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THE REAL ENVIRONMENTAL CRISIS

ROGER KERR
EXECUTIVE DIRECTOR
NEW ZEALAND BUSINESS ROUNDTABLE

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The environment matters to people. It is part of their overall quality of life. All parties at last weekend's election had environment policies. The public and political debate is not mainly over environmental goals. It is more over the means of achieving them and over trade-offs, where they exist, with other goals such as economic growth, freedom and equity.

The Business Roundtable has had a longstanding interest in environmental issues. We have been involved in debates over the Resource Management Act (RMA) and climate change from the outset. With the change of government it is pleasing that policies in both these areas are up for review. The election result suggests that voters at large are unhappy with them. On climate change National must not make the mistake it made in the 1990s on the RMA of only tinkering with the policy it inherited and regretting it ever since. A more fundamental reappraisal is essential.

In its work on environmental issues, the Business Roundtable has emphasised the importance for environmental management of secure property rights, compensation for regulatory takings, proper economic pricing and the use of markets wherever possible. These policy elements scarcely feature in the RMA, in contrast to the much sounder Public Works Act. Environmental regulation is sometimes necessary but needs to be well designed if it is not to do more harm than good. The previous government's climate change policy was an incoherent mix of a market mechanism (an emissions trading scheme) and 'command and control' regulation (such as the ban on new thermal generation). My view is that a better market mechanism for New Zealand to start with would be a low carbon tax (with offsetting income tax reductions). This could be superseded by an emissions trading regime if a broad international carbon market developed (which is not in prospect at present). A key advantage of a low tax is that it would give certainty as to price, which would help firms to plan and help make what needs to be a stable, long-term policy more politically sustainable.

The Business Roundtable has put out extensive material on environmental issues. Some time ago we published a book *Conservation Strategies for New Zealand* by Peter Hartley, now professor of economics at Rice University, Texas, which advocated moving away from central planning and putting more emphasis on decentralised and voluntary mechanisms to achieve conservation goals. In 2004 we brought Bjorn Lomborg, author of the acclaimed book *The Skeptical Environmentalist*, to New Zealand. Last year Nigel Lawson, former British Chancellor of the Exchequer, gave the 2007 Sir Ronald Trotter Lecture on the economics and politics of climate change. More recently, in association with other major business organisations, we published *A Primer on Property Rights, Takings and Compensation* by Bryce Wilkinson, which explains the importance of secure property rights and how their absence gives rise to environmental 'tragedy of the commons' problems. (All this material is available on our website at www.nzbr.org.nz.)

Today I want to talk about another book entitled *The Real Environmental Crisis* by Jack Hollander, Professor Emeritus of Energy and Resources at the University of California,[1] and the author of more than 100 research publications, including 20 books.

It was published five years ago but is still well worth reading. Hollander's credentials as an environmentalist are second to none, and he shares the widespread ambition to preserve the environment and to pass it on to future generations, if not unchanged, then as something no less valuable. But he challenges the apocalyptic pessimism that pervades public discussion of the subject.

Hollander wants to make us confident that we can solve present environmental problems, largely by showing how environmental problems have been successfully overcome in the past. He rejects the view that optimism about the environment betrays denial about the scale of the environmental problems we face, and writes that, on the contrary,

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[1] Jack M Hollander, *The Real Environmental Crisis: Why Poverty, Not Affluence, is the Environment's Number One Enemy*, Berkeley and Los Angeles, University of California Press, 2003.

"optimism implies a 'can-do' attitude that makes success in dealing with such problems more likely" (p 11). And the key to restoring environmental optimism is to reject the view that our affluent lifestyles are to blame – that "the richer we become, the more we consume the earth's scarce resources" (p 1). On the contrary, the more affluent we become, the greater our chances, and our means, of preserving the environment.

Conversely, the 'real' environmental crisis to which the title of Hollander's book refers is poverty, and he sums up the central argument of the book in these words:

> … the essential prerequisites for a sustainable environmental future are a global transition from poverty to affluence, coupled with a transition to freedom and democracy (p 3).

If he is correct about this, then there are indeed grounds for optimism. Not only is life getting better for billions of people worldwide,[2] but we know roughly how to overcome poverty: under the right institutions and policies, it's possible for people to work their way out of poverty and improve their well-being. It follows that the best thing we can do for the environment is to end world poverty, and Hollander believes that there is an "absolute human obligation" to do so (p 14).

Hollander illustrates his thesis by exploring a dozen or so familiar environmental issues. I won't attempt to summarise them all, but I'll elaborate on his central argument and pick out the most compelling examples of the evidence he cites.

