

## ***Environment, Scarcity, and Violence***

**By Thomas F. Homer-Dixon**

Princeton, NJ: Princeton University Press, 1999

253 pages, cloth

ISBN: 0-691-02794-3

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While there is a growing body of work on how social, political and economic arrangements affect the environment, there are few studies exploring how the environment affects social outcomes. In this volume, Thomas Homer-Dixon adduces a wide array of empirical work linking environmental degradation with violent outcomes, and articulates a preliminary theoretical framework to explain these linkages.

The central thesis of the book is that scarcity of renewable resources can, in combination with other social factors, contribute to macro-level violent outcomes such as ethnic clashes and insurgencies. Yet the role of environmental scarcity in causing violence is seldom simple, direct and linear. Rather, as Homer-Dixon points out, violent outcomes are often the product of interactions between scarcity and a number of other factors, such as inequality, migration, and the functioning of social institutions. Because violence rarely is caused by scarcity alone, it has been typical for researchers to look to the factors with which it interacts as the causes. Homer-Dixon calls for a more complex and nuanced view — a multivariate, non-linear and interactive view — of the social and ecological world.

Homer-Dixon presents an overview of intellectual currents over the last two centuries, first focusing the discussion around the broad trends of neo-Malthusian population-based ideas, economic theories of ingenuity and optimism, and resource distribution models. Drawing on prior work in complexity theory (e.g. Broecker 1987; Holling 1994), Homer-Dixon makes a compelling case that researchers should be attentive to a number of non-linearities, such as thresholds and interactions, and should accommodate to the possibility of systems having multiple-equilibria.

He then gives overviews of nine physical trends of global change: human population growth, rising energy consumption, global warming, ozone depletion, cropland scarcity, freshwater depletion, decline of fish stocks, and biodiversity loss. Each of these could be expanded into a treatise in its own right.

In examining the increasingly common phenomenon of cropland scarcity (see 63 ff.), for example, he notes that

“Experts generally describe a country as ‘land scarce’ when 70 percent or more of the arable land is under production.” He finds it ominous that in Asia, which has four of the five most populous nations, over 80% of all arable land is cultivated. Herein he makes an entirely plausible case, although he may well be wrong in the details. A reader could well wonder, for example, who are the “experts” he alludes to, have these experts done a rigorous set of tests to come up with the 70% figure, or is it an educated guess? With the crucial caveat that some of the specific pieces bear questioning, the overall picture he presents merits consideration.

Homer-Dixon follows through on his earlier discussion of complex systems, and he spends a considerable amount of the text grappling with higher-order interactions. He sees two such interactions as particularly important, and they bear noting here: “resource capture” and “ecological marginalization” (see 73 ff.). The first refers to situations in which a society has a large growth in population, in combination with shortage of some renewable resource. It is often the case in such situations that elites within a society are able to garner much of the resource(s) for themselves — to engage in resource capture. Ecological marginalization occurs when precipitous population growth is overlaid on already serious inequality in access to scarce resources, most notably land. This tends to be followed by migration into ecologically fragile regions.

Homer-Dixon looks to relations between Arabs and Israelis on the West Bank of the Jordan River for an example of resource capture. The chronic water deficit there has been addressed with the expedient of overpumping aquifers. In addition to the long-range environmental problems this was bound to cause, the details of implementation exacerbated existing social problems as well. Israel restricted the number of wells Arabs could drill, and limited the amount of water that could be pumped from them, which in turn led to a drop in Arab agriculture. While he admits the links between such dynamics and the “unrest” on the West Bank are less than clear, he argues that it is not unreasonable to believe there is a relationship.

Ecological marginalization can lead to critical social as well as environmental problems, especially when it occurs in combination with resource capture. He interprets the well-known violence in Chiapas, Mexico in this framework. As the population of indigenous peoples and field workers increased steadily, there was an increased demand for more agricultural land. Even as the land being claimed for new cultivation was increasingly marginal, local elites asserted greater control over the best land. This social closure by elites contributed to a cycle of demand for even more marginal land among peasants, accelerating environmental impact. The combination of this with declines in agricultur-

al subsidies led to an economic crisis and a collapse of the legitimacy of the ruling party, which in turn fed into the mobilization of the Zapatista insurgency.

