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POPULATION-ENVIRONMENT LINKAGES IN INTERNATIONAL LAW

DIANA D.M. BABOR*

INTRODUCTION

I wish the McCaugheys the best of everything for their family. Unfortunately, their children may face adulthood in a world fraught with ecological disaster because of overpopulation. There are so many humans that we are crowding out other species and changing the biosphere of the planet. It is time we all lived responsibly, with our children's future in mind. Otherwise, there may not be much of a world for our children or the septuplets to enjoy.¹

Since the 1970's, the incidence of artificially-induced multiple births has tripled in North America. Regulations to govern assistedreproductive technology and the provision of fertility treatments have yet to be adequately articulated in the United States even though half of all multiples born are burdened with life-long health problems.² While many recipients of fertility treatment have indeed been "trying for years" to conceive a child, and while ethical concerns over using selective reduction abound, it is rare to hear mention of the greater responsibility needed to limit growth and reduce excessive consumption within developed societies, so as to maintain a viable biosphere.

This article explores population-environment linkages both within developed and developing nations, and considers the consequences of a population growth rate which, as one hectare of arable land is simultaneously lost or destroyed, currently results in eight live births every three seconds.³ In order to better comprehend the forces governing our

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^{1.} Letter from Larry Murphy of Provincetown, Mass. to TIME, Dec. 22, 1997, at 4, available in 1997 WL 16251406.

^{2.} The Journal: Medical Misadventures (CBC television broadcast, Nov. 19, 1997). According to Dr. John Barrett, forty to forty-five doctors were involved, or on duty, to assist the McCaughey septuplets into life. Id.

^{3.} For a cyber-view of this rate of growth (after the death rate is accounted for) and loss (due to deforestation and erosion) see *The Resource Clock* (visited Nov. 3, 1998)

perceptions, Part I of this article will discuss eight interactive variables which inform decision-making. Part II will examine the existence of legal duties under international law to limit or constrain our level of consumption and our right to freely reproduce, particularly as applicable in states considered free of a population "problem."

PART I

A. Anthropogenic Repercussions

[W]e are deeply concerned that the overall trends for sustainable development are worse today than they were in 1992...Conditions in natural habitats and fragile ecosystems, including mountain ecosystems, are still deteriorating in all regions of the world, resulting in diminishing biological diversity. At the global level, renewable resources, in particular freshwater, forests, topsoil and marine fish stocks, continue to be used at rates beyond their viable rates of regeneration.⁴

As the human family continues to increase in size, a greater output of basic resources and services is required. The fact that every child born has a need for, and a human right to, food, water, shelter, clothing, an education and an ecologically-balanced environment places additional demands on existing infrastructures responsible for providing these services, as well as for sewage, sanitation and pollution control. In developing countries, slowing the population growth offers time for the state to develop services for its inhabitants and to prepare for the needs of future generations, whose options would otherwise be even more constrained.

When slower population growth permits increased economic growth, it can also result in higher consumption. Consumption must be efficient if sustainable goals are to be achieved. Yet at any level of development, expanding populations increase energy use, resource consumption and environmental stress,⁵ albeit to different degrees. Stabilization of population growth and levels of consumption must be pursued so as to maintain an ecologically-balanced environment and to keep the environment's carrying capacity within limits.

<http://www.idrc.ca>.

^{4.} Programme for the Further Implementation of Agenda 21, U.N. GAOR, 19th Spec. Sess.at paras. 4, 9, U.N. Doc. A/RES/S-19/2, (Sept. 1997) (visited Feb. 15, 1999) <go-pher://gopher.un.org/00/ga/recs/RES-S19.2>.

^{5.} UNFPA, POPULATION ISSUES BRIEFING KIT 6 (1994). Current literature on population growth and resource use is often focused on whether or not enough food can be produced. As this is critical for survival, there is an insufficient amount of emphasis placed on how the ecosystem itself can be sustained, which includes innumerable species dependent on habitat for survival, each of which contributes an intrinsically significant function in maintaining ecosystem vitality.

Unsustainable levels of overconsumption and production are primarily found in affluent societies in the North where population growth is not perceived to be a problem. The wealth and status enjoyed by the North has also led to the "indiscriminate pursuit of economic growth in nearly all countries" which "is threatening and undermining the basis for progress by future generations."⁶ These wide-scale activities have resulted in indisputable signs of anthropogenic ecosystem damage in, among others, the form of climate change,⁷ ecosimplification⁸ and freshwater constraints.⁹ Although forest preservation is a mitigating force in containing the speed of damage in these foregoing realms, reaction to a proposed global forestry treaty¹⁰ demonstrates that precaution has yet to become the norm.

1. Climate Change

Climate change is considered one of the most serious threats to

8. Ecosimplification results from lost biodiversity. As noted in AFTER RIO, the Earth is believed to have between 7 to 20 million species of which only 1.75 million have been catalogued. AFTER RIO, *supra* note 7, at 23. Current extinction rates are fifty to a hundred times faster than the natural background rate of extinction and loss estimates over the next 25 years range from 2 to 25 percent of species. *Id.* Destruction comes from poaching and loss of habitat. Africa and Asia have lost two thirds of their original wildlife habitat and losses of 80 percent or more have occurred in Burkina Faso, Burundi, Gambia, Ghana, Liberia, Mauritania, Rwanda, Senegal, Sierra Leone, Bangladesh, India, Sri Lanka and Vietnam. *Id.* Rapid deforestation in the "commons" of countries where women have the burden of seeking fuelwood is frequently attributed to their lack of control over the land and their non-consultation over its use. *Id.* at 22. "Women could be powerful agents of conservation since they directly suffer the consequences of resource management failure." *Id.* at 23.

9. See id. at 18-19 (stating that for poor women, water shortages mean extreme hardship as the extra time and energy needed to obtain water increases their risk of malnutrition and subsequent pregnancy-related health concerns for themselves and their offspring). Responsibility for water means women have a profound interest in its supply, as well as the knowledge to make their involvement in community decision-making on land and water issues, crucial. *Id*.

10. World Notes: Saving the Earth - Later, MACLEAN'S, July 7, 1997, at 47. This article describes how the week-long UN Rio Plus Five Conference in New York in June 1997 "designed to rekindle the spirit of the 1992 Earth Summit in Rio de Janeiro—largely avoided concrete commitments." *Id.* "Delegates shelved a bid by Canada to start negotiations on a global forestry treaty; talks are now unlikely before 2000." *Id.*

^{6.} Id.

^{7.} Global warming is almost completely attributable to resource use and waste production by developed nations as well as fossil fuel pollution and ozone-depleting chlorofluorocarbons. See Judith E. Jacobsen, Population, Consumption, and Environmental Degradation: Problems and Solutions, 6 COLO. J. INT'L ENVTL. L. & POL'Y 255, 258 (1995); UNFPA, POPULATION AND SUSTAINABLE DEVELOPMENT: FIVE YEARS AFTER RIO 27 (1997) [hereinafter AFTER RIO] (noting that while emissions per person have been on a downward trend, population growth has caused total carbon dioxide emissions to rise). "Remarkably, the IPCC does not mention action to slow population growth as a possible strategy to mitigate global warming." Id. See also Donald M. Goldberg, Negotiating the Framework Convention on Climate Change, 4 TOURO J. TRANSNAT'L L. 149 (1993).

planetary life.¹¹ Global warming is a consequence of the build-up of greenhouse gases, such as carbon dioxide pollution from the burning of fossil fuels. The Intergovernmental Panel on Climate Change (IPCC) believes that human-induced climate change has caused a rise in global mean temperatures by 0.5 degrees Celsius since the end of the 19th century and that a further rise of 1 to 3.5 degrees Celsius will occur before the end of the next century.¹²

This will result in shifting climate zones, the death of mountain and boreal species, and a 14 to 17 percent loss of tropical rainforest and boreal forest.¹³ Sea levels will rise anywhere from 15 to 95 centimeters and will have catastrophic consequences for some countries and island states.¹⁴ Exposure to heat extremes will affect human health, as will the increased range of tropical diseases, parasites and insect vectors.¹⁵

The recent convention in Kyoto, Japan, where a new Protocol for emissions reduction was negotiated, received mixed reviews as to its effectiveness. Developing nations undergoing rapid industrialization "rebuffed all attempts to bring them into the accord, even on a voluntary basis" and defeated "even a gently worded article that would have permitted developing countries to join the protocol at an unspecified future date."¹⁶ That affluent nations have agreed to effectuate the trade-offs required to meet their commitments heralds an "end to using the lack of scientific certainty as an excuse to do nothing"¹⁷ and a promotion for developing and using new technologies.¹⁸ Indisputably, converting words to action is now compulsory.

2. Ecosimplification

Deforestation is a militating factor affecting the rate of climate change, as trees which absorb carbon dioxide and release oxygen are removed. Commercial logging has been identified as an important cause of world-wide deforestation, and illegal logging, particularly in the Amazon, remains highly problematic. Furthermore, in contrast to a natural forest fire, clear-cutting removes the life-generating biomass trees contribute to the food chain, while the "slash and burn" approach

18. See Danylo Hawaleshka, Cashing in on Cleaner Air, MACLEAN'S, Dec. 22, 1997, at 25. Hawaleshka notes how a study for the Canadian Institute for Environmental Law and Policy reported that only ten landfills in Canada capture methane from decaying organic material for combustion into electricity, and that by converting 60 percent of its landfill methane "the country could cut a significant portion of its emissions." *Id.*

^{11.} AFTER RIO, supra note 7, at 26.

^{12.} Id.

^{13.} *Id*.

^{14.} Id.

^{15.} Id.

^{16.} Inside the Kyoto Deal, MACLEAN'S, Dec. 22, 1997, at 22, 24.

^{17.} Id. at 25.

to forests releases more carbon dioxide into the atmosphere.¹⁹

In addition, tropical deforestation is "probably the greatest single threat to the world's biodiversity."²⁰ Removal of forest cover results in ecosimplification meaning that "[s]pecies are losing their habitat in the unequal competition with humans. We are commandeering wildlife habitat for agriculture, cities, roads, factories, leisure and tourism."²¹ Future population growth will only compound this sprawl to the utter detriment of the world's non-human inhabitants.

3. Water Constraints

Another non-renewable component of the ecosystem is usable freshwater, the availability of which has rarely been examined in the context of population growth. "Analysts fail to recognize the critical impacts that increased population pressures on the world's freshwater supply can have on human health, the environment, and international security."²² Water is an "absolutely limited resource" so that "any increase in population leads automatically to lower availability per person."²³ Current unsustainable water use by urban centers, industries and agriculture result in the discharge of water contaminated with chemicals and heavy metals into the water cycle.²⁴ Pressures from

19. See The Nature of Things: The Great Northern Forest (CBC television broadcast, Apr. 10, 1997).

20. AFTER RIO, supra note 7, at 23. See also United Nations Population Division for Economic and Social Information and Policy Analysis, Population and Deforestation in Developing Countries POPULATION NEWSLETTER, No. 56, Dec. 1992, at 6 ("[T]ropical deforestation has provoked the largest body of current research in the field of population and environment.").

