CONFLICT OVER THE CONTEMPORARY FATE OF COMMON LANDS IN JAPAN

Margaret A. McKean
Department of Political Science
Duke University

Association for Asian Studies
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Most "modernizing" governments, those that accept as a national mission the task of encouraging industrialization and economic growth, have behaved as if they believed that traditional forms of resource use and customary property rights were inefficient, backward, and in need of modification. The two trends fostered in most countries are the conversion of collectively used resources to individual ownership, and the nationalization (confiscation) of such resources as public or state-owned property. But environmental stress has stimulated great debate over the causal relationships among the type of property rights regime, the efficiency of resource use, and long-term environmental outcomes. Some governments are now reconsidering their original policies of privatization to individuals and nationalization to governments, and there is new enthusiasm for legalizing traditional common property rights arrangements to foster sound environmental results.

The Japanese experience with common lands serves as both model and warning to others: common property regimes can work and be integrated into a modern legal structure, but there are pitfalls and contradictions worthy of careful study if others are to anticipate or even avoid them. The modernizing Meiji government adopted policies toward common lands that were laden with inconsistencies; on the one hand, guaranteeing legal protection of these shared private property rights in the Meiji civil code, and on the other hand trying to wrest the lands themselves from the people in policies related to registration and taxation of all land, the creation of national forests, and the amalgamation of tokugawa villages into new municipalities. Disputes between rival claimants and between citizens and government over traditional common property rights (iriaiken), practical debates over forestry policy, and theoretical debates among scholars and government officials over legal doctrine have raged since early Meiji and remain unsettled today.

This paper describes the legal evolution of the commons and then summarizes the iriaiken conflicts of the past century and attempts to analyze their causes, in hope of contributing eventually to an appropriate extrapolation of lessons from Japan and an understanding of the relationships between property rights, conflict, and environmental outcomes.

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Two-thirds of Japan, or 25 million hectares, is forested or uncultivated meadow; all of Japan's cities, rural residential land, and cultivated fields today comprise only one third of the land. A very large portion of this uncultivated or forested land was managed as commons during the Tokugawa period, much of it owned by villages themselves for this purpose and the rest as an exercise of usufruct on other lands, granted by feudal lords and officials to villages in exchange for protection of those forests. Beginning in 1873 with the Meiji campaign to survey and register all land in Japan for purposes of taxation (chiso kaisei), the common access rights to a large quantity of these lands were either "lost" or sold, so only 2.5 million hectares is still held and used in common today.[1] In many ways, the functions of common property regimes, the changes they have undergone in the face of commercialization and government policies to "modernize" them, and the conflicts that have arisen over common property in Japan mirror the developments now taking place in developing countries. The Japanese experience is worth close examination: it provides examples of successful community management of large interactive resource systems (about which I have written earlier[2]), and it offers warnings about some of the pitfalls in the legalization of common property rights and conflict over these rights (the focus of this paper).

First, a few definitions. Property per se is a social invention consisting of rights and duties applying to the use of a resource (which can range from physically discrete items like trees, to environmental benefits like clean air or prevention of soil erosion, to physical intangibles like knowledge or special talents). "Ownership" is a very troublesome term: it is usually thought of as possession of a complete bundle of property rights, including the right to use, change the use of, bequeath, exchange, sell, consume, or destroy a resource. By this definition, someone who possesses certain use rights, but not the right to sell the resource, does not have full "ownership" of the resource. In fact, of course, it is theoretically possible to exercise, bequeath, exchange, sell, or destroy a use right (as did holders of shiki in medieval Japan) without possessing the resource itself. What we need to keep in mind here is that property rights are what is owned, not resources themselves. Full ownership of a property right then refers to the ability to exchange or extinguish that right.

Resources to which no rights and duties attach are open-access non-property resources.[3] When governments claim property rights in a resource, we have public property. When individuals claim property rights in a resource, we have unmistakably

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private property. When groups claim property rights in a resource, scholars become confused about labels. My preference is as follows: whenever non-governmental units claim specific and exclusive property rights in a resource, we have private property. Private property can therefore be jointly owned by groups of individuals: business partnerships, joint stock corporations, corporate villages, groups of resource users, or any other collection of individuals. For me, then, when rights and duties to a resource are vested in a group we have common property. If these rights are vaguely defined or incomplete, our common property system is something other than private property. But when these rights and duties are specifically defined and exclusive to that group, common property is a form of private property.

These definitions have several implications. The well-known tragedy of the commons is actually a tragedy of open access resources, the unmanaged or unowned commons, as Garrett Hardin now recognizes.[4] Those who advocate "privatizing" common property in the name of "modernizing" it may thus be promoting the opposite of what they recommend: not the creation of private property where there was none, but the destruction of private property. The "modernization" or "privatization" of common property may actually consists of transferring ownership from one group to another or to individuals. Those faced with the loss of their customary rights and claims can be expected to view the process as theft, and they may not look upon it passively. Finally, all shared forms of private property, including "modern" joint stock corporations, are vulnerable to principal-agent and free-rider problems (shirking and cheating), threatening the precious cooperation that is nonetheless in the mutual interest of those involved. Specialists in corporate management and industrial relations understand this well. Oddly, those who view common property regimes as antiquated holdovers from a pre-capitalist era do not recognize any potential similarity between common property regimes and the joint stock corporations that are fully acceptable in their scheme of "modern" institutions.

In much of the discussion of common property management elsewhere in the world, there appears to be tension between de jure and de facto notions of property and ownership, or between "formal" and "informal" institutions, or between "modern" and "traditional" institutions, with common property regimes being equated with de facto or informal or traditional customary patterns that are seen to be inconsistent with formal law and modern market capitalism. Those of us who study common property regimes see value and lessons for all in the rich variety among these regimes, but many of us sadly agree with the critics of these institutions that these regimes are indeed vulnerable and perhaps unlikely to survive much longer. Many Japanese leaders, as enamored of rapid industrialization and as uninterested in externalities or environmental issues as anyone before or since, have criticized common property for being "inefficient" or "backward," but common property institutions have nonetheless had legal protection in Japan since the 17th century or earlier, and many of these community systems survived the spread of a cash economy. They are as formal and as legally "real" and in some ways as modern as many other things in Japan.

Evolution of the Commons

The story of the Japanese commons begins with their presumed formation in the medieval period. The two most important developments for our purposes during the medieval period were (1) the development of a system of property rights (shiki) that allowed for splitting and trading of shares to different kinds of property rights, and (2) the emergence of the nucleated (clustered) self-governing village with secure claims to surrounding commons.