Yet scarcity-induced violence is not unique to rural areas. Serious urban problems can be precipitated by a chain of social and environmental causes (see 155 ff.). One such causal chain could be a situation in which rural population growth, environmental degradation and unequal distribution of resources lead to falling wages and further environmental degradation and an accompanying marginalization of peoples who already were relatively powerless. When this is accompanied by rural-to-urban migration, particularly of relatively young people, the demand on resources goes up precipitously. Especially if unemployment is extensive, there is considerable risk of widespread violence.

He adduces preliminary research indicating that scarcities of environmental resources, such as cropland, water and forests often lead to social stresses within countries. These, in turn, can and do often lead to civil unrest. Equally important is Homer-Dixon's attempt to define the scope of the phenomena in question. Put another way, he makes a serious attempt to speak to what kinds of violence do not necessarily stem from environmental scarcity. He does not, for example, find much evidence that environmental scarcity has led to war between nations.

Homer-Dixon's book is primarily a theoretical work, bolstered by an array of references to empirical studies. This work is not empirical in itself. He attempts to create an overarching framework linking environmental scarcity and violence. While a number of his linkages bear closer scrutiny, the overall picture he presents is compelling. He connects an array of more tightly focused studies which, when taken together, warn of a world on the brink of catastrophe.

With environmental degradation comes increasing scarcity, and that is likely to become more acute as time goes, and so violent outcomes are likely to increase in the future. Homer-Dixon holds out real hope of addressing those problems, however. The cycle of scarcity, violence, and disruption leading to further scarcity, etc. can be mitigated by the ingenuity of a society, in terms of its ability to generate ideas to help solve technical and social problems. While Homer-Dixon discusses factors that can mitigate ingenuity itself (e.g. market failure, social friction, and cognitive limits on understanding processes that are often complex, nonlinear and even chaotic), I was left wishing he had given more attention to the critical question of what social factors would tend to cause the ingenuity that is generated to take a pro-environmental turn, as opposed to a perverse one.

In the least, a number of his assertions are empirically testable. This book presents a challenge to researchers. It presents a way of thinking about relationships between envi-

ronmental trends and catastrophic social outcomes. While he correctly points out the importance of context, he appears overly enamored of qualitative, national case studies, rather than quantitative, cross-national research (e.g. see the Appendix on "Hypothesis Testing and Case Selection"). While there clearly is a need for case studies, an equally strong argument should be made that certain patterns only emerge when seen in the light of cross-national treatments. World system processes, for example, emerge most clearly only when attending to relationships that go far beyond national boundaries (e.g. Tilly 1984).

Most of the conjecture in the book is highly engaging and is supported by citations of empirical studies. Yet some of the arguments struck me as being made as much by fiat as by hard evidence. The assertion that scarcities of renewable resources are more important causes of violence than scarcities of non-renewables seemed poorly supported, for example. Also, given that there is covariation among environmental and social factors and violence, questions of which of these relationships may be spurious, warrants careful consideration. A smaller issue of form bears noting as well: while the book cites numerous sources and is richly endnoted (there are 57 pages of endnotes), the book lacks a general bibliography. It does have an abbreviated reference section marked "General Readings on Environmental Security," but the author (or the editor) could have saved the serious reader some time and aggravation by simply supplying a full reference section.

Despite some flaws, this is an important and even path-breaking book. The author has amassed existing patterns of findings from otherwise disparate work from an array of disciplines, and has woven them into a plausible whole. While the reader could question a number of the precise linkages, the overall pattern is indeed compelling. In many ways, the book is a *tour de force*.