21. AFTER RIO, supra note 7, at 22-23. Habitat loss and the rate of deforestation tend to be highest where human population density is highest. *Id.*

22. Pamela LeRoy, Troubled Waters: Population and Water Scarcity, 6 COLO. J. INT'L ENVTL. L. & POL'Y 299, 302 (1995). Between 1940 and 1990, the world's population more than doubled, resulting in a simultaneous doubling of per capita water use. The practical result was that the global use of water increased over four times in 50 years, and that given its finite nature, such a quadrupling of use cannot occur again. Id. Population growth not only increases water needs, but helps accelerate the environmental disturbances of the water cycle due to greater food and fuel production. Id. at 305. Among these disturbances are "deforestation and other destructive land-use practices, the disposal of waste, the use of pesticides and fertilizers, and the release of greenhouse gases that could warm the global climate. These activities limit the amount of water that can be captured and pollute what water is available." Id. That water constraints will be compounded by climate change is acknowledged by Malin Falkenmark in the essay, Landscape as Life Support Provider: Water-Related Limitations. Malin Falkenmark, Landscape as Life Support Provider: Water-Related Limitations in POPULATION - THE COMPLEX **REALITY: A REPORT OF THE POPULATION SUMMIT OF THE WORLD'S SCIENTIFIC ACADEMIES** 103, 110 (Sir. F. Graham-Smith, F.R.S., ed., 1994) [hereinafter COMPLEX REALITY].

23. AFTER RIO, supra note 7, at 17.

24. See LeRoy, supra note 22, at 303, 313. The overexploitation of groundwater in Bangkok is causing parts of the city to sink at a rate of 14 centimeters a year, leading to cracked pavements, broken sewer and water pipes, seawater intrusion and flooding. Treatment of contaminated groundwater can be prohibitively expensive and timegrowing populations are increasing dependence on underground aquifers as water tables and river levels fall.²⁵

Water scarcity begins with supplies falling below 1,000 cubic meters per person per year, and water stress is found in those countries with annual supplies of less than 1700 cubic meters per person. In 1990, 28 countries were in a state of water stress or scarcity, and by 2025, the number "will soar to 50 countries with 3.32 billion inhabitants" affected.²⁶ Significantly, deforestation reduces the freshwater supply as it results in less local rainfall. In addition, erosion resulting from deforestation reduces the amount of rainwater absorbed and thereby lowers groundwater levels.²⁷

If "sustainable development ultimately implies a stationary population,"²⁸ then current unsustainable environments along with the foregoing changes already in evidence will lead to very mobile populations. Human-induced environmental disasters have already given rise to at least 10 million environmental refugees, composed primarily of women with their children, and "if current trends continue unbroken, there could be major population shifts."²⁹ Under these circumstances, sustainable development may well come to be appraised as political rhetoric which, so as not to hinder industry, proffered "too little, too late."

B. Inefficient Per Capita Consumption

In order to achieve sustainability, several United Nations Declarations have called for a reduction in overconsumption. Chapter 4, Paragraph 3 of Agenda 21 explicitly recognizes that "the major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production, particularly in industrialized countries, which is a matter of grave concern, aggravating poverty and

consuming. Id.

^{25.} AFTER RIO, supra note 7, at 18.

^{26.} This is according to UNFPA medium projections for population growth as cited in AFTER RIO, where it also states that a shift from the 1990 abundance of 3200 cubic meters per person to acute scarcity is expected in Nigeria by 2050, when "they will be down to 910 each, on the medium population projection." *Id.* Somalia, Kenya, Rwanda, Burundi and Malawi will face extreme scarcity, by 2050, when supplies will be "less than 300 cubic metres per person." *Id.*

^{27.} Id. at 22.

^{28.} Herman E. Daly, Sustainable Development: From Concept and Theory to Operational Principle, in RESOURCES, ENVIRONMENT, AND POPULATION: PRESENT KNOWLEDGE, FUTURE OPTIONS 25, 37 (Kingsley Davis and Mikhail S. Bernstam eds., 1991) [hereinafter FUTURE OPTIONS]. Daly states that "[s]ustainability is compatible with a large population living at a low level of per capita resource use, or with a small population living at high levels of resource use per capita. For many countries resource consumption levels are below sufficiency, yet ecological carrying capacity has already been exceeded. In such cases population control is a precondition rather than an ultimate consequence of sustainable development." Id. at 37.

^{29.} UNFPA, POPULATION AND THE ENVIRONMENT: THE CHALLENGES AHEAD 21 (1991).

imbalances."³⁰ As Chapter 4 of Agenda 21 is concerned with consumption, the lack of study given to this source of ecological imbalance is acknowledged in Paragraph 6 which states that "[g]rowing recognition of the importance of addressing consumption has also not yet been matched by an understanding of its implications" and "[m]ore needs to be known about the role of consumption in relation to economic growth and population dynamics in order to formulate coherent international and national policies."³¹

To achieve sustainable development and a higher quality of life for all people, Principle 8 of the Rio Declaration suggests that States should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies.³² In addition, Paragraph 1.2 of the Preamble and Principle 6 in the second chapter of the ICPD make reference to "unsustainable patterns of production and consumption."³³ The Report of the Fourth World Conference on Women also carries a reference to the deleterious consequences of such activities.³⁴

30. United Nations Conference on Environment and Development, UN Doc.A/CONF.151/26 (1992), 31 I.L.M. 814 [hereinafter Agenda 21]. Paragraph 4.4 states "[m]easures to be undertaken at the international level for the protection and enhancement of the environment must take fully into account the current imbalances in the global patterns of consumption and production." Paragraph 4.5 states:

Special attention should be paid to the demand for natural resources generated by unsustainable consumption and to the efficient use of those resources consistent with the goal of minimizing depletion and reducing pollution. Although consumption patterns are very high in certain parts of the world, the basic consumer needs of a large section of humanity are not being met. This results in excessive demands and unsustainable lifestyles among the richer segments, which place immense stress on the environment. The poorer segments, meanwhile, are unable to meet food, health care, shelter and educational needs. Changing consumption patterns will require a multipronged strategy focusing on demand, meeting the basic needs of the poor, and reducing wastage and the use of finite resources in the production process.

Id. at ¶ 4.5.

31. Id. at para. 4.6. Following the Earth Summit, the belief was expressed that a Consumption Summit should be convened in the form of an International Conference on Population, Consumption and the Environment. Jacobsen, *supra* note 7, at 56.

32. Declaration on Environment and Development, United Nations Conference on Environment and Development, UN Doc.A/CONF.151/26/Rev.1, princ. 8 (1992), 31 I.L.M. 874 [hereinafter Rio Declaration].

33. International Conference on Population and Development (Cairo, 1994), UN Doc. A/CONF.171/13, Ch. 1, Preamble [hereinafter ICPD]. The relevant sentence in Paragraph 1.2 states in full: "Around the world many of the basic resources on which future generations will depend for their survival and well-being are being depleted and environmental degradation is intensifying, driven by unsustainable patterns of production and consumption, unprecedented growth in population, widespread and persistent poverty, and social and economic inequality." *Id.* at para. 1.2.

34. The Fourth World Conference on Women, UN Doc.A./CONF.177/20, at para. 246 (1995), 35 I.L.M. 401 [hereinafter Beijing]. This paragraph reiterates and expands on Paragraph 4.3 of Agenda 21.

The conference provisions on consumption have been described as both clear and direct. However, it is argued that they are so straightforward "in part from a lack of substantive programs and recommendations to give the statements teeth and in part from the varied and vague meanings of 'unsustainable.'³⁵ The premise of this analysis is that since nations would protect "their sovereign rights to produce and consume as they wish" the provisions would be somehow less than clear and direct if there were substantive recommendations to pursue.³⁶ In effect, this contention provides affluent nations with an excuse to obfuscate and avoid their obligations to limit their activities.

1. Overconsumption

"Overconsumption by the world's fortunate is an environmental problem unmatched in severity by anything but perhaps population growth."³⁷

On the basis of consumption alone, the United States is the most overpopulated nation in the world. The average person in the U.S. consumes almost 20 times as much as a person in India or China and 60 to 70 times more than a person in Bangladesh.³⁸ Using energy consumption as an indicator of sustainability, a child born in the United States represents twice the environmental impact on life-support systems as one born in Sweden, three times one in Italy, thirteen times one in Brazil, thirty-five times one in India and 140 times one in Bangladesh.³⁹

36. Jacobsen, *supra* note 7, at 256 n.10.

39. REPORT OF THE INDEPENDENT COMMISSION ON POPULATION AND QUALITY OF LIFE,

^{35.} Jacobsen, supra note 7, at 258 n.10. "[C]onsumption" is defined as everything populations do to feed, house and clothe themselves including the industrial and commercial activities required to produce the products and services used. *Id.* at 256 n.3. *See also* Digby J. McLaren, *Population Growth - Should We Be Worried*? 17 POPULATION & ENV'T 243, 249 (1996). McLaren defines "sustainability" as the *availability* of life-supporting resources and a capacity to absorb waste, not only now, but in the immediate and long range future, while absorbing another 1 billion consumers every 11 years or so, for the next 20 or 30 years. *Id.* I would suggest that at the present rate of environmental decline, "unsustainable" could be defined by the pejorative meaning of "consumer," as some of its synonyms portend: deplete, dissipate, drain, exhaust, expend, finish up, fritter away, lessen, squander, use up, vanish, waste, wear out, annihiliate, decay, demolish, destroy, lay waste, devastate and ravage. *See* THE NEW COLLINS THESAURUS 123 (10th ed.1984).

^{37.} DONALD G. KAUFMAN & CECILIA M. FRANZ, BIOSPHERE 2000: PROTECTING OUR GLOBAL ENVIRONMENT 129 (1993) [hereinafter BIOSPHERE 2000].

^{38.} G.H. Brundtland, Population, Environment and Development, Address at The Rafael M. Salas Memorial Lecture (1993) [hereinafter Brundtland]. In calculating per capita waste, wealthy people generate far more pollution, with the exception of untreated sewage, than do the poor. The 25 million richest Americans generate 11 tons of carbon per capita each year from the burning of fossil fuels, while the world's poorest 500 million release about 0.1 ton per capita. ALAN THEIN DURNING, HOW MUCH IS ENOUGH? THE CONSUMER SOCIETY AND THE FUTURE OF THE EARTH 49-50 (1992), cited in Lamont C. Hempel, Population in Context: A Typology of Environmental Driving Forces, 18 POPULATION & ENV'T 439, 450 (1997).

