

Population, environment and security: a new trinity

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1. Klare, Michael T. (1995), *Rogue States and Nuclear Outlaws: America's Search for A New Foreign Policy*, Hill and Wang, New York.

2. Deudney, Daniel (1991), "Environment and security: muddled thinking" in *The Bulletin of the Atomic Scientists*, April, pages 22-28.

SUMMARY: *This paper critically examines the literature which claims that internal conflict in Africa, Asia and Latin America is often the result of population pressures and resource scarcities, focusing particularly on the work of Thomas Homer-Dixon. This literature largely fails to consider the underlying economic and political causes of environmental degradation and violence, including the role of international companies, development assistance agencies and militaries. Yet, as the paper describes, this literature has a growing influence. It provides a convenient rationale for sustaining US military expenditures which are threatened by the end of the Cold War and gives hardliners in the population control lobby a justification for moving away from the new, broader focus on reproductive health back to more coercive population policies. It has also been used by journalists such as Robert Kaplan to present inaccurate and racist images of Africa. The paper ends with a discussion of why it is important to challenge this ideology before it exercises a firmer hold on public policy and consciousness, not least because it leads to negative stereotypes of women and "peasant" farmers and could lead to the militarization of environmental policy.*

I. INTRODUCTION

THE END OF the Cold War has forced a redefinition of national security in the United States. While "rogue states" such as Iraq have replaced the Soviet Union as the enemy,⁽¹⁾ globalization has ushered in an era of more amorphous threats and environmental problems rank high among them. "Environment and security" are linked in a rapidly growing policy enterprise which involves the US Departments of State and Defense, the CIA, academic research institutes, private foundations and non-governmental organizations.

There are a number of reasons why "environment and security" is an idea whose time has come. Clearly, serious global environmental problems such as ozone depletion, global warming and pollution of the seas require new forms of international cooperation. Whether or not these should be the purview of national security agencies is another question, given their tradition of competition, secrecy, and nationalism.⁽²⁾

The environment and security field often focuses less on these legitimate concerns, however, than on a supposed causal relationship between population pressures, resource scarcities and

3. Homer-Dixon, Thomas F. (1994), "Environmental scarcities and violent conflict" in *International Security* Vol.19, No.1, pages 5-40.

4. Kaplan, Robert D. (1994), "The coming anarchy" in *Atlantic Monthly*, February, pages 44-76; also Connelly, Matthew and Paul Kennedy (1994), "Must it be the rest against the West?" in *Atlantic Monthly*, December, pages 61-84.

5. Wirth, Timothy (1994), "Sustainable development vital to new US foreign policy", speech presented to National Press Club, Washington DC, July 12; also Christopher, Warren (1996), "American diplomacy and the global environmental challenges of the 21st century", speech presented at Stanford University, Palo Alto, CA, April 9, reprinted in Woodrow Wilson Center (1996), *Environmental Change and Security Project Report*, Spring, Washington DC, pages 81-85.

6. Deibert, Ronald J. (1996), "From deep black to green? Demystifying the military monitoring of the environment" in Woodrow Wilson Center (1996), *Environmental Change and Security Project Report*, Spring, Washington DC, page 29.

7. Rockefeller Foundation (1997), *High Stakes: the United States, Global Population and Our Common Future*, Rockefeller Foundation, New York, pages 9 and 21.

8. Hartmann, Betsy (1995), *Reproductive Rights and Wrongs: The Global Politics of Population Control*, South End Press, Boston.

intra-state conflict in the South. According to the main architect of this theory, Canadian political scientist Thomas Homer-Dixon, environmentally induced internal conflict, in turn, causes states to fragment or become more authoritarian, seriously disrupting international security.⁽³⁾

The scarcity-conflict model is fast becoming conventional wisdom in foreign policy, population and environment circles, popularized and sensationalized by writers such as Robert Kaplan and Paul Kennedy.⁽⁴⁾ Top State Department officials have blamed political strife in Haiti, Rwanda and Chiapas, Mexico in large part on population and environmental stresses.⁽⁵⁾

Opportunism no doubt plays a role in making the model a fashionable trend. For the State Department, it is a convenient form of ideological spin control which masks the tragic human consequences of US support for military regimes and Duvalier-style dictatorships during the Cold War. For the military, it provides new rationales and missions to legitimize its multi-billion dollar budget. This also means more business for the large aerospace corporations suffering from the loss of Cold War defence contracts. Increasingly, the military-industrial complex is becoming a "military-environmental security complex".⁽⁶⁾

The international relations field also needs new *raison d'être*, and environment and security research is well-funded. The population lobby has seized on it too, for several reasons. As birth rates continue to fall around the globe more rapidly than anticipated, it is hard to sustain the alarmism that fuels popular support for population control. Building an image of an overpopulated, environmentally degraded and violent Third World is politically expedient, especially as it feeds on popular fears that refugees from this chaos will storm our borders.

An appeal to national security interests is also a strategy to counter the right-wing assault on international family planning assistance. For example, a recent Rockefeller Foundation report *High Stakes: The United States, Global Population and Our Common Future* (whose cover contrasts sad dark-skinned children with happy white ones) draws heavily on the scarcity-conflict model in order to move a recalcitrant Congress:

"Resource scarcities, often exacerbated by population growth, undermine the quality of life, confidence in government, and threaten to destabilize many parts of the globe... Once a resource becomes scarce, a society's "haves" often seize control of it, leaving an even smaller share for the "have-nots". Since population growth rates are highest among the have-nots, this means that an even larger number of people are competing for a smaller share of resources – and violent conflict is often the result."⁽⁷⁾

In a strange kind of *déjà-vu*, the threat of resource scarcities and political instability also featured in Rockefeller's first rationales for population control in the 1950s.⁽⁸⁾

Opportunism and political pragmatism are not the only explanations for the rapid acceptance of the scarcity-conflict model, however. The concept of scarcity has a deep resonance in the

