

Mark O'Connor has given us permission to publish his letter to the head of the [Australian] National Population Council (NPC), a government-supported study group. Mark, a poet and a member of Australians for an Ecologically Sustainable Population (AESP), attended the NPC seminar that stimulated this thoughtful letter.

When Is a Country Overpopulated?

By Mark O'Connor

Professor Glenn Withers, Chair
National Population Council

Dear Professor Withers,

I was impressed by the level of debate at the recent NPC seminar in Canberra.

There seemed to be a heartening awareness that indefinite exponential growth of Australia's population could not be recommended. Granted that there is still an obvious and powerful momentum for growth of our population, it seems most important to work out what are actually the limiting constraints — those which set some kind of identifiable ceiling that both the public and politicians might recognize and respect. One suggestion that emerged at the seminar was that environment might be the limiting factor; and both you and Phillip Toyne suggested that more precise data should be found to link population growth with environmental impact.

As the representative of one of the few conservation organizations to be specifically represented at that particular seminar, I would like to suggest some answers.

I believe the draft Report has correctly identified the four possible areas of constraint on population growth, viz. 1. Environment, 2. Economy, 3. Social Justice, and 4. Global/Humanitarian concerns.

I suggest that there are in fact three possible types or degrees of constraint, as follows:

1. A general principle of caution which we might call "The Herpes Principle" or "The Prudence Principle," this is: while there are practicable ways for a nation to increase its population, there are no practicable short or medium term ways to reduce it markedly. Like herpes, overpopulation is not necessarily unbearable, but there is no known cure for it. Hence, unless one is very very sure that one doesn't mind the condition (and its possible further consequences), one should try to avoid it. Pro-natalist governmental policies might, in a different metaphor, be seen as like jumping into a smooth-sided pit. Granted that the majority of the world's nations seem to have, to more or less degree, tumbled into just such a pit, we should be skeptical of the argument that Australia is a special case and can jump in with impunity. Most of those other nations thought they were special cases too.

It should be noted that the "Herpes or Prudence

Principle" does not set an absolute ceiling for population growth. However, it does at the very least suggest that any government policies which tend to produce marked population growth, unless they produce quite undeniably valuable or indispensable effects, should be wound down as quickly as practicable.

2. Constraints that imply an absolute ceiling. The Prime Minister's remark that it would be best for Australia's growth to level off at 25 million seems to imply a belief in some such ceiling, but gives no specific rationale for it. Tom Havas's research suggested the same figure of 25 million as a safe lower ceiling for Australia, and suggested that water resources might be the critical factor.

I will argue below that environmental (as opposed to resource) constraints set a much lower figure for Australia's desirable future population. Clearly, where absolute ceilings are concerned, the critical one is the lowest.

3. Proportional Constraints. These are ones expressed by equation or quasi-equations of the general form: *"The more people, the less of [something desirable]"* or *"The more people, the more of [something undesirable]."* There can also be multi-stage propositions of this sort, e.g. *"Assuming the present standard of affluence, 1. more people in Australia tends to mean 2. more imports, which means 3. more pressure to create exports, which means 4(a) more pressure to allow rapid draw-down or sell-off of mineral resources, or 4(b) more pressure to crop marginal and erodible lands or to invade National Parks."* Such proportional constraints can have considerable force.

Most of the constraints derived from economic, social justice, and global/humanitarian considerations are of this proportional sort. (Some of course may be countered by contrary proportional arguments.)

COMBINING THE TYPES OF CONSTRAINT

A logician might argue that the second type of constraint, the absolute-ceiling type, is the critical one — especially if it sets a figure very close to the present population size.

"...while you can legitimately be an optimist or a pessimist about the future, you cannot be optimistic or pessimistic about what is demonstrably happening now."

In practice, granted the momentum our society has built up towards rapid population growth, and the need of democratic governments to appeal to as many sections of society as possible, both politicians, and even the framers of a report such as the NPC's, will need to appeal to all three types of argument.

