

Across the Frontiers: Nationalism, Internationalism and Ecological Crisis

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“We may consider mankind, therefore, as a band of bold though diminutive giants, gradually descending from the mountains to subjugate the earth, and change climates with their feeble arms. How far they are capable of going in this respect futurity will show” – Johann Gottfried von Herder, Reflections on the Philosophy of the History of Mankind

Every year some 17 million hectares of forest are cleared from the face of the globe. Cynics suggest that a large share of these end up being turned into books about the environment. Certainly, a visit to any bookshop will confirm that few recent issues have seized the public imagination as powerfully as the environmental crisis. Growing international consciousness of environmental issues has been accompanied, not only by increasing debate on the crisis, but also by a widening of the intellectual boundaries of that debate. While the earliest warnings of environmental catastrophe came largely from ecologists, demographers and other scientific experts, the environment is now the domain of the historian, the economist, and the philosopher, as well, of course, as the lawyer and the politician.

Environmental ideas, in other words, have become a central part of contemporary thought, and are therefore worth very careful examination in their own right. This paper is an attempt to consider two approaches to environmental issues which seem to be particularly influential at present. The first might be called the “traditional culture” approach: that is, the view that the environmental crisis is a product of the culture and values of modern industrial society, and that solutions are to be found in the recovery of the lost values of traditional or pre-industrial society. The second approach is the concept of “sustainable development”.

In many ways, these two approaches stand at opposite poles of environmental thought. The first inhabits the realms of philosophy, history and anthropology; the second deals in the currency of economics and politics. The first looks back in time and the second forward. The first emphasises the uniqueness of particular cultures; the second looks for international solutions to a global problem. By considering them together, however, it may be possible to draw out some common concerns and some topics for future discussion. Because Japan is emerging as a world leader in international environmental issues, I shall try to relate these ideas particularly to their Japanese context, but also to draw some links between debates in Japan and in other

parts of the world.

“Traditional Culture” and the Environment

Contemporary society, it seems is facing a crisis of culture as well as a crisis of nature. The worldwide spread of modern technology, while threatening the ecological balance, is also resulting in a sort of fission of the atom of culture. Revolutions in transport and communications have made the cultural distance between (let us say) New York and Bangkok in many ways smaller than the distance between Bangkok and the villages of northern Thailand. People who share views on marriage and childrearing with their parents and neighbours, therefore, may now share their taste in clothes with people of the same generation on the opposite side of the globe.

The fission of the atom of culture has positive and liberating aspects, but it also undermines old certainties, threatens established relationships and often creates fear and uncertainty in the minds of those most affected by change. One reaction to this uncertainty is an attempt to put the fragments back together again: to reassert the indivisibility and the authority of ethnic or national culture. In the process, however, the fragments to be reassembled are always selected with contemporary problems in mind: “traditional culture” comes to be reconstructed in a modern mould.

In the face of this dual crisis of nature and of culture it is hardly surprising that “traditional culture” should come to be seen, not only as the key to re-establishing fragmented social identity, but also as a key to restoring the lost balance between human beings and nature. Debates about the historical relationship between nature and national culture are nothing new, although for many decades the more powerful stream of thought, running from Herder through William Henry Buckle to writers like the Japanese philosopher Watsuji Tetsurō, has been one which emphasised the impact of nature on the shaping of human culture rather than vice versa.¹ The emergence of the first wave of environmentalism in the late-1960s, however, gave a new twist to these debates, so that the main topic of interest came to be the power of culture to remake nature in its own image. At this time, a number of scholars in Western Europe and the United States began to link the pillaging of nature to values which they saw as being inherent to the modern western tradition, as it had evolved from Christian thought through the intellectual revolutions of the Renaissance and Enlightenment. These traditions, they suggested, could be contrasted with a more harmonious relation-

1 See Johann Gottfried von Herder, *Reflections on the Philosophy of the History of Mankind*, (Trans T. O. Churchill) Chicago and London, University of Chicago Press, 1968, ch. 1; H. T. Buckle, *History of Civilization in England*, London, Longman Green, 1903; in prewar Japan, Watsuji Tetsurō argued that Japan’s combination of warm monsoonal summers and cold winters had encouraged the development of a special relationship with nature which transcended both the passive attitude of tropical monsoon-belt countries and the aggressive approach of the cold north. See Watsuji Tetsurō, *Fūdo* (1929) chs. 3–4, reprinted in *Kindai Nihon shisō taikai* vol. 25, Tokyo, Chikuma Shobō, 1974, particularly pp. 207–09; even in these works, though, there is some recognition of the dialectical nature of the relationship between humans and their environment. Herder observes (in the quotation at the start of this paper) that that human beings have changed climates, and that “the living creation has adapted itself to the artificial climate.” Herder *op. cit.* p. 19.

