

## THE EVOLUTION OF JAPANESE IMAGES OF THE ENVIRONMENT

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A discussion of images of the environment, of environmental problems, and of appropriate environmental policies in contemporary Japan should begin with a consideration of the cultural legacy, the intellectual baggage, with which the Japanese entered the era of industrialization and environmental problems. Many Westerners are familiar with traditional East Asian religions and may expect these to have acted as a brake, to lend moderation, to Japanese development. However, this was not the case in Japan: perhaps the older a tradition is, the less powerful it can be in restraining the forces of industrial development. Japan's sophisticated theological developments in Buddhism might seem perfectly suited to modern environmentalism but could not save Japan from first becoming the most polluted country of the twentieth century.

### THE EARLY TRADITIONS

The earliest components of the legacy were Japan's traditional religions - Shinto, a primitive fertility cult lacking any ethical code whatever (in fact, some scholars of religion would not call Shinto a religion at all for this reason), and Buddhism, a seventh century import loaded with enough guilt-inducing ethical teachings to make up for earlier omissions. For the vast majority of Japanese today - a decidedly pragmatic and secular people who claim in public opinion polls that they are simultaneously believers in Shinto, Buddhism, and nothing whatsoever<sup>1</sup> -, these are no longer living religions and provide little more than guidelines for arranging weddings (Shinto) and funerals (Buddhist). But they still have significance for contemporary life because they have worked their way deeply into popular culture over the centuries, and some of the precepts of Shinto and Buddhism survive even for people who have no formal training or even conscious familiarity with their teachings. As we shall see in a moment, the teachings of these religions that

apply to popular attitudes toward the environment do not by any means dominate in the current century. But they are worth mentioning because they constitute a philosophical counterpoint - something that is unavailable in the West - which Japanese environmentalists can rediscover if they wish, rather than groping aimlessly for a substitute for the West's environmentally destructive ideologies of industrial progress, the infinite frontier, and the anthropocentric Judeo-Christian tradition<sup>2</sup>.

So, what do Shinto and Buddhism have to say about the natural environment and about man's responsibilities toward it? Shinto is concerned primarily with agricultural fertility and very little else<sup>3</sup>. Adequate supplication to the eight million gods (largely animistic totems, usually with very limited jurisdiction over individual trees or animals or mountains) and proper ritual should produce a good annual harvest. Man is not responsible for his misdeeds (which therefore cannot be defined), and disappointments and tragedies can be prevented - if foreseen - by paying additional homage to the gods. In essence, then, man is part of the natural environment which guarantees his survival and which he protects out of prudence and respect for the deities that inhabit all natural objects. Beyond this there are no rules - no particular value in practicing frugality, no harm in acquiring wealth or having a good time, and in fact man is free to use supplication and ritual to get whatever he wants; the gods will not pass judgment and will provide whatever is asked if they are given proper incentives to act, regardless of the nature of the request.

Buddhism also promotes the view that man is merely one creature in a vast, diverse, interdependent natural world, but there the resemblance to Shinto ends<sup>4</sup>. According to Buddhism, man is responsible for his misdeeds, which are so numerous that they are almost impossible to avoid committing, and he pays in this life and the next. Desire, for anything but especially for material things, is the root of all suffering, and only by eliminating desire can man hope to escape the cycle of suffering, achieve the buddhahood that is the potential destiny of all creatures, and enter nirvana. To oversimplify enormously, the major distinctions among the various Buddhist sects have to do with different methods of eliminating desire (meditation, asceticism, altruism, performing death-defying tasks, praising the name of Buddha repeatedly or even just once with feeling, and so on). Because all creatures are former or future human beings (possibly even relatives) at different stages of their quest for buddhahood, and because it is immoral to cause pain to others, Buddhists should be gentle with the environment and practice vegetarianism. Material wealth is undesirable (although Buddhist temples never had qualms about amassing great wealth and political power in Japan), and therefore, strictly speaking, industrialization and consumerism would be essentially pointless and environmental pollution would be a sign that man in his foolish vanity is destroying the natural systems that support all life. Buddhism is thus a very suitable philosophical underpinning for ardent environmentalists.

One might expect then to find that industrialization in Japan would be

tempered by benevolent consideration for the natural environment, or if pollution did somehow emerge that Japanese environmentalists would quickly sound the alarm, draw upon their Shinto-Buddhist heritage to adopt a holistic ecological perspective, and put a prompt halt to environmental destruction. However, this is by no means the case. Japan has in fact industrialized not just once but twice with the intensity of a religious crusade. The Japanese environmental movement is a good deal younger than that in the United States and Britain. Even since 1970 when the movement became large and politically significant, only a minority of even the most active environmentalists have begun to view environmental problems in this comprehensive way. Most environmental groups in Japan are concerned only about specific problems in their own local areas, and only the most tentative efforts at building national coalitions or founding a Green Party have occurred.

Why does today's particularistic environmental movement (which we will explore more fully below) seem to have difficulty relying on such a useful intellectual tradition - in comparison to other countries where environmentalists seeking a comprehensive view and failing to find roots for it in their own traditions actually go to the lengths of borrowing the Buddhism that Japanese environmentalists ignore (witness E.F. Schumacher's interest in "Buddhist economics", for example)<sup>5</sup>? A good portion of the explanation has to do with Japan's history since the flowering of Buddhism in medieval times - the waning of Buddhism in the Tokugawa period (1600-1867), the euphoric endorsement of industrialization as a strategy for national survival not just once in the 19th and early 20th centuries but again after 1945, and finally the very nature of the kinds of pollution produced by the postwar economic miracle. Each of these developments allowed other images of the environments to displace the Shinto-Buddhist legacy.

The incidence of environmental disruption during the Tokugawa era (insofar as the historical record permits) suggests that at least the implicit environmental holism of Buddhism must have continued to exercise some influence. After two centuries of intermittent warfare, extensive destruction of both nature and man-made works, and near brushes with deforestation, the Japanese closed themselves off from significant foreign trade and lived at peace - not only with themselves but with nature also - within the limits of natural carrying capacity for more than two centuries. This is a noteworthy accomplishment in human history even if it was unconscious and unintended. The population was by now spread over the home islands (Hokkaido would not be colonized until the 19th century), and if the Japanese had ever had any notion of a frontier they certainly lost it during this period. Occasional natural disasters, local famines, poverty in most of the population and an ethic of rugged self-denial among the only slightly wealthier samurai class all taught the Japanese the virtue of living within one's means. However, the Buddhist legacy and the explicit principle of living in harmony with nature because man was merely a part of nature began to slip away.

The great age of evolution and ferment in Buddhism was over in Japan when

the Tokugawa government took power and established a complex administrative structure that challenges one's powers of description - sometimes called "centralized feudalism" but just as aptly and contradictorily described as "decentralized totalitarianism". The central government ruled only indirectly in most of the 250-300 domains, allowing for a great deal of local control and regional diversity, but laws regulated all sorts of behavior according to a social structure of four classes and one outcaste, all individuals had to be registered, and movement among the domains was carefully monitored. Along with collective responsibility by neighborhood and village for the transgressions of group members, an impressive array of spies and inspectors enforced all of these arrangements.