All governments face a troubling contradiction in the effort to support themselves: maximizing tax revenue by confiscating all surplus beyond subsistence gives people no incentive to produce any surplus whatever. In early Japan, population was low enough for land outside of the Kinki area to be an essentially open-access resource, and peasants faced with high tax demands simply absconded to the hills to practice swidden farming and evade taxation.[5] Whereas the government was interested only in yields and recommended construction of irrigation works (not warranted by the shortage of labor and the abundance of land), peasants were interested in product per unit of effort, and preferred land-intensive agriculture to labor-intensive methods, wisely economizing on expensive factor inputs. This government of civilian aristocrats lacked the draconian means of enforcement to keep peasants on the land it could tax, and began to award property rights in land to give people the incentive to develop new fields.[6]

New property rights went both to peasants and to nobles who demanded independent control of lands they developed in order to support their personal needs.[7] Thus emerged the medieval shôen, free from both taxation and entry by the central government, and the system of shiki. Rather than being the conventional rights to land that we might imagine likely - - e.g., the right to use or transfer the land - these were rights to **income** from the land. The central proprietor of an estate held all the rights to income (these were the honke shiki) produced by estate lands, and essentially paid the staff and even the senior peasants living and working on the states by divvying up his own rights and allocating shares to them. These shares, or shiki. rapidly became dissociated from the land itself and became tradable assets. After a century or two, rights-holders might well have bits of shiki to many non-contiguous lands in different estates in different provinces. Up through the 16th century, trade, inheritance, and exchange of shiki continued, leading simultaneously to fragmentation of original ownership patterns and reconsolidation of fragments in new hands.[8]

As population, intensification of agriculture, and civil disorder increased during the medieval period, cultivators became increasingly interested in forming nucleated (clustered) settlements - the first real villages in Japan ~ the better to defend themselves against marauders and the better to pool their labor for irrigation and transplantation of rice. As land became somewhat scarce, peasants also discovered the need to exercise management, as opposed to indifferent non-management, over the uncultivated mountainsides from which they gathered fodder, fertilizer, fuel, construction timber, thatch, fiber for clothing, bamboo for household products, wild game, and sundry foods. More systematic use of the commons increased the need to manage it well, define

eligible users and uses, and exclude ineligible users and uses.** Sound resource management required cooperation by all villagers, and became the impetus to solidary (and occasionally democratic) self-government by village units. Thus the development of secure private property rights to arable lands simultaneously stimulated the use of commons, led to a richer and therefore more assertive peasantry organized into self-governing villages, and led to the assertion of village ownership of the commons.[9]

Villages developed increasingly secure claims to particular commons, recognized by neighboring villages and by local officials of the shogunate, during the medieval period. This is entirely consistent with the theoretical argument that people create property rights to resources when those resources become valuable enough to warrant enforcement of claims.[10] Rights to the commons eventually included not only the right to use the products of the commons (e.g, usufruct), but apparently also the right to exchange, sell, or transform the commons (e.g., full ownership).[11] In this way, medieval villages not only began the process of closing the commons and converting open access resources into common property, but also rearranged rights to these commons by swapping and selling commons amongst eachother in order for each to get a desirable assortment of different types of land in convenient locations.

The experience with shiki familiarized the Japanese with the idea of breaking up the standard "bundle" of property rights in unusual ways and trading in the pieces. I have no evidence capable of demonstrating a causal connection here, but it seems obvious to me that this tradition made it easy, even natural, for Japanese peasants and rulers alike to conceive of dividing rights to land in more complex ways than physical property itself could be divided - the right to surface uses, the right to constrain those uses, the right to change those uses in some radical way, the right to sell, bequeath, or transfer the land -- and also to conceive of sharing ownership (by owning shares!) of some of these rights. I cannot help but think that this system of fragmented, interlocking, and shared property rights would have made valuable contributions to the process of creating legal legitimacy to complex rights in the commons in Japan.

The medieval period ended with the unification of Japan in the late 1500s. The

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** The need to do something well does not guarantee success. History is replete with examples of people failing to do what they needed to do, and as long as failure is not fatal a considerable range in levels of performance persists. But presumably during the long-lasting tumult of medieval Japan, natural selection operated among villages: those that experimented successfully with institutional innovation survived and prospered, and those that did not lost their population to more successful villages and then expired.

*** Japan specialists are reluctant to say that the notion of "ownership," meaning possession of a complete bundle of property rights including the right to alienate for cash, existed in Japan before 1867. I see no reason to limit the term to possession of complete bundles -- the owner of a shiki in medieval Japan owned something as tangible and tradable as the owner of a share of ITT does today. It seems clear to me that all the necessary ingredients for "ownership" of assorted property rights did exist, and often in complete bundles anyway by the beginning of, and not just after, the Tokugawa period.

most important features of unification that concern us here were the cadastral surveys of the 16th century and the removal of armed samurai from villages. Although there is considerable controversy over their accuracy and effects,[12] the surveys reportedly vested both rights of use and cultivation and rights of transfer to any plot of land to its actual cultivator, and made the village the primary unit of assessment and tax collection, which included tax responsibility for uncultivated meadow and forest not owned by particular individuals within the village. Whether or not one disputes the claim of some that the cadastral surveys were essentially a nationwide land reform granting full rights in land to the tiller, the surveys did grant full ownership of the commons to villages. The separation of warrior from peasant further left cultivators in charge of their own affairs and agricultural decisions.

The commons underwent two serious crises during the Tokugawa period, and in many places undoubtedly was mismanaged, but the idea of common property survived and the techniques for sound commons management evolved considerably in some villages. The first of these crises was serious deforestation, lasting from about 1570 to 1670, as daimyo built castle towns and great cities emerged.[13] We know that deforestation occured both on common land and on daimyo land (the lord's forest). Observers of the time commented more often about the deforestation on common land, but no one has yet managed to add up the voluminous but scattered evidence from particular cases to see if the destruction was worse on common or daimyo forest.[14] It is certain that deforestation on common land occurred, but it is much more difficult to determine if environmental recovery on degraded commons took place more often after privatization to individuals or through concerted management efforts by villages acting collectively.[15] Nonetheless, Japan's forests recovered, and without the elimination of common forests. Indeed, daimyo enthusiasm for establishing new supplies of high-grade timber may have increased Japan's total forest cover after 1670 above what it had been before deforestation, to the point where rural communities were beginning to worry that they were converting too much grassland to forest. To convince the daimyo to stop creating incentives for villages to afforest daimyo land and their own land, villagers would occasionally resort to arson on the lord's forest, which usually reminded the daimyo of his need for their cooperation.[16]

The second crisis faced by the Tokugawa commons was massive conversion to cultivated fields. In the first century of the Tokugawa period, the commons probably expanded somewhat as peasants got their commons back from now-defunct officials who had claimed forest and meadow as personal property earlier.[17] But this was only regaining lost ground. Thereafter, new cultivated fields were carved out of the commons at an astonishing rate: Hayami Akira believes that cultivated acreage in Tokugawa Japan doubled from 1600 to 1700 and trebled from 1600 to 1867, reaching a total of 4.4 million hectares (but recall that even today Japan still has over 2 million hectares of commons).[18] This most frequently occurred when villages parcelled their commons for individual use for long periods of time. Although these collective village decisions almost always included specific references to the temporary nature of the parcellization and the need to prevent the conversion of common property into individual property, conversion did take place if the villages decided later to allow it. [19] Given that Japan remained closed to foreign trade until after 1856 and was self-sufficient in resources, we have to conclude

that the greatly altered ratio of common to arable land that resulted from the Tokugawa conversions was sustainable within the Japanese eco-system. This is perhaps a testimony to the extraordinary prudence of Japanese villagers about their commons, to have arrived at fairly well-defined common property rights and to have developed in some areas careful rules of restraint on the commons even though they were in fact well short of their environmental limits.

At the beginning of the Tokugawa period, cultivators owned their fields, and throughout the Tokugawa period villages or groups of villages owned the commons (as well as non-landed commons, such as irrigation networks, hot springs, and coastal fisheries). Owning the commons consisted of owning not only the products of the commons, but also the right to decide how best to use the commons, as well as a vote (often veto power, where unanimity was required) in decisions to transfer commons to individual owners or to other villages. In that the commons required an investment in labor -- to enforce use rules, to patrol for intruders and violators, to cut firebreaks for the annual burning of grasslands, or to engage in joint harvesting -- the village also owned a piece of each household's labor as well.