The idea that affluence preserves the environment goes against the widespread but casual and unconsidered view that affluence itself is, virtually by definition, a great consumer of the earth's resources, renewable or otherwise. This view relies on a simple-minded equation between outputs and inputs: the more wealth we produce, the more resources we must consume in doing so. But wealth does not consist of physical resources as such. It consists of value, and while we may increase value

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[2] See Indur Goklany, *The Improving State of the World: Why We're Living Longer, Healthier, More Comfortable Lives on a Cleaner Planet*, Washington, DC: Cato Institute, 2007.

by adding more inputs, we can also – and in the long run we have to – get more out of less: we can *economise* on resources.

To economise on resources, we use technology. Examples abound. Cars use far less oil today than a generation ago for any given distance travelled. Think what we can do nowadays with personal computers and mobile phones: a few scraps of metal and plastic can be assembled into devices that perform miracles of textual, audio and visual communication and information transmission, which we are learning to put to an ever-growing number of high-value uses. The more affluent we become, the fewer resources we need to produce a unit of value.

Conversely, the poor can obtain value only from the direct consumption of physical resources. Often they can derive only meagre value from them. For example, in countries where the only available source of energy is fuelwood or peat, people's health is often impaired by the indoor smoke they have to live with. A small increase in their incomes may enable them to switch to healthier sources of energy, like some fossil fuels. Not only does this help preserve the immediate physical environment, but people can also devote the time they used to spend collecting wood to higher-value activities.

A second way that affluence preserves the environment is that the environment is what economists call a 'superior good': as people's incomes rise, they demand more of it. For poorer people, environmental protection is a costly luxury that threatens their living standards. But as their incomes increase and their notions of well-being evolve, they come to value the environment more, and are willing to spend more of their rising incomes to protect it. This is the force that in free and open societies ensures that the environment will be saved. It would actually be self-defeating to reduce our living standards in order to protect the environment because, as living standards fell, we would be unable to protect the environment as effectively.

Hollander links these insights with the goals of environmentalism throughout his book. One of his most useful treatments is of population growth and the related topic of food production. Some of us are old enough to remember the overpopulation scare of the 1960s and early 1970s. This is salutary because, like climate change today, it was a source of pessimism – if anything, even greater pessimism because it was thought to be insoluble, or soluble only by the brutal self-correction of famine.

And yet the scare turned out to be groundless. It reached its peak in 1968 when the biologist Paul Ehrlich published *The Population Bomb*, which envisaged massive famine within a few years. However, the rate of increase soon started to slow. Hollander attributes this primarily to economic growth: as people become more affluent, they choose to reduce their fertility, and the two-child family is emerging as a world norm. Other factors reducing fertility that Hollander cites include falling infant mortality rates and female emancipation, which offers women sources of status other than motherhood, such as participation in the workforce. The world's population continues to grow as people live longer and healthier lives, but Hollander expects it to stabilise as affluence grows and spreads. This is one environmental problem that has been solved in a way that reflects people's underlying preferences, which higher incomes, better health care and access to contraception have enabled them to realise.

Another reason that the massive famines forecast by Paul Ehrlich didn't materialise is the 'Green Revolution'. In the early 1960s, new strains of wheat were harvested in India and Pakistan which enabled food production to increase faster than the population. The figures are spectacular. Hollander writes, "Since 1968 India's population has more than doubled, its wheat production has more than tripled, and its economy has grown ninefold" (p 39). What is of great technical interest about this revolution is that it involved agricultural 'intensification' – that is, getting more food out of existing cropland. Previously, the main way to increase food output was to expand the acreage of farmed land – a resource that is indeed finite. But there is no limit to technology, and in principle technical innovation should

allow the amount of food obtainable from existing farmland to increase indefinitely.

Indeed, a much-needed second Green Revolution is in the offing with the opportunities for genetic modification (GM) of crops that research in biotechnology has made available. But some environmentalists are bitterly opposed to the use and spread of GM food. Opposition to it is not based on any actual problems – according to Hollander, GM food is not known to have caused any harm, and biotechnological advances have been accepted in pharmaceuticals and medicine. Our royal commission that inquired into genetic modification recommended New Zealand should proceed cautiously with it. Hollander expects that the clear benefits and apparent harmlessness of genetic modification will gradually erode resistance to it and that it will eventually be accepted as just an extension of the selective breeding that humanity has been practising for millennia.

Furthermore, if food technology does continue to enable food production to expand continuously from a fixed acreage of farmland, the prospect arises of that acreage eventually being allowed to shrink and the environment being improved as land goes out of cultivation and becomes available for human recreation as parkland or wilderness. It's difficult to think of a more direct link between affluence and environmental improvement than that.

