

Dam Close

Water Resources and Productions of Harmony in Central Japan

Eric J. Cunningham



ABSTRACT

This article examines socio-cultural circulations associated with dams and other water management technologies in central Japan. Such technologies and the circulations of water they enable link communities across Japan's rural and urban spaces in social, political, economic, and cultural ways. They also produce anxieties by highlighting social inequalities and the disparate impacts of water resource development in modern Japan. Using Makio Dam in central Japan as a case study, I argue that actors in both upstream and downstream communities actively imagine and enact social relationships that work to ease the tensions that arise from unidirectional flows of water by producing sensations of harmony and common identity.

KEYWORDS

gift-giving, harmony, Japan, national identity, natural resources, social relations



Introduction

Japan's verticality—its predominance of steep, forested hills and mountains—makes for a topsy-turvy hydrologic landscape. Waterways cut through the country's mountainous interior in a netlike series of shallow, fast-running streams and rivers that drain highland areas. Flatlands, located primarily along the coasts in the form of flood plains, are where waters converge like woven threads to form large, slow-moving rivers that meander through the land before emptying into the sea. There is no lack of water in Japan, however its unevenness in both time and space makes it difficult to control. Desires to direct flows of water have created in Japan "a love affair with dams" (Murakami 2003), which is reflected in the more than 2,700 dams scattered across the archipelago (Japan Commission on Large Dams 2009).

As elsewhere, dams in Japan are not only technologies of water manipulation, but also socio-cultural phenomenon with implications for the ways that human actors relate to landscapes and to one another.





Moreover, because of the profound impact that dams have on the environments in which they are situated they both reflect and recreate socio-political asymmetries (Johnston and Donahue 1998). At the same time, dams and their associated waterways also compose lines that flow through landscapes, creating new intimacies between people and communities. Such is the case with Makio Dam, a multipurpose dam in the small village of Otaki in central Japan's Nagano prefecture.

This article focuses on social intimacies that emerge from Makio Dam. It frames the dam as a site of cultural production where actors in both upstream and downstream communities negotiate tensions and anxieties stemming from asymmetries of resource development. My argument is that these negotiated tensions and anxieties give rise to sensations of cohesiveness and harmony, which are conveyed using sets of discourses and practices that are compelled by (and also invoke) notions of democracy, citizenship, and nationhood. More specifically, I suggest that actors frame flows of water from Makio Dam as gifts and imagine them within the social intimacies of exchange relations thereby generating culturally meaningful sentiments of reciprocity. My aim in analyzing the ways in which technologically mediated flows of water foster new intimacies, obligations, and reciprocal relations, which are navigated in part through practices of exchange, is to uncover the asymmetries and tensions of resource development that exist below dominant conceptions in Japan of a harmonious body politic and common national identity.

This article is informed by experiences and information that I collected while living and researching in Otaki village between April 2008 and May 2010. Much of the material presented comes from interviews and participant observation conducted during that time, including sixteen in-depth interviews, dozens of additional informal interviews, and participation in a variety of study meetings, events, and other activities. Since leaving Otaki in May 2010 I have continued research concerning Makio Dam, tracking published materials and following activities via the Internet. Digital materials were particularly prevalent during 2011 as people in both Otaki and downstream communities marked the fiftieth anniversary of the completion of Makio Dam.

Smooth Waters

On a cool October morning in 2008 I stood overlooking Ontake-ko, a lake that occupies a narrow section of the Otaki Valley. The water



was placid, forming a mirrored surface that reflected the variegated patterns of wooded hillsides that were flush with fall colors. Several homes sat on the far side of the lake, their chimneys sputtering wood smoke. High above stood Ontake-san, the mountain that is the source of water for Ontake-ko and its namesake. The surface of the lake flawlessly reflected the mountain, which glittered under a dusting of fresh snow. It was as if two landscapes had been cut from a single piece of paper that lay unfolded before me. I looked closer at the waters of the lake and began to discern movements. Curved lines writhed across the surface. These were the front edges of currents; expressions of larger movements in the depths of the lake where masses of colder and warmer water worked themselves around one another; tensioned transitions that were barely visible on the glassy and undisturbed surface.

Ontake-ko is technically not a lake. It is a reservoir filled with the swollen waters of the Otaki River, which are held up by the 105-meter-tall Makio Dam. The dam is an imposing presence in the Otaki landscape. Entering the village along a narrow winding road, one immediately encounters the imposing face of its concrete spillway dug into the surrounding rock and soil (Figure 1). These are flanked by a rock-



Figure 1 ■ Makio Dam (creative commons license: https://commons.wikimedia.org/wiki/File:Makio_Dam.jpg)



fill wall that slopes down at a 45 degree angle like a wedge of cheese laying thin side up. When its reservoir is full, Makio Dam holds back 68,000,000 cubic meters of water that covers an area of 2.47 square kilometers.

Makio Dam was built as part of a larger set of infrastructures implemented to deliver water to drought-prone areas in Aichi and Gifu prefectures. Notably, a 112-kilometer-long canal was dug to deliver water to a particularly arid area known as the Chita Peninsula. Otaki was selected as an appropriate dam site for a variety of reasons. Foremost among these were the village's climatic and geographic features. Otaki encompasses a single watershed that feeds into the larger Kiso River drainage system. Moreover, ample snowfall coupled with mountainous terrain and abundant forestlands were attractive to planners who were focused on water storage. Of course dams are never built only into rock and earth, but also into fields of power, meaning, and emotion. Ultimately, it was Otaki's marginalized status within the broader Japanese nation—its small population, relative economic unimportance, and small political voice—that was key to both the envisioning and carrying out of the Makio Dam project. However, this is not to suggest that there were not resistances, frictions, and ruptures along the way.

On 5 November 1957, the waters of the Otaki River were diverted to make way for construction of Makio Dam. In the hamlet of Futagomochi, power shovels and dump trucks, brought by boat from the US and then by train to Otaki, began the work of carving out hillsides to clear space for concrete footings. In addition to the groans of laboring machinery, loud booms of exploding dynamite reverberated up and down the Otaki Valley as crews blasted their way through rock and earth. A small town grew up around the construction site, which came to be known as Makio Ginza after the famous Tokyo entertainment district. In addition to prefabricated housing for workers, the town hosted a *pachinko* parlor¹ and several *izakaya* (drinking establishments), as well as a dance hall and movie theater (Takazaki 2010b).

