearly, narrow perspectives on human wildlife relations that focus only on the material or economic, while omitting the cultural and social, fail to consider the full range of human relationships with wildlife specifically and with nature more generally. On the other hand, the opposite approach of extreme social constructionism is limited in failing to recognize that many of these constructions are grounded in material experiences. The resulting conclusion that we need to fully contextualize human wildlife interactions within the larger social, cultural, and ecological spheres where they are played out provides an important insight and a sound basis for future research and practice.

NonZero: The Logic of Human Destiny

By Robert Wright
New York: Vintage Books, 2000
ISBN: 0-679-75894-1

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This is the kind of book that makes a lot of social scientists nervous. For starters, it attempts to explain all of biological and cultural evolution with reference to the same underlying principle. Wright also argues that this evolutionary change actually leads somewhere: note the subtitle, The Logic of Human *Destiny*. At a minimum then, *NonZero* ought to prompt a lot of discussion, assuming it is not dismissed summarily.

Perhaps we should start with the question, Why all the likely consternation? Most social science, with the possible exception of anthropology, long ago grew weary of evolutionary schemas in general and of putative linkages between biology and culture in particular. While many social scientists in general (and perhaps sociologists in particular) would cheerfully admit credence to biological evolution as an explanation for the origin of human beings, acceptance of its relevance typically ends there. For instance, a recent review of best-selling Introductory Sociology textbooks revealed that the authors, across the board, reported that "little or no empirical evidence exists to support sociobiological explanations of human behavior" (Machalek and Martin 2004, 6). Likewise, the notion that human history is headed somewhere, i.e., that the directionality of change is nonrandom, remains a contentious claim. As Wright himself notes, Franz Boas, arguing against directionality, once dismissed the notion of cultural evolution as "a cheap toy for the amusement of big children" (p. 15).

Such is the terrain on which Wright's seeds fall, yet fearlessly he proceeds. He argues that the "secret of life" was discovered by John von Neumann and Oskar Morgenstern, who provided us the concepts of zero- and non-zero-sumness. The former are interactions in which success by one equals failure for another, while the latter refers to those in which the outcomes for both actors may be equally and infinitely good (or bad). Happiness, to illustrate, typically is non-zero-sum: my escalating happiness need not make you increasingly sad, even if seeing me happy makes you sad. Happiness, on the other hand, would be zero-sum if you became sadder and sadder because I used up, thereby draining from you, a larger and large share of the world's quota of happiness. According to Wright, this elementary principle of game theory can be used to account for all increasing cultural complexity:

> *...[O]n balance, over the long run, non-zero-sum situations produce more ...mutual benefit than parasitism. As a result, people become embedded in larger and richer webs of interdependence.*
>
> *This basic sequence — the conversion of non-zero-sum situations into mostly positive sums — had started happening at least as early as 15,000 years ago. Then it happened again. And again. Until — viola! — here we are, riding in airplanes, sending e-mail, living in a global village.* (p. 6)

Though the tone in these last sentences is a bit frivolous, what follows in the first three-fourths of the book is not. Using this principle, Wright sets about the task not only of describing the transition from hunter-gatherer to horticultural-herder to agrarian and then industrial society, but also of arguing that the principle is genetically based ("the arrow human history begins with the biology of human nature," p. 19). The last one fourth of the book applies the same principle to biological evolution — shrewd positioning, as by this time many social scientists will have put down the book.

They shouldn't. This is a serious discussion about serious things, about issues that matter. To address these issues in reverse of the order introduced above, many social scientists would do well to revisit their thinking on the biological