Each village was collectively responsible for paying the tax (to the holdier of the fief or domain) on its arable and non-arable lands. The land registers and tax records that demonstrated a history of having paid the tax on a piece of common land were important evidence in documenting a village's claim to common pasture and forest in disputes. Tokugawa legal records demonstrate clearly that common property benefitted from legal protection, that villages were rural persons entitled to take their grievances to court, and that the courts accorded this form of ownership and property the same weight that it did any other.[20]

The description above is a simple and tidy one, but reality included a few additional complications. First, villages could own usufruct rights on land owned by others (other villages, daimyo, wealthy individuals, shrines, and temples). After the daimyo discovered that their own rapacious demand for timber was deforesting their holdings, a practice emerged whereby a lord would award use rights in his forests to a village in exchange for that village functioning as forest guards watching for other intruders.[21] Shrines and temples made similar arrangements to protect their holdings. In this way, a village with guard status came to own permanent use rights in forests on domain or other large expanses of private land, and a village (or for that matter a single individual) with an ownership share in particular trees planted on land owned by others essentially owned temporary partial use of a forest.

Second, in most domains the daimyo claimed ownership of particular trees (cypress, cedar, cyptomeria, and several other valuable species), no matter what land they happened to grow on.[22] Thus a village could own its commons and almost everything that could be removed from it, but not certain trees. The daimyo's agents might well come along and mark these trees, and watch timber markets to see if such trees appeared for sale without their permission. But as in the situation described above where daimyo had to grant rights to villagers in order to win their cooperation in protecting other daimyo resources, the daimyo would often grant permission to villagers to cut such trees for a small fee, in effect acknowledging the need to pay someone to protect the tree

to maturity and then to engage in the labor of cutting it and transporting it to market.[23] Thus just as the daimyo's ownership of his own forests could become attenuated by a village's ownership of use rights in the forest, so a daimyo's claim to own particularly valuable trees on others' land could be attenuated by the daimyo's need for villagers' help in protecting and then cutting those trees.

Third, many expanses of common land were owned not by one village but by several. This may have been an artifact of the multi-village leagues that emerged in the 16th century - the villages in such a league would sometimes make formal agreements with eachother about the boundaries and use of shared commons[24] -- but it may also have resulted from ecological or political difficulties that would result from trying to divide some commons into smaller pieces. The disputes over common land that most frequently reached Tokugawa courts concerned disputes between villages.[25] There was an understandable trend during the period for multi-village commons to be divided, by mutual agreement or by the courts, into single-village commons to eliminate such controversies, but there were also regions where mu!ti-vi!iage commons survived. (I am fairly confident that these survivals made ecological and economic sense -- the benefits of larger commons exceeded the additional negotiations costs of involving more villages and villagers

Finally, a village with abundant commons could decide to grant access and use rights, on terms of its choosing (for a fee or not, for a limited term or not, for particular products or all, via certain entry roads or not), to other villages in more desperate straits. Granting access to other villages was a way of making temporary additional gains (either in good will one hoped would be remembered and reciprocated later or in plain cash) from a large commons that the village did not currently need full use of, without selling away the opportunity to make fuller use of it later.

Since the village was a corporate owner of its common property rights, how the village defined its members was a terribly important issue. It is almost certain that from the very beginning, the membership unit was the household, represented by whoever was recorded as the household head (usually male), rather than the individual, since all economic accounting had been done in household units since the institution of koseki registers in the 7th century.[26] In the 16th century when self-governing villages emerged, village documents and contracts began to be signed by all cultivators (little as well as big, those without surnames or seals as well as those with them), who were clearly acquiring citizenship rights in the village. The most common pattern in Tokugawa Japan was for village citizenship to be awarded to the farmers who owned arable land and paid tax on it to the domain (the honbyakusho, descendants of those who won both cultivation rights and landowning rights in the cadastral surveys).

At the beginning of the Tokugawa period this rule, if applied to fairly egalitarian villages of owner-cultivators, would have had democratic results. But as concentration of land, the emergence of tenancy, and migration between villages took place, the rule of honbyakusho citizenship would begin to exclude the unfortunate. A village that followed this rule quite strictly would exclude from citizenship and from entitlement to the commons all members of headless households (households without an adult male), non-farming households, branch (bunke) households that had not been given rights independent of

their main house (honke), recent arrivals, vagrants and wanderers, outcastes, and perhaps even tenant farmers (kosakunin, those who had cultivation rights and possibly their own subtenants, but no longer the attached landowning rights). Some villages coped with the flux in these categories by allowing tenant households eligibility in the commons too. After all, large numbers of village residents ineligible to use the commons could pose quite a problem for commons management, and eligible users might have preferred to extend some rights to them rather than cope with sabotage and mutiny.[27] Legally, the jural person that owned the commons was the village itself, but since the village was free to define its membership by its own rules, and could exclude some persons who lived in the village from citizenship and from the commons, it might be more accurate to say that the common property user group (iriai shūdan) owned the commons. (As we will see, this distinction would become legally important after 1867.)

Moreover, headless households, impoverished tenant households, and other families that might otherwise lose their rights to the commons might actually thereby win especially privileged access to the commons instead. Villages in the Tokugawa period were collectively responsible for paying their assessed tax to the domain, and to collect that sum from their members by whatever means they liked. Just as it was in the daimyos' interest to make sure that villagers generated enough surplus from which to pay taxes, so it was in the villages' interest (and in the richest families' interest) to make sure plenty of households were able to share this tax burden.[28] We have documented instances in which villages used their commons as a welfare insurance scheme to help households that had become too poor to pay their proper share of taxes.[29] The village (meaning all of the other taxpaying households) would take on the tax burden of the defaulters -- who presumably had no substantial land or other assets within the village by this point -- and allow them to relocate to the commons itself, to live and farm for a few years on a tax-free and rent-free basis in order to regain solvency. In a village with this custom, the eligible users of the commons therefore included a regular class of users with full ownership and decision-making rights in the commons who mutually agreed to limit their access to the commons in order to sustain the productivity of the commons, and an underclass of extremely unfortunate but therefore privileged users, who might receive unlimited access to the commons at the same time they lost decision-making privileges about the commons. Thus in this situation all villagers, whether full citizens or not, owned a share of eligibility for welfare support from the commons.

The village, or more correctly the group of eligible users of the commons, determined what could be extracted from the commons and what limitations and rules applied. In brief, the user group owned the products of the commons collectively and apportioned them as it saw fit. The entitlement to products from the commons could range from an equal share per household for some items, to different-sized shares for other items, based more on a household's ability to invest labor in the commons. (The

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* Karen Wigen pointed out to me that even in a village where distribution of wealth among households might be fairly egalitarian, tremendous inequities might be concealed within households, which could include poor relations and indentured servants serving at the mercy of the household head.

existence of mixed arrangements is is one reason it is so difficult to figure out if the commons had a egalitarian or inegalitarian distributive effect on communities.)

The user group also governed the extraction of products from the commons for cash sale. In most communities, products from the commons could not be appropriated by individuals and sold for cash, although they could be harvested collectively and sold for cash by the village itself. The relationship between the commons and the cash economy is problematic. Most scholars agree that the arrival of a cash economy threatens common property management, and there is no doubt that in Japan the conversion from subsistance agriculture to cash crop agriculture with tax payment commuted to cash went hand in hand with the decision in many villages to divide the commons into individually owned parcels. In fact, one might even argue that in the Japanese ecosystem (where rainfall is generous and fairly reliable and the climate moderate), the only services provided by the commons that could not be guaranteed after parcelling would be insurance against risk and watershed management (requiring healthy vegetative cover with some large proportion in forest). As farmers became richer, they might feel less need for the commons as insurance, and the continuing high price of wood (combined with very secure long-term individual property rights and the already-accomplished discovery of deforestation as an outcome worth avoiding) guaranteed sensible maintenance of forests on individually-owned private land as well. Indeed, one could actually argue that there were few reasons for Japanese villages to maintain their commons as common property in the face of the spreading cash economy. The fact that so many did is in part testimony to the soundness of the management routines they developed over time - meaning that individual parcellization did not seem so advantageous by comparison -- and to the flexibility with which they confronted the cash economy.