In this light, let us look again at the three types:

1. **The first constraint (the "Herpes" or "Prudence Principle")** would of itself be sufficient reason to abandon pro-natalist and high-net-immigration policies. It is an argument that most people can readily grasp, though it does require some public education to combat the widespread myths that Australia is a special case or "an empty/underpopulated country."

2. **Absolute Ceilings: Does environmental damage set an absolute ceiling that is close to the present population size?** As the NPC's draft report suggests, it is difficult to predict the extent to which future technology will mitigate population-generated environmental problems. The draft Report suggests that a major problem is to resolve the conflict between "optimists" and "pessimists" on this issue. I would accept that distinction, but point out that we simply do not know how technology will develop, and so should probably plan conservatively (cf. the Prudence Principle above).

However, there is a very important point of basic philosophy: while you can legitimately be an optimist or a pessimist about the future, you cannot be optimistic or pessimistic about what is demonstrably happening *now*. Once the ship is already on the rocks, it is no use arguing that future improvements in steering gear will remove the problem.

If the environmental limit is already being breached, then there is not much point in arguing that future improvements in technology or in people's attitudes would have made possible a larger population.

Yet the argument that we are already "over-populated" on environmental grounds is obvious. To quote ASEP's earlier submission by Dr. Chris Watson:

Australia, as custodian of many thousands of unique species of plants and animals, and of their habitats and bio-regions, has an international duty to keep its human population below limits that will seriously damage these regions. Such limits will change from time to time, depending on public attitudes and

technological possibilities. At present these limits are clearly being exceeded, and unacceptable damage is occurring.

Australia is already one of the world's most ruthlessly cleared countries. Salination, deforestation, erosion, loss of habitats and extinction of species are all currently out of control.

The argument for an absolute environmental constraint is thus a readily-grasped three-stage one: If (1) unacceptable damage is being done now, and (2) there is no serious doubt that population increases likely over the next few years will increase that damage, then (3) those population increases should be avoided.

2(b). **Can the environmental effects of population growth be precisely calculated?** AESP is therefore a little concerned about your belief that the environmental effects of future population growth must be precisely calculated, or a rigorous equation found for them. The equation is in fact known. It is $I = PAT$. As this equation shows, the notion of precise measurement is a red herring or a fallacy. You cannot put a precise figure on the amount of environmental damage (I) caused by each extra person (P), because it will depend on future levels of affluence (A), and of technological "invasiveness" (T). This emphatically does *not* mean that the connection between more people and environmental impact is "unproven" or "inconclusive."

The point is that we do know the *direction* in which population-size needs to go in order to reduce environmental impact. $I = PAT$ cannot give us a precise future per capita value for Impact divided by Population, but it leaves no doubt that $I \propto P$ — that is, environmental impact varies *directly* with population-size.

What you can offer therefore is a calculation of what each citizen currently demands (per lifetime) from Australia's resources, environment, petrol supplies, garbage disposal, job creation, electricity generation, and imports. It comes to an impressive heap, as Professor R.V. Short has pointed out.

"Our present technology is one that involves heavy material demands on the environment; and it is difficult to see this changing radically for some decades at least."

However, if *future* measurements are demanded, there may still be a solution to your problem. As my poet friend, Les Murray, has

remarked, although none of our projections curve where the future curves, we see in practice "a small living distance into it."

To give a practical example: If you are trying to predict the per capita cost in fuel (or in greenhouse emissions) required for urban commuting in a future Australia whose population is twice the size of the present one, there are all sorts of uncertainties. New technologies may have been introduced, public transport may have become more attractive (or even compulsory!). One just can't tell.

(A mathematician would note that Les Murray's remark is similar to Isaac Newton's observation that underlies differential calculus: that $\delta y / \delta x \rightarrow dy / dx$ as $\delta x \rightarrow 0$).

One should note that the "small living distance" we can reliably see into the future is usually shorter for assumptions about technology pure and simple than for assumptions about future technology plus future changes in social attitudes — or in human nature. It is perfectly true that if Australians could turn into environmental angels, then this continent could probably sustain a very much larger population with no more environmental damage than is being done at present. Yet, apart from extreme optimists of the Luby Zarsky sort, few would anticipate such a scenario.