Prior to the start of construction, homes in the submersion area were dismantled and their inhabitants forced to relocate. In total, 235 homes were destroyed and over 1,100 residents displaced. Eventually, four complete hamlets and significant portions of three others were submerged, along with sixty-six hectares of productive agricultural land. As the start of construction loomed, farewell parties took place in each of the hamlets. One Otaki resident described the experience in a newsletter dated 25 March 1958:



Fate of submersion—Hamlet dissolution ceremony

On the day we separated
from the soil, the homes,
and the hundreds of years of history
to which we have so much attachment;
there were hearts mixed
with affection and the beginning of a new life,
on everyone's cheeks, tears glistened,
and there was lamentation.

Submerge! It has been eight years and some months since the rumor started; the opposition movement has become a thing of the past; and the real construction site has come to look as if fire has been lit under the asses of the people in the submersion zones. At any rate, other permanent residences have been purchased, and they must go away from here.

Misawa is first on February 1st; Tajima is February 23rd; Futagomochi, March 2nd; Yodoichi is March 9th; Kuzushigoshi, March 25th; a hamlet dissolution ceremony is held in each. (Takazaki 2010c)

As this passage suggests, village residents were acutely aware of the impacts of Makio Dam, and *hantai-undō* (opposition movements) emerged in Otaki and remained active throughout the project planning process. For example, in response to a 4 March 1952 newspaper report that World Bank funds had been secured for the Aichi Yōsui project, the head of Otaki's Association to Oppose the Construction of Futagomochi Dam² (*futagomochi damu kensetsu hantai kisei dōmei kai*) wrote in a village bulletin that:

The fact that foreign capital is being introduced for the construction of Futagomochi Dam means that prospecting for the capital required for construction has commenced; this is a grave matter for us. We have for some time now been circulating petitions in the affected hamlets, and we plan to continue a line of absolute opposition until the bitter end, no matter what happens. Development that benefits only downstream Aichi prefecture and for which there is no positive [benefit] whatsoever for local areas cannot be called integrated development. I will wait for detailed investigation results about the foreign capital and then I want to make a new counter-plan. (Takazaki 2010d: 12)

Noteworthy in this passage is specific reference to the idea of “integrated development” (*sōgōkaihatsu*), which had its ideological roots in David Lilienthal's writings on democracy and dam building.

Makio Dam was touted as a democratic project; a reflection of Japan's new postwar identity as a peaceful and internationally oriented nation. Moreover, the dam both embodied and reflected Japan's new relationship with “the West” in that it drew inspiration from, was



engineered with the help of, and carried out using machinery from the United States. In this Makio was part of a larger trend of postwar “American liberal nationalism” in which dam building was embroiled in Cold War geopolitics and stood as a marker of democracy, progress, and civilization (Klingensmith 2007: 63–108). So, while Makio Dam created disruptions and disconnections at the local level in Otaki, it also created new connections and novel patterns of order at regional, national, and international levels.

Financing for Makio Dam was largely secured through World Bank loans, which gave the project an air of internationalism befitting Japan’s postwar democratic identity. The United State’s Tennessee Valley Authority (TVA) served as a model and ideological inspiration for the project. In particular, a Japanese translation of TVA director David Lilienthal’s 1944 book *TVA: Democracy on the March*, was influential with Hisano Shōtarō and Hamajima Tatsuo, two farmers from the Chita Peninsula who first conceived of the Aichi Yōsui project (Takahashi 2010a). Lilienthal’s discussions of integrating regional planning and public works projects with the values of democracy fit well with the scope of the Aichi Yōsui project and its promise of equalizing access to water in the region.

In addition to ideologies of progress and democracy, discourses referencing natural resources also emerged alongside Makio Dam. James C. Scott (1998: 13) notes that this kind of “utilitarian discourse replaces the term ‘nature’ with the term ‘natural resources,’ focusing on those aspects of nature that can be appropriated for human use.” Thus, in the case of Makio Dam, the work of such discourses was to paint water, as well as trees and forests, as natural resources in the service of the nation and its citizenry. Through the implementation of water storage technologies, both nature and people in Otaki were transformed into “national natural resources” and intimately tied to notions of progress and democracy, not to mention the possibilities of postwar Japan within the whirring of global capitalism.

The ideological weightiness of Makio Dam may have been too much for the consciences of many Otaki residents. A poem composed in 1958 by sixth-grade elementary school student, Yasue Chikako, whose home was located in the submersion zone, expresses the mixed emotions that surrounded Makio Dam. The poem is titled simply *Dam*:

I was surprised to hear that my house would become a dam.
There is no reason to make the dam since there are so many households
like mine;
I hated the people who decided to make the dam.



Everyday, everyday, I was all messed up.
 But, now it's different.
 Over there,
 Are many people
 Who are in trouble
 without enough water.
 So, I will be happy from now on
 If they make a dam here
 Everyone will be better
 I can't be selfish and think only of myself
 It's for the benefit of everyone

"Otaki" 25 January 1958 (No. 6)
 (Quoted in Takazaki 2010d)

In addition to the great ideological bloc that emerged in support of Makio Dam, an imposing aggregation of capital, political power, and technological means had also fomented around the project. Thus, voices of protest coming from Otaki's residents were quickly drowned out and the dam was completed in 1961.

Today, the smooth waters of Ontake-ko belie the turbulence that the construction of Makio Dam imposed on the land and people of Otaki. Looking to calm this turbulence, leaders within the Aichi Yōsui project actively pursued pathways to compensate, as well as help support and express gratitude to, residents of Otaki. So began Otaki's existence as a source water village with links to downstream beneficiary communities. The pathways forged as part of Makio Dam and the Aichi Yōsui project continue to be tread today as sets of social practices that are meant to both produce and embody affective qualities of harmony. However, this is a tense harmony that is constantly threatened by inequalities and feelings of discontent that writhe below the smooth surfaces of upstream/downstream relations. Before examining these tense harmonies I offer an account of life in Otaki since the completion of Makio Dam in order to give a sense of the ongoing feelings of tension, anxiety, and unease that surround the project.