Overall, the United States consumes more than 4.5 billion metric tons of materials annually. With only 5 percent of the world population, the United States nevertheless accounts for approximately 25 percent of global energy use on an annual basis. In 1994, the U.S. used 19.9 million barrels of oil *per day* while the remaining OECD countries *collectively* used 23.8 million barrels per day.⁴⁰ Based on per capita energy use alone, an increase in the American population of 125 million is the equivalent of increasing the population of a developing country by 1.25 billion people.⁴¹ The most fundamental indicator of overconsumption by the affluent is also the most conspicuous in history. Any aspiration to consume a diet of the western world is being foreclosed by world population growth.⁴²

2. Underconsumption

Defining unsustainable as "inefficient resource use" suggests that overconsumption is only one side of the equation. Underconsumption by the "victims of multiple deprivation" also leads to environmental degradation and is primarily a result of poverty and a lack of technology.⁴³ The nexus between consumption, poverty and population are considered in Chapter 3 of the ICPD in Paragraph 14. It states, in part "[e]fforts to slow down population growth, to reduce poverty, to achieve economic progress, to improve environmental protection, and to reduce unsustainable consumption and production patterns are mutually reinforcing."⁴⁴ The role of the international economic system⁴⁵ in main-

42. See Bracken, supra note 41, at 204 n.49. She indicates that most American grain is consumed indirectly through meat (as well as soft drinks) and that at United States consumption levels, the "world grain output could only sustain 2.75 billion people, half as many as are alive today." Id. At Italian consumption levels (half that of the US) 5.5 billion people could be supported, whereas "at the Indian level, world grain output could sustain 11 billion people." Id. Short of harvesting kelp from the sea, or advanced technological breakthroughs, the most favourable short-term solution would be that "the affluence of the world's diet must be reduced" Id. (actually it is the diet of the affluent of the world which must be reduced) (emphasis added). Bio-tech grain patents are beyond the scope of this article as is a discussion of the technology which brought about the "green revolution" of the 60's and 70's.

43. PAUL HARRISON, THE THIRD REVOLUTION - ENVIRONMENT, POPULATION AND A SUSTAINABLE WORLD 83, 274 (1992). See also Jacobsen, supra note 7, at 266-67 (stating that environmental damage stems directly from poverty, the options that poverty excludes and the low productivity that flows from it).

44. ICPD, supra note 33, at para. 3.14. See also Dr. Nafis Sadik, Reflections on the International Conference on Population and Development and the Efficacy of UN Confer-

CARING FOR THE FUTURE - MAKING THE NEXT DECADES PROVIDE A LIFE WORTH LIVING 52 (1996).

^{40.} U.S. Population and Sustainable Development, 22 POPULATION & DEV. REV. 391, 392 (emphasis added) [hereinafter U.S. Population].

^{41.} Elizabeth Rohrbough, On Our Way to Ten Billion Human Beings: A Comment on Sustainability and Population, 5 COLO. J. INT'L ENVTL. L. & POL'Y 237 (1994), cited in Jill Bracken, Respecting Human Rights in Population Policies: An International Customary Right to Reproductive Choice 6 IND. INT'L & COMP. L. REV. 197, 204 (1995).

taining "a low technological level" amongst the world's poor, directs attention back to the North as the controlling influence behind both underconsumption and overconsumption.

The desire by non-industrialized countries to mimic the consumption patterns of the world's greatest polluters is a matter for concern.⁴⁶ Furthermore, the rapidly growing worldwide gap between rich and poor increases the risks posed to environmental systems by these two extremities of the economic spectrum. "Extreme differences in consumption are inevitable in a world that contains 358 known billionaires whose combined net worth equals the combined annual incomes of the poorest 2.5 billion people."⁴⁷

> [T]he dominant perspective that informs policymakers and citizens alike is that of economics where insatiability is taken as axiomatic, analytically and normatively. In fact, the very notion of progress and the belief in unending growth is premised on the inevitability and desirability of increasing consumption.⁴⁸

As buyer preferences transform yesterday's luxuries into today's social expectations,⁴⁹ the environmental externalities which would attach to these products remain unaccounted for, underscoring how such costs are viewed as non-profitable to the production process and to the final sale.⁵⁰ Goals to reduce consumption have been mainly rhetorical,

47. Hempel, supra note 38, at 449.

49. See HARRISON, supra note 43, at 275.

50. Since conventional economic accounting does not incorporate the depletion of natural resources or the deleterious emissions generated by any given process or activity, a nation's GNP is not an accurate reflection of economic growth. PAUL R. EHRLICH ET AL, THE STORK AND THE PLOW: THE EQUITY ANSWER TO THE HUMAN DILEMMA 241 (1995). The final price paid by consumers for a product will not include the price of pollution reduction or clean-up charges if the cost of polluting is not accounted for. This has effectively allowed industrialized nations to develop their markets at the expense of the biosphere since these costs are diffuse, spread over time and difficult to calculate. PAUL EHRLICH & ANNE EHRLICH, POPULATION, RESOURCES, ENVIRONMENT: ISSUES IN HUMAN ECOLOGY 285 (1970). The application of the "polluter pays principle" ensures that pollution costs, or externalities, are internalized. See Rio Declaration, supra note 32, at princ. 16 (stating that "[n]ational authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment.").

ences, 6 COLO. J. INT'L ENVTL. L. & POL'Y 249, 250 (1995).

^{45.} HARRISON, *supra* note 43, at 84-85. A more comprehensive overview of the economic factors which bolster the industrialized north is beyond the scope of this article.

^{46.} See DURNING, supra note 38, at 117-35. This can also lead to traditional societies abandoning their cultures in favor of adopting materialistic values, usually disseminated in mass advertising by global producers.

^{48.} See Thomas Princen, Toward a Theory of Restraint, 18 POPULATION & ENV'T 233, 234 (1997). See also McLaren, supra note 35, at 248. He describes how most economists ignore the limitations of population growth and consumption because they ignore the ecosphere "[t]hey think in terms of an infinite world."

reflecting how such objectives directly contradict "commercial and employment policies aimed at economic growth for which *increased* consumption is integral."⁵¹ Far less attention has been paid to the forces which impel overconsumption than to the factors leading to overpopulation,⁵² particularly since the pollution from this form of inefficient consumption is transboundary and, therefore, less conspicuous.

"It is easier to force an Indian woman to have fewer babies than it is to force Americans to drive fewer cars."⁵³

C. The Forces that Drive Us

One study on the "driving forces" involved in environmental destruction identified the eight interactive variables of a causal framework, as: 1) Anthropocentrism: a core value which refers to the preoccupation with human progress and domination at the expense of other species. It also encompasses the widespread domination of women by men, and the ecological consequences that such domination produces; 2)

52. See Jacobsen, supra note 7, at 259. She notes that "[t]his argument, often made by analysts from the South, is echoed by Northern communities of faith, people with concerns for the Third World, and environmentalists, who urge the inclusion of consumption in industrialized countries in the international debate over sustainable development." *Id. See generally* POPULATION, CONSUMPTION, AND THE ENVIRONMENT - RELIGIOUS AND SECULAR RESPONSES (Harold Coward ed., 1995) [hereinafter POPULATION, CONSUMPTION AND THE ENVIRONMENT]; LOURDES ARIZPE ET AL., POPULATION & ENVIRONMENT -RETHINKING THE DEBATE 5 (1994).

53. John Stackhouse, Quantity of Life, THE GLOBE AND MAIL, Sept. 3, 1994, at D1; John Stackhouse, Is the Problem Overconsumption or Overpopulation?, THE GLOBE AND MAIL, Sept. 1994 at D-3. See Nathan Keyfitz & Kerstin Lindahl-Kiessling, The World Population Debate: Urgency of the Problem, in COMPLEX REALITY, supra note 22, at 43 [hereinafter Population Debate]. They discuss how in 1994, approximately 500 million automobiles were being used worldwide, by about 1/5th of the world's population, or 1.1 billion drivers. Id. If full development means that 1/5th of the projected 10 billion global inhabitants, or 2.5 billion people, become drivers of fossil fuel burning and terrestrial warming vehicles, the environmental consequences will be inconceivable. Id. See also BIOSPHERE 2000, supra note 37, at 207 (quoting the Gaia Peace Atlas "Since the Industrial Age the world has increasingly depended on fossil fuels. Modern civilization is actually based on non-renewable resources. This puts a finite limit on the length of time our civilization can exist"). But emission-free vehicles are being tested for mass production, including hydrogen-cell buses and electric cars. Public demand for these vehicles would compel the market to respond to, rather than set, consumer trends.

^{51.} Princen, supra note 48, at 252 (suggesting that in the many societies which equate progress with material consumption, the distance created between production and consumption decisions makes it virtually impossible to relate one's individual decisions to collective and environmental impacts). But see Jacobsen, supra note 7, at 256 n.3 (listing "consumption policies" such as: "changing technologies used to produce goods so that resources are used more efficiently or not needed at all; economic and regulatory policies to encourage efficiency... reduction in the use of primary materials, and reuse, recycling and improving durability of goods; efforts to change cultural and psychological beliefs so that individuals use less; economic, political, and technological changes that improve the material condition of people who live lives of material dearth; and political changes that improve equity of access to resources").

Contempocentrism: also a core value which involves the human preoccupation with the present, often at the expense of future generations. both human and non-human; 3) Population Growth and Migration: an amplifier, or a principal means by which core values are extended. It involves the rate and magnitude of changes in fertility, mortality and migration; 4) Technology: can be either beneficial or detrimental but is another amplifier of core values which has an enormous impact on the environment; 5) Poverty: a consumptive behavior variable that is a major creator of ecological poverty; 6) Affluence: also a behavior variable, it encourages environmental destruction through overconsumption, a lack of concern for natural resource depletion and "throw away" consumer lifestyles; 7) Market Failures: represent environmental externalities and unpriced opportunity costs, such as acid rain pollution; and the 8) Failure to Have Markets: results in an unacceptable level of environmental damage due to an absence of assigned property rights or a failure to recognize economic value in vital ecological resources and services.54

Linkages between behavioral choices and the perception of how these choices will benefit the self can be understood from a more comprehensive review of these concepts. Contempocentrism, defined as "the elevation of individualism over the human community, just as anthropocentrism,⁵⁵ represents the elevation of the human community over the rest of nature," results in "net present value maximization" being the "most widely accepted rationale for placing individual selfinterest above that of the collective human and biospheric community."⁵⁶ A further force considered to impel the consumptive behaviors of the world's middle-class is "the tension between poverty and affluence." This tension is also considered a source for "the political paralysis in environmental policy making."⁵⁷

56. Id. at 447.

57. Id. at 449. An example of political ambivalence given is environmental protection

^{54.} Hempel, *supra* note 38, at 443. Additionally, Hempel states that the "model reveals the folly of basing environmental improvement strategies on unicausal theories and linear solutions—even demographic ones. It also helps explain why thinking in terms of tradeoffs rather than solutions may be more productive." *Id.* at 459.