Even the speed of technological change should not be exaggerated. Its implementation often involves overcoming social, economic and political constraints. Our present technology is one that involves heavy material demands on the environment; and it is difficult to see this changing radically for some decades at least.

One also needs to avoid the error of thinking that improved public attitudes mean that the destruction ceases. As in the case of old-growth forests, we may indeed care more and more about the less and less that remains to preserve; yet the destruction continues. Similarly, the fact that we are actually destroying fewer acres per year every year, doesn't mean that things are improving for the rainforest — or that the rate of species extinction has dropped. When your car runs off the road and onto the verge it is probably at the time decelerating quite healthily, but that's not much consolation if it wraps around a lamp-post.

3. Proportional Constraints: How strong are the constraints derived from Economics, Social Justice, and Global / Humanitarian Concerns?

(a) Economics

The most obvious proportional constraint involves the import / export balance. Under present political and economic circumstances it is not possible to prevent a population of Australia's affluence from buying numerous and expensive imported goods. These have to be balanced with exports. Our most characteristic exports are foods, fibers, and minerals. All of these need to be produced in a highly

mechanized way to be competitive on the world market, and it is difficult to believe that a larger population / laborforce in the country would enable them to be produced more economically — though it might certainly increase the pressure to produce them more recklessly, or in the case of mineral deposits to sell them off more rapidly.

Hence, a higher population, assuming (as government would probably wish to) the present level of affluence, implies lower per capita export productivity, and problems with import/export balance.

An additional issue is the amount of potential export product that is consumed within Australia. Food is a good example. According to Henry Nix, Australia at present produces, in calorie terms, foods sufficient for about twice its present population. Yet this is the world's oldest, driest, flattest, most ruthlessly cleared, most salinated and least fertile continent; and there is no guarantee that future production of our main crops can be greatly increased or even sustained. Clearly a doubled population that consumed these food resources within Australia might be unable to use agricultural exports to pay for the imports it desired, or even to pay for the fuel, fertilizers and pesticides it currently imports to produce the food. (The economic prospect is actually even worse than this calculation suggests, since Australia's food exports tend to be bulk foods like wheat, which attract a lower price per calorie, than, say, the imported foods one finds in a delicatessen).

A second proportional economic constraint, this time one that applies rather to *rate* of population growth than to absolute size, is that at present huge amounts of public money have to be diverted into infrastructure and services, including housing and new suburbs, for a fast-expanding population. At the same time, investment funds are increasingly diverted into various forms of the real estate speculation industry which now absorb most of the banks' and insurance companies' investment capability. This means less capital for the modernizing of factories and plants. This again implies lower export productivity per worker, and lack of competitiveness on the world market.

Further, the diversion of investment into service industries and basic infrastructure means that technological advances are more likely to be made in such areas than in those more suitable for export.

Against this, of course, many economists see some advantages from "economies of scale" — but that's a long and vexed argument.

(b) Social Justice

Firstly, Don Edgar from Institute of Family Studies and others have pointed out that the diversion of money into rapidly expanding

suburbs, which are often sited (as on the outskirts of Sydney) in expensive and unsuitable terrain, means a dangerous running down of infrastructure in older areas. E.g., most older Australian cities now have crumbling sewer systems which they can neither afford to ignore nor to replace.

Secondly, Llewellyn Jones and others have pointed out statistics that show (both in the U.S. and in Australia) striking correlations of city-size with violence and with the per capita crime-rate.

"The fate of several South American countries suggests that inequality (leading even to dictatorship and death squads) can rapidly set in once a sizeable middle class recognizes that it is quite impossible to extend their standard of living to all members of an ever-increasing population."

Thirdly, several futuristic writers have predicted increasing breakdown of equality, social justice, and ultimately of democracy under stresses largely caused by an expanding population. Many of these stresses were already visible in Thatcher's Britain, or in the behavior of disaffected unemployed youth in Australia's present cities — left out of work largely because of our factories being undercapitalized and non-competitive on the world market. While population growth of itself certainly does not lead inevitably to the scenarios envisaged for Melbourne in the middle of next century by George Turner in his novels *Drowning Towers* and *The Sea and Summer*, it is certainly one necessary precondition.