Source Water Village

Otaki is situated deep in a narrow valley that runs along the base of Ontake-san. This 3,067-meter composite volcano sits independent of the orogenic mountains that surround it and the ridges radiating from its base compose a mountainous terrain that makes access to Otaki difficult. No train lines connect the village to Japan's larger rail net-



work and the nearest highways are about an hour away by car. This remoteness limits pathways for accessing the privileges and benefits of Japan's postwar economic "miracle." For instance, the manufacturing jobs that supplemented the income of "part-time farmers" in rural communities across Japan, particularly in the northern Tohoku region (see McDonald 1996), were never actualized in Otaki. At the same time, commercial rice agriculture, which the central government subsidized heavily during the postwar period, has never been tenable on a wide scale due to Otaki's high altitude (approximately 900 to 1,500 meters above sea level), limited arable land, and extreme climate.

Given this situation, the impacts of Makio Dam on the landscape, livelihoods, and lifeworlds of Otaki and its residents were and are varied and complicated. For example, the dam came with financial compensation, which initially appeared beneficial. In 1961, the village government received a compensation payment of 210 million yen (about 583,000 USD, based on 1953–1970 exchange rate of 1 USD = 360 JPY), an amount ten times its operating budget. Village officials put the compensation funds toward developing tourism infrastructure focused on skiing, which at the time was an increasingly popular recreational pursuit across much of the nation. By 1963 work was completed on a ski hill that utilized former pasturelands on Ontake-san's southeastern slope. Initially, the ski slope consisted of a small, single-seat lift and a road leading from the village. Though the initial investment was a modest 7.5 million yen (21,000 USD), the village government continued to expand the ski slope throughout the latter half of the 1960s and by the end of the decade had invested roughly 13 billion yen (36,000,000 USD) into the project.

These investments in infrastructures for outdoor activities such as skiing and mountaineering initially produced positive results in the form of increased tourist numbers and thus tourist spending. As a result, a number of guesthouses, inns, and restaurants appeared in the village, allowing some residents access to modest pieces of Japan's postwar economic prosperity. However, with the bursting of Japan's economic "bubble" (*baburu hōkai*) in the early 1990s tourism began to falter. Visitor numbers peaked in 1993 and as a result Otaki's ski slope has become increasingly unprofitable. Though still in operation during winter months, the ski slope has ultimately proved a financial liability resulting in a large amount of governmental debt. Despite this, the struggling ski slope, which still provides opportunities for work (albeit work that is mostly unstable, seasonal, part-time, low paying, and without benefits), remains one of the last economic options for many

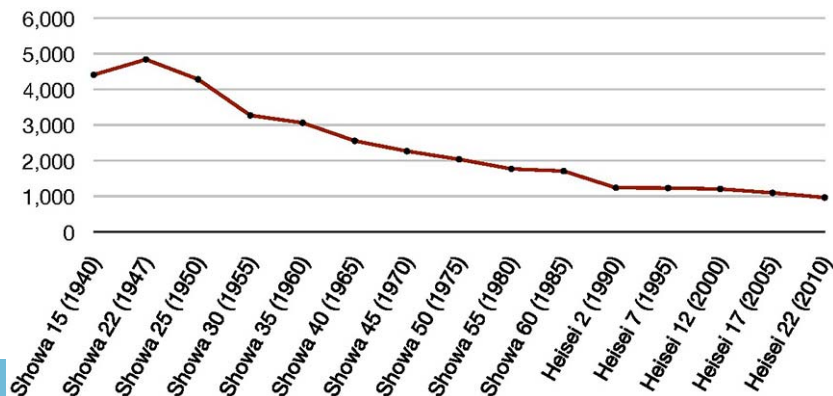


residents. Indeed, in 2010, the majority of Otaki's 965 residents (72.7 percent) worked in tertiary industries mostly related to tourism (Ministry of Internal Affairs and Communications, Government of Japan).

Prior to the development of tourism, forestry had been the major source of livelihood among Otaki's residents. From at least the beginning of the twentieth century, as Japan's imperial government began expanding timber operations in Otaki, many residents were employed as forestry workers. Things changed, however, in the mid-1960s when governmental restrictions on foreign timber imports were eased, causing Japan's domestic timber markets to all but evaporate (Knight 2000: 344). This meant that large-scale, government-sponsored forestry operations in the Otaki Valley all but ceased by 1976.

The decline of Otaki's forestry and tourism economies continues to have debilitating effects on the village. Loss of stable employment has exacerbated broader trends of depopulation as residents, particularly young people, move to urban areas in order to pursue educational, employment, and other opportunities. Like other rural communities in Japan, Otaki's population has been in steady decline throughout the postwar period (Table 1), a fact consistently noted as a major concern by residents. One man I spoke with expressed it this way: "if [the number of] people really declines, it will become a situation where there is nothing we can do. And, if [Otaki] becomes a village full of old people its vitality will really be lost. So, if some decision is not quickly made regarding that aspect, I think it's hopeless."

Table 1 ■ Otaki Village population (1940–2010): Ministry of Internal Affairs and Communications, Government of Japan. Kokusei chōsa (National Census): <http://www.e-stat.go.jp/SG1/estat/eStatTopPortal.do> (accessed 8 November 2015)





In addition to the financial difficulties that accompanied village governmental investments made into tourism infrastructures, there have also been social and political turbulences. Most residents were kept in the dark concerning the level of debt related to the village-owned ski slope. Revelations came in 2004 when a bid to amalgamate with neighboring municipalities as part of a larger national restructuring policy was unsuccessful. Other municipal governments explicitly cited Otaki's enormous debt as a primary reason for their opposition to the bid. When the extent of Otaki's financial troubles was fully revealed, residents demanded a recall of the mayor, as well as the village council. With a population at the time of just over one thousand, the political turmoil was intimate and reverberated deeply throughout the community.