ship between humans and nature, which they identified with the civilizations of Asia.²

In the past two decades, similar ideas have been enthusiastically elaborated by Japanese scholars. The well-known historian of science Watanabe Masao, for example, has described Japan's traditional attitude to nature as being one in which human beings "see themselves as the companions of nature, and seek to immerse themselves in nature and become one with it."³ Others have gone further than this, suggesting that the Japanese vision of the cosmos may have a special part to play in solving contemporary environmental problems, and indeed in curing other ills of modern civilization.⁴

The writers who take this view explain the origins of the Japanese concept of nature in a number of ways. Some link it to the enduring influence of Shintoism, which has no concept of a transcendent god, but rather a sense of the spirit present in all natural things, from rocks and waterfalls to human beings;⁵ others emphasise the importance of Buddhism. Some seem to relate it to the more recent historical development of Japanese agriculture; others trace it back to the pre-agrarian Jomon period, or even to the very origins of Japan itself.⁶

In general, though, these analyses of the place of nature in traditional Japan have several common features. They see the sense of oneness with nature as being the result of adaption to a unique environment, and they link the Japanese value system to the preservation of that environment, particularly of natural riches like the forests. They also often illustrate the Japan concept of nature by referring to all the wealth of artistic activities — haiku poetry, brush painting, flower arranging etc. — which celebrate the beauty of natural forms.⁷

Not all scholars, it should be said, accept this characterisation of traditional Japanese culture. The pioneering historian of Japanese technology Saigusa Hiroto, for example, made an interesting distinction when he observed that Japanese art expressed a love for nature, but that this was always for "a nature which has been adapted by humans so that it can fit beautifully into the human world"; in short, a "humanised nature" (*ningenteki shizen*).⁸ More recent work by historians like Andô Seiichi also points to the diversity of human interaction with nature in pre-industrial Japan. While craft industries in seventeenth and eighteenth century Japan certainly showed sensitivity and parsimony in the use of natural resources, some technological practices, like the mining of alluvial iron sands, caused such severe environmental

2 For example, Lynn White Jr., "The Historical Roots of our Ecological Crisis", *Science*, no. 155, 1967, pp. 1203–07; Edward A. Olson, "Man and Nature: East Asia and the West", *Asian Profile*, nos. 3 & 6, 1975.

3 Watanabe Masao, *Nihonjin to kindai kagaku*, Tokyo, Iwanami Shoten, 1976, p. 174.

4 For example, Umehara Takeshi, *'Mori no shisô' wa jinrui o sukuu*, Tokyo, Shôgakukan, 1991, pp. 137–79.

5 For example, Yasuda Yoshinori, "Animism Renaissance", *Nichibunken Newsletter*, 5, 1990, pp. 2–4.

6 See "Teidan: Mori to dôbutsu to bunmei", *Bunmei to kankyô* no. 2, August 1991, particularly pp. 14–16.

7 For example, Umehara *op. cit.* pp. 204–05; Yasuda, "Animism Renaissance".

8 Saigusa Hiroto, *Gijutsu shi*, Tokyo, Tôyô Keizai Shimpôsha 1940, pp. 14–15.

disruption that they provoked riots by local farmers.⁹

Ideas about the environment seem to be similarly diverse. By the eighteenth century some merchants and farmers, as well as philosophers, were beginning to speak in terms which have distinct overtones of modern developmentalism. One popular text on silk farming, written by a well educated farmer around 1810 contains a debate between the author and an imaginary questioner, who wishes to know whether wealth is a gift of nature or the fruit of human ingenuity. The answer involves an edifying story about the entrepreneurship of two successful silk merchants, ending with this unequivocal moral: “commodities are not produced in accordance with the natural environment of the country. Undoubtedly, they are brought forth by people with a talent for economic management.”¹⁰ Andô, in his recent study, suggests that even philosophers like Kumazawa Banzan (1619–91), who emphasised the need to respect the fragile web of ecological relationships, may have done so not just because of their own sense of harmony with the natural order, but also because they saw that order being threatened by the spread of the commercial economy.¹¹