9. Ross, Andrew (1996), "The lonely hour of scarcity" in *Capitalism, Nature and Socialism* Vol.7, No.3, pages 3-26.

US cultural and political psyche. Andrew Ross draws the link between the manufacturing of social scarcity essential to capitalist, competitive individualist regimes and the notion of natural scarcity.⁽⁹⁾ The grossly unequal division of wealth in a society of resource abundance and waste demands an ethic of social scarcity to explain poverty. In the 1970s, the wasteful consumer class in the US spearheaded concerns about a global ecology crisis; worried about the earth's "natural limits", they brought a new paradigm of natural scarcity into being. The result, according to Ross, is that:

"For more than two decades now, public consciousness has sustained complex assumptions about both kinds of scarcity. In that same period of time, however, neo-liberalism's austerity regime has ushered in what can only be described as a pro-scarcity climate, distinguished, economically, by deep concessions and cutbacks and, politically, by the rollback of "excessive" rights. As a result, the new concerns about natural scarcity have been paralleled, every step of the way, by a brutal imposition of social scarcity...the two forms of scarcity have been confused, either deliberately in order to reinforce austerity measures against the poor, or else inadvertently through a lack of information about how natural resources are produced and distributed."⁽¹⁰⁾

10. See reference 9, page 6.

Ross concludes that systematic inequalities underlie both shortages of economic resources and environmental degradation. Unlike New Right economists such as Julian Simon, he does not minimize the severity of environmental problems but points to the need for the redistribution of wealth and power in order to prevent a genuine crisis of biological scarcity.

Neo-Malthusianism dovetails nicely with the ideology of social and natural scarcity and has proved very compatible with neo-liberalism. It is not surprising that it occupies such an important place in the environment and security framework.

II. PARABLES OF SCARCITY

IN 1989, JESSICA Matthews' article "Redefining Security" helped set the stage for the linking of environment and security. "Population growth lies at the core of most environmental trends," she wrote and then went on to recommend support for international family planning as one of the four most important steps in a new security agenda.⁽¹¹⁾

Since that time, references to population pressures as a, if not the, major strain on the environment have become seemingly obligatory in the literature. They are usually unsubstantiated, presented as a self-evident truth. The 1996 US National Security Strategy announces in the preface that "...large-scale environmental degradation, exacerbated by rapid population growth, threatens to undermine political stability in many countries and regions."⁽¹²⁾ "Exacerbated by population growth" (and nothing else) is in fact a constant refrain.

11. Matthews, Jessica T. (1989), "Redefining security" in *Foreign Affairs* Vol.68, No.2, pages 163 and 177.

12. White House (1996), 1996 *US National Security Strategy of Engagement and Enlargement*, excerpted in Woodrow Wilson Center (1996), *Environmental Change and Security Project Report*, Spring, Washington DC, page 72.

Just what is the evidence for these assumptions? Thomas Homer-Dixon's *Project on Environment, Population and Security*, jointly sponsored by the University of Toronto, the American Association for the Advancement of Science and the Canadian Center for Global Security has produced a series of case studies (e.g. of Rwanda, South Africa, Pakistan and Chiapas) to investigate the relationship between population growth, renewable resource scarcities, migration and violent conflict. Whilst the text of the case studies tends to be more nuanced, the models based on them are simple diagrams of questionable causality.

The Homer-Dixon Models

Figure 1: How Environmental Stress Contributes to Conflict

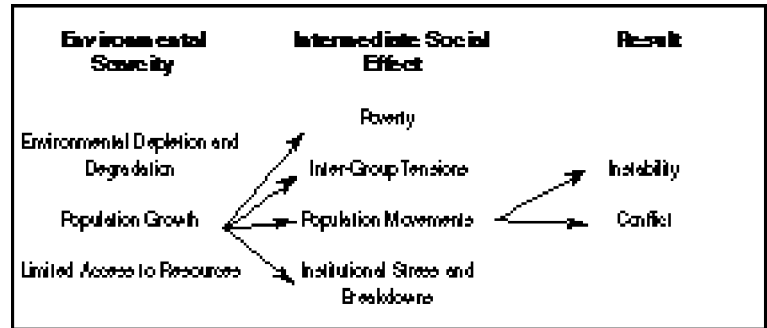


Figure 2: The Process of Resource Capture

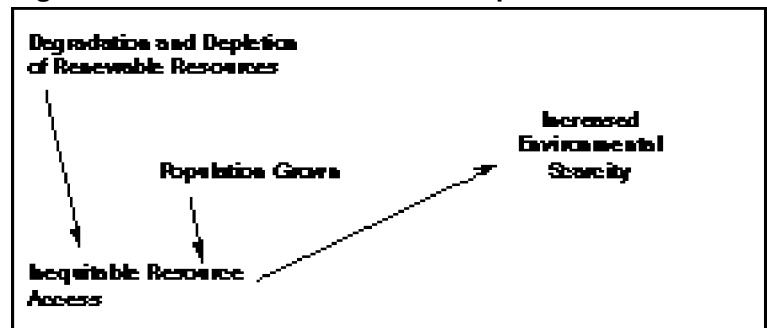
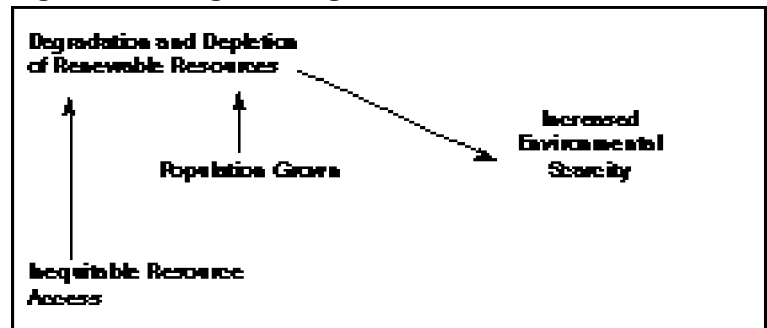


Figure 3: Ecological Marginalization



SOURCE: Homer-Dixon, Thomas, F. (1996), "The project on environment, population and security: key findings of research" in Woodrow Wilson Center, Environmental Change and Security Project Report, Spring, Washington DC, pages 45-46

In Figure 1, Homer-Dixon illustrates the main lines of causality between environmental scarcity and conflict. In Figure 2, he depicts the process of "resource capture" and in Figure 3, that of "ecological marginalization".