A village that frowned on individual cash earnings from the commons was still free to decide in particular circumstances to harvest a product from the commons for cash sale, with the funds either going to the group for its expenses or being divided into equal shares per household. This might have happened when the community faced an unusual and occasional need for cash, or when a particular commons happened to be an excellent source of some product that could be cropped and sold on a sustainable basis for the market without damage to the more fundamental purposes of the commons (providing watershed management and crucial agricultural). Villages might also rent out a commons with a particular product to others who contracted for the right to extract that product -- this was the standard arrangement for charcoal-making, and it was also used to accommodate cultivation of fields within the commons. Thus villages did have ways of using their commons for cash income for the village as a whole, and of converting large amounts of the commons to special uses when the market was tempting enough. There is also evidence that in some communities individual eligible users of the commons actually sold their entry tickets to others (probably with village permission in some instances, without it in others), an adaptation that essentially puts access to the commons on the market.[30] Using the commons for cash income in response to new market opportunities could pose a threat of overuse. But cohesive communities with face-to-face contact where many individuals used the commons were also capable of assessing damage to their commons, and of changing their rules so that no one could extract

dangerously large harvests of formerly unregulated products from the commons.[31]

With these patterns of ownership, protected by law, honored by the courts, property rights and sound management on Japanese commons survived the Tokugawa period even though villages chose to convert much common land into individually-owned cultivated fields. Markets had proliferated during the 15th century, and during the Tokugawa period the cash economy reached all comers of Japan. Internal markets linked all of Japan together. The deforestation of the 17th century was reversed without abolishing the commons, and indeed afforestation was also accomplished on common land. With property rights in the commons already securely theirs, those villages whose over-harvesting had contributed to deforestation - those with bald mountains, silted rivers, and flooded fields -- had both motive and means to rescue the productive value of their commons. Many proved capable of understanding the causes of overuse and designing rules and enforcement schemes to restrain use, and thereby restored their forests. Japan continued into the 19th century with healthy forest cover on vast expanses of common land.

The Assault on the Commons in the Modern period (1867-present)

Tokugawa shogunate collapsed in 1867 and was replaced by a government of young, dynamic, energetic, patriotic modernizers, bent on saving Japan from Western imperialism (by using precisely the same methods as the imperialists if necessary). They were determined to "modernize" Japanese institutions, whatever that meant, by adopting the best and strongest ideas and institutions from all over the world. The Meiji reforms included rewriting the law into a new Civil Code and conducting (again...) a massive registration of lands to improve the collection of taxes. These two developments worked in tandem, or in some ways against eachother, to bring common access rights to village commons into the modern era with full legal protection, but also to make it extremely difficult for villages to register ownership of land on which they had common access rights as their common property in order to make it eligible for that protection. The new policies dealt separately with common use rights or iriai [*****] rights (protected in the civil code) and with registration of land ownership (the target of the land registration campaign). Such a separation had not been problematic in the past, but many difficulties now emerged from these two policies.

[*****] From this point on I will use the Japanese term, iriai, to refer to the village-owned rights of common access and use that evolved before 1867. Iriai land therefore refers to the land to which iriai rights attach (no matter who owns the land itself), and the iriai user group refers to the community of households with full iriai rights (not necessarily the same as all residents in a community, because an an iriai user group has the right to determine its own criteria for membership). Using the Japanese term should also reduce confusion between iriai rights that are not individually tradable and collective property whose individual shares are tradable. Even if I consistently used two different English terms for these two forms of ownership, these terms and their synonyms in English (collective, common, communal, shared, joint) would seem so similar as to make it difficult for readers to remember which form was which.

The Civil Code guaranteed the protection of individual private property rights, just as Western law did and as the new Meiji constitution required, but it also protected two forms of collective private property. The first was iriai rights, the portion of pre-1867 village common property rights consisting of entry, use, and extraction of the products of the land. This was conceived here as separable from land ownership and therefore **theoretically** possible on any land to which iriai rights of entry, use, and extraction had been attached before 1867, no matter who ended up owning the iriai land itself after the land registration was completed. Articles 263 and 294 of the civil code provided that iriai rights would continue to exist and would function according to local custom, meaning that the iriai user groups that continued to possess iriai rights would each determine their internal rules. Unfortunately, Japan's lawmakers never got around to spelling out the forms of iriai ownership or its consequences in various contexts. This omission forced many iriai user groups into the courts to have judges do what legislators had failed to do.

A crucial consequence of declaring that iriai rights would operate according to local custom was that almost anywhere in Japan, then, iriai rights belonged to households and not to individuals, could be sold only collectively and not by individual rights-holders, could not be claimed by newcomers just because they had moved into a new community where there was an existing iriai user group, and were forfeited when a user moved away. Iriai rights-holders made decisions about their membership and their resource use collectively, using a unanimity rule; because individuals could not sell their shares, most groups adopted a unanimity rule in order to make it impossible for the group to sell the rights of any individual member without that member's consent.

The second form of collective property protected by the Meiji Civil Code is a very simple extension of individual property that we encounter in most societies: individual shares of collective property rights (kyôyûshoyûken), a form of property ownership that can extend from the office coffee pool to a consumer cooperative to huge joint stock corporation. In this form of collective property, individuals may buy and sell their shares without consulting eachother or the group, and their place of residence is irrelevant. The shareholders may vote, again according to a decision rule of their choosing (not necessarily a simple majority vote), to make decisions about the disposition or operation of their joint property. Whenever the decision rule requires less than unanimous agreement it becomes possible for this kind of collectivity to sell property even when some members dissent; they still own their shares and can sell them individually if they like.

The difference between this form of collective property ownership and iriai rights may seem like a minor technical matter, but the difference has been the subject of immense conflict, including bloodshed, in the last century. There have been lawsuits between iriai households and newcomers to town who wanted a share (and cut it down), between iriai households and former iriai households who moved away but still wanted a share of products or income from the commons, between iriai households and persons who asserted that they have acquired title to individually salable shares of collective property, and between iriai households and registered iriai representatives who began to treat the commons as their exclusive personal property. Some conflicts are similar to the Brooklyn Bridge problem. If a gullible buyer believes a seller's claims that iriai rights attached to the land go with the title to the land and tries to exercise the rights he thinks

he bought, then the iriai user group may have to resort to the courts to persuade the buyer that those rights did not transfer with the title to the land, and that the buyer did not acquire iriai entitlements because they were not for sale. If the iriai user group can convince the court that it is an iriai user group with iriai rights, the courts invariably decide in favor of the iriai group, because the law so clearly permits an iriai user group to base its decision rules on custom.[32]

The land registration campaign that began in 1873 (chiso kaisei) was intended to determine and record the ownership of land itself - the right to use, change the use of, or transfer the land, **except** as attenuated by the existence of any iriai rights that might be attached to that land. The initial objective of the land registration campaign was not to destroy iriai rights nor to alter the uses of land to which iriai rights were attached. The primary objective was simply to get land titles straight for purposes of taxation. The first step in land registration was to distinguish between government (kan) and people's (min) land, and the government issued an initial set of guidelines and instructions that clearly indicating that village iriai land should, when in doubt, be registered as people's land.