^{55.} See id. at 445. He indicates the irony that, while self-centered behavior, both individual and as a species, is now the "ultimate threat to our planet" due to amplification by rapid population growth and new technologies, human aggrandizement had important evolutionary survival value. He also discusses how such anthropocentric thinking is also manifest in gender-based differences, often "symbolized in the way nature—"she"—is defined and treated." Id. at 446. I would suggest that disparaging the feminine has often been accomplished by equating it with emotion and irrationality. An example of how this approach has been legitimized by modern science is the emphasis on (linear) instinct over any more complex depth of feeling in non-human species. Acknowledgment of such feelings would require accepting not only emotional but also rational thought processes in other mammals, as intelligence in the form of rational thinking, has its foundation in emotive capacities. Having to incorporate "the feminine" is avoided so as not to have to abandon the utterly anthropocentric warning against anthropomorphism, and so as to maintain a reasoning which justifies a strictly utilitarian view of non-human species.

To correct market failures, consideration has to be given to those most directly affected by today's decisions. "Since future generations are logically denied representation in the market," the economist must achieve "an efficient allocation of resources for present generations, while correcting pricing distortions."⁵⁸ Many economists believe that reliance on a free market, despite its premise of continuous growth, is the best mechanism to account for all externalities.⁵⁹

The "missing market" problem is analogized to the "tragedy of the commons" where collectively-used property ends up destroyed.⁶⁰ Critics of this analogy indicate that communal property can be sustainably managed and that when land in developing countries becomes privatized it is most often women who are adversely impacted.⁶¹ Nevertheless, the trend now is for economists in the North to use the absence of market structures to account for everything from the decline of local fisheries, due to a lack of private oceanic property rights, to the growing threat to biodiversity, where nature's amenities are seen as "jointly supplied and non-exclusive."⁶²

58. Id. at 452.

59. As Edward Abbey noted "[g]rowth for the sake of growth is the ideology of the cancer cell." BIOSPHERE 2000, *supra* note 37, at 565.

60. Garrett Hardin, The Tragedy of the Commons 162 SCIENCE 1243, 1244 (1968). It states, "Ruin is the destination toward which all men rush, each pursuing his own best interest in a society which believes in the freedom of the commons." But see Ronald D. Lee, Comment: The Second Tragedy of the Commons in FUTURE OPTIONS, supra note 28, at 321 n.4 (noting that historically, common property resources were not free-access, but rather, were communally managed).

61. See Hempel, supra note 38, at 453-54. He notes that studies from anthropology and archaeology show communal property has often been sustainably managed for many centuries on the basis of cultural practices and institutions for self-regulation. Even the medieval commons used in Hardin's analogy "have been found to be far more stable, ecologically, than the rift between individual and collective rationality would seem to suggest. . . [n]evertheless, Hardin's allegory may have increasing relevance in the modern era. The cultural practices and community-based institutions that in the past served to protect common resources are now in decline as a result of population growth, cultural erosion, and external development pressures." Id. at 453-54. But see Antonio G.M. La Vina, The Right to a Sound Environment in the Philippines: The Significance of the Minors Oposa Case, 3 REV. EUR. COMMUNITY INT'L ENVTL L. 246, 250-51 (1994). See also Policy Statement on Population and Environment, in WOMEN AND THE ENVIRONMENT 22 (G. Reardon, ed., 1993) (commenting how people, primarily women, have traditionally adapted to and shaped the natural environment through the accumulation of local knowledge, the devaluation of which has increased environmental degradation). See generally UN Economic Commission for Africa, African Training and Research Centre for Women, Update No. 17, Nov. 1991, at 10-11; and Recommendations of the Expert Group Meeting on Population and Women, Report of the Secretary-General of the Conference, Substantive Preparations, Dec. 16, 1992, E/CONF.84/PC/6 at 20-21.

62. Hempel, supra note 38, at 453, 455-56. The environmental destruction of the

measures through higher gasoline taxes, which were rejected due to their regressive impact on income distribution. For a specific example on attempts to ensure political accountability in environmental policy-making, see Diana D.M. Babor, *Environmental Rights in Ontario: Are Participatory Mechanisms Working?*, COLO. J. INT'L ENVTL. L. & POL'Y 1998 Y.B. 121 (forthcoming in 1999).

However, the process of assigning market values to the greater biosphere signifies a complete and all-encompassing entrenchment of anthropocentric values. Making animals and plants subject to the laws of the marketplace obviates the need to care for the rest of the ecosystem, because their assigned values would have no connection with their role in a forest or marine ecosystem.⁶³ The numerous unknown species which are presently disappearing would not be computed as having value to humans. "The real value of the ecosystem is without limit, as it uniquely enables us to stay alive on the planet."⁶⁴

In light of the fact that private ownership is also no guarantee that an ecosystem will not be subject to unsustainable abuse, a substantive right to an ecologically-balanced environment would provide recognition for the life-giving value of the ecosystem. In addition, this right would serve to attenuate anthropocentric and contempocentric motivations by providing for a balance between that of the self and the other, the present and the future, and our rate of consumption and fertility.

D. Affluence and Population

The Rio Declaration acknowledges that industrialized countries are largely responsible for unsustainable activities, as differentiated responsibilities reflect the level of a state's industrial development. Principle 7 sets forth that:

states shall cooperate in a spirit of global partnership to

64. McLaren, supra note 35, at 250.

eastern command economies can be explained by the absence of market forces, which "is particularly true in the case of ecosimplification, where the absence of market incentives for protecting habitat or common property appears to have its greatest impact." *Id.* at 456.

^{63.} McLaren, supra note 35, at 250. In the border areas of Cambodia, Laos, Vietnam and Thailand, biologists have spent decades, in a region plagued by thirty years of warfare, seeking the elusive kouprey, a wild forest ox of which an estimated few dozen survive today. The kouprey is probably the most endangered big mammal in the world, yet six decades of international effort to study it or even capture it on film has only resulted in the loss of lives due to land mines and armed attacks. Since the likelihood of finding the kouprey remains slight, the World Wildlife's Fund Hanoi office has not allocated its limited funds to prioritize this mystery bovid. Steven Hendrix, Quest for the Kouprey, READER'S DIG., Sept. 1996, at 105, as condensed from International Wildlife. More illuminating, is the "other priority" given to capturing live koupreys. According to Noel Vietmeyer of the U.S.-based National Academy of Sciences and a specialist in the economic evaluation of tropical species, the kouprey is "probably the most genetically valuable species on Earth" since kouprey cross-breeding could offer a "billion-dollar genetic boost - in terms of disease resistance and general fortitude - to domestic cattle stock" Id. at 106. This perception of a species which has been barely seen, in terms of its economic utility to service a minority of human livelihoods, is indicative of how the intrinsic value of nature is continuously coopted by the profit its purely physical properties yield. This is the crux of the problem which we have allowed to develop: the value of nature as a dimension for reverence has been displaced by the belief that it is strictly for our limitless use and exploitation.

conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. "The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command."⁶⁵

In 1993, the U.S. government formed an advisory body on sustainable development which acknowledged that stabilizing the population without changing consumption patterns and waste production would not be enough. However, it would "make an immensely challenging task more manageable. In the United States, each is necessary; neither alone is sufficient."⁶⁶

Indeed, it is clear that if a reduction in consumption in the North is critical, then "any population growth in a country with high levels of consumption is as severe a crisis as the environmental problems that it intensifies."⁶⁷ At present, the United States is the only major industrialized country "experiencing population growth on a significant scale."⁶⁸ Fertility in the United States has been rising in recent years and in 1989, the average number of children per woman exceeded 2.0 for the first time in seventeen years.⁶⁹

Despite the recommendations of the ICPD, no industrial nation, other than Japan, concedes to having a stated population "policy." This is particularly true in the United States where population control is as-

^{65.} Rio Declaration, supra note 32, at princ. 7.

^{66.} U.S. Population, supra note 40, at 391. The advisory body, named the "President's Council on Sustainable Development," is comprised of about thirty members drawn from "senior levels of the Clinton administration, CEOs of major corporations and heads of environmental groups." Id.

^{67.} Jacobsen, supra note 7, at 269.

^{68.} Id. Jacobsen indicates that, on the basis of data from June 1994, "the United States annually adds nearly two million people to the world's population from natural increase alone." Id. Births to unmarried women. . . reached a record high of more than 1.2 million in 1991, up 4 percent from 1990 and 82 percent from 1980. . . The most dramatic increase in non-marital childbearing occurred among relatively older women. One-third of unmarried mothers in 1988 were aged 25 and older, compared with about one-fourth in 1980. Unmarried teens also account for one-third of unmarried births. UNITED STATES OF AMERICA, U.S. NATIONAL REPORT ON POPULATION 21 (1994). See also U.S. Population, supra note 40, at 391 (stating that 60 percent of all pregnancies in the US are unintended).

^{69.} See Jacobsen, supra note 40, at 279. "This recent increase [in fertility], coupled with a rise in immigration, makes the likelihood of population stabilization in the U.S. remote." *Id.* According to the US Census Bureau, the most recent medium range projection estimates a population of 350 million by 2030 and of nearly 400 million by 2050. *Id.* "Based on current trends, efficiency in the use of all resources would have to increase by more than 50% over the next four or five decades [in the United States], just to keep pace with population growth." U.S. Population, supra note 40, at 393 (emphasis added).

sociated with negative or racist immigration policies.⁷⁰ Consequently, the United States has "no legislation that limits or manages population growth, advocates attempts to determine ideal population size or cultural carrying capacity, supports family planning programs, or promotes education about population issues or human sexuality."⁷¹

In fact, most industrialized countries, faced with aging populations, "are trying to halt the decline in their fertility rates and some have even decided to actively encourage higher fertility. . .Family policies are the principal means of addressing these objectives."⁷² As such policies are aimed specifically at women in the labor market, the procedures by which governments are attempting "to reconcile professional and family life"⁷³ are not specified, although pro-natalist financial incentives have been offered in some jurisdictions in Europe.

The greater capacity of the affluent to access the legal system to advance and protect their interests and rights further differentiates the scope and manner by which a population policy is formulated and implemented, as between North and South. When a state policy in an industrialized country attempts to limit a freedom or right, it will likely be challenged on constitutional grounds. For example, the "special leave" granted for teachers employed by the South African government upon a birth or adoption is being challenged. That maternity benefits are limited to "the birth or adoption of two children," with only unpaid leave available for the birth or adoption of further children, is being

^{70.} See Rohrbough, supra note 41, at 239. She writes "[a]lthough migration does not change world population figures, it does affect the overall consumption of resources and ignores the real problem of overconsumption." Id. Comprehensive arguments surrounding immigration policies held by industrialized nations are beyond the scope of this article. For further information, see U.S. Population, supra note 40, at 397 (noting that one "undervalued strategy" to address immigration into the United States would involve formulating policies in international trade, economics and the environment to redress the economic, political and social conditions which influence an individual's decision to emigrate). However, choice as to when, where and why one ends up migrating does not always enter into the equation. See any and all of the most recent United Nations Declarations and Conventions pertaining to development and/or human rights for similar recommendations.