There are a number of problems with these models. First, is the weak definitional foundation upon which they are built. Homer-Dixon defines environmental scarcity to include three factors: the degradation and depletion of renewable resources, the increased consumption of those resources, and/or their uneven distribution. The increased consumption of resources is mainly linked to population growth, hence its prominence.

The concept of environmental scarcity thus conflates distinct processes – the generation of renewable resource scarcities, environmental degradation, population growth and the social distribution of resources – into a single, over-arching term which is "...tantamount to analytical obfuscation."⁽¹³⁾ Environmental degradation is confused with renewable resource scarcity (indeed, they are often presented as virtual synonyms) although there is no necessary link between the two. Land shortages, for example, can be an incentive to boost productivity through better agricultural techniques and land improvements.⁽¹⁴⁾ By adding the social distribution of resources into the definition of environmental scarcity, Homer-Dixon *de facto* creates a link to conflict, since political conflict often revolves around issues of resource control. This is the main tool by which he is able to force very disparate conflictual situations into his universalizing model but the result is a model so inclusive as to be banal.⁽¹⁵⁾ Levy makes a similar critique, arguing that it is difficult to imagine that conflicts in the South would not include renewable resource issues: "Developing country élites fight over renewable resources for the same reason that Willy Sutton robbed banks – that's where the money is."⁽¹⁶⁾ He also notes that environmental factors interact with such a variety of social processes to generate violence that "...there are no interesting mechanisms that are purely and discretely environmental."⁽¹⁷⁾

The automatic equation of population growth with increased resource consumption is another problem. Not only does it not necessarily follow that if there are more people, they will consume more – per capita consumption could fall for a number of reasons – but the increased resource consumption may have little to do with demographic factors but instead with increased demand in external markets for a particular product, e.g. teak for Scandinavian furniture or shrimp for Western palates.

By their very nature, Homer-Dixon's models homogenize diverse regions with distinct histories and cultures. Clearly, the specific colonial and post-colonial histories of countries such as Pakistan and Haiti, for example, have much to do with the present generation of "scarcity" in those places.

Also missing from the picture is serious discussion of economic inequalities. Although Homer-Dixon acknowledges their importance, the place they occupy in his models skews causality, in effect naturalizing the processes of maldistribution. Combined with population growth, he argues, resource scarcity en-

13. Fairhead, James (1997), "Conflicts over natural resources: complex emergencies, environment and a critique of 'greenwar' in Africa", paper presented to the UNU/WIDER and QEH meeting of the Project on "The Political Economy of Humanitarian Emergencies", Queen Elizabeth House, Oxford, UK, 3-5 July, page 18.

14. See reference 13, page 15.

15. See reference 13, page 18.

16. Levy, Marc A. (1995), "Is the environment a national security issue?" in *International Security* Vol.20, No.2, page 57.

17. See reference 16, page 58.

18. See reference 3, page 13.

courages powerful groups within a society to shift distribution in their favour - this is the "resource capture" presented in Figure 2. Similarly, agricultural shortfalls due to population growth and land degradation are seen to induce large development schemes, the benefits of which are then captured by the rich.⁽¹⁸⁾

The origins of inequalities and the role of powerful forces in environmental degradation – agribusiness, mining, timber and other corporate interests – receive little attention. The argument that environmental stress weakens state structures or that it makes them more authoritarian puts the cart before the horse, since state structures themselves profoundly affect how resources are distributed and managed. The choice of a large development scheme over more sustainable small-scale projects, for example, may have little or nothing to do with agricultural shortfalls but instead reflect the links between foreign donors and domestic élites who stand to gain from lucrative procurement and construction contracts.

Homer-Dixon's view of the state is oddly idealized. Environmental scarcities, he argues, "...threaten the delicate give and take relationship between state and society." If the state cannot cope with the resulting agricultural shortfalls, economic stress and migration, then "...grassroots organizations" may step in to respond. Focusing only on the needs of their respective constituencies, these organizations supposedly cause society to fragment into groups which do not interact or trust each other. This enhances "...the opportunities for powerful groups to seize control of local institutions or the state and use them for their own gain." Homer-Dixon also claims that "...environmental scarcity can strengthen group identities based on ethnic, class or religious differences."⁽¹⁹⁾

19. Homer-Dixon, Thomas, F. (1996), "The project on environment, population and security: key findings of research" in Woodrow Wilson Center (1996), *Environmental Change and Security Project Report*, Spring, Washington DC, page 48.

It takes quite a stretch of the imagination to believe that the states which he has studied, which include Mexico, Pakistan and Rwanda after all, had a nice give and take relationship with their people before scarcity set in. In fact, one could argue that the real scarcity in those places was and still is the absence of democratic control over the structures that govern access to both economic and natural resources. Characterizing "grassroots organizations" as forces for social segmentation also neglects the role many such groups have played in building a democratic civil society to challenge corrupt and authoritarian states.

The neglect of external actors constitutes a further lacuna. Intra-state violence is seldom a self-contained phenomenon – where, for example, does the role of the arms trade, geo-political manoeuvring and international financial institutions figure in Homer-Dixon's models? The models are essentially closed systems in which internal stresses may generate movement outward, mainly though mass migration, but the outside is rarely seen to be pressing in.

