

Overpopulation, overconsumption and economics

Published in The Lancet 1994

Vol 343, pp 582-584 (lightly edited Jan 17, 2003)

Colin David Butler

Last year Verkuyl¹ presented a compelling argument for a more equitable provision of family planning technology and knowledge to the Third World. In this article I want to develop that theme by exploring several interdependent issues: (a) global ecological pressures resulting from overconsumption, especially in western Europe, North America, eastern Asia and Australasia (the North); (b) overpopulation in the Third World (the South); and (c) their relation to the dominant economic paradigm operating in both North and South.

Verkuyl and an accompanying *Lancet* editorial² called for a shift in attitude towards family planning by one of the world's most powerful religions, the Roman Catholic church (the Church). This compelling advocacy bolstered the case for a thorough re-evaluation of population growth, as vigorously discussed at the 1993 population summit in New Delhi.³ The fundamental medical issue is the need to forestall closure of two traps - the demographic trap⁴⁻⁶ in parts of the Third World and the technology trap globally.⁷⁻¹⁰

Verkuyl referred to the inequity of the Church's permitting "natural" family planning methods to those who are sufficiently educated, empowered, and motivated while denying any other method to the poorest and most vulnerable. To many of the Third World poor, religion is a vital inspiration and solace; religious leaders who fail to consider the earth's limited resources and who advocate policies that result in unsustainable population growth may ultimately be judged to have been negligent in their duty of care. Verkuyl did not claim that contraception alone will solve Third World problems, any more than King⁴ proposed the denial of medical care to children in developing countries as a means of avoiding closure of the demographic trap. The Church's provision of medical care in the developing world is a praiseworthy activity, but do Verkuyl's critics such as Peeters¹¹ and Kelly¹² really believe that

the Third World population can reach, say, 10 billion, and that sufficient global resources will be available to cater for the "wants of all", including continuing Northern demand? Surely we have to accept that there is a limit to the earth's resources and that global population must be kept below that limit. Is this goal achievable without either universal access to birth control or closure of the demographic trap?

Non-Christian attitudes to contraception

One of the world's religious leader, the Buddhist Dalai Lama, recognises the links that are necessary between environment, population, and sustainable economic growth if we are ever to attain the World Health Organisation's Health for All.¹³ His support for contraception, although not abortion, is remarkable. Not only are Tibetan victims of racial dilution but also they are governed by Chinese law, which limits all families to a single child and allows abortion as a common method of birth control. Official Chinese attitudes to birth control diametrically oppose those of the Pope. The predominantly Buddhist populations in Sri Lanka and Thailand are also experiencing demographic transition, the former with a strong emphasis on literacy, especially of women, and the latter perhaps as a result of industrialisation.

Responding to Verkuyl, Omran¹⁴ clearly enunciated doctrinal Islamic acceptance of family planning, noting that one acceptable justification is "to avoid economic embarrassment". Indonesia exemplifies a predominantly Islamic country with a rapidly declining rate of population increase. Now, more than ever before in human history, global family planning is needed to avoid ecological embarrassment.

The technology trap and its security threat

Those in the developed world may watch with horror the explosion of numbers of third world poor if followed by closure of the demographic trap through war, epidemics, famine, or all three. They and their political

leaders may hope that these catastrophes will not threaten Northern security. However, if millions of ecological refugees were to find the means to migrate to the North a very real security threat would be perceived. Similarly, the technological impact of billions of 21st century Third World subsistence farmers may create little Northern strategic concern provided the per caput environmental impact of the South remains low. However, if the South gains widespread access to 20th century technologies with sufficient fossil fuel supplies, affluent countries will be threatened by at least two other traps - the energy trap and the technology trap.^{4,8,10,15}

We in the North have a moral imperative to allow less developed countries the same technological benefits that we enjoy. This issue is also of strategic concern,⁷ as recognised by politicians such as US Vice-President Al Gore.¹⁶ Development of new generations of environmentally sustainable technology must be achieved and transferred as quickly as possible to the developing nations so that they can leap-frog¹⁵ polluting 20th century technologies. Technology transfer from the First to the Third World must not stop at vaccination or oral rehydration techniques. Nor should such transfer be “Coca-colonisation: or the selling of the latest military hardware. The resource demand index (RDI) of the average US citizen is 67 times that of the average Indonesian.¹⁷ The US and other Northern countries must devise ways to maintain their living standards with lower environmental impact, and the technologies developed to so this must be transferred urgently to the South.

