Remake Politics, Not Nature: Tanaka Shozo's Philosophies of 'Poison' and 'Flow' and Japan's Environment

Robert Stolz

Remake Politics, Not Nature: Tanaka Shozo's Philosophies of "Poison" and "Flow" and Japan's Environment Japanese translation available By Robert Stolz

Tanaka Shozo (1841-1913) is widely acknowledged as Japan's "first conservationist." A former village headman, in the 1890s he led the fight against the Ashio Copper Mine's pollution of the Watarase and Tone rivers northwest of Tokyo. Tanaka's endeavors are frequently cast as a peasant warning to an industrializing Japan, but they can more accurately be seen as the work of a modern environmental thinker who developed a sophisticated ecological theory of society based on the twin processes of nature: "poison" (doku) and "flow" (nagare). From this position he went on to combat the Meiji state's flood control plans for the Kanto plain: a massive reengineering of the entire watershed and the beginning of the Japanese state's systematic intervention in nature. In response to the state's flood control plan, Tanaka's Fundamental River Law (konponteki kasenho) and philosophies of "poison" and "flow" describe the harm that comes from ignoring the dictates of an active nature in the name of absolute human agency. His law revered flow, "not as a made thing" but as fundamental to nature, indeed, to all life.

Tanaka developed his theory in the fight to save the village of Yanaka from a destruction deemed necessary to make way for a flood control reservoir, and although he was writing before the era of large dam construction, his explicit linking of bad environmental policy to social woes has much to offer the current debate on the relationship between society, economics, and the environment, and not only in Japan. His expansive concept of "poison" seems especially appropriate to new, diffuse forms of environmental degradation such as global warming. A veteran of the 1870's Popular Rights and Liberty Movement that succeeded in transforming Japan into a constitutional monarchy with a representative

National Diet, Tanaka was perhaps the first to see that environmental degradation threatened to erode Japanese citizens' newly won civil rights. In his struggle against the Ashio mine and the state's flood control plans, Tanaka's evolving views on humanity's relationship to nature linked the ecological and the social to the point where they became inseparable.

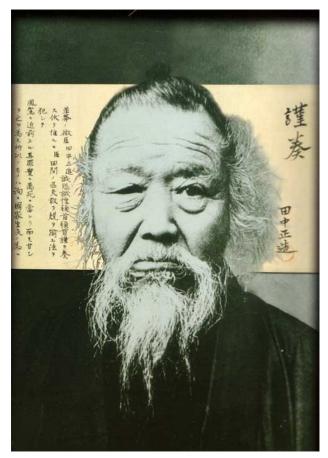


FIG. 1: Portrait of Tanaka Shozo. (Source: *Tanaka Shozo to sono jidai: tenno jikiso hyaku nen shunen*, Sano-shi, Tochigikenritsu hakubutsukan, 2001.)

The Ashio Copper Mine Pollution Incident

Though an exploited copper mine since the seventeenth century—the copper roofs of the Tokugawa shrine at Nikko are from Ashio—the Ashio mine increased greatly in size and output after being acquired by Meiji success story Furukawa Ichibei (1832-1903) in 1877. In 1882 and 1884 increasingly rich veins of copper were discovered. These discoveries, coupled with Furukawa's introduction of cutting-edge extraction technologies, meant a rapid increase in the mine's output. During the 1880s the remote mountain town of Ashio became, in the words of Fred Notehelfer, "one of the most technologically advanced centers of the country," boasting Japan's first electric railway, first hydroelectric plant, compressed air rock drills, electric lighting and centrifugal fans for ventilation. [1]

Citing an edict from the governor of Tochigi forbidding the sale or consumption of fish taken from the Watarase, contemporary narratives of the Ashio Incident often date the first hints of trouble to 1880. While this has recently been shown to be a misreading of an anti-cholera edict, not in dispute is that on 12 August 1885 the Choya Shinbun reported sweetfish (ayu) in the Watarase river were so weak children were catching them by hand. The editorial suspected pollution from Ashio as the cause. In autumn 1887 there was a mobilization by local students from afflicted households, and by the time of the fifty-year-flood of 1890 a protest group had already discovered, and arranged for the Utsunomiya hospital and soil scientist Kozai Yoshinau of the National Agricultural College to confirm, the presence of Ashio copper in the degraded fields. (While pre-Ashio floods had brought necessary green fertilizer, the floods of the 1890s brought pollution.) With the unprecedented, damaging floods of 1896, the Ashio Copper Mine Pollution Incident (Ashio Kodoku Jiken) became a national issue. According to Meiji journalist Miyake Setsurei, Ashio and the Great Treason Incident of 1911 were the top two social problems of the Meiji era (1868-1912).