Needless to say, there remain ambivalences among Otaki residents concerning Makio Dam. Regardless of the actual causal relationships between the dam and Otaki's turbulent economic history, many residents perceive the two as being intimately connected. Thus, ambivalences are born of recognition of the negative impacts that Makio Dam has had on Otaki's environment, economy, and society. However, despite its contentiousness, Makio Dam and the Aichi Yōsui project to which it belongs remain prominent parts of Otaki's landscape, economy, and the lives and identities of its people.

As a community, residents continue to actively participate in productions of Otaki as a "source water village" (*suigenchi*, literally water source land). These productions have emerged from and are enmeshed within relationships with downriver communities and are embodied in flows of water. Within these productions, water serves both as a modality of exchange and as a signifier of common national-cultural identity. Below, I look at these socio-cultural productions and suggest that one of their primary effects is to generate sensations of shared identity, reciprocity, and harmony that do the work of assuaging tensions that stem from the inequalities and unequal impacts of water resource development in the region. Before doing so, I turn first to these inequities and the divergent perceptions they engender.

Uneven Waters

In Japan, as elsewhere, water is considered a basic element of life, sustaining human bodies through consumption. In addition, water carries the significance of being an essential element for rice production, a central component of (lowland) Japanese society, culture, and polit-



ical-economy for centuries (Ohnuki-Tierney 1993). As stated earlier, Japan's mountainous topography results in an uneven distribution of water. Highland areas like Otaki are water rich, with hydrologic landscapes comprised of networks of fast-running streams and rivers. Meanwhile, lowland areas are potentially water poor and rely on a smaller number of larger waterways. So, although there is no overall lack of water, its unevenness in both time and space often dictates human intervention of one kind or another to facilitate use. Of course, the character of such interventions depends on the spatial locations of human populations. Many lowland rice-growing communities, for example, have long relied on extensive irrigation networks to secure water for paddy fields (Kelly 1982). On the other hand, highland communities, which often lack the land and climate required for rice cultivation, tend to have simple, if any, irrigation systems.

Like many other elements in the natural environment, in Japan water is often viewed with respect as a *kami* (a god or spirit). However, this deification or spiritualization of water also tends to diverge between upland and lowland populations. Scott Schnell (2007) argues that images of water in Japan have been dominated by the perspectives of lowland rice cultivators, who consider it, "the ultimate source of the rice crop's vitality" (865). In the pre-industrial past addressed by Schnell, anxieties over water among lowland community members were often eased through supplications to water *kami*. Religious specialists capable of entering the mountainous realms of the gods were tasked with mediating flows of water between the sacred and mundane worlds. He goes on to describe how material relationships of flowing water were conceptualized through folk beliefs in which *yama no kami*, or gods of the mountain, were ritually invited down into rice paddies where they became *ta no kami*, and then returned again to the mountains at the end of the growing season. William Kelly (1986) describes similar beliefs regarding water among lowland farmers in the late 1970s, despite their incorporation of modern canal networks and farming techniques meant to "rationalize" their agriculture. There is a "linkage of hydrology, rice growth, and spiritual energy," Kelly's informants explained in more candid moments while drinking, "the mountain spirit receives the winter snowfall and descends through the rivers in the spring as the water spirit. Proper ritual can entice the water spirit to enter the rice fields as the paddy spirit to bring fertility to the soil and protection to the crops" (603).

In Otaki, conceptions of water are prominently linked to the sacred mountain Ontake-san, from which most waters in the village



flow. Five ponds are situated atop the mountain and it is said that a dragon deity lives within each. The “third pond,” or *san-no-ike*, in particular, is renowned among village residents and others for its healing qualities. One man I spoke with, who was in his sixties and a lifetime resident of Otaki, told me about his personal experience of healing with the help of water from Ontake-san’s third pond. Talking in his home over coffee, he recounted how he had been diagnosed with throat-cancer a couple of years earlier and showed me a plastic jug on which he had written *go-shin-sui* (literally god water). He warmed some of the precious water for me, saying it tasted better heated, and then, after seeing my underwhelmed reaction to its taste, wondered aloud, “maybe it would be better to make coffee with it.” Drawing water from the top of Ontake-san is not an easy ordeal and usually requires an overnight stay. The man went on to tell me that his friend brought water to him regularly while he was struggling with cancer. He assured me that the water had been essential to his overcoming cancer.

In addition to these sacred ponds, flowing water is an almost constant part of the Otaki landscape and lifeworld. Small streams tinkle through the myriad forested ravines that stretch like unfolded fans across Ontake-san’s broad southeastern slope. Inside the village proper one is often accompanied by the sight and sound of flowing water as it tumbles through ditches that run alongside fields and roads. In front of many Otaki homes stand small cisterns that allow flowing water to pool temporarily. During summer, the swirling waters inside these cisterns are filled with fresh cut flowers or vegetables left to chill. In other words, water in Otaki embodies and emanates a logic and aesthetic of flowing. Water is movement from up to down; a reflection of the verticality of the mountainous landscape and a physical manifestation of the connections that bind human actors to the land, especially Ontake-san whose flowing waters offer both life and livelihood. Geographer Keiichi Takeuchi (2000) suggests that such a sensibility was once widespread among Japanese who, “perceived water as a free good in the economic sense” and “characterized [it] first of all by an image of abundance and wildness” (176). Water, we might say, embodied conceptions of wildness, or what Kalland (1995: 254) calls “nature in the raw.” However, technological manipulations of water for irrigation and other purposes “came to be considered as a means of taming nature” (177). Put differently, technological intrusions effectively transfer waters from the realm of nature and spirits (highland areas) to the realm of society and humans (lowland areas). Water is transformed, in other words, from “raw” to “cooked” nature.



I also suggest that to different extents water is understood to be mercurial and unpredictable among the residents of lowland communities. It is capable of supporting human life, endeavor, and wellbeing, but also of bringing destruction and even death. A dearth of water in the form of drought, for instance, can wreak havoc on crops, while an overabundance, such as can occur during seasonal typhoons, carries the threat of flooding. Thus, in its abundance and dearth, water embodies a sort of dialectic that must be mediated through human intervention.