Transfer of technology must go hand in hand with promotion of family planning. The carrying capacity of our planet will be stretched to the limit if Indonesia and other Southern countries achieve anything like the existing Northern per caput RDI. If this occurs with a rapidly growing population, human survival will be jeopardised. The Clinton administration’s reversal of the Bush policy to surtail funding for Third World family planning out of deference to the domestic pro-life lobby is a welcome sign of change.² However, Australia lately suspended its A\$130 million (US\$87 million) family planning aid programme at the behest of a single Catholic

senator.¹⁸

Planners and politicians discount events in the distant future. In the same way that 1000 deaths in the South approximate one death in our immediate (Northern) neighbourhood, a famine predicted for 2050 is deemed of minor concern, and further discounted if we distrust the prediction. Altruism, though a powerful force, is unlikely to change our existing consumption patterns, especially when results take years to manifest. However, self-preservation is a very powerful motivator of behavioural change. Lobbyists for sustainable development must prove that it is in the self-interest of the North’s residents and religious institutions to take these concerns seriously.

Quantifying natural capital

When Fellows¹⁹ sought to determine the value of the forest she challenged some of the assumptions of the dominant economic paradigm, whereby wealth is measured solely in terms of the directly quantifiable monetary value of goods obtained from processing natural capita such as forests and mineral resources. Thus a forest, until processed into products such as paper or chopsticks, is not judged part of a county’s wealth. Yet, forests have value as repositories of biodiversity. They serve as living genetic banks, especially in the tropics, and they modify both local and global climate, both by retarding the greenhouse effect and affecting local transpiration and rainfall.²⁰ Examples of other vital natural capital - eg, the ozone layer, biodiversity, clean water, soil, air, and oceans – are counted as “free”. So they may be, until they are almost gone, when they become very valuable indeed.

Accounting for the future

There are fundamental selfish reasons why the richer countries should tackle these problems. Self-interested “aid” must concentrate on providing ways to escape these traps. Early signs of closure of the demographic trap may be the reversal of a previously declining infant mortality rate and the increased prevalence of diseases secondary to impoverishment - eg diarrhoea in children or Konzo in adults.²¹

Confronting these issues requires global, political, economic, and ethical rethinking if there is to be any hope of a habitable future for coming generations. We need to challenge economic assumptions that emphasise indices of human welfare such as disposable dollars for consumption per head. Schumaker²² has done so, trailing in his wake more and more forward-thinking economists and scientist, including those who signed the Heidelberg Appeal.^{23,24}

The World Bank, by its introduction of the disability-adjusted life year (DALY) to calculate the global burden of disease, is breaking new public health and economic ground.²⁵ DALYs take some account of future years lost from death or disability. A parallel measure-estimation of future years of lost consumption by our grandchildren ? may be needed to motivate change in our consumption patterns.

Real national wealth

Misleading approximations of national prosperity such as gross national product (GNP) should be amended to take account of natural capital- ie, actual and potential human resources, and natural resources including clean water, air, soil, fish stocks, mineral and oil reserves, and standing forests. This natural capital is the hardware of the biosphere, in which the software of biological, ecological and climatological functions operate. Examples include the role of photosynthesis as a basis for the food chain, of insects for pollination, and of mangrove forests in fish breeding. Human beings might view biodiversity as a vital resource and protect it better if it had financial value.

Measures accounting for pollution and depletion of natural capital are likewise required. Additionally, indices of social welfare?eg, income distribution and levels of literacy, education, employment, and human rights?could be developed to measure a country's "wealth".

Towards this goal, I propose the terms: real national wealth (RNW) and real global wealth (RGW) be used to describe the level of sustainable development of individual countries and the world as a whole. These measures would

attempt to incorporate measures of both natural capital and human welfare into progress indicators. Communism may have rated relatively well in the areas of income distribution and access to employment, but it rated poorly with respect to human rights and the environment. According to our current economic values, Alaska's King William Sound paradoxically increased its share of GNP after the 1989 Exxon Valdez oil spill, because of the influx of cleanup workers, even though the final result was still an environmental disaster.