Writings on the environmental crisis often stress the need to overcome the dualistic concept of humans versus nature. In the present context, however, it is equally important to avoid a simplistic dualism of “east” (or “Japan”) versus “west”. It is therefore important to recognize that Japanese debates on traditional attitudes to nature have recently been echoed by debates in other parts of the world. One intriguing example is the case of Russia, where that potent mixture of environmental concerns and nationalism which I have elsewhere termed “econationalism” lies at the heart of debates on post-Communist ideology. After Chernobyl and other environmental disasters, the challenge to Communism came to be based in part on the accusation that it had destroyed the harmonious relationship to nature built up through centuries of Russian peasant culture. The rediscovery and celebration of that culture is therefore an important theme in contemporary Russian thought, and is expressed in terms which are very reminiscent of some Japanese writings on traditional culture.

An influential article by anthropologist Kseniya Myalo, for example, argues that the pre-modern Russian village possessed a “cosmocentric” world view in which human activity harmonized with the order of nature. Although the peasantry was not averse to change, social and technological innovation was always fitted into “a model of the ideal balance of the whole.” It is only in our present age “the era of global destruction of the ecological equilibrium and of the hole in the ozone layer,” she writes, that we have come to appreciate the intuitive wisdom of village society.¹² In the same vein, the novelist Dmitri Balashov has claimed that, through centuries of adaptation to their

9 Andô Seiichi, *Kinsei kôgai shi no kenkyû*, Tokyo, Furukawa Kôbunkan, 1992, pp. 194–243.

10 Narita Jûbei, *Sanshi kinuburui taisei*, in *Nihon nôsho zenshû*, vol. 35, Tokyo, Nôsan Gyoson Bunka kyôkai, 1976, p. 316. The words “*no fûdo*” are not included in the text, but are clearly implied, since the statement is an answer to the question “*meisan wa kuni no fûdo ni yotte sanzuru ka. Mata keizai no hito ni yotte izuru ka.*” (Are famous products created by the natural environment of the country, or are they the product of people skilled in economic management?)

11 *Ibid.*, pp. 365–79.

harsh environment, the Russian people developed a unique culture based on a system of agriculture which harmonised with nature. This culture, however, was eroded, first by the westernising policies of Peter the Great and later Tsars, and then by the Communists' obsessive drive towards industrialisation. For Balashov, the solution lies in the "restoration of national culture and national ethical norms," an important part of which is the restoration of the authority of the Orthodox church.¹³

These views in turn have echoes in a number of recent popular books which seek solutions to the contemporary crisis in the wisdom of tribal minorities in various part of the world. The best known is probably *The Wisdom of the Elders*, by Canadian ecologists Peter Knudtson and David Suzuki, which tries to distill some essential features of all "native" cultures, and to show "the power and relevance of their knowledge and worldview in a time of imminent global catastrophe."¹⁴ The crucial features of the "Native mind", they suggest, include a profound awareness of the interconnectedness of all living things, an understanding of and respect for the powers of our fellow creatures, and a sense of sacred attachment to the land.

The Lessons of "Traditional Cultures": Uses and Limitations

The story told by books like *The Wisdom of the Elders* is an attractive one, but I cannot help having some doubts about its value as a source of solutions to contemporary environmental crisis. On the positive side, the study of non-industrial societies (ancient and modern) can certainly give us new perspectives on the problems of the industrial system and its relationship to nature. Seeing dominant modern concepts of nature in a comparative context, we are better able to criticise the weaknesses of those concepts and to imagine alternatives.

The "rediscovery" of indigenous cultures is also encouraging new research on surviving hunter gatherer societies, including the Ainu in Japan and Aboriginal societies in Australia. This research has both intellectual and political importance. There is an obvious contradiction in seeking to learn from the culture of indigenous people while at the same time perpetuating centuries of dispossession. So the rediscovery of native culture is inseparably bound up, in Japan, Australia and elsewhere with the call for land rights which can, in the words of one Ainu leader "give us back the rights to live with nature."¹⁵

In spite of these important contributions, though, efforts to find a solution to environmental crisis in traditional or indigenous cultures have certain inherent problems. If we treat "traditional" societies as a source book for answers to modern questions, there is a temptation to focus only on their harmony with nature, and to avoid

12 Kseniya Myalo, "Oborvannaya Nit': Krest'yanskaya Kul'tura i Kul'turnaya Revolyutsiya" *Novyi Mir*, August 1988, pp. 245–57, quotation from p. 253. For a discussion of Myalo's article, see V. Krasnov, *Russia Beyond Communism: A Chronical of National Rebirth*, Boulder, Westview Press, 1991, pp. 116–17.