Thomas Homer-Dixon has done us a service by framing an extended discussion around crucial issues. *Environment, Scarcity, and Violence* raises questions that scholars would do well to examine in a great deal more depth, and that citizens and policy-makers ignore at the peril of the natural environment and of society. It deserves a wide and serious reading.

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***The Story of Vermont:  
A Natural and Cultural History***

**By Christopher McGrory Klyza and  
Stephen C. Trombulak**

Middlebury College Press/University Press of New England, 1999  
Paperback \$19.95 ISBN 0-87451-936-5

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One of the best ways to understand human ecology is to examine the long term evolution of a landscape. To do so grounds one in a concrete place, requires attention to evolutionary processes and encourages a reasonable holism that takes account of, if not everything, all those things that matter. *The Story of Vermont* takes on exactly this task and guides the reader through the geologic, climatic and anthropogenic transformations of the landscape that is now Vermont.

Klyza and Trombulak begin by sketching the geologic history of the region. Then in five chapters they move through the key periods in human habitation of Vermont. Here the excellent studies by Bill Cronon and Carolyn Merchant have paved the way, but *The Story of Vermont* also makes significant use of primary and less well known secondary sources. Having established the evolutionary history of the Vermont landscape, Klyza and Trombulak then spend three chapters describing the typical forest, open terrestrial and wetland and aquatic communities of the region. The book concludes with a chapter on the future.

Such an ambitious undertaking is not without its limits. I was sorry that the authors did not more directly engage with ecological and human ecological theory. While the book is intended for the general public rather than academic audiences, theory can help readers understand the processes underlying a specific historical event and thereby help think about the future. More extensive use of graphics, maps and photographs would have been helpful and perhaps these can be added in future editions.

More could have been made of the interesting and complex cultural history of Vermont, especially as it relates to state and local decision making. Vermont has always been in the forefront of struggles for civil rights. It was one of the strongest advocates of abolition and even today is struggling with how to implement spousal rights for gay and lesbian couples. Over the last century and a half it has been one of the most staunchly Republican states, yet there is only one Republican in the current Congressional delegation, which also includes the only independent socialist in the U.S. Congress (Rep. Bernie Sanders). It is a state noted for policies to preserve the landscape and in which access to state government is very open and yet one where local growth machines dominate current development patterns. All these important and seemingly contradictory forces contribute to the complex dynamics of political culture and power. They will be central to how Vermont changes over the next decade, and deserve more extensive consideration.

The lack of attention to political institutions and culture parallels the limited attention to current issues. Current issues are sketched in a few places and some effort is made in made in the final chapter to integrate key trends into an overall perspective. But this section fell short of its potential. Vermont is facing great stress from sprawl development and is being influenced by a number of external stressors, including climate change, invasive exotic species and acid precipitation. Yet, in my experience (including several years as a town Planning Commissioner in Vermont) most decisions about development are made without much attention to these larger dynamics in which they are embedded. After developing a careful history of the evolution of the Vermont landscape, Klyza and Trombulak are in a perfect position to show readers the current interplay of exogenous and internal forces. Such an analysis could have a real impact on how Vermonters think through local decisions that have larger implications.

But these are faults in something quite extraordinary. Klyza and Trombulak have produced a wonderful example of human ecology at its best. Every schoolchild and elected official in the state should be required to read *The Story of Vermont*. The perspective it offers would lead to a more informed citizenry and far better public and private decisions.

## **Families on Small Farms: Case Studies in Human Ecology**

**By M. Suzanne Sontag and Margaret M. Bubolz**  
East Lansing, MI: Michigan State University Press, 1996  
432 pages, \$45/hardback ISBN: 0870134094

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What emerges in the intersection between landscape and lifestage as households dedicate themselves to creating a more sustainable world through farming? What changes occur on the land and in the business environment and what changes occur within the household? What are the appropriate measures for studying this change? What policies do these changes suggest that can facilitate a new way of households farming and interacting in the environment?

