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Comments and suggestions welcomed.
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When Economic Performance Turns on the Colonized Rather than the Colonist:

The Ainu Example

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Abstract: Acemoglu, Johnson & Robinson posit that colonizing countries promoted growth in places where their citizens planned to live by introducing rational economic and legal institutions. By contrast, where they faced high mortality rates, they introduced only "extractive" institutions. They took what they could and left. The former places thrived; the latter failed.

Disproportionately, Acemoglu, et al.'s countries with high settler mortality rates were places that had only recently made the transition from hunter-gatherer economies to settled agriculture, if they had made it at all. Unlike agriculturalists, hunter-gatherers generally lack any sense of private ownership over the most obvious capital asset -- land. Not owning that capital asset, they have little reason to defer gratification and invest in it. And for the most part, they relentlessly fight each other over resources and women. With no tradition of capital ownership or long-term investments but with chronic and lethal violence, most hunter-gatherers would not have been able effectively to exploit rational legal institutions anyway.

I illustrate (only illustrate; I do not claim to prove) this intuition with the example of the Japanese Ainu. As of the mid-19th century, most Japanese lived either in settled agricultural communities or in booming commercial cities. The hunter-gatherer Ainu, however, lived in the northern-most island of Hokkaido. When the Japanese government introduced western legal institutions at the turn of the century, it applied the new rules both to the agricultural and commercial regions outside of Hokkaido and to the hunter-gatherer communities within Hokkaido. Over most of Japan, men and women quickly learned to exploit the opportunities presented by the new legal system. In Hokkaido, the Ainu failed to do any of that. In time, they simply intermarried with the other Japanese and disappeared. The innovation and investment that would eventually transform Hokkaido came instead with immigrants from the rest of Japan.

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Economies grow when people have an incentive to make the investments that generate positive returns for society at large. A legal system can create and sustain those incentives by defining and enforcing private rights to scarce resources. By assigning ownership to a person, it can help ensure that he captures any positive returns to investing in the resource. In the process, it helps align the private and social rates of return.

Over the past decades, several groups of scholars have used cross-national regressions to explore whether some legal systems might more effectively promote economic performance than others. One group compared "legal families" -- the German legal systems, for example, or the French or the Anglo-American. Another group examined the other institutional arrangements that colonial countries imposed. Most recently, several scholars distinguished between the institutions that colonial countries imposed when they hoped to settle in a country themselves, and the institutions they imposed when they merely wanted to extract what resources they could and leave.

Each of these groups of scholars focused on the colonizing country. None asked whether people living in the colonized community brought the experience, knowledge and resources that might help them exploit any opportunities created by the new legal regime. In taking this approach, they followed an obvious tradition in social science: assume similarly informed and rational utility- (or wealth-) maximizing actors, and then model and test the effect of various institutional arrangements.

We follow this tradition in social science for its analytic tractability, but we realize it does not capture the range of human diversity. To their investment opportunities, people bring different levels of education. They bring different experiences, hopes, and abilities. These differences are ones that the recent scholars have (rationally and deliberately) side-stepped.

In the article that follows, I drop this tradition. Instead, I posit that unobserved differences in experience, hopes, education, and abilities (among the colonized people) have correlated with several crucial observed variables in the cross-national regressions. These unobserved-but-correlated differences track the question of whether a community had shifted from a hunter-gatherer economy of small and transient bands to an agricultural community of dense and sedentary villages.

Major consequences follow from this agricultural transition. Communities that have made the transition (a) have learned to understand and appreciate the potential advantages that follow from the private ownership of their principal capital asset -- land, (b) have learned to calculate the possible gains to the inter-temporal substitution enabled by long-term investments in this capital asset, and (c) have lowered their use of violence to a level that makes possible the dense and permanent settlement patterns that accompany the agricultural transition. By contrast, communities that remain hunter-gatherers have not gone through all of these transitions.

Where communities have not yet (i) assigned land to private owners, (ii) learned to make long-term investments in their capital assets, and (iii) delegated the enforcement of their collective rules to the community itself, they will -- I posit -- find it harder to exploit

the opportunities posed by a modern legal system. Crucial to the modern comparative enterprise, however, the question of whether a society has made these changes correlates heavily with several of the variables used in the recent studies of the performance of different legal regimes. As a result, where the most recent studies claim to explain differences in economic performance by (observed) differences in colonial policy, they may instead be capturing the effect of the (unobserved) differences among the men and women colonized.