13 Quoted in Krasnov *op. cit.*, p. 161.

14 P. Knudtson and D. Suzuki, *The Wisdom of the Elders*, Sydney, Allen and Unwin, 1992, p. xxxv.

15 Kayano Shigeru, "Give us Back the Rights to Live with Nature!", *Ampo*, vol. 20 no. 4 & vol. 21 no. 1, 1989, pp. 18–20.

evidence of more complex or conflictual relationships with the natural world. But the Wisdom of the Elders was accumulated from many centuries of experience, which presumably involved both trial and error. As we grope for a deeper historical understanding of the human relationship with nature, it may be more helpful to recognise these tensions and problems in “traditional” societies than to pursue the quest for the perfect paragon of ecological harmony.

There are two even more important problems with the “traditional culture” approach which I should like to single out for discussion. One is its role as a form of “post modern” thought—that is, solution to the environmental and other ills of modern industrial societies. The difficulty in presenting “traditional culture” as means of solving contemporary problems is that it does not seem to offer any clear path to practical action, at least for those of us who live in the rich nations of the industrial world. Once we have marvelled at the cosmocentric philosophy of the Russian peasant, the Zen monk or the Kung herdsman, where do we go from there? Can we select the view of nature embodied in one of these non-industrial cultures and make it our own? I suspect not; for concepts of nature are not free-floating entities which can be detached from one social setting and transferred to another. Instead, they are bounded and given meaning by other notions—about the relationship between one human being and another, about the ownership or sharing of material goods, about the limits of space and the flow of time. And these concepts in turn are moulded and strengthened by day to day experience of work and play. Indigenous cultures, or the cultures of past societies, may teach us the details of their technology, but it is difficult to see how we can adopt their attitude to nature without some fundamental re-ordering of contemporary society.

The second problem has to do with the question of diversity. Efforts to define a single indigenous or traditional view of nature can lose sight of the differences within and between non-industrial societies. It is of course possible, in surveying cultural traditions of various non-industrial societies, to pick out certain recurrent themes: myths of creation, rituals of the hunt, symbols of identity with the land etc. But surely the most wonderful thing about past human societies, and about surviving indigenous cultures today, is their phenomenal variety of forms. Rather than selecting a particular society as a model of ecological wisdom, or seeking to extract common features from many traditional cultures, it may be more meaningful to concentrate on that diversity itself. The success of human beings as a species surely has a lot to do with the fact that, of all animals, we are capable of adopting the greatest variety of different lifestyles. Across the span of time and geographical space human societies have shown the ability to interact with nature in an extraordinary diversity of ways: they have eaten different foods, gathered and farmed different crops, made their clothes and buildings from different materials, used different tools, sung different songs and dreamed different dreams. For this reason they have been able to occupy an enormous range of different niches in the global ecosystem.

The Limits to Sustainable Development

These two issues—the issue of diversity and the issue of the relationship between

values and practical action—are central to contemporary environmental dilemmas, and therefore also to dilemmas about the notion of “sustainable development”. A major cause of environmental crisis is, not so much economic growth itself, but the fact that for the first time in history we have a worldwide economy in which virtually all countries are pursuing the same model of growth, using similar productive techniques and therefore consuming the same natural resources and pouring the same pollutants into an overloaded ecological system. This worldwide uniformity is reinforced, not only by the complex interconnectedness of modern technologies, but also by the rules of the international economic game.

Since the Second World War, this game has been based on a continual tension between the logic of the nation state and the logic of the global economy. International organisations like the IMF and GATT have striven to maintain an open trading system, allowing the free worldwide movement of goods and capital (but not people) while national governments have struggled to balance the demands of their domestic constituency with the demands of the international rule-makers. This balancing act creates a short-term perspective where governments are constantly concerned with riding out the current crisis. The rules of the international game foreclose certain options for nation states. Policies which isolate parts of the economy from international influences, for example, are contrary to the ethos of the IMF and GATT.

Given the pressures under which they operate, the simplest path for governments to pursue is one which encourages the inflow of foreign investment and the expansion of exports. Rather than undertaking the arduous long-term process of developing locally appropriate technologies, governments are always under pressure to pursue immediate solutions based on the standardised economic policies of the IMF and World Bank, and on the import and diffusion of standardised global technologies. The rules designed to maintain an open world trading system and resolve balance of payments problems have thus encouraged the world economy to develop, as it were, a massive balance of payments deficit with nature.