Available land and housing on an experiment station farm and increasing concerns about energy and environmental degradation coupled with the need for alternative farming models inspired Michigan State University to undertake a unique experiment in the early 1980s. Led by faculty in the College of Human Ecology, the University solicited proposals from households who wished to move to a rural setting, who wanted to farm sustainably, and who wished to establish a home-based business. The couples (presumably the search was limited to legally married heterosexual couples) had to prepare a detailed farm and business plan, as well as submit statements showing a commitment to voluntary simplicity and sustainable agriculture.

Three families were chosen for this experiment out of more than a hundred families who applied. Two of the chosen couples are the subject of this book. A complex human ecology framework, which is less a theory than a nested-systems approach, was used to understand human behavior and change. The family farm ecological model is laid out fully, as are the methodologies used to measure it and understand the interrelationships.

A series of qualitative and quantitative participatory and objective measures were developed to mark the changes over time to illuminate the rich description of the changes in farms and families. Of particular interest were each adults' perceptions of family relations and their own health and well being prior to the projects initiation, during several midway points, and as the project ended.

One cannot help but be impressed with the insights Michigan State University (MSU) gained from this experiment. The young couples were in early stages of family for-

mation, without farm backgrounds. They left their urban lives behind, which, for one couple, included selling their home at a loss. They moved to the experiment station, remodeled the old houses to be energy efficient, built appropriate out-buildings, transitioned the land from input-intensive to organic production methods, set up complex, rotational crop/animal farming systems, and found new off-farm work in the new communities in which they located. They formed new friends (particularly each other) and entered into activities, particularly informal ones, in the nearby community.

One of the families had their first child in the course of the experiment. Interestingly enough, neither of the proposed home-based businesses developed. One was to be a massage therapy business run by the wife, and the other household was to be a home-based bakery run by the husband. Searching for and commuting to off farm work consumed all available time not devoted to restoring the house and farm. It is possible that the technical assistance proffered by MSU through its extension program privileged home and farm over business endeavors.

The experiment documents an increase in satisfaction as the couples developed the many skills necessary to put their homes and farms into shape. The human ecology nested systems perspective allows consideration of integration into the community. Community linkages are followed in terms of the informal learning that took place with neighbors, as well as the informal pressures to use more inputs and to farm more conventionally. A critical linkage for the women was informal cooperative child-care, which allowed them time to farm or just relax.

One is filled with respect for the amount of work and reflection done by these two households, one with two young sons and the other with a new baby. Major difficulties faced were economic, although the University provided a series of loan funds. University bureaucracy, in its typical way, managed to delay the availability of these funds, slowing down the construction of a greenhouse and other major infrastructure improvements. And there was still the debt each family incurred in making the home and farm improvements (which apparently went back to the MSU Experiment Station at the end of the three year "experiment".)

Finding appropriate off-farm jobs that did not involve a long commute was a major stumbling block, particularly for one family. The more specialized the skill, the more difficult it is to find an appropriate rural space to perform it. In this case, the pastry chef who had worked at elite hotels in the Lansing area found it difficult to find a shift time and a work place that met his personal and economic needs, as well as his need for sleep.

As the experiment ended, the individual levels of satisfaction regarding a number of issues began to decline.

Because the project began with establishing new relationships with the land, with each other, with the community, and with the farm animals, it was a time of great optimism and cheer. But the insecurity of tenure on this land and the University's unwillingness to commit to a final "Yes" or "No" as to whether it would continue its support led to decreasing satisfaction with almost all aspects of their lives towards the end of the project.

Yet, the quantitative and qualitative studies show that how the household systems, the farming systems, and the community systems interacted and shifted over time. The careful analysis underlines the need to consider all three aspects when implementing alternative farming structures, particularly with the increasing number of part-time farmers.

One wishes that there were more consideration of the intersections between the natural environment, the farming systems and the households. A more complete study team that included agronomists and animal scientists could have produced this. While the households had access to agronomic extension expertise, there was not the research available to link the changes on the land, including wildlife and other biodiversity, to changes in the households.