Homer-Dixon, for example, depicts ecological marginalization (see Figure 3) as a process by which unequal resource access and population growth force the migration of the poorest groups to ecologically vulnerable areas such as steep hillsides and tropical rainforests. The pressure of their numbers and their lack of knowledge and capital then cause environmental scarcity and poverty.⁽²⁰⁾

20. See reference 19, page 47.

21. Barraclough, Solon and Krishna Ghimire (1990), "The social dynamics of deforestation in developing countries: principal issues and research priorities", Discussion Paper 16, United Nations Research Institute for Social Development, Geneva, page 130.

But should population growth and unequal resource access really be ascribed equal weight as the "push factors" causing people to migrate to such areas? An extensive study of deforestation by the United Nations Research Institute for Social Development notes that while many observers blame deforestation on forest clearing by poor migrants, they ignore the larger forces attracting or pushing these migrants into forest areas, such as the expansion of large-scale commercial farming, ranching, logging and mining. "To blame poor migrants for destroying the forest is like blaming poor conscripts for the ravages of war."⁽²¹⁾ The study found an absence of any close correspondence between deforestation rates and rates of either total or agricultural population growth.

In most cases, the ecological damage caused by poor peasants pales in comparison with that caused by commercial extraction of resources, often for export. The greatest deforestation occurred under colonialism and, today, most tropical wood and beef production, for example, is destined for foreign markets. The failure to link the consumption patterns in the world's wealthiest countries and of Southern élites to "local" land uses is, in fact, a key shortcoming of Homer-Dixon's approach. The scope of inquiry is surprisingly insular in a period of rapid global economic integration.

The narrow conceptualization of population is also surprising given that the population field itself is opening up to more gender sensitive analysis and programming. Homer-Dixon, and the environment and security literature in general, focus mainly on aggregate population size and density, paying little attention to other key dynamics such as age distribution, differential mortality rates and sex ratios. Neglecting history once again, the literature displays little understanding of the processes of demographic transition to lower birth and death rates.

Nor, except for a few obligatory references to the need for women's literacy programmes, does it seriously address gender inequalities, despite a significant body of research in this area. Subsumed into the analytic frame of "population pressure", women implicitly become the breeders of both environmental destruction and violence. Important questions are not asked, much less answered. What are women's property rights, labour obligations and roles in the management of environmental resources? How have structural adjustment policies affected their health, workloads and status relative to male family members? Where are investments being made: in basic food production, where rural women most often work, or in export agriculture? If men are forced to migrate to earn cash or to join militaries, how do women cope with the labour requirements needed to sustain food production and maintain infrastructure?

Instead of linking violence to women's fertility, one can ask how violence affects women's capacity to support the family and community institutions on which protection of the local environment depends. Even more than conventional inter-state war, current conflicts in Africa brutally target women and children in order to destroy communities yet, at the same time, depend on their labour to sustain military forces with both food and

22. Turshen, Meredith and Clotilde Twagiramariya (1998), *What Women Do in War Time: Women and Conflict in Africa*, Zed Books, London.

23. Byrne, Bridget, Marcus, Rachel and Tanya Powers-Stevens (1995), *Gender, Conflict and Development* Vol. II, BRIDGE Report No.35, Institute for Development Studies, University of Sussex, Brighton, UK.

24. Hynes, H. Patricia (1993), *Taking Population out of the Equation: Reformulating I=PAT*, Institute of Women and Technology, Amherst, MA.

25. Seager, Joni (1993), *Earth Follies: Coming to Feminist Terms with the Global Environmental Crisis*, Routledge, New York.

26. United Nations Development Programme (1993), *Human Development Report 1993*, Oxford University Press, New York.

27. Faber, Daniel (1992), "Imperialism, revolution and the ecological crisis of Central America" in *Latin American Perspectives* Vol.19, No.1.

28. Tiffen, Mary, Mortimore, Michael and Frances Gichuki (1994), *More People, Less Erosion: Environmental Recovery in Kenya*, Overseas Development Institute (London) and John Wiley (Chichester).

29. Altieri, M.A. and L.C. Merrick (1987), "In situ conservation of crop genetic resources through maintenance of traditional farming systems" in *Economic Botany* Vol.41, No.1, pages 86-96.

30. See reference 3, pages 16-17.

fresh recruits.⁽²²⁾ Women are often discriminated against in post-conflict transitions as well. In Rwanda, for example, there is concern that widows may lose access to land because of women's limited property rights, undermining the process of agricultural rehabilitation.⁽²³⁾

Violence is also a direct cause of environmental destruction. The German Institute for Peace Policy estimates that one-fifth of all global environmental degradation is due to military and related activities.⁽²⁴⁾ Feminist geographer Joni Seager argues that, whether they are at peace or at war, militaries are the biggest threat to the global environment.⁽²⁵⁾ Even after the cessation of conflict, land mines and the lingering effects of scorched earth policies and chemical warfare obstruct environmental restoration.

Militaries also directly contribute to the creation of both "social" and "natural" scarcities since they take economic resources away from human development and environmental improvements. In Africa, Asia and Latin America as a whole, for example, military expenditures soared from 91 per cent of combined health and education expenditures in 1977 to 169 per cent in 1990.⁽²⁶⁾

This is not to say that population growth plays no role at all in environmental degradation, but to ascribe to it the leading role is to miss the bigger, more complex picture. Doing so fails to address adequately the question of why birth rates remain high in some places. In El Salvador, for example, the same unequal social and economic relations which have slowed demographic transition underlie unsustainable patterns of resource use.⁽²⁷⁾

Recent research also challenges the neo-Malthusian assumption that population pressure always negatively affects the environment. In parts of Africa, increasing population densities combined with sound agricultural practices have spurred environmental improvements.⁽²⁸⁾ Similarly, the focus on peasant populations as the destroyers of the environment neglects the important role of traditional agriculture in preserving biodiversity.⁽²⁹⁾

Even though he focuses on population, Homer-Dixon is not a strict Malthusian doomsdayer in the tradition of Garrett Hardin or Paul Ehrlich. He believes that social and technical ingenuity can help overcome the problem of resource scarcities. Institutions that "...provide the right incentives for technological entrepreneurs" and "family planning and literacy campaigns" that ease population induced scarcity are among his solutions.⁽³⁰⁾ Missing from this technocratic framework is the notion of political **transformation**. Indeed, progressive movements for social change would probably be put into the category of scarcity induced conflict.