Practical efforts to deal with this dilemma have come to be underpinned by the concept of “sustainable development”, which slipped quietly into popular discourse in the early-1980s.¹⁶ The popularity of this notion has grown *pari pasu* with the growing influence of the “traditional culture” perspective which we have just discussed, but its assumptions and implications are in many ways very different.

It should be said that Japan has played a particularly important role in the evolution of debates on sustainability. During the 1970s, when the Japanese government began to respond to pressure from citizens’ groups by introducing stringent curbs on industrial emissions, the focus of environment debate was largely domestic and was concentrated upon the problems of “pollution” (*kôgai*), envisaged as direct harm to human health from industrial processes. During the late-1970s, concern about *kôgai* expanded into a wider debates about the conservation of nature within Japan itself,

16 Kankyô Chô Chikyû Kankyô Keizai Kenkyû Kai, *Chikyû kankyô no seiji keizai gaku*, Tokyo, Daiyamondo Sha, 1990, p. 47.

but it was only in 1981 that the Environment Agency began to turn its attention to global matters, establishing the influential Ad Hoc Group on Global Environmental Problems (*Chikyûteki Kibo no Kankyô Mondai ni Kansuru Kondankai*) under the chairmanship of former Foreign Minister Ôkita Saburô. On the advice of this advisory group the Japanese government took the initiative in proposing the establishment of the World Commission on Environment and Development (better known as the *Brundtland* Commission), whose final report—*Our Common Future*—is the most complete and significant statement on the concept of sustainable development.¹⁷ Japan also, of course, was a key player in the Rio Earth Summit of May–June 1992, where it pledged over US\$7 billion in environmental aid over the next five years, thus becoming, as it were, the chief official sponsor of the sustainable development process. Unlike the “traditional culture” approach, the notion of sustainable development is strong on practical proposals and political programs. It is impelled by a powerful sense of forward momentum. But it is also often ambiguous about its philosophical basis, and seems to contain two different visions of the future, whose tensions are not always acknowledged or reconciled. The first vision sees sustainable development as an *agenda*, a particular set of solutions to environmental problems which is to be imposed upon the world through international agreement. The second vision sees sustainable development on the contrary as a *process*: the process of encouraging different societies to develop their own solutions to their own particular problems. The first, in short, represents sustainability through standardisation and the second sustainability through diversity; the first is sustainability from above, the second sustainability from below.

Both versions of sustainable development recognise the problem of allowing less developed nations to pursue their hopes for industrialisation without provoking environmental catastrophe. The “top down” version of sustainability, though, argues that these issues can be resolved by encouraging the worldwide spread of a specific model of industrial development. At some point around the mid-1970s, it suggests, a fundamental change—a “de-materialisation”—transformed the nature of industrial technologies.¹⁸ Since then, the trend has been towards knowledge intensive, material saving techniques—what are known in Japan as the *kei-haku tan-sho* or “light, thin, short and small” technologies. According to the *Brundtland* Commission, if industrialised countries “continue the recent shifts in the content of their growth towards less material- and energy-intensive activities and the improvement of their efficiency in using materials and energy,” it should be possible to maintain reasonably high rates of worldwide growth with low levels of environmental impact.¹⁹ High growth in industrial countries can provide markets for the exports of less developed

17 See “Statement by H. E. Bunbei Hara, Representative of Japan, to the Session of a Special Character of the Governing Council of the United National Environment Program, Nairobi, May 11, 1982”, in *Kankyô Chô Chôkan Kanbô Kokusai Ka, Nairobi Kaigi no kiroku*, Tokyo, Kankyô Chô, 1982, p. 303: *Kankyô hakusho 1991*, p. 84.

18 World Commission for Environment and Development, *Our Common Future*, Oxford, Oxford University Press, 1987, pp. 213–19.

countries, helping them to move along the path towards industrialisation. But if, at the same time, these newly industrialising countries can be persuaded to incorporate the latest materials and energy saving know-how into their expanding offices and factories, their industrial revolutions will take place without the environmental disasters which have accompanied industrialisation in other parts of the world.