In August and September 1896 floodwaters overwhelmed the Watarase and Tone watershed's levee system, leaving a layer of poisoned topsoil on the valleys' rice paddies, mulberry groves, and dry fields. A host of pollutants including arsenic, mercury, chlorine, sulfur, aluminum oxide, magnesia, iron, copper sulphate (blue vitriol), and nitric and phosphoric acids turned the waters eerily blue and left sores on the feet and ankles of anyone exposed to river water for any length of time. Ashio effluent also made the water unusable for the large and celebrated indigo industry downstream from the town of Ashikaga in Tochigi. Through flooding and the use of Watarase water to irrigate rice paddies, these pollutants became embedded in the fields where they then had to be removed by hand in order to have any hope of a harvest. Further, Ashio was located at the headwaters of the Watarase. Toxic smoke from the refinery's stacks and the clearcutting of the mountains surrounding Ashio (used for shaft support and smelting fuel) deforested the mountains and exacerbated flooding downstream. With no trees to hold the rainwater or soil, rain on Ashio's denuded slopes guickly entered the Watarase, not only increasing the volume of water that reached the Watarase-Tone system but also increasing the river's silt-load. This, in turn, raised the riverbed several feet relative to the levees, thereby ensuring continued and increased flooding. Former village headman Tanaka Shozo became the voice and public face of Japan's first protest against industrial-scale pollution. Tanaka was one of many of the pre-Meiji rural elites who participated in the flowering of popular activism in the years immediately following the Meiji Restoration of 1868. In the 1870s Tanaka was active in the Popular Rights and Liberty Movement as a member of the Progressive Party (Kaishinto). As editor of The Tochigi News he called for a representative assembly and a constitution and published other activists' translations of John Stuart Mill and Jeremy Bentham. When the National Diet opened in 1890, like many other early Party activists, Tanaka won a seat. In his role as Diet member representing Shimotsuke prefecture (present-day Tochigi), Tanaka worked with activists in the valley to document the extent of the damage to fields, rivers and livelihoods, which he then used as material for his Diet speeches and critical questioning of the government's response to the emerging pollution

In large part due to this grassroots organization, in 1897 the government formed a Pollution Prevention Committee to investigate the Ashio case; later that year the Committee issued Japan's first antipollution order. Written in the spirit of liberal capitalism and laissez-faire politics characteristic of the mid-Meiji period, the order sought to avoid a "cross contamination" of competing property interests between the mine and the farmers: issued by the government to Furukawa Ichibei as "owneroperator of the Ashio mine," the order required Furukawa to prevent pollutants from entering the Watarase system. Specifically, Furukawa was required to build settling ponds and retaining walls,

problem.

and install a "smoke-scrubber" (a mist of lime-water) in the Ashio chimneys, all at his own expense. [2] In this same spirit, the national and prefectural governments endorsed a plan whereby the Furukawa Company would pay "condolence monies" (mimaikin) in exchange for valley residents foregoing legal action against the mine for several years. Promoted as a way to give the 1897 measures time to work, the condolence payment system was fraught with rumor-mongering, intimidation and outright fraud. Despite the 1897 order and the small sums paid out by Furukawa, the pollution problem continued, and a second Pollution Prevention Committee was created in 1902.