To illustrate this discussion (only "illustrate"; I do not claim to "test"), I discuss the legal transition in late 19th century Japan. Part of Japan in the late 19th century had made the agricultural transition, and part had not. Among the agricultural communities, legal reform proceeded smoothly and rapid economic growth ensued; among the hunter-gatherers, growth followed only as immigrants arrived from the rest of Japan.

* * *

When Japan adopted a modern legal system at the close of the 19th century, the vast majority of Japanese lived in agrarian and commercial cities and villages. Those Japanese known as Ainu, however, lived as hunter-gatherers on Hokkaido. Hokkaido is the northern-most of the four principal Japanese islands, and as the 19th century opened very few people lived there. It was too cold and barren to grow rice, and too cold and barren to grow much else either. Only the Ainu survived on the island. They (probably) traced their ancestry to the people who initially settled the Japanese archipelago. They (probably) also carried cultural and genetic ties to the various Arctic and Subarctic groups that ringed the north Pacific.

By the 19th century, the Ainu hunted deer, bears, and small game, speared salmon when it swam upstream to spawn, and grew modest amounts of millet. They lived in small bands scattered over the island. They claimed rights to use the land but not to own it. They numbered 15,000 to 25,000. They moved from time to time. And they raided and killed each other when opportune.

Over the course of the late 19th century, the Japanese government adopted a variation on the German legal system. As an agricultural society, the Japan outside of Hokkaido had maintained a customary legal system in place, and that system had recognized private claims to scarce resources. So did the German system, of course. When the government substituted a constitution and civil code for the customary regime, the transition proceeded relatively smoothly.

The Japanese government also applied the new legal system to Hokkaido. The Ainu, though, had not assigned private rights to real estate. They did not live in dense villages; they lived instead in small bands of transient hunting, fishing, and foraging communities. They had not allocated land ownership to their members; not owning the land, they did not make the investments that would increase consumption in the future; and they killed each other relentlessly over access to property and women.

When the Japanese government adopted the new legal regime, the Ainu seem largely to have been unable to exploit it. Instead, they mostly married other Japanese and disappeared. The innovation and investment that eventually transformed Hokkaido did not come from the Ainu. Instead, it primarily came from the other Japanese who moved there for the economic opportunities presented.

I begin by reviewing the recent literature on the connection between legal institutions and economic performance (Sec. I), and the relevance of the agricultural transition (Sec. II). I turn to the introduction of modern law in Japan (Sec. III). I explore the legal transition both outside of Hokkaido (in the agricultural area; Sec. IV) and inside Hokkaido (the hunter-gatherer area; Sec. V, VI). I conclude by describing modern policy and outcomes (Sec. VII, VIII).

I. Legal Institutions and Economic Growth

A. The Potential Role of Law:

The connection between legal evolution and economic growth has a long academic pedigree. Within the last six decades, Douglass North contributed one of the more accessible summaries of the basic principles in his work with Robert Paul Thomas. As they (North & Thomas 1970, 10) put it, the western European economy grew when the societies adopted a set of institutions that raised the private rate of return to the social rate of return:

[W]hile the social rate of return on innovation and capital formation (both human and physical) had always been high, changes in organization and property rights increasingly brought the private rate of return accruing to individuals and groups nearer the social rate of return. Growing efficiency was the inevitable result."

Crucial to this process was the development of what North & Thomas called "property rights": institutions that enforced private claims to land and other resources.

If North & Thomas examined medieval Europe, several anthropologists (Bettinger, et al. 2007, 89) reached a similar conclusion about the much earlier agricultural transition during the (post-ice-age) Holocene:

[T]he greatest challenge to hunter-gatherer resource intensification is not technological but social -- the development of rules of ownership that provide individuals the incentive to increase procurement effort.

And the key institutional development, the anthropologists argued, was title to the most basic capital asset -- land (Bettinger, et al. 2007, 89)

Simply put, where resources are common ... property, individuals have little incentive to intensify their procurement effort, the proceeds from which must be split equally with others, whether or not they have invested similar levels of effort."

B. Shleifer and Co-authors:

Some 30 years ago (and some 30 years after North & Thomas), Andrei Shleifer and a series of co-authors explored the effect of a country's basic legal system on economic performance (by a variety of measures). Perhaps, they reasoned, some legal systems simply promote economic success more effectively than others. Using cross-country regressions, they found that countries with Anglo-American legal systems tended to perform best, while those with French legal systems did the worst (e.g., La Porta, et al. 2004; La Porta, et al. 2008).