However, the government's finances were shaky, and nationalization of land was a very attractive mechanism for acquiring assets that could then be sold off to build the government's treasury. It also provided opportunities for graft, and many Meiji leaders were able to purchase from the government prime land (land near the imperial palace in Tokyo, what later became Ueno park, most of the forests of the Kiso and Izu regions, and so on) very cheaply, even by the standards of the day.[33] Recognizing that the original criteria for land classification would result in very little national land, the government changed the guidelines, so that only villages whose iriai land had been disputed in the Tokugawa courts for which there were extant records would be able to save their iriai land from nationalization. Villages that had lived peaceably or had solved disputes on the commons through compromise without resorting to the Tokugawa courts, or whose records had been destroyed or burnt (a very frequent problem for Tokugawa and even modern records), lost out.[34]

If iriai land survived the kan-min classification, it was technically possible, but **extremely** difficult, for an iriai user group to register its land in the names of the appropriate iriai households, and even to specify the ways in which iriai rights are acquired, transferred, or forfeited.[35] Instead, most groups opted to register their iriai land in the names of a few representative individuals (the most frequent choice), as shrine land, or as the collective property of a list of individuals rather than households. These options carried serious risks. When iriai land was registered as the titular property of a few representative individuals, and they then went bankrupt, the iriai land might be used to settle their individual debts and the iriai rights owners would have nothing left. Or these representatives might later attempt to claim unencumbered ownership of the land. If iriai rights holders did not quickly mobilize to protest, their silence would not only award de facto ownership to the representative individuals, but might well doom any chance of asserting de jure claims later. Alternatively, registering the land as the collective property of individuals brought the risk that these property rights might later be considered the "modem" form of collective property whose individual owners may sell their shares, and not irai rights at all. The problem here was that although iriai rights were supposedly real, the mechanisms for land registration made it virtually impossible to register ownership as

iriai land rather than the other form of collectively owned land. Thus the burden would always fall on the iriai user group to protest any confusion of iriai rights with unencumbered ownership by representative individuals or with collectively owned individual rights, and to drag out the historical evidence that what preceded the inappropriate registration of title was in fact a long record of iria usage.

Another policy of the Meiji government was to consolidate the 70,000 villages of the Tokugawa period (which were private taxpaying citizen-surrogates more than they were arms of the government) into a smaller number of larger municipalities in order to permit closer supervision and ensure more uniform adoption of national policies at the local level. The amalgamation (gappei) policy also turned out to be a clever method of destroying iriai rights, which were classified as private property rights in the civil code. In transforming the private possessions of private entities into the public property of new municipalities, this policy vaporized iriai rights, which as private property rights could not be held by public bodies.[36]

No law, national government regulation, prewar supreme court (Daishin'in) ruling, or postwar Supreme Court verdict has ever abolished or even renounced the existence of iriai rights per se. On the contrary, many government statements repeatedly acknowledged the existence of iriai rights, not only on private land but also on public land and even on land owned by the imperial family. However, having nationalized much land, the government found its freedom of action considerably constrained on land to which iriai rights attached, and its policies shifted toward the attempt to eliminate iriai practices on government land.

As with all rights, the only iriai rights that mattered were those held by assertive user groups that protested infringement of their rights. As national and prefectural authorities pressed harder, assertive farmers protested with the tried and true methods that we see around the world: massive cutting, overuse, resource degradation, and even arson on their former commons. They felt that if they couldn't have the use of their resources then nobody else would either, and they also calculated that the authorities might come to their senses and restore these use rights as a preferred alternative to destruction and political turmoil. That is precisely what happened in Yamanashi Prefecture (the "paradise" or "Mecca" of iriai rights according to Hōjō Hiroshi) after farmers used these methods to protest a central government regulation requiring them to ask the permission before they exercised their iriai rights, and an accompanying prefectural regulation denying farmers the right to sell what they took from the commons if they had not asked for permission to enter their commons.[37] Yamanashi prefecture soon found itself contracting with the farmers to protect government forest (formerly the farmers' iriai forest) rather than destroy it, a policy similar to what daimyo had to do centuries earlier to preserve their forests as well.[38]

To summarize the Meiji assault on the commons: the Meiji government honored the existence of iriai rights in the civil code and in many of its formal statements, but otherwise launched a massive attack on these rights. It nationalized a great deal of land in ways that made it very difficult to preserve iriai rights on that land, it amalgamated villages into new public municipalities that could not possess private iriai rights, and it set about trying to eliminate iriai usage on public lands. Many iriai user groups have

dissolved and their iriai rights have vanished, because they did not have the energy or the resources or the documentation to win. It is perhaps remarkable that 2.5 million hectares of land in Japan are still regarded as land to which iriai rights attach, given the extraordinary hurdles that these iriai rights holders have faced to document their rights, register their land, fight amalgamation, and then protest interference with their rights in practice.

Nonetheless, many iriai rights holders continued to fight, even though they did not always win. In 1916 the supreme court (Daishin'in) ruled that registration of land as government-owned in the Meiji period automatically extinguished iriai rights on that land, and subsequent rulings relied on this precedent.[39] The struggle continued through the war years. Iriai rights on national forest land suffered seriously during the war. Not only were these rights still unrecognized by both courts and government, but the military's appetite for timber, the conversion to charcoal-powered vehicles, and toward war's end the human need for fuelwood meant that the forests themselves were ransacked. The actual trees to which iriai rights holders claimed entitlement were disappearing from forests now being mined on an emergency basis as non-renewable resources.

After the war, Japan underwent significant legal reform in other areas, but the schizophrenic combination of legal protection and government enmity for iriai rights continued. The postwar civil code maintained the provisions preserving iriai rights exactly as before, and new disputes continued to require the courts to determine the conditions under which iriai rights survived. However, the postwar courts began to display a more hospitable attitude toward iriai rights, particularly on public and national land.[40] The fanners in the valley north of Mount Fuji, whose eleven-village commons had been commandeered by the Japanese Imperial Army before the war and began to be used by the American occupying forces as a practice ground in October 1945, demanded compensation for iriai uses made dangerous or impossible by the military drills, and an out-of-court settlement. In fact, the Japanese government, whose Self Defense Forces took over the practice ground after the end of the American occupation, has paid many millions of dollars over the years to the Kitafuji iriai rights holders for rental and property damage, even though the land under the Kitafuji commons is government property.[41] Slowly, a new trend in case law began to emerge, and scholars deeply concerned with the contest between personal rights and government prerogatives investigated the question of iriai rights and began lending legal assistance to litigants in court.[42] Finally, in 1973, the Supreme Court rejected the 1916 ruling (which was of questionable validity anyway after 1947, given the fact that Japan now had a new constitution that the prewar court had not been charged to defend) and ruled quite clearly that iriai rights **can** exist on national land.[43]

But in spite of conflicting evidence over whether iriai rights really impeded capturing the full economic value of the land,[44] the government (that is, the conservative party whose primary objective for the nation was rapid industrialization) was still smitten with the idea that iriai rights were archaic. In 1966 the Diet passed the Common Forest and Grassland Modernization Law [Iriai rin'ya nado ni kakaru kenri kankei no kindaika no enjo ni kansuru hôritsu, or kindaikahô] Proponents of the law argued that it constituted a reversal of a century of government hostility to iriai rights because it aimed only at converting these rights to modern individual or collective private property, but not to

extinguishing these rights. Opponents of the law considered conversion tantamount to extinction anyway.[45]