Despite its popularity among liberals, Homer-Dixon's is a conservative world view where the maldistribution of both power and resources is essentially naturalized and determined by the god of scarcity. When this god of scarcity meets the devil of racism, the result is the greening of hate.

III. BACK TO DEEPEST, DARKEST AFRICA

IN 1994, JOURNALIST Robert Kaplan popularized Homer-Dixon's views in an *Atlantic Monthly* piece on "The Coming Anarchy" which proclaimed the environment as the most important national security issue of the twenty-first century.⁽³¹⁾ Much of the article dwells on West Africa, which Kaplan presents as a hopeless scene of overpopulation, squalor, environmental degradation and violence, where young men are post-modern barbarians and children with swollen bellies swarm like ants.

Kaplan's article did for Africa what *The Bell Curve* (a recent book which argues that blacks are genetically inferior) did for the United States: it reintroduced racism as a legitimate form of public discourse. But whereas *The Bell Curve* was at least attacked by some elements of the liberal press, "The Coming Anarchy" captured the imagination of the liberal establishment, even that of President Clinton himself. "I was so gripped by many things that were in that article," Clinton said in a speech on population, "...and by the more academic treatment of the same subject by Professor Homer-Dixon...You have to say, if you look at the numbers, you must reduce the rate of population growth."⁽³²⁾

Homer-Dixon, of course, should not be held responsible for all of Kaplan's racist (and misogynist) stereotyping and he is now careful to distance himself from the journalist's work. Yet, the fact remains that the scarcity-conflict model can easily serve as a vehicle for this kind of thinking. Nowhere is this clearer than in the case of Africa.

Kaplan expands on the themes of "The Coming Anarchy" in his book *The Ends of the Earth* which takes environmental determinism to a new and absurd level. For example, he links violence in Liberia to its dense forests. In the dark rainforest where trees and creepers block the view, "...men tend to depend less on reason and more on suspicion," he writes. The Liberian forest, "...a green prison with iron rain clouds," is thus responsible for the animism and spirit worship which weakened the civilizing influences of Islam and Christianity. Liberia, "a forest culture" further undermined by overpopulation, is naturally more prone to violence.⁽³³⁾

Seen through Kaplan's eyes, African women are mainly bare-breasted and pregnant and their fertility is out of control, with dire consequences. In an interview on the McNeil-Lehrer News Hour, he went so far as to suggest that if women in Rwanda had lower fertility, the genocide would not have happened.⁽³⁴⁾

His images of Africa are reminiscent of old colonial accounts of the enlightened white man encountering the primitive savage. In fact, he is enamoured of the British colonial writer Richard Burton who, he notes approvingly, perceived that slaves preferred the "paradise" of the American South and the "lands of happiness" in the West Indies to their native home.⁽³⁵⁾

Despite the lack of substantive evidence, Kaplan maintains that Africa's climate and poverty are the breeding ground for AIDS and other deadly diseases which, along with crime, threaten

31. See reference 4.

32. US Department of State (1994), Remarks by the President to the National Academy of Sciences, June 29, White House, Office of the Press Secretary, Washington, DC.

33. Kaplan, Robert D. (1996), *The Ends of the Earth: A Journey at the Dawn of the 21st Century*, Random House, New York, pages 28-29.

34. Kaplan, Robert D. (1996), Interview on "The news hour with Jim Lehrer", US Public Broadcasting System, April 5.

35. See reference 33, pages 80-81.

36. See reference 33, page 377.

37. Kaplan, Robert D. (1995), "For the Third World, western democracy is a nightmare" in *International Herald Tribune*, December 30-31, page 4.

38. Goldberg, Jeffrey (1997), "Our Africa problem" in *New York Times Magazine*, March 2, page 35.

39. See reference 38, page 35.

40. See reference 38, page 80.

41. Political Ecology Group and Transnational Resource and Action Center (1997), *The Bromide Barons: Methyl Bromide, Corporate Power and Environmental Justice*, Political Ecology Group, San Francisco.

42. See reference 38, page 38.

even our wealthiest suburbs. And that is why self-interest dictates that we care about the continent. He is short on solutions, however. He is not keen on democracy, preferring the "honest" authoritarianism of Singapore's dictator Lee Kuan Yew.⁽³⁶⁾ Hence, he argues, the West should shift emphasis away from promoting democracy in the Third World toward "...family planning, environmental renewal, road-building and other stabilizing projects."⁽³⁷⁾ He ignores the emergence of many positive national and transnational political forces such as the peace, environmental and women's movements.

Like Kaplan, Jeffrey Goldberg of the *New York Times* also shoulders a modern day variant of the white man's burden. In a recent feature article entitled "Our Africa Problem," he writes:

"There is a whole new set of what might be called biological national security issues: environmental destruction, explosive population growth, the rapid spread of disease and the emergence of entirely new diseases. It is widely understood that these things hurt Africa. What is not understood is that they can also hurt America."⁽³⁸⁾

Goldberg warns of yet unknown killer microbes emanating from Central Africa's dense rainforests. "Chaos, though, is the best incubator of disease," he claims, and disease is an incubator of chaos. Africa is caught in a vicious cycle of misery where war and corruption mean no health care and family planning, which leads to "too many sick people" who, in turn, "create desperation and poverty," leading back to corruption and war.⁽³⁹⁾ This simple closed system leaves out everything from IMF and World Bank imposed structural adjustment programmes that have seriously eroded African public health systems to declining terms of trade for African products on the international market.