Unlike its predecessor, the Second Pollution Prevention Committee put flooding center stage. Gone too was the Liberal emphasis on the inviolability of property rights. In its place was a proactive, massive nature-transforming project of national scope and scale. Invoking the 1896 River Law, the state claimed jurisdiction over any river that "had a strong effect on the benefits or harm to the public good." The Law also gave the Home Minister control over any project "when such riverine/riparian construction's harms or benefits do not coincide with any one city (fu) or prefecture's boundaries...or when the construction is especially urgent." [3] The Committee's recommendations announced in March 1903 called for a national project of enormous scale, a moment of ascendancy for the government, especially the Home Ministry's Civil Engineering Division. The project also marked a major change in Japanese flood control policy; moving from a "low-water levee" policy which sought to soften occasional floods, the Committee adopted a "high-water levee" policy which took a "zero tolerance" approach to flooding of any kind. This project was the beginning of Japan's now (in)famous wholly controlled, concrete-lined river system. By its completion in 1930 Japan had constructed 186 linear kilometers of high-water levees and displaced 220 million cubic meters of earth-by contrast the contemporary Panama Canal displaced 180 million cubic meters.

The Committee was able to achieve this switch from a focus on pollutants in the river to the river itself by the way it defined pollution. Treating soluble and insoluble copper separately, the Committee found that effluent from Ashio did contain soluble copper that traveled down the Watarase reaching the paddies, irrigation canals, drinking wells, and even the breast milk of local women. But it further held that "the amount was not sufficient to cause harm in humans." It even added that in small doses copper was a necessary dietary trace metal, the apparent but unspoken conclusion being that the residents of the Watarase and Tone valleys merely had an unorthodox way of receiving their recommended daily allowances.

Huge deposits of insoluble copper in the riverbed were considered the greater threat to public health. In a confusion of agents and causes, the Committee held that insoluble copper from Ashio was only a danger when it was agitated: it was only during a flood that the copper in the riverbed could burst forth and cause harm. In other words, the Committee concluded that it was floods, and not the mine, that "caused" the pollution damage to the farmers' fields, and this would continue even if Ashio were closed. The river, nature itself, was identified as the problem. To prevent further flooding, the Committee's proposals sought to completely sever the river from its watershed through the construction of concrete beds and banks, high levees, and engineered "choke-points". The ultimate goal was to control water levels across the system: "[We must] be able to restrict the flow to only that necessary under ordinary conditions.... New levees will be built wherever there is now nothing to block the flow." While girding of the river's banks and bed along its course would achieve much of this, a final piece, a flood-control reservoir at the confluence of the Watarase and Tone Rivers, meant the acquisition of Yanaka village through eminent domain (UK: compulsory purchase) and the forced displacement of its residents. The final recommendation, needless to say, did not call for the closing of the mine but argued that the Kanto plain, historically one of Japan's most fertile, while compatible with mining, was "completely unsuited to agriculture." This discovery of the "general poverty" of nature allowed the Committee's proposal to remake the Kanto plain to be cast as a necessary intervention into nature and even as an improvement of nature itself. [4]

Tanaka's Philosophies of Poison and Flow

Tanaka's environmental philosophy and activism existed not only as an environmentalist exaltation of nature but as a historically specific polemic against the Committee's proposals and the state's 1896 River Law. While the state saw nature as a passive object to be manipulated by humans, Tanaka's Law argued for an active nature in motion. Here his thought was grounded in a tradition of Japanese agronomy, scientific farming, a monistic tradition that conceived nature as the constant motion of an infinite material energy. But Tanaka's encounter with industrial-scale pollution taught him to doubt whether or not nature was indeed infinite. To the more optimistic eighteenth-century belief in the eternal motion of material energy, which Tanaka called "flow" (*nagare*), he added another category: "poison" (*doku*). In Tanaka's thought *doku* represents the flow of nature's energy in harmful, destructive ways. As Tanaka theorized *nagare* and *doku* they came to take many forms, moving easily from the material and ecological to the social and political.

For Tanaka, because motion was inherent in nature, the state's policies of control through constriction and manipulation of the rivers' currents would not have the desired effect of wholly controlling the river. On the contrary, they would result in a harmful "backflow" or "reversal of flow" (*gyakuryu*) as the river confronted the concrete banks, sluices, and reservoirs and reversed itself, resulting in flooding upstream. (This is precisely what happened.) Whereas human practice based on the state's policy of stopping and reversing flow would lead to an accumulation of harm in larger and larger artificial and toxic floods—*doku*—Tanaka's fostering of flow, *nagare*, would lead to an accumulation of life. As Tanaka's thought developed, doku came to describe not only the presence of toxins in the watershed's fields, but also the horizon of beneficial human intervention in nature. Doku revealed the limit of responsible human agency. This too continued the Agronomy tradition that had said famine was not natural but the result of bad social practices. In dealing with pollution, Tanaka, like agronomists before him, and unlike the 1902 Committee, argued for the need to remake politics, not nature.