Preoccupied with the relationships among people and the maintenance of stable hierarchies, the Tokugawas found Confucianism, a secular philosophy rather than a religion and so anthropocentric that it dealt only with human institutions and not with the natural order at all, far more to their taste than Buddhism. The Tokugawa era witnessed the expansion of what could almost be called "mass education" among not only the elite samurai class but also the commoners, and for more than two centuries large numbers of people learned to read and write on the Confucian classics, not the Buddhist sutras or theological commentaries<sup>6</sup>.

Finally, even though Tokugawa Japan was probably the largest and most complex and longest-lasting example of what we might today call a sustainable society, it was also an era of reconstruction, urbanization, and the creation of the world's largest, liveliest, and cleanest cities, and it quietly laid the foundations for subsequent modernization - for a secular society and commercial and industrial takeoff<sup>7</sup>.

## IMAGES DURING PREWAR INDUSTRIALIZATION

After the Meiji Restoration of 1868 a new regime took power, stimulated both by domestic ferment over the nation's proper goals and the frightening discovery that Japan, once easily the military and economic equal of the Western empire-builders in the 16th and 17th centuries when Japan opted to close her borders to foreign influence, now lagged seriously in military and economic prowess behind a newly imperialistic West<sup>8</sup>. The new regime and the populace alike were captivated by the idea of industrialization and the Western notion of transmogrifying their surroundings in the service of "progress". Unlike the industrial revolution in most Western countries that took place accidentally, without state sponsorship and without conscious commitment on the part of government or citizens to industrialization as a national goal, Japan took on the goal of industrialization quite purposefully with an intense sense of national mission, under the slogan of "rich country, strong army". The Japanese res-

olutely cast aside the already weakened Buddhist notions of humility, harmony with nature, and opposition to materialism, and began to see smokestacks belching black clouds as beautiful signs of national prosperity. This national consensus constrained criticism of industrialization for a long time, so that most people, government and public alike, regarded any deleterious side effects of industrialization as the price Japan had to pay for national survival.

Major outbreaks of pollution did occur, particularly in connection with mining, and in some instances destroyed entire watersheds, contaminated prime agricultural land, and made local farmers totally destitute<sup>9</sup>. The intense local protests associated with outbreaks of mine pollution did receive national attention and its victims finally elicited major concessions from government and industry, including industry's acceptance of the responsibility to compensate pollution victims with every recurrence, to make some modest attempt to issue warnings when the problem was expected to get temporarily worse, to direct the smoke toward areas where it would do less harm, and even to move offending factories to less densely populated areas. But remedies were always limited to the geographical confines of the contamination. In the one instance where protest threatened to spill over into a critique of the Japanese political and economic order (the decade-long protest of Yanaka Village against Ashio copper mine), the government finally dismantled the village, moved its residents to a new site in Hokkaido, and flooded the contaminated farmland. The government portrayed this policy as a remedy for the sake of the villagers, but it was probably aimed at eliminating the village as the political core of a potentially wider protest movement<sup>10</sup>. Although the victims of mining pollution hoped to appeal to agrarian sentimentalism when they protested the ruination of agriculture, and of course their own loss of livelihood, they did not criticize pollution as an assault on the natural order, and no one pointed out that pollution violated fundamental precepts of Japan's cultural heritage. By and large, pollution was regarded as an inevitable and acceptable byproduct of industrialization, and not a sufficient reason for questioning that national goal.

Industrialization and modernization did finally come in for attack, but for other reasons - they seemed to produce social conflict, especially between labor and management, they caused great suffering in rural areas, and the parliamentary political system that Meiji Japan had chosen seemed to amplify rather than contain these conflicts. Japanese elites panicked that the conflicts inherent in capitalism and industrialism might destroy Japan from within<sup>11</sup>. The eventual result was imperialism and militarism in the quest for a New Order, a mystically garbled synthesis of industrial strength with the Japanese "spirit" that would eradicate internal conflict forever and provide a model to the world of an alternative to both capitalism and communist revolution<sup>12</sup>.

Even though official propaganda portrayed the war as the solution to the conflicts inherent in industrialism - and as the ultimate opportunity to exercise mind over matter in violation of economic and thermodynamic laws - industrialization and the assault on the carrying capacity of the Japanese islands proceeded apace. During the war Japan depleted most of its remaining

ores and minerals and greatly damaged its forests, and the no-holds-barred effort to increase production for the war machine extended the scope of industrial pollution beyond anything seen before in Japan<sup>13</sup>.

This ruthless experiment ended in 1945 not only in defeat but also in more serious destruction and deprivation for the Japanese people and economy than for any of the other belligerents in World War II - even before we count the effects of the atomic bombing. A nation that had been able to operate a self-sufficient economy within the limits imposed by the ecosystem for 250 years at a population level of some 30-35 million now had a population of 75 million people, who were reduced to eating grasses and wildroots from the foothills surrounding the burned out cities<sup>14</sup>. In the 19th century industrial development had been viewed as the nation's security against encroachments by foreign governments. After World War II industrial recovery could no longer save an occupied Japan from foreign influence, but it was the only way to climb out of the miserable depths of poverty for a large and still growing population, the only way to regain national prestige and self-respect, and in a sense the only method of atonement (from the nation to the rest of the world, and from the government to the people who had sacrificed so much).

It was also based on a very practical assessment of Japan's assets and population: Japan could not consider Tokugawa-style autarky because it did not have the agricultural potential or other resources in the home islands to support 75 million people. Empire had failed. If one cannot conquer other lands to get resources one must buy them. If one no longer has agricultural surpluses or cash crops (rice or silk or tea) or other resources (coal or copper) for export<sup>15</sup> one can only sell the skills of one's population in the form of exports of manufactured products. Thus re-industrialization was a simple imperative for postwar Japan, and it is little wonder that economic recovery and later rapid growth were enshrined once again as common goals above all others. This image of Japan as a deprived, resource-poor nation just one crisis away from famine, accurate in 1945 but laughable today, persists nonetheless in the form of agricultural protectionism (so that Japan can be self-sufficient in very expensively grown rice) and even in Japan's still very low profile style of diplomacy (in which the Japanese seem unaware of or unwilling to use all of the bargaining leverage that they actually have). More importantly for our purposes, this image governed postwar economic policy. It helped simultaneously to legitimize almost every industrial development project that the new conservative regime could concoct and to repel criticism that these projects were causing unacceptable pollution damage.

#### POSTWAR RE-INDUSTRIALIZATION

Postwar Japan has been governed almost continuously by a conservative establishment that saw in industrial progress the nation's and its own individual

ticket to survival, national prestige, and all that was good. The strategy of rapid growth worked very well for 20 years - it was popular, enhanced the ruling party's legitimacy, and was thus self-reinforcing. The enthusiasm for growth was almost a national religion until the late 1960's, not just among the ruling party and its allies in business but also in the general public and even in the leftist opposition parties, whose disagreement with the party in power was primarily over the proper form of economic organization and labor's proper share of the proceeds of growth. The special features of Japan's re-industrialization - not duplicated elsewhere - had unique implications for the emergence of pollution in Japan and indirectly for the attitudes of contemporary Japanese toward environmental problems. This national consensus for growth was based on a number of subconscious images of the environment that are readily evident in the government's official strategies for growth<sup>16</sup>.