One of the households was able to be successful in custom marketing lamb and other inputs. The other household, which had planned a very complicated vegetable rotation, ultimately decided not to sell fruits and vegetables but simply to use their five acres to be self-sufficient in most of their food production.

After entering into the lives of these families and seeing their increased dissatisfaction as the three year experiment ended, I was relieved that the authors included an epilogue. The couple who raised locally-sold lamb moved farther north, where the husband found another off-farm job in the fish hatchery. They were able to establish another small farm, working toward increasing agricultural sustainability. The other couple separated. The woman works as an extension agent and runs her own small farm in a sustainable way with her two sons. The man has remarried and has a successful career as a pastry chef. Both couples feel the experiment was a worthwhile opportunity for growth, but it certainly introduced new sources of stress, as well as satisfaction, to their lives.

The methodology of this book would be extremely useful for those interested in the notion of nested interactive systems, particularly the interrelation with a built environment. The story of the adaptations made by these farmers, despite the experimental circumstances under which they took place, made them extremely instructive for understanding what the future of agriculture, particularly that involving family farms, may be in the future. The policy suggestions put forward by Sontag and Bubolz suggest the need for community development as key to supporting changes in agriculture. Increasingly, farming — even sustainable farming — is only one piece of the pluri-activity strategy used by families who want to optimize their quality of life.

***Towards a Sustainable Future: Environmental Activism in Russia and the United States — Selected Readings***

**Edited by Maria S. Tysiachniouk and George W. McCarthy**

St. Petersburg, Publishing Group of Institute of Chemistry

St. Petersburg State University, 1999

pp vii-xii, 1-242

ISBN 5-7997-0109-7

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Sustainability is a term that is commonly used and misused when considering development and environmental concerns. One reason for its misuse is a lack of consensus or understanding of what exactly is meant by sustainability. There are also great differences in views on how to achieve sustainable development and how to measure this achievement. When we start to compare ways in which these are viewed across cultural boundaries the diversity and lack of consensus inflate. *Towards a Sustainable Future* is truly a unique compilation of interdisciplinary papers by scholars from the United States and Russia on how sustainability is viewed in these two very different countries. The objective of these readings and of the conferences that generated them are to bring together various disciplines to examine environmental issues in the U.S. and Russia, and to examine sustainability in these two countries. The book reveals some extremely insightful contrasts in perspective.

The readings either examine general attitudes, perceptions, definitions and approaches to sustainability in the Russia and the U.S., or they represent case studies that examine the multifaceted details of planning and implementation of sustainable development at specific cities or sites. In the Introduction, sustainable development is defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs,” the same definition that was adopted at the 1992 United Nations Conference on the Environment and Development in Rio (ix). The editors then present some barriers to achieving sustainable development and outline how this volume studies attempts to implement sustainable development strategies in the two countries.

In the first chapter, attitudes of Russian and American environmentalists and their views on implementing sustainable development are presented as a theoretical framework

which sets the tone for the rest of the book. It is clear from the start that there are extreme differences between the economically prosperous 1990s democratic United States, and economically constrained post-Soviet Russia. Although it is my impression that this was not intentional, all of the subsequent readings from the two countries reflect these differences. It is clear from the first chapter that until Russia can move beyond the current economic crisis and begin to break down some of the institutional barriers that exist because of recent political and social history, sustainable development will not be achievable in Russia. Despite the thriving U.S. economy, there are barriers to sustainability in this country as well. These mostly have to deal with our unwillingness to limit corporate resource use and individual rates of consumption. The obstacles in the U.S. seem slightly more surmountable than those in Russia, but there has yet to be much political, corporate, or individual willingness to change approaches to continued economic growth.