^{71.} BIOSPHERE 2000, *supra* note 37, at 157. This book asserts that the stance of the United States government is one constituting an unofficial pronatalist policy on the basis of the following: "an income tax structure that provides deductions for all children in a family; a strong movement to limit legal abortions in the United States and to limit or stop funds to international family planning groups in countries with legalized abortion; increased benefits for each child born into a welfare family; a strong belief that the economy is based on continued population growth; and a strong belief that family size should be decided on by the family." *Id*.

^{72.} ICPD, NATIONAL PERSPECTIVES ON POPULATION AND DEVELOPMENT, SYNTHESIS OF 168 NATIONAL REPORTS PREPARED FOR THE ICPD, 65 (1994) [hereinafter NATIONAL REPORTS]. "The majority of industrialized countries do not perceive immigration as a long-term solution to address demographic imbalances caused by fertility decline and population aging. The socio-cultural difficulties of integrating large numbers of immigrants is cited as the main reason for this." *Id.*

^{73.} Id.

challenged as a violation of the South African Bill of Rights.⁷⁴ If a violation is found, the onus will be on the government to justify the right's limitation as to the importance of its purpose.

E. Summary - Part 1

Were the manifestation of anthropogenic environmental damage solely attributable to emission-producing technologies, a solution would have undoubtedly already been found. Yet, reliance on these technologies extends beyond their function as cornerstones of modern economies and in providing for affluent lifestyles. They act as principal amplifiers of the core values upon which modern economies are founded. Any reduction of their externalities needs to factor in the current and anticipated damage generated by increasing numbers of consumers as a consequence of population growth.

Generally speaking, efforts to change the anthropocentric and contempocentric attitudes in countries "addicted to economic growth"⁷⁵ require the creation of a new culture of sustainable consumption. A consideration of how anthropocentrism, in particular, has been made both culturally acceptable and unquestionable could begin with a review of how both legal and non-legal language is used to describe the position of humans in the biosphere.⁷⁶

As well as encouraging the elimination of wasteful lifestyle practices, family planning services engender greater opportunities for women in the industrialized world.⁷⁷ However, a decision to legally challenge a limit on the number of children for which the state should provide financial benefits, overlooks both the need for short and longterm fiscal restraint, as well as the accepted "neutrality" of the twochild family as neither pro- nor anti-natalist, since it is the replacement value. Such a concern with "rights" conforms with the belief that there is no population "problem" in developed nations. In turn, such a per-

77. See U.S. Population, supra note 40, at 391.

^{74.} The "special leave" is also being challenged as only available to female employees; it consists of twelve weeks leave on full pay. Extracted from letter from the Canadian Bar Association, Canada-South Africa Constitutional Litigation and Legal Development Project, dated July 31, 1997.

^{75.} Rohrbough, supra note 41, at 238.

^{76.} The Rio Declaration emphasizes that "[h]uman beings are at the centre of concerns for sustainable development." Vol.I, Principal U.N. Doc. A/CONF.151/26 (1992). For the affluent nations, it is a given that humans (as opposed to anything else) would be at the centre of development, whether or not it is sustainable, as it is profitable and humans are the principal beneficiaries. However, were the externalities produced by development incompatible with our core values, then the maintenance of an ecologicallybalanced environment would be the centre of concern, and the excesses of development and overconsumption would not be at issue. Clearly, however, where anthropogenic damage is caused by underconsumption, the desperation of poverty requires that humans be the centre of concern, both for the sake of sustainable development and for promoting a non-existent core value of wealth re-distribution.

ception has facilitated a measure of personal freedom on all counts that has yet to be accounted for.

Part II

A. Legal Duties to Govern Rights

The prevailing definition of the responsible manner in which individuals and couples are to exercise their family planning rights is by taking into account the needs of their living and future children and their responsibility towards the community. This responsibility or duty to the community is set forth in Article 29, Paragraph 1 of the Universal Declaration of Human Rights: "[e]veryone has duties to the community in which alone the free and full development of his personality is possible."⁷⁸

Additionally, Article 2 of the 1987 Declaration on the Right to Development emphasizes that "[a]ll human beings have a responsibility for development, individually and collectively" and that individuals must consider "their duties to the community" when exercising their human rights.⁷⁹ The inherent conflict between meeting the needs of the collective and the potential infringement on reproductive rights inspires consideration of the duties attached to the rights.

Since individual and collective rights will conflict, it may be preferable to view the "right" and the "duty" as complementary, or two sides of the same coin.⁸⁰ In consequence, the "flip side" of the coin, being the fulfillment of the duty and the denial of the right, or adherence to a constraint on its exercise, is not easily agreed to because it can be drastic in its scope.

If a personal duty of constraint in the exercise of a freedom is to gain widespread support, both the individual and the community as a whole need to take active steps to further the rights of successors to an ecologically-balanced environment. Reducing consumption and decreasing the number of future inhabitants (than there otherwise could be) would facilitate the preservation of the environment for the benefit of forthcoming generations.

^{78.} Universal Declaration of Human Rights, G.A. Res. 217(III), UN GAOR, 3rd Sess., Supp. No. 13, at 71, U.N. Doc. A/810 (1948).

^{79.} The Declaration on the Right to Development, G.A. Res. 41/128, U.N. GAOR, 41st Sess., Supp. No. 53, at 186, U.N. Doc. A/41/53 (1987).

^{80.} UNESCO, HUMAN RIGHTS ASPECTS OF POPULATION PROGRAMMES WITH SPECIAL REFERENCE TO HUMAN RIGHTS LAW 17 (1977). See also Luke T. Lee, Population: The Human Rights Approach, 6 COLO. J. INT'L ENVTL L. & POL'Y 327, 339 (1995).

1. The Duty to Limit Succession

"We have only to imagine how Europeans and North Americans would respond if they were suddenly asked to have only one child per couple because the birth rate in Africa is higher than in other regions."⁸¹

It has only been within the last forty years that individual and collective rights regarding population growth began to diverge. Previously, these rights "coincided in the direction of pro-natalism, advancing both the individuals' and society's interest in an increasing population."⁸² Given that there is both an individual and societal interest in securing and benefiting from the right to an ecologically-balanced environment, both interests have to again coincide in the direction of decreasing, or at a minimum, stabilizing, population growth.

In this regard, it is necessary to review how the duty which attaches to the right to freely choose family size has been defined. The World Population Plan of Action, formulated in 1974 in Bucharest, stipulated that couples and individuals "take into account the needs of their living and future children, and their responsibilities to the community."⁸³ Recommendation 30 of the Mexico City Report reiterated this principle, in 1984,⁸⁴ as did Paragraph 7.3 of the ICPD, in 1994, which adds that the "promotion and responsible exercise of these rights for all people should be the fundamental basis for government- and community-supported policies and programmes in the area of reproduc-

^{81.} Stackhouse, *supra* note 53 at D-1, D-3 (citing the writing of Marge Berer, a British specialist in reproductive rights, who was "mocking the pressure that the rest of the world is sure to put on developing countries to limit their growth.").

^{82.} Luke T. Lee, *supra* note 80 at 339. See S. JOHNSON, WORLD POPULATION -TURNING THE TIDE: THREE DECADES OF PROGRESS 1 (1994). See also REPRODUCTIVE HEALTH: A STRATEGY FOR THE 1990'S, 11-12 (1991) (noting that the tension between "individual good" and "common good" "is strikingly apparent in discussions of optimal family size," particularly since these decisions may involve moral judgments and ethical values). In the ICPD, *Report of the Nordic Women Parliamentarians Meeting*, Copenhagen, 3-4 March 1994, [hereinafter Nordic Women] it was observed, at 11-12, that "[a]lthough the individual right of each woman to decide on her fertility was considered a laudable goal, it was also suggested that. . .there was a contradiction between this fundamental right and social responsibility." As the Report mainly focused on countries with rapid population growth, the balance between individual rights and social responsibilities was to be made by the state and the apparent contradiction between "promoting individual reproductive rights while at the same time fostering a reduction in the world's population growth rate" was stated to imply "that women want to have large numbers of children, whereas surveys. . .reveal that most of these women would prefer fewer children."

^{83.} United Nations World Population Conference, Bucharest, UN Doc.E/CONF.60/19 (1974), Report of the United Nations World Population Conference, Bucharest, 19-30 August 1974, Para. 14(f).

^{84.} International Conference on Population, Mexico City, UN Doc.E/CONF.76/19 (1984). Report of the International Conference on Population, 1984, Mexico City, 6-14 August 1984.

tive health, including family planning."85

The degree to which this duty is actively undertaken depends not only on whether the knowledge and means to control reproduction are available, but also on how entrenched pro-natalist forces or biases exist within any given culture. Some of these pressures persist in developed societies and include, among others, encouraging women to marry young, to "try for a boy next time," to equating a sizeable family with masculinity⁸⁶ and to having a child to obtain or maintain a marital union. "The effect of this pressure can amount to coercion, even or perhaps especially when it comes from within the family" which, in effect, "can coerce women to make reproductive choices which they know to be counter to their interests."⁸⁷

Within developed nations a propensity also exists among young women, as well as their partners, to view the birth of a child as their primary life accomplishment, and as a way to indirectly gain muchneeded attention. They may also view the baby as the one being they can love and that will love them in return. Although these factors may be completely beneficial for all involved and may provide the parent with a sense of self-assurance, they have also been partially responsible for a proliferation of single mothers and the perpetuation of an inordinate focus on women's reproductive functions, both in how these mothers view their own personhood and in the gendered values which are subsequently transmitted to the next generation.⁸⁸ For the full responsibility of parenthood to be achieved, along with the requisite emotional maturity, a measure of stability and security must begin from within with empowerment.

2. A Right Informed by Responsibility

In considering the motivations which go into reproductive decisionmaking, some individuals may believe the reasons "are deeply private, and cannot be easily overridden on grounds of their adverse effects on, say, the utility of others."⁸⁹ That "unrestricted birthrates may cause

87. Id.

89. Sudhir Anand, Population, Well-being, and Freedom, in POPULATION POLICIES

^{85.} ICPD, supra note 29. Paragraph 7.3 continues, in part with: "As part of their commitment, full attention should be given to the promotion of mutually respectful and equitable gender relations and particularly to meeting the educational and service needs of adolescents to enable them to deal in a positive and responsible way with their sexuality." See also Diana D.M. Babor, Population Growth and Reproductive Rights in International Human Rights Law, 14 CONN. J. INT'L L. 83 (1999).