While in the past religious intervention by specialists on behalf of lowland communities enabled adequate flows of water, today technologies are employed to capture, store, and move water. In particular, dams like Makio have become central mediating structures for water circulation. Such interventions—dams, canals, and other technologies—however, embody and express not only the geographical unevenness of water, but also the social, political, and economic inequalities that differentiate rural and urban, particularly highland and lowland, communities in modern Japan. Water originates in highland areas where it is plentiful, and flows to lands below, where it may be lacking. Inversely, human habitation exhibits a reverse pattern, with highlands sparsely populated and lowlands densely packed into urban areas like Tokyo and Osaka. In this sense, water encompasses, and flows of water transect, not only geographical, but also socio-economic domains. And, as an element that flows through spaces of power, belief, and meaning, water in Japan is an element that can both intrigue and frighten, and its circulation a phenomenon that raises anxieties.

At the same time, deployments of water management technologies in Japan have sketched new lines in the landscape and new linkages have been forged between people and places from which have emerged novel modes of interaction and exchange. Dams capture waters and hold them in highland areas so that they can later be circulated downstream through both natural and artificial waterways, and finally consumed. Through the technological interventions of dams and artificial waterways, residents of areas prone to drought have been allowed to pursue and maintain new livelihood patterns, resulting in increased commercial and industrial expansion. Highland areas, on the other hand, have borne the brunt of these technological incursions. As described above, water storage dams are monumental entities that irrevocably alter the landscapes in which they are created, as well as the lives and livelihoods of local people.



What is more, dams in contemporary Japan embody modern technology and flows of capital that enable and are enabled by their construction. Indeed, in one sense they symbolize the very mode of production of late capitalism in which the economic capacity of urban cores expands while environmental and other impacts are offset to marginalized spaces (Harvey 2003, 2006). Yet, the object of exchange in these capital-techno-environmental assemblages—namely, water—is not usually conceived of as a commodity, but rather as a natural element, a resource, and a right of all Japanese citizens. This places water in another conceptual domain altogether; one articulated in socio-cultural norms, practices, and institutions. According to Japan's River Law of 1896 and its amendment in 1964, river waters are public property, and the water rights of downstream users historically have been, more often than not, maintained, meaning that everyone is entitled to a share of the flow (Nickum and Greenstadt 1998). In this view, flows of water are part of a "national body" (*kokutai*) to which the bodies of all Japanese citizens are supposed to be intimately tied. Water flows—whether in river, tap, or hose—thus help to solidify such ties and forge a common national identity that links people and places together. In line with *kokutai* ideals, contemporary practices of water resource governance in Japan flout the spatial and temporal patchiness of water within the archipelago and rely on technological solutions—dams and other water works—to fulfill ideals of what in the postwar era has come to be known as "river basin democratization" (*ryūichi-minshuka*), where all citizens are allotted a share. Hiding under these ideological surfaces, however, is the fact that upriver communities disproportionately bear the burdens of water circulation due to the technological incursions that sit so heavily within their environments.

In general terms, the modernization of water in Japan has reinforced patterns of inequality in which highland areas are poor, marginalized, and powerless, while lowland coastal plains—home to the nation's megalopolises—maintain enormous accumulations of economic capital, social prestige, and political authority. Water in Japan flows through landscapes that have been wrought through historical processes, imbuing them with unequal qualities of power. Technological mediations of hydrologic flows, therefore, make the movement of water a social and political phenomenon as well as a natural and technological one. As such, flows of water express the political-economic asymmetries of life in modern Japan. These disparities threaten *kokutai* ideals and social desires to achieve *wa*—a spirit of harmony, peace, and calm. As I explore further below, actors on both sides of



water flows deploy discourses and practices that draw on notions of a common heritage, future, and national identity in order to foster sensations of *wa* and a surface harmony capable of obfuscating the contestations, conflicts, and inequalities of water resource systems that writhe below.

Producing Harmony

As stated earlier, Makio Dam remains a contentious and contested topic among residents of Otaki. For many the dam is directly linked to the village's precarious financial situation, recent political turmoil, and perhaps even an overall state of decline marked by increased outmigrations and steep population declines. However, in a seeming contradiction, Makio Dam continues to garner attention and play a central role in the social, political, and economic life of Otaki.

One way to address this contradiction is to consider water in the context of gift exchange. This requires a consideration of water not only as an object of exchange, but also as an element embedded with a broader social apparatus that continually works to produce "Japan" as place and "Japanese" as people. Marcel Mauss (1990: 2) labeled such apparatuses systems of *total prestations* and described them as being comprised of groups (e.g., clans, tribes, families) rather than individuals, who are bound by moral obligations rooted in practices of exchange. He explained that:

what [these groups] exchange is not exclusively goods and wealth, real and personal property, and things of economic value. They exchange rather courtesies, entertainments, ritual, military assistance, women, children, dances, and feasts; and fairs in which the market is but one element and the circulation of wealth but one part of a wide and enduring contract. Finally, although the prestations and counter-prestations take place under a voluntary guise they are in essence strictly obligatory, and their sanction is private or open warfare. (2)

In the case of Makio Dam and Aichi Yōsui the two primary groups involved in exchanges related to water are, broadly speaking, upstream and downstream communities. While downstream beneficiary communities involved in exchanges are varied and difficult to define, Otaki is conceptualized as the single upstream community from which water is received.

Accordingly, since the completion of Makio Dam in 1961 there have been concerted efforts among downriver communities to express



kansha (gratitude) to the upriver residents of Otaki. Such efforts involve Aichi Yōsui's approximately 33,000 members and are coordinated by the collective's fifty-eight full-time employees. Practices meant to convey feelings of *kansha* rely heavily on notions of reciprocity and thus work to mediate anxieties produced as water circulates across boundaries of class and economic prosperity. The activities of downriver residents related to the Aichi Yōsui project help to signify the value of water as it flows beyond the Otaki watershed. Water flows from Otaki are transformed through consumption into economic values, which, however, are rarely returned as such. Rather, what are "given back" or reciprocated by downstream beneficiaries are a variety of social forms related to water and technologies of water circulation. These forms include volunteer activities, such as forestry work; photo contests; publications; festivals and other events; products; and token gifts of money. The enactment of these forms allow downstream beneficiaries of the Aichi Yōsui project and flows of water from Makio Dam to engage in largely imagined social relationships with upstream residents, who presumably do not otherwise benefit from the material relations of water circulation.