At this point in the argument, Japan is often held up as a model for emulation because of its remarkable success in shifting from heavy industry to the new information intensive industries. The *Brundtland* Report, quoting figures from an article by Peter Drucker, notes that “Japan used only 60 per cent as much raw materials for every unit of production in 1984 as it used in 1973.”²⁰ The head of Japan’s environmental protection agency also points out the connection between strict environmental controls in Japan and the successful development of new, materials saving technologies, and presents Japan’s experience as evidence that “excellent environmental policies lead to technological development and beneficial economic activity.”²¹ This was reiterated at the Rio Earth Summit, where Japan’s pledge of aid was presented in a speech which emphasised the relevance of Japan’s recent industrial restructuring to less developed countries.²²

The advantage of the top-down, standardised version of sustainability is that it can easily be fitted into existing economic and political structures, and so offers a way of making a rapid impact on pressing ecological problems. Of course there may be resistance from individual nation states and private enterprises to the imposition of tighter environmental standards and the introduction of less polluting technologies. But the carrots and the sticks which are necessary to overcome resistance can generally be applied within the framework of existing systems—whether national economic plans, bilateral aid programs or multilateral agencies like the United Nations, World Bank and International Monetary Fund. Many of the technologies needed to reduce resource consumption are already in existence in leading countries like Japan, and their transfer to industrialising nations requires no fundamental rethinking of official approaches to development. The period from 1975 to 1986, for example, has already seen a six-fold increase in Japan’s exports of pollution control equipment, mainly to other Asian countries.²³ The formula for sustainability, then, is “more rapid economic growth in both industrial and developing countries, freer market access for the products of developing countries, lower interest rates, greater technology transfer, and significantly larger capital flows, both concessional and commercial.”²⁴

But the idea of internationalising a version of sustainability developed by advanced industrialised countries is open to several criticisms. For one thing, the “de-materialisa-

19 *Ibid*, p. 51.

20 *Ibid*, p. 216.

21 “Jinrui kyôdô no chôsen: Chikyû kankyô mondai no arata na apurôchi o motomete”, in Kankyô Chô Chikyû Kankyô Bu Kikaku Ka ed., *Chikyû kankyô jidai*, Tokyo, Gyôsei, 1990, p. 74.

22 *Asahi Shimbun*, 11 June 1992.

23 *Kankyô hakusho 1988*, p. 98.

24 World Commission for Environment and Development *op. cit.* p. 89.

tion” of industry in the rich nations during the 1970s and 1980s was partly achieved by shifting more heavily resource-consuming and polluting industries off-shore. Newly-industrialising countries are on the receiving end of this transfer, and so in these countries, achieving a combination of industrial growth and reduced environmental impact will be much harder than it has been for countries like Japan. The resource-saving properties of the new “light, thin, short and small” technologies, too, may not be as great as they seem. As far as the exhaustion of non-renewable resources is concerned, what matters is not so much the total amount of raw material used in production, but the ratio of consumption to known reserves. New products like microelectronics may be “small and light” in terms of the absolute volume of material which goes into their manufacture, and still cause the rapid depletion of relatively rare minerals (such as tantalum and lithium) required in their production.

Besides, technologies which address the burning environmental issues of the day have a troublesome tendency to aggravate problems which have temporarily been banished from the headlines. One reason why Japan has been able to combine industrial growth with falling emissions of carbon dioxide, for example, is that Japanese industry has shifted from the use of thermal to nuclear power, which now supplies around 30% of Japan’s electricity, as compared to about 10% in the late-1970s.²⁵ In Japan and other industrialised countries some leading advocates of sustainable development explicitly look to nuclear power as a solution to the greenhouse effect. One advisor to the government’s Ad Hoc Group on Global Environmental Problems, for example, argues that “the time is coming for a fair assessment of the role of nuclear generation in energy supply...The main reason for this is the global environmental problem...I believe that, as far as the choice of energy sources is concerned, we must consider nuclear power as an effective means for dealing with the carbon dioxide problem.”²⁶ Industrialising nations like Indonesia are now devising large-scale plans for nuclear power generation as part of their future development strategies. It is not necessary to reherse the debates about nuclear energy in order to make the point that this may be a leap from the frying pan into the fire.