To prevent *doku* and to foster life, humans needed to learn how to organize themselves in a way that lets them take advantage of the benefits of a freely flowing ecosystem. A diary entry from 26 January 1912 shows Tanaka playing with the Japanese characters for mountain (*yama*) and river (*kawa*) to illustrate the complementary relationship of the land and water in fostering flow. Tanaka's own caption read: "These diagrams express the principle of nature. River managers who understand the meaning of these pictures are rare indeed."



FIG. 2: A Tanaka diary entry from 26 Jan 1912. (Source: *Tanaka Shozo zenshu*, Iwanami shoten, 1977-80. Vol. 13, p. 65.)

Even fish had something to teach humanity in dealing with pollution:

Observe. Fish have no [legal] protection and though they live in the dark polluted waters [of the Watarase] do they not avoid total extinction? The reason the polluters, with all their power, are unable to destroy these fish is this: though no law protects them, the fish instinctively rely on nature and follow a path out of danger to unpolluted streams, happily saving themselves. This is the way to use nature. The fish do it. Why should not people do so, all the more? [5]

As he developed his environmental philosophy and social vision, Tanaka increasingly located the source of rights and salvation in the material environment, continuing to the point where the two concepts, the social and the ecological were nearly inseparable. Because they were created in the wholly human world of politics, laws like the 1896 River Law were corruptible, but Tanaka's Fundamental River Law, based on his philosophy of flow, accommodated itself to what nature would allow, declaring "the essence of water is honest.... Water does not harm people... it has no class distinctions... water is not false ... [and though] people may deceive each other, flowing water never deceives." [6] In this understanding nature was the necessary starting point for all human social practice; Humans must abide by nature's principles if the result was to foster life.

Doku was not merely a separate substance, a byproduct, or unintended waste. Rather, doku was created through a systemic incompatibility—a result of the Way of Humans and the Way of Nature fighting each other. While in Tanaka's thought nature was the most powerful force known, it was not invincible. In many ways this was the lesson of Ashio. Doku was a new category of thought injected into the Japanese discourse on nature that signaled a historical break in the human-nature relationship. Despite its status as nature's ultimate principle, nagare could be thwarted by human action forcing it to flow in unintended and harmful ways with serious reverberations in all spheres of life:

> The mine-poisoned floods borrow the great power of the land and thus make it all the way into the Home Ministry. The Ministry's civil engineering division is destroyed by the mine pollution; the pollution dooms it to a cycle of destruction, rebuilding, and further destruction. Poison runs on the lay of the land and rides the river's currents to the welfare bureau, eventually felling people. The police are powerless to stop death by poisoning....(emphasis added). [7]

The modern aspects of Tanaka's philosophies of *doku* and *nagare* are clear in a position paper he wrote to counter the 1902 Committee's assumptions on nature. His language is nothing less than the

"discovery" of the modern ecological concept of "ecocide":

If the pollution continues for too long, the river's headwaters will trickle out from a poisoned mountain of foul rocks and polluted soil that wholly penetrates the water, *forming a second [toxic] nature (dai ni no tensei o nashi)*. Once this happens, it will no longer even be possible to talk of healing flood damage (emphasis added). [8]

In other words, once this toxic second nature is created, the window of salvation open to the Watarase fish will have closed. The world itself will have become fatal to humans as *doku* will have completely co-opted the processes of a nature in motion: the system would continue to move, but its product would no longer be a life-sustaining flow. In its place would be the movement of a "second, toxic nature" that would produce increasing sickness, poverty, starvation and, ultimately, death.