On the morning of 24 October 2008 I joined a group of village residents for the first-ever *chīki gakushū kai* (district study meeting) held in Otaki. The meeting was held at the village "Social Welfare Center" (SWC), a newer building with facilities for elderly care. The building is located in the center of Otaki, just below the village office and the local office of a national agricultural co-op. That morning the weather was typical for October. The air was cool and dry, and the sun, which beamed down from a crisp, azure sky, was enough to keep things comfortably warm. I arrived at the SWC and said good morning to the office staff sitting at desks behind a counter at the entryway. I was directed to an event room on the south side of the building where the district study meeting would soon get underway.

The format of the study meeting was a moderated panel discussion. The theme of the discussion was written on a large white banner that hung vertically from the ceiling: "concerning upriver/downriver interactions through Aichi Yōsui's Makio Dam" (*aichi yōsui makio damu wo tōjita jōkaryū kōryū ni tsuite*). The event was organized by a village group called *Zukudasō ōentai*. The group's name is comprised of local slang—*zukudasō*—meaning "right now" or "right away" and *ōentai*, meaning booster squad or cheer group. *Zukudasō ōentai* formed in response to Otaki's failed amalgamation, the revelation of



the village's profound financial debts, and the subsequent recall of the mayor and village council. These crises had occurred in 2004–2005 and since that time *Zukudasō ōentai* had been working—through various events and programs—to help revitalize the village. I took a seat near the front of the room and began chatting with acquaintances while waiting for the meeting to start.

The head of *Zukudasō ōentai* was an older man, probably in his sixties or seventies, who I gathered had lived in Otaki most, if not all, of his life. He began the study meeting with a short speech in which he spoke to the purposes our gathering together.

The foot of Ontake-san is the home of Aichi Yōsui's water source. It is also the theme for today's seminar. The water, without which we cannot live, is nurtured through the upstream/downstream interactions and deep mutual understanding and cooperation between upstream and downstream residents that has come through Makio Dam and the Aichi Yōsui project.

In addition to expressing the theme of the meeting, the speech invoked a broad sense of cooperation, mutual respect, and reciprocity between upstream and downstream communities. Similar sentiments dominated the rest of the meeting. Panelists included business owners from Nagoya (the major metropolitan area served by the Aichi Yōsui project) and employees of the *Aichi Yōsui sōgo kanri sho* (Aichi Yōsui general management office), which oversees the operations of the project's dams and waterways. Meanwhile, the mayor of Otaki was the only “upstream” panelist.

Following the opening speech two officials from the Aichi Yōsui general management office spoke next and discussed a new program that their office had started called *midori netto*. The name means “green network,” with the word “green” (*midori*) written in a unique way using three characters meaning “water,” “soil,” and “village.” The goal of the program was to educate school children in downriver communities about the source of their water (i.e., the Kiso District, Otaki Village, Makio Dam, and the Aichi Yōsui project). Social scientists have long argued that gifting is a practice that is embedded in and takes place across a social landscape, and that it is through gifts that relationships are made apparent, evaluated, reiterated, reinforced, and reaffirmed. The implication is that gifts *mean* something and that their meanings are enmeshed in and rely upon sets of social relationships. This requires that social actors be able and willing to recognize these relationships and their place within them. Considered in this



light, the *midori netto* educational program introduced at the district study meeting entailed a set of practices with the aim of producing within downstream actors (in this case children) a sense of the social relationships through which flow the waters they consume. In other words, the work of educational programs like *midori netto* is to foster commonality between distant and disparate communities connected through circulations of water. Because technologically-assisted water flows have created new scales and new communities in Japan, efforts such as this must be made if actors in geographically distant communities are to recognize and feel connected.

As the meeting continued other downstream panelists employed sentiments of “networking” and “connection” to articulate ideas of interdependency, obligation, and reciprocity. Such ideas are ubiquitous in Japan and are embedded in social practices to the point that many would consider them “normal” (*futsū*) parts of human interaction that are a “matter of course” (*atarimae*) (Benedict 1967; Doi 1973; Lebra 1976). Thus, the content and tone of the meeting’s discursive elements worked to generate sensations of commonality and harmony by downplaying the many differences (social, cultural, political, economic) that continue to separate downriver and upriver actors. And it was flows of water that served as the primary metaphorical vehicle for doing so.

Eventually, it came time for Otaki’s mayor to speak. With candor he spoke about the long history of resource exploitation in the village. He first discussed the heavy impacts that state-sponsored industrial forestry throughout the late nineteenth and early twentieth century has had on the environment, as well as the lack of input that local residents have concerning the management of the national forests that now comprise 87 percent of village land. In addition, he talked about the century-long impacts of dam building and water resource development in Otaki, stressing in particular that the building of Achi Yōsui’s Makio Dam was a turning point for the village. In the end, however, the mayor too offered up notions of reciprocity, which he expressed in statements concerning the reliance of Otaki on the support of downriver communities. Perhaps he really believed this, but my guess is that he was more rhetorically savvy than his at times rough manner of speaking let on. In the meeting he had been able to present a strong critical commentary on Makio Dam and to highlight its impacts on Otaki by couching his critique in language that worked to produce a sense of harmonious upstream/downstream relations and left the surface of the meeting wholly undisturbed.



Liquid Gifting

Human relationships of all varieties in Japan often involve exchanges of gifts. In addition to weddings, funerals, graduations, and other momentous life occasions, gifting is also practiced as a way to express gratitude, relieve indebtedness, and seek favor. Though gifting can take many forms, the practice is also highly structured in significant ways. Notably, many Japanese participate in structured gift exchange during two annual periods known as *seibo* (winter) and *chūgen* (summer). The cyclic patterning of gifting practices denotes the role the practices play in maintaining relations between people. As acts that give some form to the ephemeral contents of human relations, gifting is simultaneously capable of altering, relieving, and also producing tensions between actors. As Katherine Rupp (2003: 34) puts it, “[w]hile giving reinforces human relationships, it also changes them.” The effect of a gift on a relationship depends on a variety of factors including the relative social positions of giver and receiver, the gift’s value (usually evaluated monetarily), and the temporal span between acts (i.e., how long it takes to reciprocate).