Goldberg has solutions, however. Watching the sterilization of a poor, naked Kenyan woman, he notes that US aid for family planning can help stem the biological crisis of overpopulation. Add to that the magic bullet of the free market. The export of beef and roses, he believes, will save Uganda. The US should pursue a policy of heightened engagement in Africa not only to subdue the microbes, reduce population growth and stem the tide of refugees, but quite simply "to make money".⁽⁴⁰⁾

But making money is not always conducive to protecting the environment. For example, commercial livestock and flower production may well have a negative impact on Uganda's ecology. Methyl bromide, a highly toxic pesticide which is also a major ozone depletor, is now used on neighbouring Kenya's flower crops.⁽⁴¹⁾ The limits of Goldberg's environmental understanding are revealed by his statement that Mobutu, the recently deposed dictator in the Congo (formerly Zaire) was "an effective environmentalist," even if an inadvertent one, because he let the country's infrastructure deteriorate and left its immense forests in near-pristine condition.⁽⁴²⁾ Under-development thus becomes synonymous with environmentalism, as if the human beings inhabiting the Congo do not matter.

A psychoanalyst could have a field day with Kaplan and Goldberg's images of Africa – the dark, impenetrable rainforest as the sub-conscious; fears of women's uncontrolled fertility as a manifestation of sexual repression; Africa as the unknown, the other, the enemy; the US as the superpower superego.

Whatever the reason, these images have infected the US political psyche, helping to shape public opinion if not public policy. That overpopulation was a major cause of the genocide in Rwanda quickly became conventional wisdom in mainstream environmental and foreign policy circles. In a much heralded speech on the environment, former Secretary of State Warren Christopher warned that: "We must not forget the hard lessons of Rwanda, where depleted resources and swollen populations exacerbated the political and economic pressures that exploded into one of this decade's greatest tragedies."⁽⁴³⁾ Similarly, former Under Secretary of State for Global Affairs Timothy Wirth remarked recently that in Rwanda "...there were simply too many people competing for too few resources."⁽⁴⁴⁾

Scholars more familiar with Rwanda's history, and that of neighbouring states, offer a much more complex understanding of the tragic events there. Whilst not denying the existence of demographic and environmental pressures, Peter Uvin, who worked as a development consultant in the region, analyzes the role of economic and political inequalities, institutionalized ethnic prejudice and foreign assistance in generating the conflict. Ironically, the international aid community considered Rwanda a model country; even in the 1990s, when violent repression and genocidal preparations were becoming state policy, foreign aid more than doubled. Uvin writes:

"Rwanda's genocide was the extreme outcome of the failure of a development model that was based on ethnic, regional and social exclusion; that increased deprivation, humiliation and vulnerability of the poor; that allowed state instigated racism and discrimination to continue unabated; that was top-down and authoritarian; and that left the masses uninformed, uneducated and unable to resist orders and slogans. It was also the failure of development cooperation based on ethnic amnesia, technocracy and political blindness."⁽⁴⁵⁾

In his study of the population-resources dilemma in Rwanda and Burundi, economist Leonce Ndikumana explains why agriculture has stagnated in the region, noting the lack of substantive improvements in farming technologies. At the same time, the demand for children has remained high. Yet despite pressure on the land, he argues that the political crises in both countries are mainly the result of institutional failure caused by a long history of ethnic divisions between the Hutu and Tutsi: "These countries have promoted nepotist and dictatorial political systems that reward ethnic identity rather than merit while miserably failing to protect the rights and interests of the individual and minority groups... Population growth is only a scapegoat for people willing to put the blame of failed development policies on rural populations."⁽⁴⁶⁾ The failure of the international

43. See reference 5, page 83.

44. Wirth, Timothy (1996), "Population pressure and the crisis in the Great Lakes region of Africa", remarks at the Center for National Policy, December 18, excerpted in Woodrow Wilson Center (1997), *Environmental Change and Security Project Report*, Spring, Washington DC, page 118.

45. Uvin, Peter (1996), *Development, Aid and Conflict: Reflections From the Case of Rwanda*, Research for Action 24, United Nations University World Institute for Development Economics Research, Helsinki, Finland, page 34.

46. Ndikumana, Leonce (1997), "Institutional constraints and the population-resources dilemma in Burundi and Rwanda", working paper, Economics Department, University of Massachusetts, Amherst, MA, pages 21 and 30.

47. Percival, Valerie and Thomas F. Homer-Dixon (1995), *Environmental Scarcity and Violent Conflict: The Case of Rwanda*, Programme on Science and International Security, American Association for the Advancement of Science, Washington, DC, page 2.

48. Ford, Robert E. (1995), "The population-environment nexus and vulnerability assessment in Africa" in *GeoJournal* Vol.35, No.2, page 215.

49. See reference 8.

50. Pirages, Dennis (1997), "Demographic change and ecological security" in Woodrow Wilson Center (1997), *Environmental Change and Security Project Report*, Spring, Washington DC, page 43.

community to acknowledge the genocide and take swift action can also be seen as profound institutional failure on the global level.