### A) Official Images of the Environment

Postwar industrialization was concentrated almost entirely in heavy industries (oil refining, petrochemicals, steel, heavy machinery, cement, paper pulp) that generate highly toxic wastes and have high material throughput. Because of Japan's record-breaking rates of economic growth for a sustained period, the capacity of these highly polluting industries expanded very rapidly, as did the volume of wastes they dumped into the environment. This industrialization tended to occur in concentrated industrial zones called *kombinats* (the word is originally Russian). Oil and other materials brought into a port city are processed in refineries built immediately adjacent to the docks and then progressively transformed into finished goods as they move outward through concentric rings of processing plants, petrochemical plants, steel mills, and factories nearby. No time or money need be lost transporting materials to more distant locations at any stage of processing, and finished goods are easily shipped by train or boat to other ports in Japan or exported abroad. If we ignore the enormous social and environmental costs of such dense industrial zones, the *kombinat* is an extremely efficient method of production. A totally *laissez-faire* economy may occasionally produce facsimiles of *kombinats* as firms try to obtain sites for their factories near their sources of raw materials and with good transportation to markets, but only with additional government guidance to designate sites and subsidize construction of the "right" mix of industries in the proper sequence can a full-fledged *kombinat* emerge.

#### 1. New Industrial Cities (1962)

In 1962 the New Industrial Cities Law (part of a 10-year Comprehensive National Development Plan) was passed to facilitate the construction of *kombinats* in areas outside of Tokyo and Osaka. The national and local govern-

ments would construct essential public works (harbors, train stations, water supplies) to attract heavy industry and allow for the further development of related industries. This would lead to the urbanization of the area and an increased standard of living for local citizens as well as increased prosperity for the surrounding agricultural villages. An increased labor force and increased personal income in the entire zone would of course raise tax revenues for local government bodies, which would then be able to invest in public facilities to improve the "living environment" (social overhead items like sewers, schools, parks, hospitals, etc.) and ultimately improve public welfare in parts of Japan with lower income and levels of industrialization than Tokyo and Osaka<sup>17</sup>. After feverish competition for designation as New Industrial Cities, the 15 cities that won designation (along with six others called Special Areas for Industrial Consolidation) then offered very favorable terms to interested firms. In the negotiations between firms and government bodies, environmental considerations were entirely ignored, and these new industrial monstrosities soon began generating uniquely exotic combinations of pollutants in extraordinarily high concentrations.

## 2. Shinzenso (1969)

By 1969 the nation was beginning to react to pollution generated by these and older concentrations of industry, and victims of the "Big Four" Pollution Diseases had all filed their respective lawsuits (Itai-itai [ouch-ouch] disease due to cadmium poisoning in Toyama Prefecture, two outbreaks of methyl mercury poisoning in Minamata and Niigata, and one episode of air pollution near the kombinat in Yokkaichi). The previous Comprehensive National Development Plan (1961-1970) was about to expire anyway, so the government published its successor in May of 1969: the New (of course) Comprehensive National Development Plan, abbreviated Shinzenso<sup>18</sup>. The theme of the previous plan, of which the New Industrial Cities program was the principal operational part, had been to spread the assumed benefits of industrialization out to the undeveloped parts of Japan. The hallmark of Shinzenso was the re-integration of regional industrial zones with the center through a core network for transportation and communication that would then become the foundation for transition from industrial to a knowledge or information society. Whereas the first Comprehensive National Development Plan had designated every square meter of Japanese land surface for either present or future industrial development, Shinzenso attempted to respond to rising anxiety over environmental problems by designating food-growing and recreational regions as well, and by placing some emphasis on water quality and the preservation of nature. In 1967 the Basic Law for Environmental Pollution Control referring to the importance of "harmony between man and nature" had been passed, and Shinzenso incorporated this language into its promise to promote "development projects" to "preserve the natural environment" [sic].



However, for Japan's newly awakened population of environmental activists, Shinzenso was horrifying rather than reassuring. Shinzenso predicted that Japan's oil imports would have to increase five-fold between 1969 and 1985, and suggested five massive new industrial zones to process these imports and serve this demand. Each zone would be many times larger than the industrial projects already causing unacceptable pollution in Japan. Because of Japan's shortage of prime coastal land, Shinzenso would, of course, create the required land with enormous landfills into the sea - almost plugging up the straits between Honshu and Hokkaido in the north and the western end of the Inland Sea where Honshu, Shikoku, and Kyushu are closest together in the west<sup>19</sup>. Just one of these five projects, in the Suonada region of the Inland Sea, would involve a landfill from 5 to 14 kilometers across and 80 kilometers in length. The Suonada project alone was to produce one tenth of Japan's projected GNP for 1985 and would be capable of refining two to three times Japan's total oil supply for 1969 (this would be 40-60 % of Japan's total oil imports in 1985)<sup>20</sup>.

The Shinzenso's wild optimism about the possibilities of continued industrial development and economic growth in Japan, its inclusion of massive industrial projects in spite of the ostensible transformation to a post-industrial order, its explicit reference to a "frontier spirit" not bound by tradition, and its unwarranted confidence that in only 15 years Japan would learn how to control many times the pollution levels that had thus far proven unmanageable - all made Shinzenso a target of nationwide criticism and ridicule. Opponents were also anxious about Shinzenso's call for the creation of 164 new units of taxation and local administration, called New Local Living Spheres, that would displace existing municipalities and prefectures. Environmental activists in Japan, functioning through locally mounted citizens' movements to oppose pollution and development projects, were having much success in thwarting the central government's plans at the local level through their democratic influence over municipal and prefectural governments<sup>21</sup>. These activists felt - probably accurately so - that Shinzenso was also an attempt to weaken local control and guarantee compliance with these centrally directed plans. Even before the oil crisis of 1973 reintroduced the notion of limits into government thinking, Shinzenso was set aside. Powerful citizens' movement in some of the areas projected for massive development - especially Mutsuogawara in the north and Shibushi in the southwest - forced the government to scale down the size of these projects by halves and thirds<sup>22</sup>.

### 3. Kaizoron (1972)

The early 1970's were the heyday of environmental concern in Japan, and one detects a sense of bewilderment and incomprehension on the part of the Japanese establishment that its tried and true strategies for winning over the public no longer had the same magic. At about the same time that he became Prime

Minister in 1972, Kakuei Tanaka published his answer to the problem: *Nihon retto kaizoron* or "a plan to rebuild the Japanese archipelago"<sup>23</sup>. Upon investigation, this turns out to be a refurbished version of *Shinzenso* with somewhat greater attention to environmental problems and the realities of financing the transformation from material and energy intensive industrial society into a technology and information intensive post-industrial order. *Kaizoron's* major innovation was the notion of dispersing economic activity and population, not merely to coastline areas outside of the heavily industrialized Pacific Belt zone but also to new inland cities of about 250 000 population each. This would also promote larger-scale mechanized farming in cooperatives and presumably remedy economic decline in mountainous areas.