Fourthly, Australia's egalitarian culture has depended in part on the assumption that there was enough to go around for any one who was prepared to do their share of the work. The fate of several South American countries suggests that inequality (leading even to dictatorship and death squads) can rapidly set in once a sizeable middle class recognizes that it is quite impossible to extend their standard of living to all members of an ever-increasing populace.

Fifthly, it is at the least suggestive that those countries which have risen rapidly in their relative positions on the World (per capita) Wealth Table in recent decades seem to be those which have controlled population growth: eg. West Germany, Japan, Switzerland. Those which have sunk back include Australia, Canada and the USA, all of whose governments have actually welcomed and encourage population growth. Since a country which is itself in economic difficulties is unlikely to be able to offer major aid to poorer countries or to its own disadvantaged classes, the above economic possibility implies an argument, both in terms of social justice

and of global/humanitarian concern, for rapidly dismantling any policies which aim at population growth.

(c) **Global / Humanitarian Issues**

Australia is a sovereign nation with few major international treaty obligations other than those for World Heritage Areas and for Human Rights. Yet it does come under strong and I believe legitimate moral pressure from the international community to do four things. Each of these four has implications for our population size; though not all are as yet equally well recognized. I believe it will be useful to list them in the reverse of the order that might occur to most people.

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(1). **Control of our own population size.** Pressure from the international community on this issue is relatively recent. It comes (a) from the UN (including the Brundtland Report), (b) from national and international environmental groups, and (c) from organizations like the British Family Planning Organization which recently, through its patron Prince Philip, launched an appeal for all nations to control their population growth.

In the last few years environmentalists have increasingly argued that the world's worst problem with population growth, environmentally speaking, is not in the third world but in first world countries like Australia, Canada, and the USA. Australia is said to have the fastest population growth of any first world country. Environmentalists like David Suzuki and Paul Ehrlich have pointed out that each Australian or American citizen uses energy and resources equivalent to between 30 and 60 typical third world citizens. Even on the more conservative figure of 30, this makes Australia's 17 million the equivalent of over half a billion third world people — and in a region very much less fertile than, say, India or China.

(2). **Obligations to help reduce global warming, ozone-thinning, and other global effects.** Here again, Impact = PAT, and all three multiplicands have to be kept down. Granted that it is difficult to see first world governments voluntarily reducing affluence, or using only low-impact technologies, much stress must fall on population. In David Suzuki's words from *It's A Matter of Survival*:

Regardless of the angle from which you observe the critical state of the planet, you always arrive at the same bottom line — human population growth is out of control ... There are too many of us; we consume too much; we pollute too much ... The greenhouse effect is us and it is specifically us in the Western world ... the most serious population problem in the world is right here."

(3). **Overseas Aid and Immigration.**

Firstly, immigration is no substitute for aid. It is relatively easy to show that the cost to the taxpayer (both in investment and in outright grants) of settling in one family of selected "economic refugees" in such a way that they do not form a pocket of poverty, might, if more wisely used in the country of origin, have prevented scores of families being displaced. Emphasis therefore should fall on overseas aid. This aid should be targeted less for political leverage and more towards population/sustainability projects, contraception, and education of women, and health care. There is much evidence that female literacy is the single most important (and most cost effective) step towards population/sustainability balance in the world's poorest countries. Selective pirating of skilled immigrants from third world countries is of course the reverse of aid.

Secondly, a policy of high levels of immigration makes it almost impossible to convince Australians that they have either a social or a global moral duty to have smaller families. At the same time it provides people in overcrowded countries with a justification for continuing to have large families. True, the percentage of people from India or China etc. who can hope to emigrate to Australia is not statistically significant to the country of origin; but many people do not think statistically. Anyone who has travelled in such countries and talked to people about contraception knows how they cling to straws to justify large family size. The belief that there is an "empty country" called Australia is a very large straw indeed. Obviously in this area the perception is a greater problem than the reality. Australia has an obligation to tell not only its own citizens but the rest of the world that it cannot take in any large fraction of the world's annual increase of just under 100 million per annum.