This emphasis on what is being produced by humans' manipulation of nature clearly shows Tanaka's vision is social and ecological, not a paean to rural values or a romantic retreat from modern society. Writing at the beginning of Japan's modern transformation, Tanaka was worried about what the Ashio and flood control problems signaled for the future, even speculating what kind of national essence (*kokutai*) this experience would produce. Without a radical examination and transformation of attitudes and policy he feared what was being created:

> The degeneration of people's hearts is of one with the harm caused by Ashio. Both are invisible to the naked eye. Japan is a young country, and so Japan is the same as a child who contracts a disease. Though ill the child may still grow up. Japan too will grow older. [But] once grown it will be impossible to distinguish the disease [from Japan] (miwakegatashi). [9]

Because nature was constantly in motion, human activity must complement and never thwart that motion if *doku* was to be avoided. In his language the Way of Nature and the Way of Human(ity) must work together. If they did not, which is how he came to see the Ashio Incident and the state's flood control policies, the result was an accumulation of harm that moved from the environmental to the social realms. The sad fate of the village of Yanaka, destroyed in 1907 to make room for a reservoir, was an example of how bad environmental policy eventually required social oppression. Not just in Yanaka but everywhere he looked, Tanaka saw humans "fighting rather than following" nature.

Tanaka's move to the doomed village of Yanaka in 1904 should not be seen as a retreat from the progressive politics of the Popular Rights and Liberty Movement or from his dramatic appeal to the emperor in 1901. Tanaka's universalistic monism also means that it cannot be consigned to the familiar agriculture versus industry debate: nature flows equally in all places, and its thwarting anywhere results in doku. Rather, Tanaka's identification with Yanaka was the logical move to the place where, more than any other, Japan was poisoning itself. Here too it is clear Yanaka was important in terms of *doku* and *nagare* more than its status as a proto-typical village community. Yanaka was a village destroyed by the state in a futile war against the *nagare* principle of the river. It was in Yanaka, whose sons were being killed in Manchuria fighting the Russians even as their parents were being evicted through eminent domain, that Tanaka and other activists like Shimada Saburo, Kinoshita Naoe, Arahata Kanson, and Ishikawa Sanshiro chose to make their stand on the fundamental questions of Japanese modernity. Many of these activists became Yanaka landholders in a "one-tsubo movement" (one $tsubo = 3.31 \text{ m}^2$) intended both as aid to the impoverished residents and to complicate the state's acquisition of the village, a movement eventually defeated by the use of eminent domain.

For Tanaka, Yanaka's destruction represented the linking of bad environmental policy with political repression: the government's mistaken faith in the ability of humans to totally manipulate nature was behind its river projects. The project's failure resulted in escalating costs, required the silencing of the anti-mine petitioners, the use of eminent domain, and the eventual violent destruction of a village. In a preface to Arahata Kanson's Yanaka mura metsuboshi (The Extermination of Yanaka, 1907), Tanaka made this explicit: "The mine pollution problem has mutated; it has become the theft and destruction of homes." [10] It is the philosophies of nagare and doku that allow this linking, and Yanaka is the point of convergence of the two systems. In Tanaka's theory it is no coincidence that it was at precisely the point where the state made the ultimate attempt at control—completely stopping the flow of the river in a reservoir—that the greatest social oppression and human suffering occurred.

In his later years Tanaka tried to develop something he called Yanakagaku (Yanaka studies, or literally Yanaka-ology), a way of living that would not produce doku but foster nagare. Yanakagaku authorized his defiance of the River Laws and the Home Ministry and his rallying villagers to build their own levees according to their own understanding of nature's flows. These were built, torn down by authorities, and rebuilt repeatedly from 1904-10; even after the state destroyed their homes in 1907, sixteen families built shacks from the pieces of their former homes and continued to try and live according to nagare. Yanakagaku showed how alternative practices of nature contained within them alternative social visions. Importantly, Tanaka believed an adequate idea of the self, and therefore the existence of rights, was impossible in a poisoned environment. This belief that the physical environment must guarantee rights ultimately achieved a subversive universalism in his theory of what he called a "universal constitution" (hiroki kempo, uchuteki kempo). His appeal to nature to justify resisting the mine and the state appears most dramatically in Tanaka's declaration of 1912 where he claimed, "We have a constitution. Unfortunately this constitution is based on [narrow] Japanese principles, not on universal [natural] principles. As such, even if Japan were to die, we are under no obligation to die with it." [11]