This law was intended to complete the transition to "modern" capitalism by offering assistance to any iriai rights holders who wanted to convert their rights to ordinary collective rights or even individually-held property rights.[46] This help came particularly in the form of guidance through the legal hoops involved in changing ownership forms and land use, up through and including all the necessary permits from appropriate government offices. The law was particularly concerned with the fact that iriai rights are so frequently held by persons other than the entities now owning the land itself, and thus constrained the freedom of the landowners. This was of course a legacy of Meiji government's policy of forcing the registration of land into a classification scheme that did not easily accommodate iriai rights. Had the government left well enough alone, this separation of access and use rights (iriaiken) from land ownership (tochi shoyūken) would never have taken place. Between 1967 and 1986, the government processed 5586 requests involving 503,375 hectares, or about 20% of the total iriai acreage that remained after the war.[47] Interestingly, no requests (or very few) came from certain prefectures (Ibaraki, Chiba, Saitama, Yamanashi, Shizuoka, Aichi, Tokushima, Kagawa) that still have abundant iriai land and might also be thought to be attractive sites for converting land to some of the "modern" uses envisioned by the law's proponents (ski lifts, golf courses, residential construction, etc.).[48]

Since the 1973 Supreme Court ruling, iriai rights have become considerably more secure than any time in the preceding century. In effect, iriai rights are now as secure as their owners' supply of energy for exercising them -- they no longer face official opposition from the courts. Of course, Japan is now a heavy importer of food, fuel, and most other raw materials, and as long as those imports remain inexpensive, and the nation rich, Japan's forests and meadows are not heavily used for their natural products. They will always be needed for their environmental services -- watershed management, cleansing of air, perhaps even a bit of biodiversity and natural habitat. And in a nation whose population has quadrupled, thanks to imported sustenance, in 140 years, these lands are rapidly appreciating in value for tourism.

Today, after a century of confusion and struggle, it is clear that iriai rights holders own rights to the uses and products of the land, including the rights to non-agricultural opportunities. If some other entity owns the land, its use rights are constrained by the existence of iriai rights on the land, which have tangible value that destroyers or purchasers must pay for. If the national government wants to alter the use of land it itself owns and in so doing destroy the value of iriai rights on that land held by local people, it must compensate those people. If a hotel chain wants to build on land it has purchased, to which iriai rights are attached, it must also buy or rent the iriai rights it interferes with. If a manufacturer wants to build on the shore of a productive fishery, it will have to buy the fishing rights it destroys from the fishing cooperative that owns them.

Lessons

The evolution of property rights in the commons in Japan carries several messages

to today's world. First, the resilience, durability, and flexibility that commons have demonstrated suggest that this form of property rights is **not** fundamentally defective or inconsistent with "modern" institutions. Japanese specialists on iriai rights argue that even this form of non-tradable rights (as opposed to the non-iriai form of individually owned shares of collective property) does not inhibit investment on the land or efficient land use. They point out that the real assault on the commons since 1867 has come not from natural economic forces persuading iriai user groups to sell their iriai rights and thereby sell off the commons, but from government policy to nationalize the land, amalgamate villages in order to extinguish iriai rights, and in other cases make iriai rights very difficult to substantiate in court. Had the government not nationalized much forest land in the Meiji period, and had the Forestry Agency not adopted the official policy denying the existence of iriai rights on public land, there would today be far less conflict and confusion. Much contemporary conflict comes from the government policy, not from any natural or inevitable evolution of common property arrangements themselves. Indeed, with increasing land values today, Iriai rights holders are now very reluctant to sell. Instead they have developed modern forms of use (group contracting for instance) to capture greater gains. The fact that the land is owned in common, and the fact that in Japan iriai rights are owned by households, spatially based, and not tradable, do not seem to have inhibited investment in new uses or changes in use.

A second message is that the surrounding society must regard these rights as legitimate and offer them protection in order to capture the environmental benefits they can generate. Medieval and Tokugawa authorities in Japan had no apparent emotional or intellectual difficulties with this (since they had no concern with changing their ways in order to become "modern") -indeed, they treated iriai rights as a rather obvious form of private property that they had an interest in protecting in order to make sure peasants could pay their rent or taxes -- and as a result a sturdy legal basis for iriai rights evolved in Japan. The Meiji modernizers who accepted conventional paradigms of exponential development (which have now fallen into disfavor) had mixed feelings about the issue, but it appears that their attitude was what caused the real difficulties, not the reality or the existence of iriai rights. Slowly this has changed, and iriai rights are a part of today's Japan, with a niche in property law and increasing favor from the courts. Strong legal protection of common property rights is essential in any setting for the system to work.

A third message can be derived from the confusion during the last century over two different forms of collective ownership. The Japanese government created a legal mess for itself that it probably did not have to create. It would take considerable empirical research to determine whether the household-owned, spatially-based, non-tradable iriai form actually produces different economic and environmental consequences from the more familiar individually-owned tradable collective property. In theory, it is probably highly desirable to have co-owners with similar needs for resources from the commons, with the ability to limit their numbers even when faced with newly-arrived potential claimants (this is part of the exclusion that is crucial to limitation of use on a commons). These considerations make me suspect that the iriai form has much to recommend it when environmental health is the fundamental objective, but one still might be able to design some sort of amalgam of the two forms. In any case, the lesson that is clear from the Japanese case is that if both forms of collective property ownership are going to exist,

the legal system must make it easy for the iriai-type of user group to form and register itself officially, and the law should be specific and elaborate about how these rights are to function, so that user groups can spend their time exercising their rights rather than fighting for them.

A fourth message comes from the cleverness of a common property rights system in segmenting different rights, so that it becomes possible for the interested community to own the rights that concern them. That is, the separate holding of different rights in the same piece of land, what so greatly troubles the Japanese government today, may in fact be a solution to the problem of environmental externalities. Individuals can own products or access to products - e.g., rights to the flow of benefits that can be sustainably extracted from the commons — but the community owns the environmental services provided by the commons -- e.g. rights to the capital stock that produces extractable benefits. The more important those environmental services become in a congested world, the more we **must** remove some of the rights that used to be in the fee-simple bundle from the landowner, and the more we have to intrude upon what the landowner would like to think is his sovereignty. The particular uses that are capable of generating tremendous negative externalities if owned in a segmented fashion need to be owned by a group large enough to contain or internalize the externalities.

A final message from the Japanese experience is for people anywhere. If you need to hold a resource in common, either as insurance against risk or to provide vital environmental services, **it can be done,** and here is one successful model of the knowledge, the technique, and the legal support that are needed. The story of nationalization of land in Meiji Japan and of the resulting compacts and court cases that have affirmed |riai rights reminds me very much of what India and Nepal have done (nationalization and now de-nationalization of village forests) and what is routine in many developing countries. Governments in these countries may also be on the point of discovering, as various Japanese governments from the early aristocracy to the shogunates to modern constitutional monarchy have also done, that the best way to get sustainable use (and all-important tax revenue) out of a resource one cannot patrol personally is to assign a good portion of the rights to the resource to those who live there, turning them from potential overusers of a resource not theirs to vigilant protectors of a resource now very much their own. Indeed, the wave-like course of elite-peasant relations in Japan seems to suggest that whenever governments forget this lesson, civil disorder and resource degradation teach it to them again, and once again they must devolve property rights on the people best equipped to enforce limitations on access. To some observers this looks as though the government is co-opting protesters, and to others it looks as though the common property rights activists are blackmailing the government. To me it looks like a healthy devolution of property rights and power, and I like it not just because it suits my democratic ideals, but more importantly because it has the practical benefit of turning resource saboteurs into resource protectors. It would be nice if governments and the international donor community could also learn this lesson, in a few years rather than in a few centuries, so that environmental damage does not have to continue much longer before we initiate repair and recovery.

ENDNOTES

1. Watanabe Yôzô and Nakao Hidetoshi, Nihon no shakai to hô (Tokyo: Nihon hyôronsha, 1975), 45-48, and Kawashima Takeyoshi, "Iriai ken kenyû no genjô to mondaiten," parts 1 and 2, Jûrisuto (682: 1979), 70-76, and (683: 1979), 120-127.