C. Klerman and Co-authors:

Among the legal professoriate, Shleifer's findings made for a hard sell. For scholars who study multiple legal systems, the theory made too much of the differences. Modern

capitalist legal systems do differ on a wide variety of measures, to be sure. But they all accomplish roughly the same goals, and accomplish them reasonably effectively.

Much of Shleifer's data involved former colonies. In 2011, Daniel Klerman, Paul Mahoney, Holger Spamann and Mark Weinstein reexamined Shleifer's data. Rather than focus on the codes themselves, they looked studied the other institutional changes that the imperialist countries had made in their colonies. They confirmed that the countries with French law performed worse, but argued that they did not do worse because of any defect in the legal codes. Instead, they did worse because of other aspects of French colonial policy.

Klerman and co-authors (2011, 380) observed that the colonial governments brought with them a wide range of "policies relating to education, public health, infrastructure, European immigration, and local governance." They noted that the Netherlands, Portugal and Spain also imposed the French legal system on the areas they colonized. They then compared the countries colonized by France itself, with the countries colonized by these other French civil law countries. They found that the negative performance that Shleifer and his co-authors attributed to the French legal codes appeared only in those countries colonized by France itself. The countries colonized by these other French civil-law governments grew at about the same pace as the Anglo-American countries (Klerman, et al. 2011, 395).

D. Acemoglu and Co-authors:

In 2001, Daren Acemoglu, Simon Johnson, and James A. Robinson suggested that a former colony's economic growth turned on an otherwise puzzling characteristic: the mortality rate of 19th-century (or earlier) western settlers in the area. As they explained it, where settler mortality rates were low, men and women from a colonizing country established permanent settlements. For the sake of those settlers if for no other reason, the colonizing country imported stable institutions that reinforced property rights, enforced consensual transactions, and otherwise facilitated long-term growth.

By contrast, where settler mortality rates were high, the colonial country made no serious effort to establish long-term settlements. Instead, it extracted what natural resources it could, and left. Having nothing but a set of "extractive" institutions, the countries failed to grow. Over time, Acemoglu-Johnson-Robinson elaborated on the thesis in a series of articles and books. In 2024, the Nobel Committee awarded the trio their prize in Economics.

Like Klerman and co-authors, Acemoglu and co-authors looked to policies other than the basic legal codes. What mattered, in their analysis, was not the technical legal "family" on which Shleifer and his co-authors had focused. Instead, it was the quality of the broader institutional framework.

E. Initial Puzzles:

1. Introduction. -- As varied as the three approaches might be, they raise several common puzzles. Most obviously, all three focus only on the colonizing country rather than the people colonized. That a colonial country might take steps that affect the rate at which a colonized society grows is obvious enough. That it would matter more than anything else is not. What is more, in each of the three studies, the worst performing countries lie in sub-Saharan Africa. Left discreetly unasked in each is whether (or why)

African societies might have differed radically from the rest of the world in the 19th and early 20th century.

Consider both puzzles in more detail.

2. The colonialist focus. -- Although all three studies focus on institutions, all focus only on those imposed by the colonizers. All of the studies ask whether the countries that thrived received a common institutional framework from their colonists. None asks whether the people who lived there might have shared a common response to that colonist. Yet institutions matter because they potentially encourage people to undertake some activities and avoid others.

No one would argue that people who receive a common institutional arrangement respond to it everywhere identically -- whatever institutions the imperialist governments might have imposed. To state the assumption is to ridicule it, of course. The European peasants in North America, the wet-rice farmers in central China, and the Australian aboriginals would not have responded the same way to Blackstone's approach to land. Yet all three studies do implicitly posit that (a) no otherwise unobserved characteristic about the colonized societies which (b) correlates with one or more of the observed variables about the institutions (imposed by the colonial countries) (c) might explain (c) the different economic performances of the colonized societies.

3. Africa versus the rest. -- Although none of these sets of studies makes much of the fact, at root they all -- in actual practice -- distinguish between sub-Saharan Africa and the rest of the world. Of all colonies, the French performed the worst. Yet as Klerman and his co-authors (2011, 380) rightly observe, France colonized primarily sub-Saharan Africa.