*Kaizoron*, explicitly described as a corrective for pollution and other ills that come from urban overcrowding, and calmer and less effusive than *Shinzenso*, still inspired great controversy and criticism. Environmentalists argued that it should more appropriately be called *Kogairon*, a plan to distribute pollution throughout Japan - because of Tanaka's plan to bring industry to the farm. Even though *Kaizoron* talked about tax incentives to pull industry and population out of the metropolitan areas, it still projected more than double the then current level of industrial activity for Tokyo<sup>24</sup>. Although it offered more specific suggestions for pollution control than had *Shinzenso* - green belts around factories, district heating and air conditioning with waste heat from power plants, emissions standards set within the ability of local ecosystems to cleanse themselves, pollution prevention contracts between citizens and industries in line with the polluter-pays-principle advocated by both Japanese environmentalists and the Organization for Economic Cooperation and Development - it still endorsed all of the huge construction projects outlined in the government's previous plans anyway<sup>25</sup>! Moreover, it still advocated the view that further growth would be necessary to pay for all of this additional popular welfare and pollution prevention, upsetting many environmentalists who had by now become extremely suspicious of any government endorsement of additional growth. Finally, critics noted that Tanaka had financed his political career with a fortune made in construction and dismissed the plan as a device to raise land prices all over Japan and enhance the opportunity for Tanaka and his ilk to profit from additional land speculation and construction - and to market a bestselling book as well<sup>26</sup>.

These three proposals offered to the Japanese public over a ten year period display several themes in the establishment's views of environmental problems. First, although Japan has no huge geographical frontier in the form of vast undeveloped wilderness of the sort that huge countries like the United States and Soviet Union have, these plans had (in common with Herman Kahn, a futurologist much admired by the Japanese government<sup>27</sup>) the notion of infinite economic, technological, and social frontiers. *Shinzenso* went so far as to try to convert advances on the technological frontier into new geographical acquisitions in the form of enormous coastal reclamation.

Second, there is only a very sluggish awakening to pollution as a problem,

from none at all in the New Industrial Cities plan, to lip service in Shinzenso, to a glimmer of understanding in Kaizoron that pollution does not disappear simply because one says it is a problem. Both Shinzenso and Kaizoron seemed to regard pollution as a problem only because people would not tolerate it any longer, and the only important side effect of ignoring it was political. The plans saw prevention as a simple technological fix that could approach perfection (100 % cleanup) as industrial capacity multiplied. None of the plans displayed any real understanding of physical or thermodynamic limits to material throughput or to our ability to manage pollution.

Third, there was absolutely no concern for the natural environment for its own sake in any of these plans. Neither Shinzenso nor Kaizoron spoke of preserving wilderness buffers or of man's dependence on natural cycles and natural systems - rather, nature was to be preserved because people liked to go look at it, and thus nature had to be "developed" in order to serve people's recreational needs. (In Japan this can mean amusement centers with noisy rides, large restaurants that announce the meal hour to busloads of visitors via ubiquitous outdoor speakers, and gift shops selling thousands of kewpie dolls and knick knacks smack in the middle of national parks.)

There are of course some very sound arguments in favor of economic growth, and the difficulty Japanese leaders had in absorbing the arguments of their environmentalist critics is neither surprising nor unusual. But Japanese industrial and political leaders who had staked careers and (they thought) the nation's well-being on a semi-religious devotion to rapid industrial growth had an extra margin of internal resistance to criticism of their mission. The last time Japanese leaders of modernization had listened to critics concerned about the undesirable consequences of industrialization, Japan had gone off course toward collective disaster. This time the leadership was determined more than ever before not to get sidetracked and not to pay attention to unimaginative antimodern softheads who did not appreciate the value of a peaceful national strategy that had proven itself many times over. Industrialists argued that Japan's international competitiveness - and thus survival - depended on keeping costs low, which meant that the nation as a whole, and thus pollution victims, would have to bear the social costs of industrial activity. They openly advocated pollution, arguing that they and the nation could not possibly afford to indulge in preventing it<sup>28</sup>. Thus the initial response from government and industry to complaints about environmental pollution seemed not merely uncomprehending but downright callous.

## B) Activists' Images of the Environment

What eventually cracked this resistance was the enormity of the pollution brought on by the industrial juggernaut just described. Because Japan's remarkable growth occurred chiefly in heavy industries and because these industrial activities were geographically concentrated - not only due to the

limitations of available space but also to government guidance to locate in kombinat units - the industrial pollution that began to appear in Japan grew very serious very suddenly with virtually no warning even to the careful observer. The rapidity with which pollution became a serious problem produced tragic effects on human health not seen to the same degree before or since anywhere in the world. Many of us worry today that most cancers are environmental in origin, and that 20 or 30 years' exposure to low levels of radiation or synthetic chemicals will cause cancer, perhaps reducing life expectancy by a few years in susceptible people. But in Japan, contaminants were so concentrated in some instances that an "incubation" period of just a few weeks or months was sufficient to produce fatal disease symptoms in previously healthy people. The most extreme examples were the waves of mercury poisoning in the town of Minamata that corresponded to specific periods when the Chisso chemical plant there released especially concentrated pollutants. This episode and the other pollution disease lawsuits known as the Big Four (Yokkaichi Asthma, Minamata and Niigata mercury poisoning, and cadmium poisoning in Toyama) are by now well known around the world and do not need elaboration here. But it is important to mention that pollution disease in Japan did not end with these four cases.

Even though there were only nine plaintiffs in the original Yokkaichi asthma lawsuit, by March 1983 there were 88,657 registered victims of respiratory diseases caused by air pollution, distributed nationwide over 41 different designated districts, almost all of them next to industrial kombinat s built since 1945. In addition there were 2067 surviving registered victims of officially recognized water pollution diseases (the Big Four above plus two outbreaks of arsenic mine pollution) caused by particularly intense concentrations of effluents from single factories located in rural areas<sup>29</sup>. There are thousands more yet-unrecognized victims of these diseases whose symptoms are either somewhat milder or are easy to confuse with other ailments. There are also other environmentally related diseases for which no registration system exists - hexavalent chromium poisoning, PCB poisoning from contaminated cooking oil, SMON (subacute-myelo-optical-neuropathy) due to the drug quinoform, as well as additional suspected outbreaks of mercury and cadmium poisoning, and so on. There also appears to be a rather distinct syndrome of health symptoms due to severe noise pollution, from which people residing near airports and high speed railways often suffer.

### 1. Victim Consciousness

These two facts uniquely associated with the Japanese mode of industrialization - the extreme concentration and rapid increase in industrial activity and the emergence of pollution disease - had indelible influence on the way Japanese people concerned about the environment defined the problem and their own priorities. Most importantly, they focussed rather narrowly on industrial

effluents that could cause pollution disease. My interviews with environmental activists suggest that this emphasis on health was the uppermost image in the minds of activists<sup>30</sup>. In fact, only a minority of the several million people who have been actively involved in anti-pollution or environmental movements in Japan were actually disease victims. By far the majority of those who called themselves environmental activists were concerned about pollution that had not yet damaged human health or potential pollution from projects that were still in the planning stages during the anti-pollution struggle (and very likely modified because of the struggle). We might even say that there is an inconsistency between what environmentalists do - the problems they fight - and their definition of themselves as victims; nonetheless this image, of themselves as victims and environmental problems as a threat to health above all, is the image that motivates them. This offers a stark contrast with the United States where the environmentalists' image of what they are fighting for is the endangered animal, the shrinking wilderness, the national parks cluttered up with soda pop cans, the huge landfills containing valuable materials not yet ready for final disposal. Only now in the United States are kepone, dioxin, urea-formaldehyde, and toxic substances seeping into the public drinking water finally producing anxiety about human health.