2. On successful Japanese villages, see "The Japanese Experience with Scarcity: management of traditional common lands," Environmental Review (6:2, Fall 1982), 63-88, and "Management of Traditional Common Lands (iriaichi) in Japan," 63-98, in Making the Commons Work: Theoretical, Historical, and Contemporary Studies, edited by Daniel Bromley, David Feeny, Margaret A. McKean, Pauline Peters, Jere Gilles, Ronald Oakerson, C. Ford Runge, and James Thomson (San Francisco: Institute of Contemporary Studies, 1992). A longer version with more historical material appears in Proceedings of the Conference on Common Property Resource Management: April 21-26, 1985, Annapolis, Maryland), co-edited with (in alphabetical order) Bromley, Feeny, Gilles, Oakerson, Elinor Ostrom, Peters, Runge, and Thomson (Washington, D.C.: National Academy of Sciences, 1986), 533-589. See also "Success on the Commons: A Comparative Examination of Institutions for Common Property Resource Management," Journal of Theoretical Politics (4:3, July 1992), 247-281.

3. I therefore follow the new tradition of Runge, Bromley, and Cernea, rather than the old tradition of Gordon, North, and Thomas. See Carlisle Ford Runge, "Common Property Externalities: Isolation, Assurance and Resource Depletion in a Traditional Grazing Context," American Journal of Agricultural Economics (63: 4, November 1981), 595-606; Daniel W. Bromley, "Property Relations and Economic Development: The Other Land Reform," world Development (17:6), 867-877; Daniel W. Bromley and Michael M. Cernea, "The Management of Common Property Natural Resources: Some Conceptual and Operational Fallacies," World Bank Discussion Papers #57 (Washington DC: World Bank, 1989); H. Scott Gordon, The Economic Theory of a Common Property Resource: The Fishery," Journal of Political Economy (62:2, April 1954), 124-142 (reprinted in Dorfman and Dorfman, 130-141); and Douglas C. North and Robert Paul Thomas, The Rise of the Western World: A New Economic History (Cambridge: Cambridge University Press, 1973).

4. Garrett Hardin, "The Tragedy of the Commons," Science (162: 13 December 1968), 1243-1248 and most recent piece he sent me last fall.

5. William Wayne Farris, Population, Disease, and Land in Early Japan, 645-900 (Cambridge: Harvard University Council on East Asian Studies, 1985).

6. For a comprensive explanation of authories' interest in granting rights in order to raise tax revenue, see Itai Sened, "A Political Theory of the Evolution of Rights: A Game with Asymmetric Information," presented at the American Political Science Association, San Francisco, 30 August 1990. On governments' choices of revenue-collecting mechanisms, see Margaret Levi, Of Rule and Revenue (Berkeley and Los Angeles: University of California Press, 1988).

7. Kozo Yamamura, "The Decline of the Ritsuryô System: Hypotheses on Economic and Institutional Change," The Journal of Japanese Studies (1:1, Autumn 1974), 33-38.

8. Thomas E. Keirstead, "Fragmented Estates: The Breakup of the Myô and the Decline of the Shôen System," Monumenta Nipponica (40:3, Fall 1985), 311-330.

9. On the emergence of the self-governing villages (sô), their claims to land, their surprisingly democratic inclusion of small fanners (kobyakusho) along with rich ones as full members, and their multi-village political leagues (sô-ikki), see Nagahara Keiji, "The decline of the shôen system" and "The medieval peasant," Chapters 6 and 7 in Kozo Yamamura, editor, The Cambridge History of Japan: Volume 3 -- Medieval Japan (Cambridge: Cambridge University Press, 1990), 260-343, and Nagahara Keiji with Kozo Yamamura, "Village Communities and Daimyo Power," in John Whitney Hall and Toyoda Takashi, editors, Japan in the Muromachi Age (Berkeley: University of California Press, 1977), 107-123. The argument that the need to manage the commons was a major impetus to the formation of self-governing communities is the principal thesis in Kristina Kade Troost, "Common Property and Community Formation: Self-Governing villages in Late Medieval Japan, 1300-1600," (unpublished Ph.D. dissertation, Harvard University, 1990). See also Troost, "Common Property and Community Formation: The Origins of Self-Goveming Villages in Late Medieval Japan, 1300-1500," paper presented at the Washington and Southeast Regional Seminar on Japan, Williamsburg, 27 April 1991.

10. The theoretical arguments are laid out in Harold Demsetz, "Toward A Theory of Property Rights," American Economic Review (57:2, May 1967), 347-359; and Armen Alchian and Harold Demsetz, "The Property Rights Paradigm," Journal of Economic History (33:1, March 1973), 16-27. Two well-known applications in the Western context are Terry L. Anderson and Peter J. Hill, "From Free Grass to Fences: Transforming the Commons of the American West," in Garrett Hardin and John Baden, editors, Managing the Commons (San Francisco: W.H. Freeman, 1977), 200-215 (this is a revision of "The Evolution of Property Rights: A Study of the American West," Journal of Law and Economics (18:1, April 1975), 163-179); and Douglass C. North and Robert Paul Thomas, The Rise of the Western World.

11. Troost, "Common Property and Community Formation," (1990, 1991).

12. The cadastral surveys were conducted first in some areas by individual daimyo and were then completed by Toyotomi Hideyoshi in 1582-1598, just in time for Tokugawa leyasu to take over the reins of power in 1600. There is considerable controversy over who ought to get how much credit for these, how careful and accurate they really were, and how consciously egalitarian they were meant to be. Hideyoshi was of peasant origin, and it is tempting to think that he intended the cadastral surveys not only as a device for ensuring regular tax collection but also as a way to give land to the cultivators all along. However, his desire for peasant cooperation with his new regime offered an equally practical incentive for some egalitarianism, and there is other evidence that Hideyoshi was above all pragmatic, not ideological. See Mary Elizabeth Berry, Hideyoshi (Cambridge: Harvard University

Press, 1982), especially 102-146; and Philip C. Brown, "The Mismeasure of Land: Land Surveying in the Tokugawa Period," Monumenta Nipponica (42:2, Summer 1987), 117, note 3.

13. This deforestation crisis and Japan's recovery from it are described in Conrad Totman, The Green Archipelago: Forestry in Preindustrial Japan (Berkeley: University of California Press, 1989).

14. See Chiba Tokuji, Hageyama no bunka (Tokyo: Gakuseisha, 1973), 160-165; and Kären Wigen [Lewis], "Common Losses: Transformations of Commonland and Peasant Livelihood in Tokugawa Japan, 1603-1868," (M.A. thesis in Geography, University of California at Berkeley, 1985), 92-95.

15. I attempt to analyze some of this conflicting information in McKean, Collective Action and the Environment in Tokugawa Japan: Success and Failure in Management of the Commons," paper presented to the Association of Asian Studies, San Francisco, 25 March 1988.

16. Wigen, 79-81.

17. Wigen, 109-111.

18. Hayami Akira, "The Population at the beginning of the Tokugawa period," Keio Economic Studies (4: 1966-1967), 1-28.

19. See Wigen, 73-90, who also examines the confusion over whether parcellization had egalitarian or inegalitarian distributive effects on the villages where it took place.

20. Dan Fenno Henderson, Conciliation and Japanese Law: Volume I -- Tokugawa (Seattle: University of Washington Press, 1965); and Henderson, Village "Contracts" in Tokugawa Japan: Fifty Specimens with English Translations and Comments (Seattle, University of Washington Press, 1975). A crucial source of information about Tokugawa law is the multivolume collection of law and cases collected by John Wigmore, Law and Justice in Tokugawa Japan (Tokyo: University of Tokyo Press, 1967-present), which is cited below as Wigmore, with information about the particular volume used in each citation.