The case of Makio Dam and the Aichi Yōsui project present quandaries in terms of analysis based on theories of gift exchange. Namely, that one of the primary gift forms, water, is not generally thought of as such. As a naturally occurring material, water does not easily fit into the category of gift. However, as noted earlier, examples of exchange relations involving flows of water are abundant throughout Japan’s history. These relations of exchange were not between sets of human actors, but rather humans and gods. In the past, rituals in which humans offered gifts of rice, *sake*, fish, and other foods to gods in order to insure flows of water, were commonplace in many locations throughout the Japanese archipelago. Even today, such rituals continue to be practiced, most frequently in rural communities like Otaki that are located near water sources. The continued existence of rituals related to water points to an understanding among at least some people in Japan of water as a gift, the unending flow of which positions human actors within an ongoing relationship with the gods whom they must attend to with gifts lest the relationship become tense and ultimately dangerous.

However, for downriver beneficiaries of water flows, whose livelihoods depend only indirectly on such flows and who lack immediate connections to their sources, there may be only vague senses of water as some form of gift, which must be reciprocated. Indeed, it is often



the interventions of water transport technologies that foster such disconnections. In the case of the Aichi Yōsui project, it was the building of Makio Dam and the profound impact this had on the environment and community of Otaki, as well as the impassioned protest of village residents, that moved those who had conceived of and helped carry out the project to seek ways to reciprocate their newly established gifts of water in an attempt to harmonize upriver/downriver relations.

Like other forms of gifting in Japan, exchanges of water and money along the Aichi Yōsui corridor serve to make tangible the human relationships within which they are enmeshed. Residents from both communities take part in a variety of activities that produce and reinforce sensations of common identity and purpose; sensations wrapped in broader ideologies of the nation and a shared racial, social, and cultural Japaneseness recognized (albeit to varying degrees) by all parties.

Interestingly, such sensations of group inclusivity have developed beyond the Aichi Yōsui corridor. In recent years Otaki's government has made active efforts to elicit support from individuals and communities that are not beneficiaries of water from Makio Dam. In fact, in 2011 monetary "gifts" from non-beneficiaries made up the majority (56 percent) of support funds received, which is a marked difference from previous years. This suggests that Otaki, like other rural communities, is increasingly understood as a generalized symbol of "rural Japan," a place that those residing in the cosmopolitan centers of Japan's "economic miracle" should express gratitude toward. Why, one might ask. One possible answer is that in twenty-first century Japan rural communities embody nostalgic ideals of a past that offers promising alternatives to the increasing precariousness of life within the nation's "lost decades." If rural Japan—the *real* Japan—disappears, what will be left? The nation will be adrift, unanchored in the wild seas of modernity.

Recently, Otaki's government has begun to brand the village as *mizu to midori no furusato*, as a way to elicit support. Literally meaning "home of water and green," the name employs the emotionally laden term *furusato*, which in modern Japan denotes an idyllic hometown that is traditional, pure, timeless, and close to nature. Marilyn Ivy (1995) attends to notions of *furusato* as one of many nodes upon which people in Japan continue to articulate and strive to stabilize an essential national-cultural identity as a totality. She suggests that:

The effort to sustain this totality announces itself in every tourist advertisement, every appeal to "home" (*furusato*), every assertion that "we Japanese



are modern, but we have kept our tradition," every discourse on public (Japanese) harmony. This effort to maintain the self-sameness of Japanese culture thus exposes itself by denial of social difference—race, ethnicity, class. (26)

For Otaki, water is a thread with which the small mountain village has been, and continues to be, sutured every more securely to the national body known as "Japan."

Practices of gifting money enable actors and organizations in downriver areas (as well as other parts of Japan) to make visible expressions of *kansha* (thankfulness) toward upriver communities, which are often articulated through culturally meaningful concepts of duty (*giri*) and obligation (*on*). One downriver resident expressed his gift to Otaki this way, "I was deeply touched and grateful when I heard about efforts, such as forest maintenance, being made to maintain the water quality of Makio Dam, which is the source of water for downstream areas. Please continue these efforts."

For their part, Otaki residents too, despite occasional complaints and contestations, have continued to work with downriver beneficiaries to promote the benefits of the Aichi Yōsui project and to foster and maintain upriver/downriver relationships between communities located on both sides of its water flow. As a result, much like the movements of water in Ontake-ko noted at the beginning of this article, tensions over Makio Dam and the development of water resources find only the faintest expression as ripples within a broader expanse of practices and discourses through which an undisturbed surface harmony is continually reproduced.

Dam Close

Makio Dam and the larger Aichi Yōsui complex exemplify the ways in which flows of water in Japan circulate through landscapes with varied social, economic, political, and cultural histories and link together divergent groups of actors. I have argued that these circulations produce anxieties by highlighting the inequalities that mark movements and consumption of water in Japan today. On the one hand, water is viewed as an essential element of life and conceptualized as a common right of all citizens, as well as a symbol of democratic ideals. In this sense water serves as a marker of common national citizenship and identity. However, dams and other water storage and transportation technologies continue to dissolve the past boundaries that ex-

isted between rural and urban communities in Japan, while etching new lines of connection and producing new social intimacies. Within this process social, economic, and political inequalities, which are increasingly the hallmarks of late capitalist Japan, are increasingly visible to actors on both sides of water flows. Through enactments of reciprocity and commonality actors in both upstream and downstream communities help to ease the tensions that arise from one-directional flows of water and the disparate trajectories of development they engender. Actors thus help to mask the inequalities of water resource development in Japan by imagining and enacting social relationships that result in productions of harmony that, though not completely genuine, are damn close.

Eric J. Cunningham is an Assistant Professor in the Japanese Studies and Environmental Studies programs at Earlham College. His research interests include resource use and governance, productions of nature, and tourism. More specifically, his work is concerned with political ecologies of resource use in central Japan and the survival struggles of local communities. Address: Earlham College, 801 National Road West, Richmond, IN 47374, USA. E-mail: cunnier@earlham.edu.