Acemoglu and his co-authors formally focus on countries with high settler-mortality rates. These countries overwhelmingly lay in sub-Saharan Africa. More specifically, Acemoglu and co-authors observe the settler-mortality rates (per 1000 population) in 71 countries. Of their 71 countries, 19 countries (27 percent) had settler-mortality rates of over 200. All of these were in sub-Saharan Africa. An additional 9 countries had settler-mortality rates between 100 and 200. Of these, 3 were in sub-Saharan Africa.

This is nothing new. When Robert Barro (1991) pioneered the use of cross-country regressions to explore the determinants of economic growth, he often added a binary variable for whether a country was in sub-Saharan Africa. He did not add the variable because he thought theory required it. He added it because the points did not otherwise fit. Ultimately, he concluded that his regressions left "unexplained a good deal of the relatively weak growth performances" of the countries in sub-Saharan Africa. Barro identified the problem, in other words, that Acemoglu and his co-authors arguably ignore: the possibility that the sub-Saharan societies might share an otherwise unobserved characteristic that explains their slower shared pace of economic growth.

F. Reexamining sub-Saharan Africa.:

1. Introduction. -- Return to North & Thomas. The institutions that promote economic growth are (by definition) those that bring the private rates of return more closely in line with the social rates of return. Typically, they do so by assigning residual control rights over scarce resources to specific people (or families) and enforcing these control

rights through the community at large. The people who hold those rights then have an incentive to make investments that trade current consumption for greater consumption in the future.

By the 18th and 19th centuries, most societies had made the shift from hunting and gathering to agriculture. The Middle East, East Asia, and Europe -- all had made the agricultural transition. Necessarily, all had adopted legal and institutional frameworks (a) that recognized private rights of ownership over land, (b) that enabled people to make investments that traded current consumption for greater consumption later, and (c) that delegated the enforcement of their rights to the state. Many of the communities in sub-Saharan Africa had not yet adopted these institutional structures. Yet these were precisely the countries that France colonized (per Shleifer and his co-authors) and that posed stratospherically high settler mortality rates (per Acemoglu and his co-authors).

2. The problematic settler-mortality. -- Crucially, the countries that Acemoglu and his co-authors identify as societies with high-settler-mortality rates had made the transition to sedentary agriculture only recently (if they had made it at all). Note two straightforward observations.

First, communities with high rates of settler mortality also have high rates of local mortality. In sub-Saharan Africa, settlers faced three principal disease risks: malaria, yellow fever, and diarrheal diseases. Malaria is parasitic, and yellow fever is viral, but mosquitos carry both.

These diseases kill local inhabitants as well as Europeans. Granted, the effects were not identical. Some local inhabitants survived yellow fever. If they did, they often had immunity for the rest of their lives. Some local inhabitants also had greater resistance against some strands of malaria.

Nevertheless, both the colonists and the local inhabitants died from malaria. Both died from yellow fever. And both died from the many variations of water-borne diarrheal diseases.

Second, these high mortality rates necessarily slow the agricultural transition. Hunter-gatherers live in small, transient bands. They move regularly and seldom settle in dense communities. In an environment with major communicable diseases, their mobility and the sparse populations will help protect them from these fatal diseases.

By contrast, societies that have made the agricultural transition live in dense, sedentary communities. Epidemic diseases that only occasionally reach a small transient band can decimate an agricultural village. Given that disease environment, a band that joins a dense community will lose a much larger percentage of its population than one that had not. If transient bands can avoid epidemic diseases but those same diseases will ravage dense sedentary cities and villages, the shift to agriculture will happen slowly if it happens at all.

To say that European settlers faced high mortality rates is to say that they entered an area that either had not yet made the agricultural transition, or had made it only recently.

3. The agricultural transition in Africa. -- The agricultural transition began around 10,000-12,000 years ago in the Middle East. It probably began about the same time in China. And by sometime after 1000 B.C.E, the agriculturalists who had transformed the Korean peninsula settled Japan.

As of 500 B.C.E., however, the people in central Africa still did not farm. The leading historian (and linguist) of Africa Jan Vansina (2004, 23) writes:

In the beginning there were only foragers in West Central Africa. They lived in small nomadic communities whose members communicated and intermarried with individuals from the outside but they did not develop any social aggregate larger than the community itself.

The transition to agriculture began sometime after that, through what Vansina (2004, 23) called "a series of technological innovations" in processing and cooking that let people expand the range of foods they could eat. Yet even as recently as 1600, farmers and hunter-gathers co-existed in western Africa. Even then, writes Vansina (2004, 12), "significant numbers of non-Njila [i.e., non-Bantu-related] foragers were still roaming over the southern half of the area and Njila speakers were still encroaching on their lands in the southeast of the area."