(4). **Refugees.**

On a global scale, for Australia to take in economic or environmental refugees may well be counterproductive. Certainly the funds are better spent in the country of origin. Yet there is a strong case for taking in *political* refugees (including not only activists but anyone who is in deadly danger from racial, cultural or ideological persecutions).

Granted that constraints to Australia's population size should be set by environmental and other factors,

there is a surprisingly strong moral case for restraint both of non-essential immigration and of family size within Australia, in order to leave more space for political refugees. Even if one accepts the Prime Minister's view that the country could take another seven to eight million people, much of that figure would be supplied by natural increase, and the remaining capacity is less than that of refugees currently passing through camps in other parts of the world — not to mention those who can be expected to do so over the next thirty years or so.

In retrospect our descendants may find it very hard to justify (a) our current policy of large scale non-refugee immigration, apparently aimed at filling up the country's supposed surplus capacity as rapidly as possible, and (b) the total lack of any public information campaign to suggest to Australians that family size is a moral rather than a purely personal choice.

"FUTURE DIRECTIONS"

In the above 4 headings I have assumed that population planning is primarily a responsibility of national governments. This is not to say that they necessarily have close control of the results; but after all you *can* turn the Queen Mary around with an outboard motor provided you give yourself plenty of time to do it, and don't wait till you're near the rocks. Though we have all become more aware of being part of a world community, I believe that, for the present, international population planning will have to be carried out via the policies of national governments.

Overall, I would argue that the various proportional constraints, considered under the four headings above, add up to a most powerful case for revising any government policies whose aim is to increase population.

"...what the third world requires is intelligently targeted aid, not selective emigration."

You may be convinced by most of the above, yet still feel some political difficulty in offering such conclusions to a nation which has traditionally been more inclined to see population growth as panacea than as problem. Yet I believe there *are* some important statements your final Report can make which will be generally accepted:

1. The simple point that Australia is not the large fertile country which the propaganda of our immigration-seeking years pretended it was.

2. That we cannot take in a significant fraction of the world's annual population increase of around 100 million — and that we have an obligation to tell the rest of the world that this is so.

3. I believe you should deal directly with the issue of "population prejudice" and point out that the seemingly unshakeable belief of many Australians that our country is a special case and will never have too many people may be a typical nationalistic attitude, echoed in countries as diverse as India, Nigeria, France, and Britain.

4. I believe you could also reach the finding that what the third world requires is intelligently targeted aid, not selective emigration.

5. I also believe you should lay great stress on what Christobel Young has described as the "demographic Rubicon." It appears that, granted the present birth rate, there is a precise per capita rate of net immigration (one currently equivalent to around 50,000 net per annum) beyond which the projections are for indefinite population growth. At immigration rates below that figure we get a graph that does at least level off at some specific point in the future.

Of course, if the birth rate goes up or down the position of this Rubicon would change. But the importance of the Rubicon is, I think, still enormous. I believe you could reasonably reach the finding that all rational discussion of desirable *long term* immigration rates must deal in the range *below* this Rubicon. (Note that it is possible to be below the Rubicon, and still on course for a graph which will level off only at 100 or even 200 million.)

6. I believe the Report needs a chapter on a long-term strategy of public education to change our present public *unawareness* of population issues.

7. To decide how many people is too many, you will need a clear definition of overpopulation — a concept that is nowhere defined in the draft Report. You might find it useful to consider the following two formulations, taken from our earlier submissions and from our policy document, "Future Directions:"

A nation must be considered overpopulated when it is unable to provide for this population at the level on which they insist except by seriously degrading its natural and agricultural heritage, including forests, coastlines and coastal waters.

An overpopulated country is not necessarily a crowded one. Even India and China have large areas that are sparsely populated. Over population is better defined as a condition in which the community cannot live on its environmental "interest" and so must deplete its "capital."

Good luck.

Yours sincerely,

Mark O'Connor

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