The most interesting point about this top-down, standardised version of sustainable development, however, is its stark contradiction to the “traditional culture” approaches which we looked at earlier. At the level of contemporary ideas there seems to be a passionate search for alternatives to the values of industrial civilization, but at the level of practical action, global environmental policies are locking us more firmly than ever into the industrial ethos of rapid growth, international standardisation and sophisticated technological fixes. This paradox was in a sense epitomised at the Rio Summit, where official commitments to the transfer of technology and the promotion of worldwide growth were accompanied by a speech in which former Prime Minister Takeshita called for the creation of a *chikyū furusato* — a term which could literally be translated as “global village”, but has strong overtones of return to one’s native, rural

25 See *UN Statistical Yearbook for Asia and the Pacific*, 1979 and 1989.

26 Quoted in *Gijutsu to ningen*, vol. 18, no. 3, March 1989, p. 34.

roots.²⁷

The architects of sustainable development seem to be aware of the contradictions, because amongst the recommendations for more aid, trade and foreign investment, there are signs of a different version of sustainability trying to get out. *Our Common Future*, for example, while calling for large-scale transfers of technology through conventional methods such as foreign investment and aid, also recognises that “the technologies of industrial countries are not always suited or easily adaptable to the socio-economic and environmental conditions of developing countries.” It therefore emphasises importance of “enhancing research, design, development and extension facilities in the Third World,”²⁸ and suggests that social and environmental needs can best be reconciled by “decentralising the management of resources upon which local communities depend...promoting citizen’s initiatives, empowering people’s organizations, and strengthening local democracy.”²⁹ *Agenda 21*’s program of international regulation, standardised data collection, and large-scale flows of development assistance through existing bilateral and multilateral channels, too, sits rather oddly beside its calls for “the generation and application of...indigenous and local knowledge...to achieve sustained levels of development” and recommendations on the involvement of local expertise in developing “national and regional pathways to sustainable development.”³⁰

Statements like these seem to suggest a vision of the future which is at odds both with the idea of restoring “traditional” values and with the idea of sustainability through the worldwide application of a single development model. They suggest a vision of sustainability whose aim to rediscover technological and social diversity. This is not, however, a diversity which relies on the maintenance or re-imposition of “tradition”, but a diversity which could grow out of contemporary choices made by communities on priorities and techniques for development. The aim seems to be a process of improving living standards where all societies would not adopt the same production technologies and the same organisational systems, but where development could involve the emergence and evolution of variety of different technological models, each of which would sustain its own style of work, play and social organisation. They point, in other words, to a different approach to transcending the problems of “modernity”.

But the pursuit of this version of sustainability would imply practical policies very different from the ones which have emerged from so far from events like the Rio Sum-

27 *Asahi Shimbun*, 5 June 1992.

28 World Commission for Environment and Development *op. cit.* p. 60.

29 *Ibid.*, p. 63.

30 United Nations Conference on Environment and Development, *Agenda 21*, Geneva, 1992, ch. 35 pp. 3 and 5; a similar tension is evident in Japanese government White Papers on the environment, where statements on the need for Japan to exert tighter control over aid payments, rather than relying on a “request-based” system, sit side by side with statements on the need for more “appropriate technologies” and more grass-roots cooperation between local organisations in Japan and developing countries. See *Kankyō hakusho 1988*, pp. 112–17.

mit. It implies, for example, that less developed countries might learn, not so much from Japan's industrial strategies in the 1970s and 1980s as from other aspects of Japan's past, such as its rather rich experience in adapting and modifying techniques to suit local needs. Work by historians like Nakaoka Tetsurō has shown the very important role which intermediate technologies played in Japan's early industrialisation.³¹ The eminent environmentalist Ui Jun points out that these successes were often the result, not of central government policy, but of the efforts of local communities and local government.³² In my own research on the history of Japanese technology, I have been struck by the number and diversity of Japan's locally-based industrial research laboratories, of which there are now more than 120, the oldest of them dating back to 1873.³³ Although the role of these laboratories has changed over time as they have become integrated into national strategies for high technology, many have a history of developing their own distinctive techniques, working closely with local industrial communities whose origins may go back to the eighteenth century or beyond. These bodies could provide the basis for a policy of technological cooperation which would not simply transfer know-how to other countries, but would share with foreign counterparts the experiences of fitting innovation to local needs.

This sort of "grass-roots cooperation", though, will always be marginal unless it is linked to the much wider and more difficult reforms which would create space for the local control of resources and techniques. A central part of these reforms would need to be a radical rethinking of the structure and goals of international organisations like the IMF and World Bank: a point acknowledged by *Our Common Future*³⁴ but not followed up the environmental agreements emerging from the Rio Summit. Several recent studies of environmental and development issues have suggested, for example, that international economic agencies, when providing conditional loans, might set development targets for recipient countries, rather than prescribing the policies by which targets are to be achieved.³⁵ Another vital aspect of reform would surely be a lengthening of the time horizons built into the policies of international agencies, so that governments would have scope to pursue long-term strategies rather than quick fixes.