As of the early 20th century, the agricultural transition remained living history in parts of Africa. In 1984, Vansina (144) could still write:

Some oral traditions recall wars between 'pygmy' hunters and farmers, and a glance at the distribution of pygmies shows that they were driven out of large areas, in many of which their former presence is still remembered.

Perhaps more basically, even the so-called "Bantu agriculturalists" who eventually migrated over much of the continent did not practice the intensive agriculture that dominated most of the rest of the globe. In many ways, they were less "farmers" than "horticulturalists." Often, individual Bantu did not own plots of land. Instead, they used a plot for a season, and then let it revert to the community. Members of the community farmed an area until they exhausted the soil. At that point, they collectively moved on.

As explained below, the point matters for this analysis: many Bantu did not "own" their land. Not owning it, they would not have invested extensive labor and resources in it. Instead, even in the 20th century the Bantu in South Africa still held their land in common. According to J.S. Murray (1970, 30), the Bantu in 1970 farmed under a "customary tenure" in which land "belongs to the tribal community as such and none of it is owned by individuals."

B.M. Jones (1964, 67) describes tenure in South Africa in more detail:

[U]nder traditional Bantu land tenures, accepted membership of a community entitles an individual to a share in the lands of the community and the natural resources of the land. Land is regarded as being for the use and benefit of the community, and individual property rights in land are not conceived."

What is more, a member of a community who farms a piece of land in a given season has a claim to the produce only for that season (Jones 1964, 68):

The exclusive use of arable holdings ... is seasonal. Once crops are reaped and removed from the fields individual claims fall into temporary abeyance, and the community may resume grazing and gathering rights until the start of the next planting season, when individualized rights once again are exercised."

And the settlement is not permanent. Instead, the Bantu farmed until the land no longer supported their produce, and then moved on (Jones 1964, 68):

In traditional Bantu agriculture, ... families or kraals are apt to cultivate the areas round the residential sites until all the surrounding land has been exhausted. When

no more arable land is readily available nearby, a move is made to another area Thus the pattern followed is one of shifting subsistence agriculture."

II. Legal Evolution and the Agricultural Transition

A. Introduction:

Modern law -- and the private ownership it conveys -- matters because of the incentives it provides for value-increasing investments in resources and labor. Absent that private ownership, individuals face a common-pool problem. They can improve a piece of property, but will then need to share the increased output with their neighbors. For each member of the society to make cost-effective investments, he needs to capture the gains that he makes possible. Private ownership does that.

The shift from collective to private ownership is not simple. Anthropologist Robert Boyd and his co-authors (Bettinger, et al. 2007) mark that shift as key to the agricultural transition. Climate variability precluded humans from developing agriculture during the Pleistocene ice age. When that ice age ended at about 10,000 B.C.E., climatic conditions no longer prevented the shift. As noted above, the barrier that remained was social (id.): the "difficulty of evolving social arrangements suitable to agriculture." And among those arrangements (id.), "the greatest challenge" was "the development of rules of ownership that provide individuals the incentive to increase procurement effort."

For a group to shift from a transient hunting and gathering economy to a sedentary agricultural base, (i) members must learn to accept the private ownership of land and its produce, and the private ownership of the gains from one's labor. (ii) They will need to understand and appreciate the potential welfare gains from investing (delaying gratification) in land (and other capital assets) for greater consumption in the future. And (iii) they will need to delegate the enforcement of their private resource claims to the community itself. From this start, in time they will likely learn to accept the concept of trade in land, goods, and labor, and the concept of term rental. Observing potential gains from trade, they will learn to cooperate with their neighbors and develop reputations for keeping their word.¹

In short, economic growth follows legal institutional change when people (a) accept private claims to scarce resources, (b) understand the potential gains to intertemporal substitution and the investment in those scarce resources, and (c) relinquish private violence and rely instead on the community as a whole to enforce their claims. For the most part, these are standard norms among agriculturalists. They are not typical of hunter-gatherers. Yet without these norms a society is not likely to exploit the growth opportunities that modern institutions make possible.

Consider these observations in more detail.