^{86.} The foregoing are listed in UNFPA, THE STATE OF WORLD POPULATION 1997, THE RIGHT TO CHOOSE: REPRODUCTIVE RIGHTS AND REPRODUCTIVE HEALTH 43 (1997) [hereinafter POPULATION 1997].

^{88.} See Rebecca J. Cook, Human Rights and Reproductive Self-Determination, 44 AM. U. L. REV. 975, 984 (1995) (noting that "[a]n exclusive focus on motherhood is dysfunctional to women in that, if the value of women is perceived to arise solely through motherhood, women acquire status only through pregnancy and childbirth").

adverse effects on the well-being and freedom of others—for example, of present and future generations, through environmental degradation" is premised on the view that a large population imposes "externalities" on others.⁹⁰ However, others argue that these externalities depend "on a tenuous distinction between two groups of people: those whose wellbeing is the object of our concern, and those whose presence is assessed purely in terms of what it does for the first group."⁹¹

Inasmuch as reproductive decision-making is personal, it can only be held to be "deeply personal" when the decision involves the termination of a pregnancy. Otherwise, the decision to have a child cannot be construed as entirely personal, as it is quite social in its consequences.⁹² Furthermore, and as is well noted by many feminists, the concept of "freely choosing" is an anomaly for many women, who, subject to any range of social and familial "externalities" in terms of the choices they make, may have a distorted impression as to how "personal" their decisions actually are.⁹³

Finally, the suggestion that only one of two groups of people has its well-being impacted by population growth ignores not only the globalized effects of ecosystem degradation, but those "non-people" species at risk of extinction. The group choosing to freely reproduce without regard for any adverse effects and "whose presence is assessed purely in terms of what it does for the first group" has chosen to be so assessed. Furthermore, its presence has little relevance in terms of what it is not doing for any group, including those that pre-date *homo sapiens*.

Another analysis of the duty attached to the right to freely reproduce argues that the use of the phrase "freely and responsibly" is confusing, as "[o]ne is left to wonder just what *responsibly* means, in particular when yoked with the word *freely*."⁹⁴ On the basis of the relevant 1974 and 1984 Conference [WPPA] provisions, the right to decide on

RECONSIDERED - HEALTH, EMPOWERMENT, AND RIGHTS 75, 81 (Gita Sen et al. eds., 1994) [hereinafter POLICIES RECONSIDERED].

^{90.} Id. at 82.

^{91.} Id.

^{92.} See Rita M. Gross, Buddhist Resources for Issues of Population, Consumption and the Environment, in POPULATION, CONSERVATION AND THE ENVIRONMENT, supra note 52, at 157. She writes that "pro-natalists regard reproduction as a private right not subject to public policy, even though they usually insist that the results of their reproduction are a public, even a global, responsibility." *Id.* Given that children involve a great deal of personal sacrifice, particularly for women, it is beneficial if the couple or individual know in advance not only what it takes to have a child, but also why they are choosing to have one.

^{93.} But see RUTH DIXON-MUELLER, POPULATION POLICY & WOMEN'S RIGHTS: TRANSFORMING REPRODUCTIVE CHOICE 26 (1993) (writing that "[g]irls and women in every society have devised means, subtle or otherwise, to try to influence the outcome of decisions that concern them or to circumvent the authority of men and elders while appearing to acquiese").

^{94.} Reed Boland et al, Honoring Human Rights in Population Policies: From Declaration to Action, in POLICIES RECONSIDERED, supra note 89, at 93.

the number of children is "a limited right, balanced by significant responsibilities to others," and while "the sentiments behind the theory of responsibility" are considered important, the analysis asks: "[w]ho is to decide whether persons are acting responsibly?"⁹⁵

The WPPA's reply to this query is that the human right to freely reproduce should be consistent with "national goals and values," which, "in effect, undermines the concept of universal reproductive freedom . . . by making individual human rights subordinate to national objectives and values, and thereby insulating national policy from outside scrutiny."⁹⁶ Further, although the pre-Cairo conferences "purport to take a neutral stance with respect to overpopulation, most of their specific recommendations are directed toward lowering rates of population growth, not toward ensuring that individuals are free to determine their own fertility."⁹⁷

As to whether there is "a fundamental right to procreate," recognition "that childbearing has consequences for others" is granted, but this does not encompass "the claim that women have a duty to society (or the planet!) to abstain from reproducing."⁹⁸ The assertion then made is that "[s]uch a duty *could begin* to exist only when all women are provided sufficient resources for their well-being, viable work alternatives, and a cultural climate of affirmation outside of childbearing so that they no longer depend on children for survival and dignity."⁹⁹

While the foregoing has indisputable significance in developing countries where traditional stereotypical roles of women remain entrenched, and while it can certainly be recognized that a "cultural climate of affirmation" does not fully exist in the developed world, the empowerment process does not stop with the freedom to make choices under conducive conditions. Once made, empowerment decisions become truly established when responsibility rooted in the greater consequences of each choice is taken.

However, as many single mothers in both Canada and the United States can attest, the consequences of their choices differ significantly from those not similarly situated. Often living in hardship, with poor nutrition and poor employment and wage prospects, disincentives to bearing more children have little to do with simply surviving. As few

^{95.} Id.

^{96.} Id.

^{97.} Id.

^{98.} Sonia Correa & Rosalind Petchesky, Reproductive and Sexual Rights: A Feminist Perspective, in POLICIES RECONSIDERED, supra note 89, at 114.

^{99.} Id. (emphasis added). In the rest of the section which follows this paragraph, I have removed certain "all-encompassing" statements from the overall context in which they have been expressed in order to highlight certain underlying themes. The authors of this current citation indicate that "[W]e are suggesting not that reproductive and sexual rights are absolute or that women have the right to reproduce under any circumstances, but that policies to enforce those rights must address existing social conditions and begin to change them." Id. at 108.

single fathers have yet to discover, it has everything to do with perceived social roles.

That the duty can only come to exist when *all* women [italics are mine] are in a position of well-being, fails to account for the fact that "well-being" is socially constructed and will vary in its substance and scope to a significant degree. Taken together, the expectation is that states are to provide any possible range of benefits to improve the condition of those who are freely reproducing and to also uphold the right to freely reproduce by refusing to set national goals to accommodate both current and future needs. Realistically, however, such a vision belongs to a world where the "purest" forms of coercion are never unleashed in a war waged over resources, because they are never scarce and the ecosystem never degrades.

As much as the foregoing arguments concerned with women's needs are important for ensuring that the women who shoulder tremendous responsibilities in many impoverished nations are not subject to further indignities, a qualification is in order and a distinction is to be drawn when discussing the many who comprise the developed world and who may have many of their most significant needs met.

3. A Norm of Restraint

There is little dispute that many citizens born in developed nations believe that the larger problems facing the planet originate elsewhere. The very notion that constraints could exist on their freedom, or right, to live at a level of material and social well-being to which they have grown accustomed, is met with fear that their world could disappear. When the prospect of increased immigration to the North is raised, many unflinchingly retort that the borders should simply be closed.¹⁰⁰

^{100.} I am basing these assertions on conversations with a number of people from a cross-section of occupations and levels of education. The idea that there could be islands of affluence amidst an ocean of poverty alarms them less than the prospect of "losing" their world as they know it. Implicit in this is the thought that the nation they live in could be "overrun by the rest of the world's masses." Little credence would therefore be given to the following message

[[]T]here is simply no way for affluent denizens of the North, whose lifestyle preys upon just those beleagured resources and populations of the South, to make any credible case for world-population control, in isolation from the larger context of our own resource use and environmental impact. This discrepancy between the theory and practice of population pundits makes one wonder if the conspiracy of progressive silences on population may not represent the more ethical posture. Indeed, only as we in the North begin in greater numbers to practice our own forms of eco-asceticism, thus reducing our disproportionate dependency upon resources and technology—and continuing to reduce our own populations to make space for the needs of the poor forced by Northern policies to migrate Northward—may we engage the population issue in good faith.

The unwillingness to extend reciprocity evokes a racist and classist view of the world. The "legitimacy" of this view could be said to be grounded in a form of self-centredness that was once the reserve of a scattering of royalty, rather than an entire nation-state.¹⁰¹ In essence, the universality of human rights, in practice, depends on what side of the border is at issue.

The fact that for each person who has wealth there are several who are impoverished will only be redressed with the acknowledgement that we have made the planet a metaphorical Titanic, our faith premised on the belief that science will solve everything. This global ship we have appropriated may not be able to avert an impending collapse if the speed of our "progress" is not reduced and if the number of future passengers is not stabilized and "brought up" to first class. While reducing consumption is the best immediate solution, the long-term strategy of population stabilization must also be pursued by the affluent, particularly in those states in which a pro-natalist agenda continues to be espoused.

B. The Right to an Ecologically-Balanced Environment as a Basis for Restraint

"[Human] nature...is what we were put in this world to rise above."¹⁰²

Population growth clearly has never been the sole cause of environmental degradation anywhere.¹⁰³ Yet, in light of the scope and speed of environmental decline, the right to an ecologically-balanced environment has much in common with reproductive rights, since both are concerned with ensuring a life of quality.

Within the framework of reproductive rights lies a potential tension between the individual and the common good. Not only can this duty to the community imply that the individual or couple must exercise restraint in determining family size, but this communal element

102. Katherine Hepburn, in AFRICAN QUEEN (Romulus-Horizon 1951) (based on the novel by C.S. Forester).

103. See AFTER RIO, supra note 7, at 5.

Catherine Keller, A Christian Response to the Population Apocalypse, in POPULATION, CONSUMPTION AND THE ENVIRONMENT, supra note 52, at 118.

^{101.} A proclamation frequently made regarding any form of a duty to exercise restraint, being: "why should I reduce my consumption just so those people (referring to the South) can keep having children?" is hopefully an attitude that will die with the most over-consumption-self-oriented group of people ever to pass across the planet at once. I am referring to the baby-boomers of the developed world, whose legacy may not only be all the new and exciting technology, but more significantly, will consist of a blank cheque they have drawn on the state of the planet's ecosystem, which will be passed on to future generations to pay (as Jacques Cousteau himself described it) since taking responsibility now could mean having to forego "a material world" and could involve trade-offs over the provision of jobs, or possible affluence.

can also be reinforced by utilizing the duties construed within the right to an ecologically-balanced environment. The community to which the individual owes a duty to limit reproduction can be expanded to encompass the greater ecosphere in which the (global) community resides, as the right to an ecologically-balanced environment carries an implicit duty that each person, corporation and government ensure that an ecologically-balanced environment be maintained. Given that a flourishing biosphere is beneficial for all who reside within it, it is incumbent on the planet's not-so-benign predators to exercise the necessary duties to ensure the right will be not only upheld, but also available, for both present and future generations.