Defining themselves as victims caused environmental activists to define an enemy: polluters were therefore identified as profit-seeking industrialists who polluted in order to reduce their internal costs. Their co-conspirators were irresponsible public officials who approved dangerous development projects, failed to enforce the law, and even accepted bribes and rake-offs in return for ramming some projects through the approval process without adequate attention to democratic procedures. The victims - and other citizens who were not polluters as defined above even though they might be vigorous consumers of material goods - were innocent. Environmental problems were therefore seen as a moral and social evil that some people (polluters) did to other people (victims), and the problem had fundamentally to do with the distribution and abuse of power and sociopolitical relationships among people. (This emphasis, as well as the notion of "environmental rights" discussed below, suggests an analogy between the Japanese environmental movement and the American civil rights movement rather than with any other environmental movement.) These various definitions were probably shared not just by most environmentalists in Japan but generally throughout the population, opposed only by those defined as polluters who wanted, understandably, to share the blame more broadly.

The "victim consciousness" of environmental activists in Japan influenced their choice of methods. Japanese environmental activists concerned about a pollution problem that has already materialized are understandably anxious to win compensation for past damage and guarantees against future damage, but beyond these goals they put unusual effort into forcing the polluters - the bad guys - to display responsibility, preferably in the form of a humiliating, grovelling public apology. One faction of Minamata victims preferred direct

negotiations with Chisso to litigation, and camped for 18 months in a tent outside of company headquarters in Tokyo to demand negotiations. One might expect the polluters, for their part, to apologize profusely whenever asked, apologies being much cheaper to perform than installing filters at effluent pipes. However, Japanese industrialists were very reluctant to apologize for two reasons. Obviously, any display of responsibility would damage the firm's chances of winning a liability lawsuit. Secondly, apologies mean a great deal in Japan and they are not made lightly - apparently not many Japanese are transparent enough to apologize without meaning it just for the sake of form (perhaps because they know it would not be convincing anyway). Victims knew that the industrialists they approached would offer sincere demonstrations of contrition only after immense personal anguish, which was precisely what the victims wanted to put the industrialists through<sup>31</sup>.

Another result of the "victim consciousness" of Japanese environmentalists was the prevalent view that the people most entitled to protest a particular case of actual or threatened pollution are the local residents who will be affected - i.e., the potential victims. This in turn had three indirect consequences of great significance: emphases on local organizations, on democratizing the political process, and on avoiding ideological factionalism. First, the environmental movement consisted almost entirely of locally based groups of frightened residents, each fighting separate battles, greatly inhibiting effort to form large national coalitions. Regional and national coalitions do exist, at least in name, of course, and in March 1983 Japanese environmentalists actually formed a Green Party (interestingly, the keynote speaker at the inaugural meeting was a member of the German Greens)<sup>32</sup>. There is also talk of trying to convert an existing splinter party, the United Progressive Liberals, into an environmentalist party<sup>33</sup>. But these efforts are late and small compared to the Green and environmentalist parties in European countries and the Barry Commoner presidential candidacy in 1980 in the United States.

Because most environmental activists were devoted principally to the struggle in their own area, often protesting unethical and undemocratic behaviour on the part of local patriarchal politicians, they usually concluded that a prerequisite for solving pollution problems was to bring democracy to life at the local level so that local residents opposed to a polluting project could deny approval for a future project or enforce a strict pollution prevention contract for an existing one. Japanese environmentalists were therefore unusually concerned with democratizing the political process and decentralizing the central government's authority. They regarded the populist provisions of the 1947 Constitution (recall, initiative, referendum) as precious tools.

This interest in political participation made it very important for environmentalists to assume a moderate stance in their local communities. Japanese people are really quite conservative about political tactics and social behavior of all sorts. Extremist tactics and contact with leftist groups could threaten a movement's internal cohesion and could destroy its hope of electoral success

in local political contests, especially in conservative areas. For this reason most environmental groups in Japan did not espouse any systematic economic analysis of pollution problems. It was enough to agree that unfettered capitalism was unacceptable, and that polluters should pay for the external costs that they imposed on society. Naturally, conservative environmentalists considered it inevitable and proper that polluters pass on some of these increased costs to their customers, and leftist environmentalists believed that polluters had a cache of excess profits from which they ought to be able to pay pollution taxes without lowering wages or raising prices to consumers. But this difference of opinion was not allowed to split environmental groups into ideological factions.

## 2. Views of the Natural Environment

Because of their "victim consciousness" focussing on sociopolitical relations among people, Japanese environmentalists did not at the outset pay very much attention to wilderness or the natural environment. The natural environment was at most a vehicle of transmission, even a bystander in the process by which some humans hurt others. This contrasts sharply with the attitudes still prevalent in the United States, where environmentalism got its start a century ago with the conservation movement, and where environmentalists still feel that nature itself is the victim and that all human beings share the role of perpetrator of pollution. The Japanese focus on "pollution" narrowly conceived rather than "environmental problems" broadly conceived largely ignores what American environmentalists at least would call the big issues - overpopulation, overburdening an innocent ecosystem with synthetic and other substances foreign to it, and in effect damaging the natural system that supports all (including our) life.

Needless to say, Japan's scientists and the scholar-publicists who write the influential literature of environmentalism and many committed environmental activists are perfectly well aware of this broad perspective and of the fact that human beings are ultimately dependent on the natural environment<sup>34</sup>. And Japanese environmentalists are capable of occasionally getting upset about a threat to the natural environment - witness the 1972 uproar about the government's plan, now quashed, to build a sightseeing road through the Oze swamp, one of Japan's last true wilderness areas. And Japan has very agreeably signed several international treaties to protect the habitat of migratory birds that pass over Japan.

But the language used in discussions about environmental disruption reveals that nature in the raw is not a top priority. First, in the course of discussions about damage to nature (*shizen*) writers will often use as a substitute for "nature" the term "*kyodo*", which can be variously translated as homeland, origin, birthplace, home province, or home town, and to any Japanese means that part of the country from which one's family migrated to the city. In con-

trast, then, to American discussions about the destruction of "wilderness", which is currently and formerly uninhabited by human beings, the Japanese are talking about urbanization creeping into the rural villages from which they once came and destroying not wilderness but well trampled territory around the old homestead. Frequently the natural environment is seen as a vehicle or arena for conflict between polluters and potential victims, and damage to it is alarming primarily because it is evidence that polluters have transgressed the proper boundaries and caused damage to people to have a right to pleasant surroundings<sup>35</sup>.

Similarly, most discussions of the destruction of nature turn quickly to a consideration of human rights or human health. One article included in a special magazine feature on the destruction of nature is titled "Let us have fish that are safe to eat" and is really all about industrial effluent and damage to the health of people who eat contaminated fish<sup>36</sup>. Another example is Michitaka Kaino's 1971 book, *Kankyō hakaï* (environmental destruction), unusual at the time because it used the term "environment" when most people, including government white papers, talked only about "pollution". In his own contribution, titled "Basic human rights and environmental destruction", Kaino quickly turned away from a broad definition of the environment, zeroed in on human health as a civil right, and started urging citizens to fight against industrial pollution as part of their political struggle for citizenship and civil rights that include their right to health<sup>37</sup>. Thus this essay summarized the mental images that Japanese environmentalists had of their goals.