The difference in vocabulary that the authors from Russia and the U.S. use to talk about environmentalism and sustainable development is extremely revealing, and is one of the most intriguing aspects of the book. These differences clearly reflect the political, historical, social and cultural biases that underlie the perception or the actuality of achieving sustainability. Common terms used in the readings from U.S. authors include: “legislation and enforcement,” “conflict with corporations,” “individual empowerment,” “justice and fairness,” “community-based efforts” and “local involvement.” Language that is more represented in the readings by Russian authors includes: “economic infrastructure,” “political games,” “ecological culture,” “structure of regional power” and “regional science networks.” Although I am not quantifying these differences and perhaps they are not significant, as I move through the book I am left with the impression that the Russian scholars are focusing more on social and institutional structures, while the Americans deal more with individuals and stakeholders. I like that this book strikes me and leaves me with an impression of difference, and I believe that this impression is the product of my own bias and the terminology used by authors from each country.

Because I am not a theoretical social scientist, the readings that I enjoyed the most were the applied case studies. These represent real attempts at implementing sustainable development. Whether Newburgh or Hudson in the U.S., or Kirishi or the Karelian forests in Russia, there are a number of commonalities drawn. As one reads these case studies it becomes clear that the stakeholders or local communities need to see clear benefits to shifting towards sustainability. Economic growth, improved environmental and public health, sound science and the maintenance of cultural and social traditions need to be part of the plan. It is crucial that

non-governmental organizations (NGOs) and members of the local community are involved in the planning and implementation stages (44). One can also conclude from these case studies that any plan for sustainability that has been handed down from the government or outsiders to the community of implementation is likely fail (38).

One particularly illuminating case study was presented by Michael Edelstein of Ramapo College of New Jersey on the "dead" port city of Newburgh, New York, which is 80 miles north of New York City on the Hudson River. Edelstein concluded that development of port activity is essential to social and economic regeneration of the community and is therefore a positive objective as long as it can be achieved in a way that protects the health of local citizens, workers and the environment. To pay for the development of the infrastructure required to achieve these goals, an interim project of transferring and processing harbor dredge spoils which are believed to be harmful to human health was proposed (42). Edelstein presents this as a wonderfully insightful dilemma for environmental justice. The workers and proximate residents that most likely would be exposed to the harmful dredge spoils are nearly all African American. Based on this, one could conclude that this interim project is racially unjust. Alternatively, to deprive these same people economic opportunities because of environmental concerns might also be perceived as a reverse form of environmental racism (57).

The author urges a path of economic development that maximizes human and environmental health (58).

In addition to the site-specific case studies, a number of the readings report on sociological studies of environmentalism. Among these is an interesting study that focuses on the birth of non-governmental environmental organizations in Russia, an important phenomenon since the fall of the Soviet Union. I also enjoyed reading about how environmental ethics organizations have influenced nutritional behavior in Russia. These organizations seem to be effectively promoting sound relationships between humans and the environment, and subsequently vegetarianism and preference for organic foods have risen in Russia (224).

This book might prove quite useful in undergraduate environmental studies courses, especially those that try to integrate disciplines to develop realistic solutions to the environmental, social, and economic crises that we face. Although more disciplines could have been represented, for example more perspectives from the scientific community would be valuable, the cross-cultural comparison is excellent and might prove useful in any course that compares Russia and the U.S. On the back cover it is stated that the book will be tested at a Russian and an American University this year, and after this test a second revised edition will be published. I look forward to seeing the revised edition and perhaps using at least parts of it in my own environmental studies courses.

## ***The Local Politics of Global Sustainability***

**By Thomas Prugh, Robert Costanza, and Herman Daly**  
Washington, D.C.: Island Press, 2000  
ISBN 1-55963-744-7

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Here is a book that brings together in an easy read a number of important contemporary themes including: sustainability, ecological economics, adaptive management, participatory democracy, bounded rationality, post normal science, consensus conferencing, and community visioning. It argues that global sustainability will never be engineered from the top-down, but can only emerge out of countless numbers of local communities creating and realizing a local vision of sustainable community. As a prescription for how communities should go about this, the authors look back to 1984 and Benjamin Barber's idea of strong democracy (Barber 1984). Strong democracy is a vision of participatory governance rich in discourse and volunteerism. But Barber has always been long on theory and short on practice. To flesh out what strong democracy might actually look like these authors point back in time to Northern Italy circa 1300 (Putnam 1993) and Eastern Switzerland's Republic of Rhaetia circa 1600 (Barber 1974). Nearer to our present time they find examples of strong democracy in action in Denmark's consensus conferencing (Sclove 1996), New England town meetings (Zimmerman 1998), and an example of watershed restoration work in Oregon (Johnson and Campbell 1999).