Towards this objective, the right to an ecologically-balanced environment provides a window through which to argue that the state must set and meet goals to reduce its own overconsumption. An environmental right is ultimately concerned with both the quality of life and the right to life itself, so there are compelling arguments to be made that our anthropocentric and contempocentric approaches to the ecosphere, by which excess and arrogance prevail over a precautionary approach, require legal constraints. This is particularly significant in affluent states where each additional human amplifies the speed of environmental harm and resource use.

The right can also support the argument that a state must provide the knowledge and means for all of its citizens to control their own fertility. The provision of knowledge must extend beyond the means to access and utilize the reproductive health care system. There must be an emphasis on providing information, within an educational context, on the full range of options available for "creating" a family. Societal services and support must be fully extended to those who opt to adopt, or have only one child, or choose not to have children, or choose pets in lieu of children, or choose to be sterilized without having children, or decide not to have children when a partner has children from a previous marriage.

The state must also direct fertility control towards its male population, particularly as developed nations witness a trend, which has been analogized with polygamy, of children being fathered across multiple marriages and relationships. Masculine responsibility has often been left outside of the discourse on reproduction and needs to be substantively addressed in the form of male contraceptive research and education. Given that every fertile male always has the potential to impregnate a female, but that the potential for females to become pregnant is less certain, the responsibility must also be assumed by the male, who has otherwise been quite free from any such considerations.¹⁰⁴

Towards the further fulfillment of its duty, the state must also im-

^{104.} See NORDIC WOMEN, supra note 82, at 12-13; POPULATION 1997, supra note 86, at 48-50.

plement a policy which informs people about population-environment linkages, so that the significance for undertaking responsible decisionmaking becomes apparent.¹⁰⁵ Towards this objective, the state itself must first acknowledge and analyze both the current and future implications of these linkages, as well as those between environment and consumption. Of the national reports on population and development received prior to the ICPD, only 25% of industrialized countries indicated interrelationships between the environment and population size, and between the environment and consumption.¹⁰⁶ The state has a duty not only to recognize the linkage, but to also engage in research to determine local and national carrying-capacities, in which community participation and awareness is emphasized.

105. In a study on the extent to which these links are expressed by the popular media, a random sample of 150 stories about urban sprawl, endangered species and water shortages found that only one story in ten framed population growth as a source of the problem, and only one story out of the entire sample mentioned population stability among the realm of possible solutions. The study further uncovers that "journalists are aware of the controversial nature of the population issue, and prefer to avoid it if possible. Most interviewees said that a national phenomenon like population growth was beyond the scope of what they could write as local reporters." T. Michael Maher, How and Why Journalists Avoid the Population-Environment Connection 18 POPULATION & ENV'T 339, 339 (1997). Maher cites Interpreting Public Issues, a public affairs reporting textbook, which, admonishes journalists by noting that, "[a] common journalistic mistake is simply to cover events-real or staged-and ignore underlying issues" and then proceeds to identify population trends as one of the "big trouble spots" and lists world population as the first of its "forefront issues in the '90's." Id at 356. citing INTERPRETING PUBLIC ISSUES 320 (1991). See also J. MAYONE STYCOS, POPULATION AND THE ENVIRONMENT: POLLS, POLICIES, AND PUBLIC OPINION (1994) (evaluating how surveys sent by the UN to member states on their official position on population issues are structured and answered). For example, the 1988 inquiry was 42 pages long without a single question on the environment. In the 1990 survey, "not one of 38 industrial countries considered its growth too rapid, and as many as seven considered it to be too low." Id. Of the 169 government reports to the Earth Summit, the data confirmed "industrial nations' lack of concern about their population growth." Id. at 8. A 1994 American national survey indicates that 42% of respondents opposed the US sponsoring programs overseas to help other countries slow population growth and 48% disagreed that it is important to lower birth rates in the US to help save the environment. Id. at 13-14. Finally, 68% agreed that people everywhere should feel free to have as many children as they can properly raise. Id. In his conclusion, the writer suggests that the "general publics of most nations do not understand population-environment linkages" and that governments "also often ignore them, indicating the need for more research on, and perhaps education of, decisionmakers." Id. at 21. As was noted in the Report of the ESCAP/UNDP Expert Group Meeting on Population, Environment and Sustainable Development, Jomtien, Thailand, there is a need for more emphasis on community participation, the electronic and print media and formal and non-formal education to inform the public on a regular basis as to the linkage, journalists need to be more proactive, investigative and more involved in agenda setting and in assisting NGOs in problem-solving and that all media should also incorporate educational messages in the dissemination of population and environment issues. Report of the ESCAP/UNDP Expert Group Meeting on Population, Environment, and Sustainable Development, U.N. Doc ST/ESCAP/1033, Jomtien, Thailand, May 13-18, 1991., at 24-25.

106. See NATIONAL REPORTS, supra note 72, at 19.

1999 POPULATION-ENVIRONMENT LINKAGES

1. **Responses to Reductions in Fertility**

The considerations which shape a population policy may not be directly related to the rate of population growth, as much as they may be a secondary outcome of gender-based discriminatory state measures.¹⁰⁷ Among industrialized states with declining fertility rates, concern that social security be garnered for the elderly and that at least some of its population self-perpetuates continues to contribute to pro-natalist initiatives. The steps which a state may take to address these concerns tend to be in direct opposition to its duty to limit growth.

The approach by some states in adopting "egalitarian" family policies which are "aimed at helping women combine working careers with raising families, and distributing the burden of housekeeping and childraising more equitably between the genders"108 has been a vital and beneficial social undertaking. However, while the international community acknowledges that "some countries need to make greater efforts, at the work place and at home, to enable women to both manage a career and raise a family," a potentially harmful qualification exists as to the extent to which such efforts should progress. "[S]ince certain aspects of family policy can inadvertently contribute to the breakup of the traditional family structure, care should be extended to minimize such adverse incentives."109 The provision of sufficient affordable day-care undoubtedly qualifies in some states as an adverse incentive.

That the traditional family structure is inherently pro-natalist, patriarchal, and focused on female reproductive capacities is not perceived to be as disconcerting as the rapid deterioration of the "central, cohesive structure" which the traditional family proffered. That "families used to be the moral and ethical nucleus of societies, with governments playing a relatively neutral role in this regard"¹¹⁰ fails to consider how

Id. at 6-7.

109. Id. at 23.

110. Id.

^{107.} An example would be the state agenda to eject women from the work-place following the Second World War, largely through social pressure and an emphasis on their "familial duties." Their return to the domestic sphere helped usher in the baby boom.

^{108.} NATIONAL REPORTS, supra note 72, at 17. Sweden's national report on population states as follows:

Sweden's policy is that couples should be able to have children and combine gainful employment with child-care. In Sweden, about eighty-five per cent of mothers of underage children are employed outside their homes. The number of women that do not bear children at all is small. . . One of the corner-stones of Sweden's family policy is the parental insurance system, which offers both parents the opportunity of caring for their newborn child at home by compensating them economically for their loss of income. The parents themselves decide how to divide the parental leave between them. Another is that child day care facilities meet the demand. . .A third component is financial support for families with children, including relatively generous contributions to single parents.

frequently human rights were and are abused within what was and can often be a dysfunctional private sphere.

2. Discouraging Reproduction

Since most developed states are attempting to ensure that a decline in fertility does not lead to a decline in the size of the population as a whole, an emphasis on duties has yet to materialize as a state policy in any industrialized country. Although such an approach would certainly reduce consumption rates and environmental degradation, this linkage between population, consumption and the environment has yet to be fully considered beyond the contempocentric concerns of government with a rights-oriented polity.

If advocates challenged this pro-natalist positivist agenda by emphasizing the right to an ecologically-balanced environment, it would most likely arise within a nation such as the United States, where increasing population is expected to "exacerbate problems such as air pollution, landfill capacity, urban boom, overcrowded school systems and extinction of species."¹¹¹ The degree to which the citizenry will "blame" the nation's immigration policy can best be countered with an emphasis on the need for restraint by all inhabitants.

If disincentives became necessary to "encourage" a duty-oriented approach to reproduction, the degree to which such a population policy would impinge on the exercise of human rights would reflect how responsibilities to the community are perceived and the extent to which they are endorsed by individuals. A suggestion that birth quotas be analogized to laws which restrict the number of spouses, would, it is argued, make the establishment of a two-child family norm compatible with human rights.¹¹² As this raises issues concerned with enforcement, a preferable means may be the use of financial disincentives. Given the general preoccupation with personal economic security in affluent societies, such a strategy may prove to be the most effective means of communicating that life is indeed an expensive undertaking.

Another suggestion to ensure that a duty-based approach becomes the norm is that of an income-based tax on births. This process would internalize the environmental costs of childbearing, as the affluent "consume a disproportionate share of the environmental birthright,"¹¹³ and would provide funds which could be transferred to poor families, or to poor nations, to facilitate improved reproductive health care or to re-

^{111.} Omar Saleem, Be Fruitful, and Multiply, and Replenish the Earth, and Subdue It: Third World Population Growth and the Environment, 8 GEO. INT'L ENVTL. L. REV. 1, 3 n.7. Even the city of London England is running out of space to bury its dead, and is attempting to "recycle" graves over a century old. See CBC Evening News (CBC television broadcast, Aug. 24, 1997).

^{112.} See Luke T. Lee, supra note 80, at 333.

^{113.} Ronald D. Lee, supra note 60, at 319.

habilitate degraded environments. In this way, no particular population size or level of fertility would be imposed by central authorities and the preferences of the people would ultimately be reflected as the system evolves.

As well, unlike the current situation, "in which we are ineluctably driven to an environmental standard lower than we would choose for our descendants if we were able," the tradeoffs "implicitly chosen between numbers and environmental quality of life" would belong to those whose choices have made it.¹¹⁴ A fee on procreation would also reflect a recognition that just as the species which create an ecologicallybalanced environment are having to pay (literally with their lives) for existing in "our territory," so too should we pay for the right to encroach on theirs.

The issue of money for improving standards in service delivery for reproductive health is well-documented. Although the Amsterdam Declaration on a Better Life for Future Generations which was adopted in 1989 at the International Conference on Population in the Twentyfirst Century, called upon governments to double total global expenditures in population programs in order to meet the needs of millions by the year 2000, in 1997, money still remained an issue.¹¹⁵ The total worldwide yearly cost of better reproductive health care is approaching \$17 billion, or "less than one week of world expenditure on armaments."¹¹⁶

3. Empowering Individual Duties

Advocates and theorists of human rights have invested their abilities in defending the "claims-to that human rights contain, but have devoted much less effort to developing accounts of claims-against," as this "deals with the production rather than the consumption side of rights, the side where people bear burdens rather than receive liberties, protections, or benefits."¹¹⁷ Given the power of the driving forces which underlie environmental destruction, it is valuable to consider that irresponsible reproduction has the potency to place human rights at risk, particularly, the right to life.

As "human rights are invariably asserted and defended in relation to power...be it political, economic, social, military, media-based, scientific, technological or even spiritual," it bears remembering that not only are human rights designed to limit power but they also counterbalance a utilitarian view with an ethical requirement for limits; "in a world where power centres are shifting, our concern for human rights

^{114.} Id. at 319-20.