Common in these discussions are references to civil rights (*jinken*) and environmental rights (*kankyōken*). To anyone familiar with developments in American environmental law, this latter term would refer to unspoken rights of the natural environment itself to exist untrammelled and undisturbed by man. American environmental law passed a major milestone with the *Mineral King* decision (*Sierra Club v. Morton*) in which the Supreme Court outlined criteria by which altruistic citizens could in effect represent the legal interests of natural objects<sup>38</sup>. In Japan the term refers to something quite different - the rights of persons to pleasant surroundings. The environment does not have rights; people do, and "environmental rights" in Japan are yet another claim that man makes against other men, not a claim that the natural surroundings make on man. This notion is often based explicitly on the provisions of Article 25 in the Japanese Constitution of 1947 (courtesy of the Allied Powers) which guarantees the individual right to "minimum standards of wholesome and cultural living". Individuals who regard natural objects - a few trees, a speck of grass, perhaps a local park, even if these things are not in their natural state at all - as within minimum standards therefore see this provision as a guarantee of "environmental rights" to all Japanese.



## IMAGES SINCE THE 1970's

I have used the past tense in my account of environmentalists' images thus far because there have been many changes since the heyday of environmentalism in the early 1970's. The immediate results of litigation and protest were expensive legal settlements, all won by the victims, that convinced Japanese industry to take effective preventive measures against pollution just as insurance against future lawsuits regardless of legal requirements and standards. In addition, the parliament finally passed a large body of environmental laws beginning with an emergency session in 1970 and has progressively strengthened these laws since. Japanese environmental policy is conspicuously "advanced" in areas that reflect concerns of the early 1970's environmental movement: (1) the world's only law defining pollution as a crime (as opposed to a civil offense) with criminal penalties, (2) a mediation system designed to handle a huge load of environmental disputes including many that are not amenable to litigation, (3) a compensation system for official victims of pollution disease, financed by taxes levied against large polluters on each cubic meter of gaseous emissions and calculated at rates that vary according to the seriousness of air pollution in their region, and finally (4) some of the world's toughest standards for air and water quality and automobile emissions<sup>39</sup>.

Then came the oil crisis of 1973, a severe shock not only for the country but also for its leaders, whose projections in *Shinzenso* and *Kaizoron* for future growth and energy demand now seemed ludicrous. Although the oil crisis was expected to produce an environmental rollback in many nations, it did not have this effect in Japan<sup>40</sup>. Instead, the economic slowdown and the reduced energy consumption induced by high energy prices in and of themselves contributed to cleanup of air and water. With citizens more immediately concerned about prices and the economic slump than about already-reduced pollution problems, environmental groups seemed quiescent for a time. With industrial pollution "taken care of" - compensation for past damage and clear laws against future damage already achieved - environmentalists were also free to move on to other concerns that included opposition to nuclear power plants and an increased interest - finally - in the natural environment. In 1974 volunteers started a national trust movement modelled on Britain's and similar also to the Nature Conservancy in the United States, to save a shoreline in Wakayama Prefecture (near Osaka) from developers<sup>41</sup>.

It appears that the traumas of the early 1970's forged a new national consensus, shared by government, citizens, and business, covering most economic and environmental issues. Pollution is a matter of life and death and not a minor nuisance or a faddish frivolity of the rich. Japan must take seriously the goal of moving away from energy- and material-intensive heavy industry toward something else, not just out of economic common sense but for the very survival of the home islands. Rapid economic growth and grandiose plans for economic change are a thing of the past. Administrative decentralization to some extent (what extent is not a point of agreement) is a good idea.

The government seems to have absorbed the message of the environmentalists and may in fact have moved ahead of them at least on paper. The government's annual White Paper on the Environment (Kankyo hakusho) (the first of which in 1970 was called the White Paper on Pollution) has steadily increased the attention given to conservation of nature and to the larger questions of living within the limits of natural ecosystems<sup>42</sup>. There is considerable interest in a national trust like Britain's to save endangered coastline and wilderness<sup>43</sup>. However, land prices are as much of a problem for public as private purchases of land, and this method will probably make little difference until the Japanese government can alter the structure of taxes on property and capital gains to deter land speculation.

Finally, the latest of the government's development plans, the Third Comprehensive National Development Plan or Sanzensho (1979), makes environmental conservation and pollution prevention rather than economic growth its highest priorities<sup>44</sup>. It is apologetic about the era of rapid growth and reads almost as though an environmentalist had written it. In place of the overweening optimism and absurd economic projections of the past is an acceptance of the idea of living within natural limits. Insofar as the plan means anything (which is always in doubt in a capitalist economy, even with Japan's administrative guidance), either it is a magnificent snow job (as opposed to the readily transparent lip service toward environmental concern in its predecessors) or the government has been converted to the environmental cause. I doubt if it was the eloquence of environmental protesters that convinced plan-writing bureaucrats to change their views. Rather, Japan got so close to the brink, had so many pollution tragedies, and the political ruckus of the early 1970's was so unpleasant for a government that was used to the easy life, that the regime decided it was politically and physically necessary to face these problems, including some - such as conservation of nature - that the environmentalists had not articulated so forcefully.

The environmental movement remains active on those issues not covered by the new consensus. The most conspicuous of these is anxiety about nuclear power, which is not included in the government's new commitment to environmentalism. Japan's official policy is to develop nuclear energy, including a complete fuel cycle, as rapidly as possible in order to acquire diplomatic independence from oil exporting countries and to shift to an ostensibly cleaner form of energy. It is not surprising, then, that the government still displays undaunted optimism in its projections for nuclear power plants. Japan has 24 plants in operation and another 19 under construction or on the drawing board, totalling 43 with an expected capacity of 35.24 million kilowatts, and has only just achieved the ability to operate the existing 24 plants at 67 % capacity, a record somewhat better than America's and Britain's and equivalent with France and West Germany. Nonetheless, the government expects to have 100 plants in operation with 90 million kilowatts of capacity in just 17 more years<sup>45</sup>. To environmentalists, projections like these reveal an irrational government devotion to what they regard as the ultimate pollution problem.

Environmentalists continue to be concerned about promoting and protecting democratic values in their communities. Because of past problems with official concealment of development plans they are very interested in working for a freedom of information act, and have already succeeded in getting freedom of information ordinances passed in two prefectures, Saitama and Kanagawa (both bordering Tokyo)<sup>46</sup>. They are also working for laws that would require environmental impact studies before development projects are undertaken, in all cases and not merely in connection with certain government projects and not merely in response to informal government guidance. By April 1983 environmental impact guidelines had been issued in 14 prefectures and 4 cities, and environmental impact ordinances had passed in three prefectures and one city; 40 more local government bodies were considering similar steps<sup>47</sup>. These ordinances are not always satisfactory to the environmentalists. There is serious controversy in each instance over whether the impact assessment studies will be freely discussed at public hearings, whether citizen input at these hearings will make any difference, and whether it will be possible to cancel the projects if the studies reveal deleterious impact. Business and the conservative central and local governments in these cases invariably try to eliminate the possibility that environmental impact studies might actually interfere with the design of a project when these guidelines and ordinances are created. The government seems very unwilling to give anyone veto power over its pet projects.