At the time of Ghana's independence in 1951, the country had bauxite, rich hydroelectric resources, a relatively well-educated population, and a visionary leader, Nkrumah. A World Bank loan was secured to develop an aluminium industry. In the 1960s and 1970s Ghana sustained a series of coups and today remains deeply in debt. Its GNP has risen over time, but its RNW has not. Papua New Guinea (PNG) has one of the last untouched areas of tropical rainforest, as well as rich mineral resources. Its GNP is rising due to exploitation of these resources, but if this wealth is not used wisely for investment in sustainable development the RNW will fall catastrophically. If its population increases, PNG's per caput RNW will fall even further.

Nationalism may be subdued by the pursuit of an increased RGW, which values the global commons – the oceans, the ozone layer, Antarctica, and outer space. Current economic strategies rarely account for such items. Because the monetary values of this intact capital is not measured explicitly the general public may be unaware of declining RGW. However, at a time when the West can still recall rising per caput GNP. There can be no doubt that per caput RGW is falling fast, as the human population inexorably expands to fill all possible habitats.

One argument is that the global forces which most tangibly benefit from rigid economic thinking in conventional terms have a vested interest in maintaining the status quo. However, if policies are adapted so that RNW increases and global population stabilises, both per caput national and global GNP will eventually increase as well. If not ecological and demographic chaos

threaten us all.

The medical profession must embrace this new challenge and aim to reverse the ecological clock now poised almost at midnight for many of the species and people of the planet.

I thank Prof AJ McMichael, Prof F Schofield, Prof J Last and Dr W. Fox for their helpful comments.

References

1. Verkuyl DAA. Two world religions and family planning. *Lancet* 1993; **342**: 473-5.
2. Anonymous. Unholy struggle with third-world genie [editorial]. *Lancet* 1993; **342**: 447-8.
3. Anonymous. Whose future? Whose world? [editorial]. *Lancet* 1993; **342**: 1125-6.
4. King M. Health is a sustainable state. *Lancet* 1990; **336**: 664-7.
5. King MH, Elliott C. Legitimate double think. *Lancet* 1993; **341**: 669-72.
6. Last JM. War and the demographic trap. *Lancet* 1993; **342**: 508-509.
7. Leaf A. Potential health effects of global climatic and environmental changes. *New Engl J Med* 1989; **321**: 1577-83.
8. Butler CD. Global warming, ecological destruction and human health [letter]. *Med J Aust* 1991; **155**: 351.
9. Haines A, Epstein PR, McMichael AJ, et al. Global health watch: monitoring impacts of environmental change. *Lancet* 1993; **342**: 1464-9.
10. Ehrlich PR, Ehrlich AH. *Healing the Planet. Strategies for Solving the Environmental Crisis*. New York: Addison-Wesley Publishing Co, 1991.
11. Peeters MA. Religion, family planning, and abortion. *Lancet* 1993; **342**: 808.
12. Kelly J. Religion, family planning, and abortion. *Lancet* 1993; **342**: 808-9.
13. Dalai Lama. *The Dalai Lama, a Policy of Kindness: an Anthology of Writings by and about the Dalai Lama*. New York: Snow Lion, 1990.
14. Omran A-R. Religion, family planning, and abortion. *Lancet* 1993; **342**: 808.
15. Gore A. *Earth in the Balance*. Boston: Houghton Mifflin, 1992.
16. Reddy AKN, Goldemberg J. Energy for the developing world. *ScientifAmerican* 1990;

263(3): 63-72.

17. Trounson A. Population growth. *Lancet* 1994; **343**: 59-60.
18. O'Neill P. Population summit condemns family planning cuts. *BMJ* 1993; **307**: 1162.
19. Fellows L. What are the forests worth? *Lancet* 1992; **339**: 1328-1331.
20. Lovelock J. *The Ages of Gaia. A Biography of our Living Earth*. Oxford: Oxford University Press, 1988.
21. Tylleskär T, Banea M, Bikangi N, Fresco L, Persson LA, Rosling H. Cassava cyanogens and konzo, an upper motor neuron disease found in Africa. *Lancet* 1992; **339**: 208-11.
22. Schumaker E. *Small is Beautiful. Economics as if People Mattered*. New York: Harper & Row, 1973.
23. Henderson H. *The Politics of the Solar Age: Alternatives to Economics*. Indianapolis, Indiana: Knowledge Systems, Inc, 1988.
24. Barbier E. Economic growth: the political economy of resource misallocation. In: Ekins P, ed. *The Living Economy: a New Economy in the Making*. London: Routledge and Kegan Paul, 1986: 7-40.
25. World Bank. *Investing in Health. World Development Report*. Oxford: Oxford University Press, 1993.