^{115.} See UNFPA, POPULATION ISSUES BRIEFING KIT 20 (1994).

^{116.} POPULATION 1997, supra note 86, at 3.

^{117.} James W. Nickel, How Human Rights Generate Duties to Protect and Provide, 15 HUM. RTS Q. 77, 79 (1993).

should involve us in a constant search for sources of domination."118

That the power to reproduce must be constrained within a human rights framework, on the basis of an ethical requirement towards current and future generations, requires a widespread understanding of population-environment linkages. For the dissemination of this information to have any significant influence it must counter the anthropocentric forces which undermine the prospects for a sustainable and balanced ecology. The right to an ecologically-balanced environment has the ability to balance such human-centered ethics, where human beings "alone have intrinsic worth and dignity," with the very foundation upon which all rights depend, being the life-support system.¹¹⁹

"[T]he concepts presented here are contested by many citizens in the affluent world and especially among politicians with a mandate at risk."¹²⁰ It is nevertheless critical that the political message convey the necessity for change and limitations. Just as a concerted voluntary effort which subscribes duties to both the community and the environment obviates a concern with coercion, so too would a right to an ecologically-balanced environment be extraneous had this century witnessed a far more decisive effort to alleviate poverty, improve women's status and reduce untenable levels of production and consumption.¹²¹

C. Human Rights and Sustainability

Two factors illustrate how the right to an ecologically-balanced environment can be balanced against the right to freely reproduce. First, since both rights are concerned with quality of life, the interests of future generations are discernible within them. By striving to maintain a

121. See NATIONAL REPORTS, supra note 72, at 19. The Australian national report indicated that "small populations with high consumption patterns actually alter the environment more than large populations with low consumption levels." *Id.*

¹¹⁸ Interregional Meeting organized by the Council of Europe in advance of the World Conference on Human Rights, *Human Rights at the Dawn of the 21st* Century, 6 Palais de l'Europe, Strasbourg, Jan. 28-30, 1993 (Council of Europe Press, 1993), as stated by Alexis de Tocqueville.

^{119.} Herschel Elliott, The Absurdity of a Human-Centred Ethics, 17 POPULATION & ENV'T 427, 428 (1996).

^{120.} Population Debate, supra, note 53, at 45-46. (quoting K. Boulding "Those who are concerned with the future of the planet in its totality have to ask themselves: What are the sources of power in the human species directed towards. . . It is not enough to preach we must do this, we must do that. . .We do need to study very carefully. . . the structure of power in human race over the future, which involves not only particular decisions but also the overall images of the world in the minds of the decision makers. . .And in the solution of these problems—if there is one—we will undoubtedly have to make some use of threat power—taxation, regulations and so on—and some use of economic power. But the major element unquestionably will be integrative power, based first on widespread knowledge that we all live on the same fragile planet. . .to which we owe a common loyalty and affection. Unless this view is very widespread, legitimacy will not be granted to those frequently painful processes which may be necessary to prevent catastrophe.").

balanced ecosystem and by seeing each new life as representing forthcoming progeny, who will also require an ecologically-balanced environment, both current and future interests are encompassed. Second, since there is no linear solution to what is essentially a multi-faceted predicament, any balancing to be achieved will require trade-offs and "new paradigms, not just new policies, technologies or markets."¹²² In a proposal well-suited to industrialized nations, the question posed is whether "population control is the best starting place for policy action" or whether it should be viewed as a "desired consequence of other actions on the road to environmental sustainability." Such actions would include setting up consumption "speed limits" and development "toll booths" in the interim.¹²³

Furthermore, as much as population "is the headline...the real story may be hidden in the core values, consumption patterns, technologies, and market designs that influence and are influenced by population growth."¹²⁴ In light of this, the "greatest need—arguably more pressing than the need for zero or negative population growth—is for a compelling vision of sustainability" that helps to promote sustainable communities.¹²⁵

While recognizing that population growth is "a looming threat to social and environmental sustainability," the proposal warns that this driving force is too easily taken out of context and "framed as a problem for which nationalism, racism, and economic protectionism find expression as part of the solution." Population policies which encourage such expression "are far more likely to foster polarization than stabilization."¹²⁶

Whether a human rights based approach may also foster such polarization depends upon how its objectives are pursued. Universal reproductive health care is as important to the maintenance of an ecologically-balanced environment as is a reduction in affluent consumption. Persuading a society to observe limits in how it pursues its economic well-being or chooses to freely reproduce requires a fuller understanding of the interdependence of issues related to such choices.¹²⁷ Otherwise, a regulatory law may or may not be observed, whether or not coercive measures are engaged.

In addition, given that thought-processes, and therefore choices, are defined by language, the duties which reside "within" human rights

^{122.} Hempel, supra note 38, at 459.

^{123.} Id. at 458.

^{124.} Id.

^{125.} Id.

^{126.} Id. at 458-59.

^{127.} See id. at 459. Population issues are said to be interdependent with those of ethics, biology, politics, economics and community and that further research is needed to understand how population-environment tradeoffs will operate "under different cultural orientations, forms of governance, levels of education, and standards of living." *Id.*

would benefit from a change in terminology, to something such as the "Responsible Human Right for Ecological Balance" or "Responsible Reproductive Rights." The duties which complement these rights can be, and are, easily overlooked, both by policy-makers and rights' advocates. For an eco-centered vision to evolve, a norm of responsibility must become manifest in a paradigm of stewardship and "ecological economics." Constraints on the role of women across all societies must be lifted so as to provide choices beyond one of parenthood. Ultimately, the core values which have allowed humanity to survive over the millenia must be re-evaluated in the current context, particularly by those bestsituated to do so, being the affluent "denizens of the north."

"[P]eople without resources do not have choices, and people without choices cannot be asked to take responsibility."¹²⁸

CONCLUSION

The current rate of environmental depletion along with growing numbers of human beings compels attention to whether there is a responsibility governing human reproductive choices. While developing nations advocate a reduction in family size, many industrialized countries persist in utilizing an informal pro-natalist approach. Faced with declining fertility and aging populations, many of the more affluent states indirectly encourage reproduction while failing to take adequate steps to reduce overconsumption. Given that inefficient per capita consumption in the North causes as much, if not more, environmental degradation than the overpopulation of the South, the Northern nations must reduce both fertility and consumption levels simultaneously.¹²⁹

Towards this objective, the linkage between population, consumption and the environment must be underscored and its unabated consequences for forthcoming generations must be disseminated. Greater opportunities for women outside the home must continue to be encouraged along with the elimination of wasteful lifestyle practices. Core attributes, such as anthropocentrism and contempocentrism, must be recognized as driving forces which can only be surmounted with a concerted and deliberate effort, particularly by the popular media.

As human rights are concerned with ensuring a life of quality, a

^{128.} Jael Silliman, Ethics, Family Planning, Status of Women, and the Environment, in POPULATION, CONSUMPTION AND THE ENVIRONMENT, supra note 52, at 257 (quoting Marge Berer, Population and Family Planning Policies: Women-Centred Perspectives, in REPRODUCTIVE HEALTH MATTERS 10 (May 1993).

^{129.} The goal of reducing population growth as "a problem of global scope" and as one to be addressed within affluent states was recognized at the outset of concerns with overpopulation. See Richard A. Falk, World Population and International Law, 63 AM. J. INT'L L. 514, 520 (1969). This notion has since appeared to receive far less articulation. See also, Note, Legal Analysis and Population Control: The Problem of Coercion, 84 HARV. L. REV. 1856, 1857, 1892 (1971) (highlighting the differentiation between the right to procreate and the right to decide on family size).

balance could be struck with a norm which emphasizes duties to society, for both the state and the individual.

Remove the metaphysical partitioning of the imaginary state-frontiers from the face of the Earth and what is to be seen? The human species multiplying, rapidly. The human species transforming the whole Earth into an object of labour... using the energy of the Sun and the energy contained in the Earth to transform the whole Earth into an object of use...to make the whole Earth into an object of property. The human species...transforming the whole Earth, everything on it and in it, into an object of trade.¹³⁰

The interdependence of human rights, like that of all living species, needs to be respected to surmount trends in current power structures. A shift from the rights of the individual or corporation to duties to the larger community will facilitate a balancing process. Without a clear vision of what constitutes responsible behavior, attitudes will never be transformed. Without such a transformation, the biosphere itself is likely to be transformed, with unforeseeable and life-threatening consequences.

Although obligations may not have concomitant "rights," for every right there is a concomitant duty, both of which can be conceptualized as being complementary, or, as two sides of the same coin.¹³¹ As a right is "not merely a claim to some freedom or benefit; it is also a claim against certain parties to act so as to make that freedom or benefit available,"¹³² an equal weight must be placed on the duties which give rise to the rights.

The reciprocity of rights and duties must be brought into balance, if balance is to be restored and maintained within ecosystems. The need to recognize "the emptiness of the gesture of 'guaranteeing' rights which are physically impossible of fulfillment" without a recognition of concomitant duties heralded a call over twenty-five years ago for a Universal Declaration of Human Responsibilities and Duties.¹³³ Noting an "historical avalanche of words on rights without duties" the writings of Mazzini remain pertinent: ". . .all your rights are summed up in one: the right to be absolutely unfettered and to be aided within certain limits, in the fulfilment of your duties."¹³⁴ In light of numerical growth and

^{130.} See Phillip Allott, Eunomia - New Order for a New World 365 (1990).

^{131.} See UNESCO, HUMAN RIGHTS ASPECTS OF POPULATION PROGRAMMES 16 (1977).

^{132.} James W. Nickel, The Human Right to a Safe Environment: Philosophical Perspectives on Its Scope and Justification, 18 YALE J. INT'L L. 281, 286 (1993).

^{133.} JACK PARSONS, POPULATION VERSUS LIBERTY 135 (1971).

^{134.} Id. at 137 (quoting MAZZINI, THE DUTIES OF MAN 68 (1907)). In comparing the moralities of duty and aspiration, the latter is said to be exemplified by the Good Life, as set forth in Greek philosophy, which advocates the attainment of excellence and the "fullest realization of human powers." However, the Greeks "never worked out anything resembling the modern notion of a legal right" as their emphasis tended to be placed on

exponential ecological decline, action on our duties is now a basic requirement.

proper conduct. Id. at 5, n.3. In consequence, "where the morality of aspiration starts at the top of human achievement, the morality of duty starts at the bottom. It lays down the basic rules without which an ordered society is impossible, or without which an ordered society directed toward certain specific goals must fail of its mark." As such, the morality of duty does not condemn humans for "failing to embrace opportunities for the fullest realization of their powers" but rather, "it condemns them for failing to respect the basic requirements of social living." LON FULLER, THE MORALITY OF LAW 5 (1964).