It is interesting to observe that Japanese officials have also recently begun to call for a basic rethinking of the economic philosophies of the World Bank. The reforms which they have in mind, however, are not ones which would encourage environmentally appropriate development strategies, but ones which would allow the state to play

31 Nakaoka Tetsurō, "Gijutsu shi no shiten kara mita Nihon no keiken", in Nakaoka Tetsurō *et al.* eds., *Kindai Nihon no gijutsu to gijutsu seisaku*, Tokyo, Tokyo Daigaku Shuppankai, 1986.

32 Ui Jun, "Trends in Ecology in Japan Since the 17th Century", *Okinawa Daigaku kiyō*, no. 9, 1992, p. 32.

33 Kagaku Gijyū Chō, *Zenkoku shiken kenkyū kikan meikan 1989-1990*, Tokyo, Kagaku Gijyū Chō, 1989.

34 World Commission for Environment and Development *op. cit.* p. 337.

35 For a discussion of this issue, see J. Clark, *Democratising Development*, London, Earthscan Publications, 1991, pp. 218-19.

greater role in forcing the pace of industrial growth.³⁶ If these efforts were directed instead to reforms which would sustain a variety of environmentally appropriate development models, it might be possible for Japan to play a more fundamental role in promoting long-term sustainability.

There is another key issue in the “bottom up” vision of sustainability which needs special emphasis: the issue of the ownership of property. This is a very unfashionable subject at present. Talk of redistributing property seems automatically to conjure up discredited hard-line Marxist ideologies. But the question of property is vital to environmental solutions for a rather simple reason. Private corporations, by their very nature, have to grow. They exist in order to make profits and in order to enhance their own competitive power by expansion. If, however, the people who use resources own those resources, there is no necessary commitment to growth or profit. Farmers who own their own plot of land can choose to use it in order to increase their material wealth, but may instead, at a certain level of prosperity, decide to choose greater leisure rather than greater material wealth. The option of choosing leisure is crucially important, because leisure allows us to enjoy the environment more fully, and also to take part more fully in those participatory democratic activities which are vital to truly sustainable development.

There is little hope of “empowering local groups” or developing regional pathways to sustainability without giving people a greater stake in the ownership of the resources which they use. Therefore large-scale transfers of wealth from north to south will only make sense if they are used, not for conventional multinational-dominated development projects, but to enable local communities (and particularly the poorer members of those communities) to buy individual or group control of the resources which they use—in other words, to buy control of their own futures.

Conclusions: Towards a Rediscovery of Diversity

The purpose of this rather winding journey through space and time is to make two suggestions for future research. The first is a plea for greater integration of various levels of research on environmental issues. Although, as I suggested earlier, the environment has become an issue of debate in a growing number of disciplines, the proposals coming out of different disciplines often seem to pass each other by without so much as a nod of recognition. So the search for new environmental values and new concepts of nature can become oddly detached from the search for new legal frameworks, economic policies or international agreements to protect the environment; appeals for the rediscovery of tribal wisdom can coexist with policies to speed the worldwide spread of industrialisation.

The second suggestion is for a closer and more interdisciplinary look at the role of social diversity, as well as bio-diversity, in ensuring ecological survival. Conventional concepts of modernisation generally assumed that material progress would be accompanied by a growing convergence between different societies. “Modern” society was of

36 *Far Eastern Economic Review*, 18 June 1992, pp. 60–62.

course a pluralistic society, allowing room for a variety of ideas and lifestyles, but it was still to bound together by an overarching system of shared values and uniform organisational structures, as well as by a single system of technological knowledge. Recently, this vision of progress has come to be challenged by various forms of "postmodernisation" theory, and the search for an alternative has been given particular significance by environmental crisis.

One possible reaction is to maintain the unity of the system but to swap the growth model, rather as one might swap an old car for a newer, more fuel efficient version. Another is to try to reverse the process of modernity altogether, reimposing the lost national or ethnic traditions of pre-industrial society. A third, suggested by the alternative version of sustainability discussed in this paper, would imply a strengthening of local control over the processes of development, thus allowing material progress to become progress towards diversity. Whether the third approach is a feasible one is uncertain. But a closer look at its problems and possibilities might provide one way, not only of deepening international environmental cooperation, but also of crossing the mental frontiers which often separate the nuts-and-bolts study of legal regulations, technology transfers, and aid packages from the more speculative search for new environmental values.