Finally, the environmental movement must always monitor violations of antipollution laws. There is still pollution in Japan, and in fact nitrates and phosphates in water supplies and nitrous oxides in the air continue to worsen, and the number of official pollution complaints has not dropped much since 1976<sup>48</sup>. There is also occasional pressure from business to loosen this or that standard. A good indicator of how seriously the government takes its new official stance on pollution will be the fate of the compensation system for pollution disease victims. Now that the oldest and most seriously ill victims are dying off, and new lower levels of pollution are not producing younger victims to take their place, the total number of registrants is expected to decline, and business is lobbying for reduction of pollution taxes and the gradual elimination of the system. The energy crisis exacerbated this pressure from power plants, steel mills, and other big users of energy, because they are buying expensive low-sulfur oil in order to keep their taxable emissions down. If the tax were abolished they could switch to coal and high sulfur fuels (without installing expensive desulfurization equipment) - in accordance with government guidance on energy matters. However, as any specialist on environmental policy would know, it is the existence of the tax itself, and not the use to which it is put, that induces industries to keep their effluents clean, and Japan would not be able to keep pollution levels down without this tax. If the government does surrender to pressure from business to dismantle the tax then we will know that the government is not truly committed to environmental cleanup.

This new national consensus on environmental problems bears some re-

semblance to ingredients in the older traditions with which this essay began. The sense of humility and modesty about human activities, the acceptance of limits on what man can safely do to his world, and a new respect (if not affection) for nature resemble Buddhist precepts; the concern for propriety in human relationships (in which the powerful should be bound by ethical codes and not abuse their power) and avoidance of excess actually resemble Confucian teachings about social behavior and the Golden Mean. In discussing their environmental problems today intellectual Japanese will occasionally refer explicitly to these traditions as if to say that all Japanese ought automatically to be environmentalists. But we should not conclude from the resemblance that these traditional values were or are powerful in Japan today<sup>49</sup>. We must not forget that the Japanese readily tossed aside these values to embrace industrialism at a time when these values should have been stronger than we could possibly expect them to be today. Japanese people are gradually rediscovering their traditions now only because the traditions are useful, only because the brutal lessons of rapid industrialization have invalidated some of the values they embraced so heartily a century ago. Their tradition of living in harmony with nature provided no immunity to the evils of rapid industrialization and no special wisdom in dealing with those evils. Recent experience is a more powerful teacher than remote experience, and the Japanese today are leaders in pollution prevention only because they also led the way as pollution victims.

#### Notes:

- 1) See Fernando M. Basabe, *Japanese Religious Attitudes*, Maryknoll, N.Y.: Orbis Books, 1972.
- 2) On the contribution of the Judeo-Christian tradition to pollution problems in the West, see Lynn White, Jr., "The Historical Roots of Our Ecologic Crisis", in: *Science*, 10 March 1967, 1203-1207.
- 3) For a summary of the precepts of Shinto, see William Theodore deBary, "Japanese Religion", in: Arthur E. Tiedemann (ed.), *An Introduction to Japanese Civilization*, New York: Columbia University Press, 1974, 311-315.
- 4) See deBary, *op.cit.* 315-322, and H. Paul Varley, *Japanese Culture: A Short History*, New York: Praeger, 1973, 11-31, 68-74.
- 5) E. F. Schumacher, "Buddhist Economics", in: *Small is Beautiful: Economics as if People Mattered*, New York: Harper and Row, 1973, 50-58.
- 6) Ronald P. Dore, *Education in Tokugawa Japan*, Berkeley and Los Angeles: University of California Press, 1965, 124-145.
- 7) See William B. Hauser, *Economic Institutional Change in Tokugawa Japan*, New York: Cambridge University Press, 1974; and Susan B. Hanley and

- Kozo Yamamura, *Economic and Demographic Change in Preindustrial Japan 1600-1868*, Princeton: Princeton University Press, 1977.
- 8) Philosopher Watsuji Tetsuro considered the *sakoku* (closure) policy a national tragedy. See Robert Bellah, "Japan's Cultural Identity: Some Reflections on the Work of Watsuji Tetsuro", in: *Journal of Asian Studies* 24:4 (August 1965), 573-594.
  - 9) For a summary of early pollution episodes, see Margaret A. McKean, *Environmental Protest and Citizen Politics in Japan*, Berkeley and Los Angeles: University of California Press, 1981, 35-42. See also: Miyamoto Ken'ichi, *Nihon no kankyo mondai: sono seiji keizaigaku teki kosatsu*, Tokyo: Yuhikaku, November 1981, 82-120.
  - 10) On the Ashio copper mine incident see Fred G. Notehelfer, "Japan's First Pollution Incident", 351-358, and Alan Stone, "Japanese Muckrakers", 385-408, both in: *Journal of Japanese Studies* 1:2 (Spring 1975). On the Yanaka village incident, see Miyamoto, *op.cit.*, 119-120, and Ui Jun, *Kogai genron I (Lectures on Pollution I)*, Tokyo: Aki shobo, March 1971, 233-236.
  - 11) For analysis of Japanese efforts to resolve the conflicts perceived to result from industrialization, see such works as William Miles Fletcher, *The Search for a New Order: Intellectuals and Fascism in Prewar Japan*, Chapel Hill: University of North Carolina Press, 1982; Thomas R.H. Havens, *Farm and Nation in Modern Japan: Agrarian Nationalism, 1870-1940*, Princeton: Princeton University Press, 1974; James W. Morley (ed.), *Dilemmas of Growth in Prewar Japan*, Princeton: Princeton University Press, 1971; and Bernard S. Silberman and Harry D. Harootunian, *Japan in Crisis: Essays on Taisho Democracy*, Princeton: Princeton University Press, 1974.
  - 12) The Japanese government's official rendition of this philosophy was published by the Ministry of Education as *Kokutai no hongu*. Analyses are available in John Paul Reed, *Kokutai: A Study of Certain Sacred and Secular Aspects of Japanese Nationalism*, Ph.D. dissertation in Sociology, University of Chicago, 1937; and Robert K. Hall (ed.), and John O. Gauntlett (transl.), *Kokutai no hongu: Cardinal Principles of the National Entity of Japan*, Cambridge: Harvard University Press, 1949.
  - 13) See the still-standard work on the wartime economy, Jerome B. Cohen, *Japan's Economy in War and Reconstruction*, Minneapolis: University of Minnesota Press, 1949.
  - 14) On deprivation during the war, see Thomas R.H. Havens, *Valley of Darkness: The Japanese People and World War Two*, New York: W.W. Norton, 1978.
  - 15) Before 1945 Japan had exported precisely these items to earn foreign exchange. However, the bottom fell out of the silk market in 1929, rice and tea production soon sufficed only to meet domestic demand, and Japan had virtually depleted supplies of coal and copper to finance prewar industrialization and to supply the war effort. G.C. Allen, *A Short Economic*

History of Japan, London: Unwin University Books, 1962.