Even Homer-Dixon's case study of Rwanda acknowledges that environmental and population pressures had at most "a limited, aggravating role" in the Rwandan conflict.⁽⁴⁷⁾ The case of Rwanda clearly points to the importance of in-depth case study research to counter simplistic explanations of conflict. In his analysis of population-environment models in Africa, Robert Ford urges scholars and policy makers "to take the longer road" and confront the complex and constantly changing political, economic, cultural, historical and environmental dynamics of a specific locale. Neo-Malthusianism, he concludes, "...is not a sound basis for environmental security."⁽⁴⁸⁾

IV. FAULTY DIAGNOSES, FAULTY PRESCRIPTIONS

IT IS TOO early to judge whether the scarcity-conflict model will have a direct impact on foreign policy or will continue to play a more indirect role of (mis)shaping public opinion by masking the deeper political and economic forces generating poverty, environmental degradation, violence and migration in the South. Much will depend on the extent to which it is challenged by alternative voices. Failing an effective challenge, one can foresee a number of serious consequences. These include:

Distortion of population policy: By over-emphasizing the role of population growth in environmental degradation and violence, the model legitimizes population control as a top priority. Already in India and Bangladesh, population control absorbs between one-quarter and one-third of the annual health budget and, in a number of African countries undergoing structural adjustment, public health systems have been decimated while funding of population programmes has increased.⁽⁴⁹⁾

Viewing population pressure as a security threat creates a false climate of fear and urgency, eroding the progress made by the women's health movement in moving the population establishment away from a narrow focus on fertility reduction to a more comprehensive women's reproductive health and rights perspective at the 1994 UN Population Conference in Cairo. This perspective is likely to be lost if family planning is viewed as the magic bullet to pacify Third World trouble spots and save the environment. Dennis Pirages, a key academic exponent of the scarcity-conflict model, believes that dealing with population growth is the place to begin a "paradigm shift" in foreign and defence policies. He laments the Cairo "emphasis on rights at the expense of responsibilities" and, instead, advocates tough and resolute action on family planning.⁽⁵⁰⁾

This kind of security mindset could relegitimize the use of targets, incentives and coercion in family planning programmes, with grave repercussions for women's health and human rights. It could reinforce the persistent bias in the choice of contracep-

51. See reference 8.

52. See reference 3, pages 37-38.

53. See, for example, Connelly and Kennedy (1994), reference 4.

54. Smith, Richard (1995), "The intelligence community and the environment: capabilities and future missions", presentation to the Woodrow Wilson Center, June 22 in Woodrow Wilson Center (1996), *Environmental Change and Security Project Report*, Spring, Washington DC, pages 103-108.

55. Nitze, William (1995), "A potential role for the Environmental Protection Agency and other agencies", presentation to the Woodrow Wilson Center, November 21 in Woodrow Wilson Center (1996), *Environmental Change and Security Project Report*, Spring, Washington DC.

tive technology towards long-acting, provider dependent methods, such as Norplant, over safer barrier methods which also protect against sexually transmitted diseases such as HIV/AIDS.⁽⁵¹⁾

Homer-Dixon's project shows no sensitivity towards these issues, neglecting to look at the ethical implications of its focus on population pressures and the actual population programmes that exist in the case study countries. In one article, he briefly mentions coercive policies in China leading to lower fertility rates but he does not criticize them. Rather, his concern is that "...experts are not sure this accomplishment can be sustained for long."⁽⁵²⁾ It hardly bodes well for women's rights when forced abortions and sterilizations are considered an "accomplishment".

Gender bias and blindness: This approach to population is part of a larger gender bias and blindness in the environment and security field. It is, in fact, far behind the development field in this respect, perhaps because it takes so little notice of literature and ideas outside of its disciplinary boundaries. Poor people, when they are differentiated at all, are mainly categorized by ethnicity and religion.

While the neglect of gender issues could easily lead to policies that reinforce male hegemony and treat women as objects rather than subjects, it also prevents recognition of the leading role women have played in reconciliation efforts such as the peace movement in the Middle East and Somalia and the anti-communalism struggle in India. Women have been at the forefront of attempts at ecological restoration too, such as the Green Belt movement in Kenya and the Chipko movement in India. Rather than targeting women's fertility, it would make more sense to learn from their organizing efforts and engage them in the processes of conflict resolution.

Dehumanizing and depoliticizing refugees: By naturalizing poverty and political violence in the South, the scarcity-conflict model dehumanizes refugees, turning them into faceless invaders fleeing the chaos and environmental degradation they brought upon themselves.⁽⁵³⁾ This view feeds racism and helps legitimize current US immigration "reforms" that, among other restrictive measures, severely curtail the rights of asylum seekers.

Using the scarcity-conflict model, political refugees from countries such as El Salvador could potentially be recast as less worthy "environmental refugees". Already, senior US intelligence officials are rewriting the history of the war in El Salvador as one caused by environmental impoverishment and overpopulation, failing to acknowledge US support for the Salvadorean military's death squads and scorched earth policies.⁽⁵⁴⁾

Militarizing sustainability: A particularly pressing issue is what impact the scarcity-conflict model will have on US defence policies. Currently, the Environment and Security Office of the US Department of Defense has a budget of about US\$ 5 billion, almost equivalent to that of the civilian Environmental Protection Agency (EPA).⁽⁵⁵⁾ While much of this money is directed towards activities such as cleaning up bases, and protecting military personnel and facilities from biological hazards, another

56. Goodman, Sherri W. and Admiral William Center (1995), "Military capabilities and possible missions related to environmental security", presentation to Woodrow Wilson Center, May 18 in Woodrow Wilson Center (1996), *Environmental Change and Security Project Report*, Spring, Washington DC, page 98.

57. Woodrow Wilson Center (1997), *Environmental Change and Security Project Report*, Washington DC, page 209.

58. See reference 6.

59. See reference 6, page 31.

60. See reference 57, page 212.

61. Porter, Gareth (1996), "Advancing environment and security goals through 'integrated security resource planning'" in Woodrow Wilson Center (1996), *Environmental Change and Security Project Report*, Spring, Washington DC, pages 35-38.

62. See reference 57, page 200.

63. Butts, Kent (1996), "National security, the environment and DOD" in Woodrow Wilson Center (1996), *Environmental Change and Security Project Report*, Spring, Washington DC, page 26.

top priority is "...helping neutralize environmental conditions which could lead to instability."⁽⁵⁶⁾

The State Department's Bureau of Intelligence and Research (INR) focuses more explicitly on "...the linkages between increasing ethnic tensions...and resource scarcity"⁽⁵⁷⁾ and, since 1991, the annual US National Security Strategy document has included environmental issues.