An intriguing aspect of this text is the attention it gives to the question of what it means to be human. Aware that mainstream economics still invokes the idea of rational economic "man" introduced by Alfred Marshall, these authors echo sociologists such as Max Weber and critical theorists such as Jurgen Habermas who call for a notion of rationality that redeems human dignity and freedom. Marshall's idea of rationality sketched homo economicus, a version of human who does not create alternatives for action, who never contemplates or learns about values or preferences, who never thinks in terms of "we," but only "me." Rational economic "man" only seeks the most efficient means to produce the highest egoistic utility possible. Such a conception may provide a convenient and powerful hypothesis-testing tool (Blank 1993), but it is historically and physiologically inaccurate (Dietz and Stern 1995), and, as critical theorists point out, it leaves out essential aspects of what it means to be human (Horkheimer and Adorno 1944). Prugh, Costanza,

and Daly clearly grasp this argument, although they may not be aware of the connections mentioned above — they cite Habermas extensively, but in a different portion of their critique of capitalism. Instead, they build off Barber, to assert a vision of humanity that is inherently social and innately capable of contemplating moral questions. Such a premise focuses attention on how people talk about the kind of community they want to have, that is, how they engage in moral discourse.

Given this integration of so many ideas, is anything important left out? The answer, unfortunately, is "yes." Most surprising perhaps is the omission of the question of how expert (i.e., professional) knowledge as well as local knowledge can and should inform a democratic discourse. Moral decisions such as "What do we want our community to be?" cannot be made without a great deal of empirical knowledge. Scientists of all disciplines as well as citizens who gain their knowledge experientially or through tradition (Berkes 1999) have important roles to play in helping provide information about likely consequences of choices. It is very surprising that no mention is made in this book about the recent work at the US National Research Council on the analytic-deliberative process (U.S. NRC 1996, 1999a, 1999b; Dietz and Stern 1998; Webler and Tuler 1998). The A-D process is precisely the kind of procedural framework one needs when designing and implementing a public discourse about local sustainability.

Another glaring omission is the lack of attention given to problems of discursive competence, especially hidden motives of free-riders and egocentered parties who mislead the group and seek to exploit public discussion for private ends. Barber's idea of strong democracy is an ideal that does not account for the mischievous aspects of people. More than anything else, having a successful process probably means getting all involved to adopt the right attitude, that is, to think "what is best for all," not "what is best for me." How are we to accomplish this when people are socialized in an economized society where the pursuit of hedonistic utilities is strongly condoned from the time one leaves the womb to the time one enters the grave? If the authors had acknowledged this problem, they might have drawn attention to the need for empirical research on this topic.

A third important shortcoming is the convenient omission of national and international bodies and forces. By putting the spotlight on the local community, we fail to see the corporations and government agencies lurking in the shadows. Gould et al. (1996) realized that grassroots resistance to global corporatism needs to be a coordinated activity. No single community can stand up to the likes of General Electric or monsters of its ilk. Strong democratic talk at the local level is essential, yes, but without a coordinated network to establish political power, the local communities will



be vulnerable to the wanton whims of much more powerful global players.

These shortcomings take some of the shine off this brand new book, but they do not compromise its integrity. The book ought to be read because it integrates important contemporary themes and in doing so it enables discussion — both in academia and in local communities — to move ahead. Building bridges across literatures that are often separated by huge expanses only helps to forge clearer understandings and to promote innovative ways of thinking about the problems facing human societies today.