- 16) The Japanese government had plan after grandiose plan to project and direct economic change, but that is not to say that these plans were all-powerful or deserve credit for Japan's economic recovery. For example, Prime Minister Hayato Ikeda's eye-catching Income Doubling Plan was supposed to double Japan's national income in a ten year period (1961-1970), an astonishing accomplishment until one realizes that this is the automatic result of an annual growth rate of 7 %. Since Japan's actual growth rate exceeded this level, Japan's income doubled in a mere 7 years, including a brief recession, in spite of the plan. Favorable international circumstances, characteristics of the Japanese labor force, good timing, and good luck count also. Rather, I regard these official plans as visible evidence of establishment attitudes, as symptoms and not necessarily as causes of anything.
- 17) On the New Industrial Cities strategy, see Okuda Yoshio, Nishikawa Daijiro, and Noguchi Yuichiro, *Nihon retto sono genjitsu: chiho toshi*, Tokyo: Keiso shobo, December 1971, 27, 422-425.
- 18) Economic Planning Agency, *The New Comprehensive National Development Plan (Summary) and its Implementation*, Tokyo: Ministry of Finance Printing Bureau, December 1972; and Environmental Planning Agency, "The New Comprehensive National Development Plan", in: *Area Development in Japan*, 3:1970, 24-29.
- 19) This is only slightly less ambitious than a proposal I once encountered, to solve the problem of land shortage and high land prices by bulldozing the tops of Japan's mountains into the sea to create a fifth home island the size of Shikoku.
- 20) On the Suonada project, see Chikushi Tatehiko, "Buzenkai no kaitachi no okori (Anger of the Shellfish of Buzenkai)", in: *Shimin* (10:September 1972), 71-84.
- 21) See McKean, *op.cit.*, *passim*.
- 22) McKean, *ibid.*, 65, 96.
- 23) Tanaka Kakuei, *Nihon retto kaizoron*, Tokyo: Nikkan kogyo shim-bunsha, June 1972 went through 22 printings in its first eight months of publication. In English, see Kakuei Tanaka, *Building a New Japan*, Tokyo: Simul Press, May 1973.
- 24) Miyamoto Ken'ichi, "'Kaizō' riron no sokatsuteki hihan (A Comprehensive Critique of the Theory of 'Reconstruction')", in: *Shimin* (10:September 1972), 28-40.
- 25) Tamura Akira, "Kodudo keikaku no wana (The Trap of National Land Planning)", in: *Shimin* (11:November 1972), 28-34.
- 26) Sato Mikio, "Kaizoron ni okeru tochi baishu kozo (The Organization of Land Purchases in Kaizoron)", in: *Shimin* (11:November 1972), 35-43.
- 27) See Herman Kahn, *The Emerging Japanese Superstate: Challenge and Response*, Englewood Cliffs, N.J.: Prentice-Hall, 1970.

- 28) Kaji Koji, *Kogai gyosei no sotenken: kaiketsu no michi wa* (A General examination of pollution administration: the road to solutions), Tokyo: Godo shuppan, 1971, 8-77.
- 29) Kankyocho (Environment Agency), *Kankyo hakusho* (White Paper on the Environment) 1983, Tokyo: Okurasho insatsukyoku, June 1983, 315-317; Japan Times, 13 November 1982.
- 30) McKean, *op.cit.*, 131-142.
- 31) On the various factions in Minamata, see Donald Thurston, "Aftermath in Minamata", in: *Japan Interpreter* 9:1 (Spring 1974), 25-42. On the objectives of anti-pollution litigants, see Frank Upham, "Litigation and Moral Consciousness in Japan: An Interpretative Analysis of Four Japanese Pollution Suits", in: *Law and Society Review* 10:4 (Summer 1976), 579-619.
- 32) *Asahi Evening News*, 15 March 1983.
- 33) Ui Jun, personal communication, 19 April 1983.
- 34) See, for instance, Han'ya Takahisa, "Ningen to shizen to no atarashii taiyo (New Terms between Human Beings and Nature)", 14-23, and Miyawaki Akira, "Shizen hakai no honshitsu (The Essence of the Destruction of Nature)", 24-32, both in: *Shimin* (3:July 1971).
- 35) See articles in a special issue of *Shimin* on environmental rights, particularly the lead article by legal scholar Awaji Takehisa, "'Kankyoken' ron no genkaidan (The current stage in the debate on 'environmental rights')", in: *Shimin* (5: November 1971), 29-36.
- 36) Hiyama Yoshio and Maeda Bunko, "Iki no ii sakana wo kuwasero", in: *Shimin* (3:July 1971), 40-52.
- 37) Kaino Michitaka, *Kankyo hakai* (Environmental Destruction) (Volume 5 in the series, *Gendai ni ikiru*), Tokyo: Toyo keizai shimposha, November 1971.
- 38) See Christopher D. Stone, *Should Trees Have Standing? Toward Legal Rights For Natural Objects*, Los Altos, California: William Kaufmann, 1974, which originally appeared as an article in: *Southern California Law Review* (45: 1972), and had great influence on the Mineral King decision.
- 39) See Steven R. Reed, "Environmental Politics: Some Reflections Based on the Japanese Case", in: *Comparative Politics* 13:3 (April 1981), 253-270; and *Environmental Policies in Japan*, Paris: Organization for Economic Cooperation and Development, 1977. Environmentally concerned developing nations regard Japan's success at pollution control as a model. *Asahi Evening News*, 11 January 1983.
- 40) Margaret A. McKean, "Japan", in: Donald R. Kelley (ed.), *The Energy Crisis and the Environment: An International Perspective*, New York: Praeger, 1977, 159-188.
- 41) 10 000 people donated ¥ 53.5 million (about \$ 250 000) to buy six tenths of a hectare. *Japan Times*, 30 December 1982.
- 42) In Japanese, see *Kankyo hakusho* (White Paper on Pollution), Tokyo:

- Okurasho insatsukyoku, annually in June. In English, see Quality of the Environment in Japan, Tokyo: Ministry of Finance Printing Bureau, annually.
- 43) Citizen's movements to establish land trusts for preservation of nature have started in Saitama, Kanagawa, Okayama, and Hokkaido prefectures and the government looks upon the strategy with favor in its 1983 White Paper. Japan Times, 4 August, and 16 October 1983.
  - 44) National Land Agency, Sanzenso: The Third Comprehensive National Development Plan, Tokyo: Ministry of Finance Printing Bureau, November 1979.
  - 45) Japan Times, 27 October 1982 and 3 April 1983.
  - 46) Osaka, Nagano, and Tokyo prefectures are also considering adopting freedom of information ordinances. Japan Times, 18 and 19 December 1982, 1 June 1983.
  - 47) Kankyocho, Kankyo hakusho (White Paper on the Environment) 1983, Tokyo: Okurasho insatsukyoku, June 1983, 427-428.
  - 48) Kankyo hakusho 1983, 3, 7-8, 337.
  - 49) To many Westerners unfamiliar with Japan's recent experience with pollution, Japan still evokes images of magnificent volcanoes against a pristine blue sky, tranquil Buddhist temples and exquisite gardens using natural, asymmetrical arrangements, all of which implies that the Japanese appreciate their natural surroundings. Such images are enthusiastically fostered by the Japanese government's own literature to promote tourism, but as we have seen are quite misleading. Upon close examination, for instance, Japanese gardens turn out to be very carefully manicured, every rock and dead leaf artfully placed, the bonsai trees maimed and twisted into submission with wires, the sand and gravel raked daily to keep them "clean", dead blossoms plucked off instantly. I have long suspected that Japanese gardens reflect a love-hate relationship between the Japanese and their natural surroundings, a desire to miniaturize not just because of a shortage of space but also in order to tame and control natural phenomena which are occasionally but regularly cruel in Japan, causing earthquakes, volcanic eruptions, fires, tidal waves, and typhoons. I recall being rather stunned when I asked a Japanese environmental activist what caused destruction of the natural environment and being told not what I expected - that it was overpopulation or industrialization or faulty waste treatment - but that the problem was mostly bad weather!