Another example of an environmental problem that has been largely solved in recent decades, at least in the developed world, is air pollution. This is an instructive example because it not only shows how innovation and technology can be applied to the solution of environmental issues, but also how our environmental values evolve with growing prosperity. Hollander writes:

> As a youngster growing up in an Ohio steel town in the depression years of the 1930s, I recall that people actually welcomed the ubiquitous gray cloud of coal smoke hanging over the steel mills. Even though we choked on the soot and our Sunday clothes became soiled instantly, the smoke cloud meant that the mills were working and our fathers had jobs and we had homes to live in with food on the table (p 113).

In fact, as early as the 1880s some local governments in the United States passed pollution-control laws to reduce the smoke and soot from furnaces

and locomotives. But it was only after World War II, when air pollution from rapidly expanding use of coal for generating electricity and from the growing number of automobiles began to increase, that governments started to legislate in earnest against it. Clean air acts in the United States have been very effective: in 1999 emissions of the six principal air pollutants were 31 percent below 1970 levels, and emissions of sulphur dioxide from coal burning had fallen back to the level of 1915.

Hollander is undoubtedly correct to stress that these improvements have come about because America is a democracy and the American people nowadays strongly support environmental regulations like clean air acts. On the face of it, it's not hard to see why. Los Angelans, for example, can now enjoy blue skies and see the distant San Gabriel Mountains, whereas 50 years ago they lived in what was considered to be the smog capital of the world.

Yet those benefits have come at a price. According to the Environmental Protection Agency (the EPA), between 1970 and 1990 just the direct compliance costs of the Clean Air Act of 1970 amounted to half a billion US dollars. Can anyone show that the benefits of clean air exceeded those costs? The EPA itself argues that the benefits in terms of illness and premature deaths avoided and higher agricultural output amounted to 14 trillion dollars. But that figure has been challenged. For a start, some critics point out that the EPA places a far greater value on a human life than do other agencies, like the Federal Aviation Commission. This makes for inconsistent policy. Other critics argue that the total costs, both direct and indirect, of the Clean Air Act are very great and exceed the likely benefits.

At this point Hollander takes an interesting tack. Rather than joining in this sort of cost–benefit analysis, which is often inconclusive, he considers the common green view that environmental values are inherently unquantifiable, and so not open to the trade-offs that are the stock-in-trade of economic analysis. He writes:

> I fully subscribe to the notion that moral and aesthetic principles, in addition to economic principles, are involved in making environmental judgments … most citizens of affluent, democratic countries are environmentalists at heart.

> Although most of us do not usually think in philosophical terms about the environment, the fact is that we value clean air, clean water and beautiful surroundings, and we are willing and able to pay whatever it costs to attain and maintain a healthy environment. The passage of the Clean Air Act in the first place is testimony to the fact that, for an affluent society, sparkling blue skies and breathtaking vistas in the end may be sufficient justification for such measures (p 118).

I find this passage badly expressed and confusing. Hollander has already said that polluted air was widely tolerated in the 1930s as part of the price of being able to make any kind of living at all. If rising prosperity makes us value clean air more, and enables us to pay the necessary price for it, that's a straightforward economic point that doesn't rely on aesthetic or moral principles. But what I suspect Hollander is getting at is that, in a free and democratic society, we can resolve the vexed issue of how to measure the costs and benefits of public goods like clean air, which are difficult to evaluate in the marketplace, by subjecting them to collective choice: if the people vote for clean air acts, then the benefits must outweigh the costs.

In fact, that line of argument has its own difficulties. Voters may be ignorant of the true costs of the benefits they vote for and environmental lobbies may be unduly influential, and represent the interests of better-off voters rather than those of poorer people on whom the costs also fall. But the weight of evidence seems to vindicate Hollander's contention that freedom and democracy as well as affluence are necessary for preserving the environment. One of the legacies of communism is severe environmental damage, from which the ex-communist countries have yet to recover fully. That communist regimes valued the environment so much less than those in the West must reflect not merely their lack of economic freedom and consequently lower living standards, but also their lack of political freedom.