Using military satellites for environmental surveillance seems to be the most important practical application of the new national security focus on the environment. In the MEDEA project, a select group of environmental scientists is working with the CIA to identify key sites for surveillance. The data collected will be kept in secret archives and then released to "unspecified 'future generations' of scientists."⁽⁵⁸⁾ Given the intelligence community's long history of deeply institutionalized secrecy, duplicity and paranoid distrust of outsiders, Deibert is sceptical that environmental researchers, especially those from other countries, will be confident that the information, when it is finally released, will not have been altered or manipulated for "national security reasons."⁽⁵⁹⁾

The existence of alternative satellite monitoring systems, controlled by civilians, can act to some extent as a hedge against intelligence disinformation. But Deibert points to the worrying trend of merging both civilian and military environmental reconnaissance systems under one umbrella so that the military effectively becomes the "clearing house" for environmental data. He cites as an example the Brazilian government's purchase of a US\$ 1.4 billion Amazon Surveillance System from the US which will be used to monitor borders, airspace and the environment.

Also problematic is the kind of technocratic, quantitative analysis of environment and conflict emerging from both official and academic security circles which substitutes for rigorous qualitative and historical research. The CIA's "State Failure Task Force" is testing the effect of 75 possible independent variables, including demographic, environmental, social and economic ones, on various political crises from 1955-1994. But in a world of complex causality, how can such variables be considered "independent"?(⁶⁰) (In keeping with neoliberal trends, "openness to international trade" was found to be one of the most important predictors of state stability.)

Gareth Porter has argued for the creation of a quantitative "national security impact index" which would reveal the importance of major global environmental threats.⁽⁶¹⁾ Researchers in Norway are using quantitative analysis to test whether environmental scarcity and population density are major contributors to civil conflict.⁽⁶²⁾ Such studies are no doubt the wave of the future and could serve as the empirical basis for the formation of defence policies. As such, they require detailed critical scrutiny.

The US military is already directly involved in promoting "sustainable development" in Africa, assisting almost 20 countries in environmental activities such as fisheries management, game park preservation and water resource management.⁽⁶³⁾ The Defense Intelligence Agency has also identified ecological dete-

64. Atwood, J. Brian (1995), "Towards a new definition of national security", remarks to the Conference on New Directions in US Foreign Policy, University of Maryland, College Park, November 2, excerpted in Woodrow Wilson Center (1996), *Environmental Change and Security Project Report*, Spring, Washington DC, pages 85-88.

65. See reference 2, page 28.

rioration in Lake Victoria "...as a cause of potential instability in East Africa."⁽⁶⁴⁾

While these are real environmental concerns, why is it the US military addressing them and not civilian agencies in partnership with local people themselves? Isn't it a fundamental contradiction in terms to have the military engaged in "sustainable development" when it is it that has been the cause of so much environmental devastation and who is hardly known for its democratic, participatory and gender-sensitive approach?

Daniel Deudney argues convincingly that turning the environment into an object of national security risks undermining the positive forms of global environmental thinking and cooperation that have been emerging in recent years. He writes:

"The movement to preserve the habitability of the planet for future generations must directly challenge the tribal power of nationalism and the chronic militarization of public discourse. Ecological degradation is not a threat to national security; rather, environmentalism is a threat to national security attitudes and institutions. When environmentalists dress their arguments in the blood soaked garments of the war system, they betray their core values and create confusion about the real tasks at hand."⁽⁶⁵⁾

It is also important to remember that national security agencies need an enemy, and who is the enemy when violence and instability are blamed on population pressures and resource scarcities? Implicitly, if not explicitly, the enemy becomes poor people, especially poor women, and the social movements which represent them. It may be an ironic outcome of the scarcity-conflict model that environmental groups are, themselves, targeted as security threats when they challenge the control and degradation of natural resources by local élites, governments and transnational corporations.

Anti-environmentalist repression is already occurring in many countries. Witness the violent suppression of the Ogoni people in Nigeria who are trying to protect their lands from destruction by Shell Oil. Sooner or later, when their lands are rendered uninhabitable, they too will probably be written off as resource scarce.

It is time to challenge the population, environment and security trinity before it exercises a firmer hold on public policy and consciousness. Whilst a watchdog role is necessary, it is not sufficient. The integration of progressive social science research with the experiences and activism of environmental, women's, peace and refugee rights movements can create a new and deeper understanding of the forces generating poverty, environmental destruction and violence. Solutions will come not from the barrel of a gun, a spy satellite or coercively imposed contraceptive technologies but from the wisdom and actions of those who have been working long and hard to overcome the scarcity of justice.

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The Research Committee on Housing and the Built Environment of the International Sociological Association invites submissions for the first Jorge E. Hardoy Memorial Prize for Best Paper by a Researcher from a Developing Country. This prize was instituted to honour the late Jorge Hardoy and to recognize current work similarly concerned with improving the living conditions of low-income households in the developing countries.

Papers must contribute new insights into housing and the built environment, broadly viewed, in the developing world. Topics may be theoretical or empirical; local, national, or international in scope; and need not represent any particular discipline. Text must be in English. Maximum length is 25 pages, double spaced, including notes and bibliography, with 1.5" margins all around. Abstract of no more than 200 words is required. Name, address and title must appear on a separate cover page, without identifiers in the paper itself.

Submissions will be evaluated and ranked by a distinguished Board of Reviewers. The winner will receive US \$ 250 and a special certificate. The paper will also be published in HABITAT INTERNATIONAL, along with other qualifying submissions. To be eligible, papers must be received by June 30, 1999. Please, send four copies to: Willem van Vliet, College of Architecture and Planning, CB 314, University of Colorado, Boulder, CO 80309-0314, USA.