Notes

1. *Pachinko* is a popular game in Japan where players attempt to control steel balls as they fall downward through a series of bumpers and pathways. The goal is to collect as many balls as possible, which can then be traded in for food, goods, or cash.

2. Futagomochi refers to the hamlet where Makio Dam is located. The name of the dam was later changed to Makio.

References

- Benedict, Ruth. 1967. *The Chrysanthemum and the Sword: Patterns of Japanese Culture*. Boston: Houghton Mifflin.
- Damu mania. *Damu mania* (Dam mania). <http://dammania.net/?http://dammania.net/nagano/index.html> (accessed 11 July 2012).
- Doi, Takeo. 1973. *The Anatomy of Dependence*. Tokyo: Kodansha International.
- Harvey, David. 2003. *The New Imperialism*. Oxford: Oxford University Press.
- Harvey, David. 2006. *Spaces of Global Capitalism*. London: Verso.
- Hino, Naoharu, Hitoshi Terashima, and Masayuki Murasaki. N.D. *Makio damu ni okeru ōgata kikai shikō* (Large-scale mechanized construction, the case of Makio Dam). Aichi Yōsui Sōgō Kanrishi (Aichi Yōsui General Management Office). <http://www.water.go.jp/chubu/aityosui/> (accessed 25 September 2013).



- Ivy, Marilyn. 1995. *Discourses of the Vanishing: Modernity, Phantasm, Japan*. Chicago: University of Chicago Press.
- Japan Commission on Large Dams. 2009. *Dams in Japan: Past, Present, and Future*. New York: CRC Press.
- Johnston, Barbara Rose, and John M. Donahue. 1998. "Introduction." In *Water, Culture, and Power: Local Struggles in a Global Context*, ed. J.M. Donahue and B.R. Johnston, pp. 1–5. Washington, DC: Island Press.
- Kalland, Arne. 1995. "Culture in Japanese Nature." In *Asian Perceptions of Nature: A Critical Approach*. ed. Ole Bruun, and Arne Kalland, pp. 243–257. London: Curzon Press.
- Kelly, William W. 1982. *Water Control in Tokugawa Japan: Irrigation Organization in a Japanese River Basin, 1600–1870*. Cornell University China-Japan Program.
- Kelly, William W. 1986. "Rationalization and Nostalgia: Cultural Dynamics of New Middle-class Japan." *American Ethnologist* 13(4): 603–618.
- Klingensmith, Daniel. 2007. *"One Valley and a Thousand": Dams, Nationalism, and Development*. New Delhi: Oxford University Press.
- Knight, John. 2000. "From Timber to Tourism: Re-commoditizing the Japanese Forest." *Development and Change* 31(1): 341–359.
- Lebra, Takie Sugiyama. 1976. *Japanese Patterns of Behavior*. Manoa: University of Hawaii Press.
- Mauss, Marcel. 1990. *The Gift: The Form and Reason for Exchange in Archaic Societies*. London: Routledge.
- McDonald, Mary G. 1996. "Farmers as Workers in Japan's Regional Economic Restructuring, 1965–1985." *Economic Geography* 72(1): 49–72.
- Ministry of Internal Affairs and Communications, Government of Japan. Kokusei chōsa (National Census): <http://www.e-stat.go.jp/SG1/estat/eStatTopPortal.do> (accessed 25 June 2012).
- Murakami, Asako. 2003. "Committee to Review Nation's Dams." *Japan Times*. 22 March.
- Ohnuki-Tierney, Emiko. 1993. *Rice as Self: Japanese Identities Through Time*. Princeton, NJ: Princeton University Press.
- Rupp, Katherine. 2003. *Gift-Giving in Japan: Cash, Connections, Cosmologies*. Stanford, CA: Stanford University Press.
- Schnell, Scott. 2007. "Are Mountain Gods Vindictive? Competing Images of the Japanese Alpine Landscape." *Journal of the Royal Anthropological Institute* 13(4): 863–880.
- Scott, James C. 1998. *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. New Haven, CT: Yale University Press.
- Takazaki, Tetsuro. 2010a. *Mizu no shisō, tsuchi no risō—seiki no daijigyō aichiyōsui. Dai go kai: "tami no koe ha ama no koe 1: nihongata <TVA keikaku> he no chōsen"* (Thoughts of water, ideals of soil—Aichi Yōsui, Century's large undertaking. number 5: "The voice of the people is the voice of heaven 1: Toward the challenge of a Japanese-style TVA project"). Tokyo: Kajima Institute Publishing.
- Takazaki, Tetsuro. 2010b. *Mizu no shisō, tsuchi no risō—seiki no daijigyō aichiyōsui. Dai jū kai: "amerika rykibō to seishin, gizeisha, soshite hisano no chikai"* (Thoughts of water, ideals of soil—Aichi Yōsui, century's large undertaking. number 6: "American-style techniques and spirit, victims, and Hisano's vow"). Tokyo: Kajima Institute Publishing.

- Takazaki, Tetsuro. 2010c. *Mizu no shisō, tsuchi no risō—seiki no daijigyō aichiyōsui. Dai kyū kai: "hisano no tōsan, kyogakuna suibotsu kokyō hoshō, shoshite chakkō"* (Thoughts of water, ideals of soil—Aichi Yōsui, century's large undertaking. number 9: "Hisano's bankruptcy, large compensation for submerged community, and the start of construction.") Tokyo: Kajima Institute Publishing.
- Takazaki, Tetsuro. 2010d. *Mizu no shisō, tsuchi no risō—seiki no daijigyō aichiyōsui. Dai roku kai: "tami no koe ha ama no koe 2: undō no sōkyokusen (sekkyoku suishin to zettai hantai to)"* (Thoughts of water, ideals of soil—Aichi Yōsui, century's large undertaking. number 6: "The voice of the people is the voice of heaven 2: Hyperbolic movements (forward progress and absolute opposition).") Tokyo: Kajima Institute Publishing.
- Takeuchi, Keiichi. 2000. *Modern Japanese Geography: An Intellectual History*. Tokyo: Kokon Shoin.

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