Tanaka's Relevance Today

Tanaka's linking of the ecological and the social had a strong effect on pre-war Japanese anarchists and socialists like Arahata Kanson and especially Ishikawa Sanshiro. The Japanese state's crackdown on these ideologies in the 1920s and 1930s meant the loss of this vision. One exception was Tanaka's protégé, a young student named Kurosawa Torizo, who later moved to Hokkaido, became a dairy farmer, and started a producers' cooperative that became Snow Brand Dairy (Yukijirushi), a company that until its recent merger was Japan's largest dairy producer. In the post-war period, Tanaka was rediscovered during the citizens' movements of the 1960s and the outbreak of the methyl mercury poisoning in Minamata Bay, in southern Japan. Today there are groups dedicated to preserving and expanding Tanaka's vision. The Watarase Study Group (Watarase Kenkyukai) and a citizens' reading group calling itself "Tanaka Shozo University"



(Tanaka Shozo Daigaku) organize "field trips" and publish journals such as *Tanaka Shozo to Ashio kodoku jiken kenkyu* and *Kugen*, where they seek to link issues of social inequality, nuclear weapons, pollution, and conservation. In the early 1990s Tanaka Shozo University followed the Furukawa group to the Philippines where the Ashio case had "jumped" and the whole saga of mine pollution was being replayed on the international stage. This last example shows that neither the Ashio Incident nor Tanaka's thoughts on *doku* are limited to Japan or dependent on any culturally specific understanding of nature. He himself clearly did not think so as seen in his views on the "universal constitution."

At Ashio itself, every year hundreds of volunteers from Ashio Green Growing Association (Ashio ni Midori o Sodateiru Kai) assemble near the remains of the Ashio refinery in an attempt to replant the mountainsides. This process is slow and requires much experimentation as the soil still contains large amounts of sulfur left by one hundred years of toxic smoke from Ashio's stacks.



FIG. 3: Remains of the Ashio Refinery, 2002. (Photo: Robert Stolz.)



FIG. 4: Meeting of the Ashio Green Growing Association, 2002. (Photo: Robert Stolz.)



FIG. 5: Experimental reforestation at Ashio: The green zone at

the top is a mix of soil, seed and fertilizer sprayed onto the rock

in an attempt to compensate for the lack of topsoil. (Photo: Robert

Stolz, 2002.)

In a great historical irony, the Yanaka reservoir has become a place of "nature recreation" and its brochure features a cartoon windsurfer enjoying the open water. Yet even while the banks of the reservoir today appear natural, their earthen facades are built on a base of hard-engineering and concrete.



FIG. 6: Concrete bank of the Yanaka Reservoir, 2002. (Photo: Robert Stolz.)