This consideration is highly relevant to the biggest of the remaining communist countries, the People's Republic of China, even though it allows far more economic freedom than did the Soviet Union and the communist regimes of eastern Europe. In that country not only are coal-fired power stations being constructed at the rate of about one a week, but the population is starting to be able to afford private motor vehicles en masse. But how soon it will do more to tackle its serious air pollution problems depends more on the priorities of the party than on those of the population

at large. The regime may promote economic growth for purposes of self-aggrandisement and international military influence rather than the general welfare, which would require more investment in environmental protection. The interesting comparison is with India. Although India's per capita GDP is smaller than China's, its much greater degree of political freedom should, if Hollander is correct, produce a more balanced prosperity in the long run, one that embodies environmental values as well as material ones.

By this stage you may be wondering what Hollander has to say about today's most prominent environmental issue – climate change. Since Hollander wrote his book a great deal more research has been done on climate change, although much uncertainty still surrounds the scientific debate. Nevertheless, Hollander's main conclusions remain valid. He observes that humanity is adjusting to such global warming as exists in much the same way that it has adjusted to climate change in the past. He doubts whether the industrial nations are likely to enact the reductions in fossil-fuel use mandated by the Kyoto Protocol unless the greenhouse gas theory of global warming can be much more firmly established than it is today. Finally, in the spirit of the 'can-do' optimism he espouses, he recommends research and development to use fossil fuels more efficiently and also to find substitutes for them. Of course, a big attraction of such R&D investment is that it's justified on ordinary economic grounds and also, in the case of oil and natural gas, on security grounds, to reduce global dependence on unreliable or politically unstable suppliers.

On the subject of alternatives to fossil fuels, Hollander concludes that use of hydroelectric power has probably reached its peak in the developed world, but it has the potential to expand in the developing countries. He is doubtful whether solar and wind energy can be produced cheaply enough to expand economically beyond niche markets, but perhaps a more optimistic view would be justified with higher oil prices. The most promising alternative to fossil fuels is of course nuclear power, and Hollander stresses its excellent safety record. He writes:

> Over four decades of nuclear plant operation in the United States, not a single documented fatality involving radiation from nuclear plant accidents or waste

> materials has occurred, while thousands of fatalities have resulted from accidents related to other energy sources (p 163).

Many countries are now stepping up their investment in nuclear power, including China, even though Hollander expects China to rely primarily on coal for a long time because of its abundance and cheapness. Indeed, he notes that fossil fuels generally are in abundant supply and will remain so for the foreseeable future, but that the climate change debate has thrown their precise future role into some doubt. However, just as the Stone Age did not end because the world ran out of stones, the age of fossil fuels may not end because of 'peak oil' but because new and cheaper technologies displace it.

In conclusion, Hollander's book offers a welcome alternative to some widespread modes of thinking about the environment. It is far removed from the pessimistic and misanthropic 'deep green' mentality that sees humanity as a blot on the landscape and is inspired by an image of the environment as pristine nature undefiled by a human presence. This approach is completely muddled; not only is humanity part of nature, but if there were no humans around to value nature it would have no value. Hollander shows that prosperity and technology enable us to value nature more effectively and to defile it less.

Hollander's approach also differs from those who want to increase our awareness of environmental issues with stunts like Live Earth and urgent but dubious messages about imminent environmental collapse. He sees no need to increase our 'awareness' of the environment. He pays us the compliment of believing that we are all environmentalists, whether actively so in the developed world, or potentially so in the developing world. He relies for the most part on the proven human ability to realise our values over the long term through the patient application of reason, using knowledge of costs and technology to calculate the appropriate trade-offs.

Viewed from the longest perspective, the ability of humankind to shape the world to meet our needs and achieve our goals is astonishing. Most of what matters is achieved by spontaneous human action rather than

conscious design through the agency of government. As Nobel laureate Friedrich Hayek wrote:

> If a man is not to do more harm than good in his efforts to improve the social order, he will have to learn that in this, as in all other fields where essential complexity of an organised kind prevails, he cannot obtain the full knowledge that would make mastery of the events possible. He will therefore have to use what knowledge he can achieve, not to shape the results as the craftsman shapes his handiwork, but rather to cultivate the growth by providing the appropriate environment, in the manner in which the gardener does this for his plants ... The recognition of the insuperable limits to his knowledge ought indeed to teach the student of society a lesson in humility which should guard him against becoming an accomplice in men's fatal striving to control society – a striving which makes him not only a tyrant over his fellows, but which may well make him the destroyer of a civilisation which no brain has designed but which has grown from the free efforts of millions of individuals.[3]

It is perverse to maintain that the environment poses challenges that are too complex and difficult for us to meet. Hollander's optimism that we can meet them, and meet them without unduly sacrificing economic growth, is not only justified but is, as he maintains, the attitude towards the task that is most likely to be rewarded with success.

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[3] F A Hayek, Nobel Memorial Lecture 1974.