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## Briefly Noted

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### **Beyond Malthus: Nineteen Dimensions of the Population Challenge**

by Lester Brown, Gary Gardner and Brian Halweil

W.W. Norton & Company: New York, 1999

ISBN 0-393-31906-7

Should you be worried about world population growth? The birth rate is falling in many industrialized countries; in some cases populations are actually shrinking. But in many nations where the population has exploded in recent decades, birth rates remain high, and populations will likely double or triple in the next half-century. Nevertheless, these nations are showing the early signs of “demographic fatigue” — a slow-down in population growth due not to smaller families but to increasing death rates.

The burden of enormous populations is making itself felt: as governments struggle with the need to educate children, create jobs, and deal with the environmental effects of population growth, any new threat—such as AIDS or aquifer depletion—can rapidly escalate to disastrous proportions. The industrialized countries have held HIV infection rates among their adult populations to one percent or less, but infection rates are as high as one-quarter of the adult population in some African countries. With their rising mortality rates, more reminiscent of the Dark Ages than the bright millennium so many had hoped for, these countries are falling back to an earlier demographic stage with high death rates and high birth rates, and ultimately little growth in population. Events in many countries could spiral out of control, leading to spreading political instability and economic decline.

In examining the stakes involved in potentially adding another 3.3 billion people to the world population over the next fifty years, the authors call for immediate expansion of international family planning assistance to the millions of couples who still lack access, and new investment in education young people—especially women—in the Third World, helping to promote a shift to smaller families.

### **Human Impact on Ancient Environments**

by Charles Redman

University of Arizona Press: Tucson, AZ, 1999

ISBN 0-8165-1963-3

What happened on Easter Island? How did the Ancients cope with Environmental Stress? Are we doomed to destroy the earth?

Threats to biodiversity, food shortages, urban sprawl . . . lessons for environmental problems that confront us today may well be found in the past. The archaeological record contains hundreds of situations in which societies developed long-term sustainable relationships with their environments — and thousands in which the relationships were destructive.

Charles Redman demonstrates that much can be learned from an improved understanding of peoples who, through seemingly rational decisions, degraded their environments and threatened their own survival. By discussing archaeological case studies from around the world — from the deforestation of the Mayan lowlands to soil erosion in ancient Greece to the almost total depletion of resources on Easter Island — Redman reveals the never-ending impact of human culture on the environment.

### **Why Sex Matters**

by Bobbi S. Low

Princeton University Press: Princeton, NJ, 1999

ISBN 0-691-02895-8

Why are men, like other primate males, usually the aggressors and risk takers? Why do women typically have fewer sexual partners? Why is killing infants routine in some cultures, but forbidden in others? Why is incest everywhere taboo? Bobbi Low ranges from ancient Rome to modern America, from the Amazon to the Arctic, and from single-celled organisms to international politics to show that these and many other questions about human behavior largely come down to evolution and sex. More precisely, as she shows in this comprehensive and accessible survey of behavioral and evolutionary ecology, they come down to the basic principle that all organisms evolved to maximize their reproductive success as they seek resources to do so.

Low begins by reviewing the fundamental arguments and assumptions of behavioral ecology: selfish genes, conflicts of interest, and the tendency for sexes to reproduce through different behaviors. She explains why in primate species—from chimpanzees and apes to humans—males seek to spread their genes by devoting extraordinary efforts to finding mates, while females find it profitable to expend more effort on parenting. Low illustrates these sexual differences

among humans by showing that in places as diverse as the parishes of nineteenth-century Sweden, the villages of seventeenth-century China, and the forests of twentieth-century Brazil, men have tended to seek power and resources, from cattle to money, to attract mates, while women have sought a secure environment for raising children. She makes it clear, however, they have not done so simply through individual

efforts or in a vacuum, but that men and women act in complex ways that involve cooperation and coalition building and that are shaped by culture, technology, tradition, and the availability of resources. Low also considers how the evolutionary drive to acquire resources leads to environmental degradation and warfare and asks whether our behavior could be channeled in more constructive ways.