Given this history, it is interesting to note the discourse on dams in modern Japan where new construction or removal maps so closely to bureaucratic initiatives, on the one hand, or citizenled ones, on the other. From former Nagano governor Yasuo Tanaka's "Dam Removal Declaration" (Datsu damu sengen) to the citizens' groups forming in opposition to the Arase and Nagara dam projects, the convergence of river policy and political and social movements remains strong. Outside Japan the saga of dams and displacement continues on an even larger scale. Like Tanaka's warnings nearly one hundred years earlier, Arundhati Roy's The Cost of Living (1999) takes on the "illusions of India's progress" in a polemic against the massive dam projects in the Narmada valley as India strives toward Great Power status-which today means not only large naturetransforming projects but also means the risk of unleashing the ultimate *doku*: nuclear weapons. [12] Other writers have highlighted the disturbing, but probably not coincidental, connection between largescale intervention in nature and less democratic government. Both Patrick McCully of International Rivers Network and Michael Goldman have demonstrated that in the wake of growing citizen's movements against dam displacement, larger projects like China's Three Gorges Dam (1.9 million displaced) and the World Bank-sponsored Nam Theun 2 in Laos are now only undertaken in more authoritarian states. [13] While the river projects Tanaka was fighting were undertaken in the conscious construction of Japan as a Great Power, today's dam construction and nature-reforming projects are less often undertaken for imperial glory than attempted in the name of another cause, possibly even more intractable and insatiable than Empire: the cause of growth for its own sake, a process likely just as resistant to democratic politics. Tanaka's thoughts on *doku* and *nagare* attune us to the possibility that pollution may not look like what we think it is. Or it is much more than we think. To be sure, the presence of certain parts per million of methyl mercury in the bodies of fish in Minamata bay is still clearly pollution. But doku suggests that pollution can be systemic and manifest itself at the social level with reverberations far from any chemically polluted space-many displaced Yanaka villagers were resettled in Saroma, Hokkaido, on the Sea of Okhotsk. Pollution, understood as *doku*, is not something extra; it is not waste or a by-product of an otherwise healthful process. At its worst doku is a positive production, the result of an affirmative choice, though, unfortunately, it is no less fatal for being intended. Today we can see certain trends and counter-trends. Global warming with its attendant creation of new disasters, poverty, the impending displacement of coastal citizens, and the spread of tropical diseases is for the most part a choice that has been in the affirmative, in the name of economic health. On the other hand, the recent awarding of the Nobel Peace Prize to Wangari Maathai for her work in founding the Green Belt Movement in Kenya shows a growing understanding of the inseparability of the ecological and the social. Which view will eventually win out remains unclear-but the stakes are not.

As Gavan McCormack previously has argued on this site, "Minamata disease was above all a disease of the spirit to which Japan succumbed as growth, money, material wealth come to be valued above the natural environment or humanity." [14] Tanaka warned in 1902 that such attitudes may eventually turn the world itself against us; indeed, this may already be happening. A recent story on water pollution in the Washington Post introduced readers to the startling idea that wildlife waste was a major cause of pollution in the Potomac and Anacostia rivers. From this scientists arrived at "the strange proposition that nature is apparently polluting itself," creating "a serious conundrum for government officials charged with cleaning up the rivers." Later, in an even stronger echo, the article proffers the chilling possibility that this could be "the ultimate irony of people's impact on nature[;] that the entire system has changed so radically that wild animals now degrade their own environment."

[15] Tanaka, McCormack, and the *Washington Post* article describe a pollution that does not have a technological fix but rather requires a change of attitude, of lifestyle, and most importantly, a change of social organization itself: remake politics, not nature.

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Notes

[1] F. G. Notehelfer, "Between Tradition and Modernity. Labor and the Ashio Copper Mine" *Monumenta Nipponica*, Vol. 39, No. 1. (Spring, 1984), pp. 11-24.

[2] "Kodoku chosa iinkai chosahokokusho" in Tochigi kenshi shiryohen genkindai 9 (Tokyo: Gyosei, 1980). 635-6.

[3] Kasenho 1896, *Horei zensho*, Okurasho

insatsukyoku.

[4] Kodoku chosa, 992.

[5] Tanaka Shozo, *Tanaka Shozo senshu* 7 vol., ed. Anzai Kunio, Kano Masanao, Komatsu Hiroshi, Sakaya Junji and Yui Masaomi (Tokyo: Iwanami shoten, 1989). 4: 159.

[6] Tanaka (1989), 5: 333.

[7] Tanaka (1989), 4: 149-50.

[8] Tanaka (1989), 4: 137-8.

[9] Tanaka (1989), 4: 228.

[10] Tanaka Shozo, preface to Arahata Kanson, Yanakamura metsuboshi (Tokyo: Iwanami bunko, 1999). 8.

[11] Tanaka (1989), 7: 247.

[12] Arundhati Roy, *The Cost of Living* (New York: Modern Library Paperbacks, 1999).

[13] Patrick McCully, Silenced Rivers: The Ecology and Politics of Large Dams (New York: Zed Books, 2001) and Michael Goldman, Imperial Nature: The World Bank and Struggles for Social Justice in the Age of Globalization (New Haven: Yale University Press, 2005).

[14] Gavan McCormack, "Minamata: The Irresponsibility of the Japanese State"

[15] David a. Fahrenthold, "Wildlife Waste is Major Water Polluter, Studies Say," *The Washington Post*, 29 September 2006.