21. See Wigmore, V - Property: Civil Customary Law (1971), 76-88.

22. In Akita domain, the list of "banned trees" (owned by the lord wherever they were) grew from 2 species to 7 by 1706, 9 in the 1750s, and 17 species by 1800. See Conrad Totman, The Origins of Japan's Modern Forests: The Case of Akita (Honolulu: University of Hawaii Press and Center for Asian and Pacific Studies, 1985), 27. See also Totman, Green Archipelago, 83-115; and Wigmore, V -- Property: Civil Customary Law (1971), 10.

23. See Wigmore, V - Property: Civil Customary Law (1971), 76-88.

24. Nagahara Keiji mentions a league from the Ise area that produced an agreement with 350 signatures on it concerning mutual boundaries for common land. See Nagahara Keiji, "The medieval peasant," 335.

25. See Wigmore, Vl-E, Property: Legal Precedents (1979), particularly cases 256, 263, 264, 265, pp 8-173. On boundary disputes concerning multi-village commons, see cases 160, 161, 163, 164, and 165, pp 154-272, in Wigmore, VIB - Property: Legal Prececents (1978), 154-272.

26. Farris, Population, Disease, and Land in Early Japan, 645-900, 18-49.

27. Smith believes that the need of disenfranchised villagers for access to the commons was a factor that forced many Tokugawa villages to democratize their criteria for citizenship. Thomas C. Smith, The Agrarian Origins of Modem Japan (NewYork: Atheneum, 1959, 1966). 182-188.

28. Stephen Vlastos argues that the practice of collective responsibility for taxes not only gave the richest peasants an interest in preventing others from becoming destitute or "broken" households, but that it also constituted a foundation and incentive for collective mobilization to protest excessive taxation. See Peasant Protests and Uprisings in Tokugawa Japan (Berkeley and Los Angeles: University of California Press, 1986).

29. Instead of the usual terms for common land (muramochi komono nariba [village-held place for little things] or iriaiyama magusaba [enter-meet mountain place for horse fodder]), these "welfare commons" might be called hinja sodate yama [poor people's support mountain] as if they were dedicated to that purpose. See Wigmore, V - Property: Civil Customary Law (1971), 70-76. Chiba Tokuji gives the term hinja hagukumi yama [poor people-nurturing mountain] in Hageyama no bunka, 158.

30. Wigen, 72-73.

31. It is clear that the villages I studied north of Mt. Fuji altered their rules and devised new limitations in response to new use patterns on the commons, and restored their commons to health. See McKean, "Management of Traditional Common Lands," (1986), 553-560.

32. Watanabe Yôzô and Nakao Hidetoshi, Nihon no shakai to hô (Tokyo: Nihon hydronsha, 1975), 75-77.

33. Hôjô Hiroshi, Mura to iriai no hyakunen shi: Yamanashi ken sonmin no iriai tôsô shi (Tokyo: Ochanomizu shobô, 1978) [hereafter, Yamanashi], 43.

34. Hôjô, Yamanashi, 42-59.

35. I have encountered the somewhat contradictory assertions that this was either extremely difficult, impossible, or not technically impossible, in various sources, but I have not yet encountered an explanation of what was so formidable about the procedure. It is

easy to imagine that it would have required considerable legal assistance not readily available to Meiji farmers, although that makes what they did do all the more remarkable. The three buraku of Yamanaka-ko village in Kitafuji each used elaborate registration procedures for their single-village commonses. The 92 households in Hirano and the 38 households in Nagaike opted for collective registration to create what is known as kyoyu iriaichi (collectively-owned iriai land), and the 198 households of Yamanaka registered themselves as represented by Asama shrine. See Kamimura Masana, Sonraku seikatsu to shûzoku, kanshû no shakai kôzô (Tokyo: Ochanomizu shobô, 1979), 269-284.

36. There was a procedure by which old villages could protect their property from being swallowed up by new municipalities. They could become zaisanku (property-owning parts) within the new municipality. However, the legal profession is utterly divided over whether zaisanku are iriai- possessing private entities or public bodies unable to hold private iriai rights. See Watanabe and Nakao, Nihon no shakai to hô, 50-52, 79-83.

37. Hôjô Hiroshi, Yamanashi, 52-57.

38. Hôjô Hiroshi, Yamanashi, 72-75.

39. Watanabe and Nakao, Nihon no shakai to hô, 86-87.

40. For a review of major postwar cases, see Nakao Hidetoshi, "Iriaiken to saiban," Nihon hôshakaigakkai hen, Gendai Nihon shakai to hô (21: 1969, special issue on Law and Society in Present Day Japan, published by Yûhikaku), 1-17; and Nakao Hidetoshi, "Saiban ni yoru iriaiken no hogo to kaitai," Noqvoho kenkyu (23: 1988), 85-92.

41. For some figures, see Hôjô, Yamanashi, 266. For a historical account, see Watanabe Yôzô and Hôjô Hiroshi, Rin'ya iriai to sonraku kôzô (Tokyo: Tokyo daigaku shuppankai, 1975), 289-307.

42. The scholars most deeply involved in the postwar cases were Kainô Michitaka, who lent his efforts to the defenders of iriai rights in the Kotsunagi case, and Watanabe Yôzô and Hôjô Hiroshi, who assisted the farmers in Kitafuji with their various cases and claims. On Kotsunagi, see Kainô Michitaka, Kotsunagi jiken: sandai ni wataru iriaiken funsô (Tokyo: Iwanami shoten, 1964); interest in conflicts of this kind is so great that this book sold out repeatedly and went through multiple printings. My copy was produced in the fifteenth printing, run in 1976.

43. Hôjô Hiroshi, Yamanashi, 249-258.

44. Watanabe and Nakao report on a survey of iriai land use indicating little difference between the uses adopted on iriai versus non-iriai collective agricultural lands. Watanabe and Nakao, Nihon no shakai to hô, 97.

45. For views of those who claimed to support both the law and the interests of iriai rights

holders, see Kuroki Saburo, "Sengo iriai mondai to kindaikaho." Noqyogo kenkyu (23: 1988), 33-40; and Kuroki Saburô, "Iriaiken to iriai rin'ya kindaikahô," Nihon nôshakaigakkai hen, Gendai Nihon shakai to hô, 16-49. For more skeptical views, see Kobayashi Mitsue, "Iriai rin'ya kindaikaho no tekiyo wo ukenai iriai rin'ya," Noqyoqo kenkyu (23: 1988), 77-84.

46. See Takei Masahide, Kumatani Kaisaku, Kuroki Saburô, and Nakao Hidetoshi, editors, Rin'ya iriaiken: sono seibi to kadai (Tokyo: Ichiryusha, 1989), especially 2-108.

47. One must be cautious with figures reporting iriai acreage, because the Ministry of Agriculture, Forests, and Fisheries has no choice but to accept figures sent in by prefectural governments, and there is much confusion about which iriai rights survive (technically, all that remain to be asserted still survive). Government figures do not acknowledge all of the land to which legally defensible iriai rights still attach. Various government agencies still resist accepting the Court's view that iriai rights can exist on government land, and do not acknowledge the property rights held by zaisanku as iriai rights.

48. Takei, Kumatani, Kuroku, and Nakao, Rin'va iriaiken, 24-28; Kobayashi Mitsue, "Iriai rin'ya kindaikahô no tekiyô wo ukenai iriai rin'ya."