B. Prerequisites to a Successful Legal Transition:

1. Introduction. -- Hunter-gatherers typically (not always) inhabit a world that lacks the concept of private ownership of land. They do not recognize the returns to investing in that land, are (consequently) reluctant to delay gratification, and live in a world of endemic lethal violence. Yet without ownership, delayed gratification, and the delegation of force

¹ See generally, e.g., Bettinger, et al. (2007); Wade (2014).

to the community itself, they are unlikely to be able to make use of the economic possibilities that a modern legal system would otherwise provide.

2. Property. -- Individual title to scarce resources underlies the basic solution to the common-pool problem. By giving the person who invests resources and labor in a project the right to capture the returns, it aligns -- to return to North & Thomas' formula -- private rates of return with the social rates of return. When members of a group share the product of a group enterprise, they each have an incentive to under-provide effort. Effort is costly. Monitoring is costly. Necessarily, team production without private ownership tends to result in under-production.²

Hence the need for private ownership of the most valuable capital resources in the community. For most communities, land has been the quintessential capital asset. Some hunter-gatherers do recognize private ownership of minor assets (like a hunting bow). Typically, however, they do not recognize claims to land. They do not recognize those claims because -- for them -- land is not scarce. For what they intend to do (hunt and gather), land is plentiful. The point follows from Harold Demsetz' (1968) classic observation that people only begin to define and enforce ownership to assets when they become scarce and valuable. Land scarcity comes with the transition to agriculture; for hunter-gatherers, land simply has not been scarce.

Note that the concept at stake is private ownership; it is not group sovereignty. Hunter-gather bands often claim a collective interest in a given area. They see it as "their" space, and fight against neighboring bands who intrude. Crucially, however, this is a sense of "sovereignty" rather than the "ownership" so basic to economic growth. Absent ownership itself, a specific individual or family in a band will face the classic common-pool problems even with respect to the land over which the band claims sovereignty.

Let me shift the point a bit. Several readers of earlier drafts suggested I define land in hunter-gatherer societies as communally owned rather than as not-owned-at-all. For purposes of this article, this distinction does not matter. To say that a society owns the land collectively is to say that it has not yet solved the collective action problem. Elinor Ostrom and her students have indeed noted situations in which common ownership produces efficient results. Such situations do indeed exist, and Ostrom is right to identify them. Hunter-gatherer societies do not limit common ownership to those situations. They apply common ownership to all the land they use, everywhere.

For a group to shift to agriculture, its members will need to prepare the land, plow, weed, fertilize, and irrigate. A member will not do this at optimal levels unless he captures the gains to his investments. And this is the logic to the statement by Boyd and his co-authors that the "the greatest challenge" to the agricultural transition lies in "the development of rules of ownership that provide individuals the incentive to increase procurement effort." This is not a question of genes versus culture; as modern scholars note, cultural and genetic change often occur in tandem (Pinker 2002, ch. 4; Henrich 2018; Henrich, Heine & Norenzayan 2010; Richerson & Boyd 2006).

² See generally, e.g., Bettinger, et al. (2007).

Although farmers in agricultural societies routinely vary ownership allocation, they vary it in ways that still reflect the basic concept of ownership.³ Consider some of these variations. Some groups recognize "use" rights. As Ostrom and her students observed at elaborate length, some groups may designate specific properties as ones they held "in common." Some farmers may rent land from others in the community. In exchange for the right to use that land, they may pay a fixed price. They may return a fixed fraction of the harvest. Sometimes, farmers help others on their lands. When they do, the one may pay the other a portion of the harvest at year's end. He might pay by yield, or pay by time worked. He might pay at the end of the year, at the end of the day, or even in advance.

Some hunter-gatherers (like the Ainu on the one hand, or the Venezuelan Yanomamo on the other [Chagnon 2013, 295-300]) plant small garden plots. Anthropologists often call them horticulturalists, but the men and women (usually the women) who tend the plots do so in the context of a fundamentally hunter-gatherer society. Typically, they do not purport to "own" the plot of land. Not owning it, they do not improve it, irrigate it, or (other than those who burn off the grass at the outset) even fertilize it. They live in small groups, exhaust the land in short order, and move on. When an agricultural community grows in number, its members invest in the land and increase total production. When a hunter-gatherer community grows in number, its members merely exhaust what they have and (unless they spread over a larger area) starve.⁴

3. Inter-temporal substitution. In order to increase aggregate welfare, individuals need to understand the concept of investment, and to be willing to delay present gratification for the sake of greater future consumption. They need the ability and willingness to recognize that not consuming something now might let them consume more later.

As a result, the calculated decision to delay gratification stands as a corollary to the concept of private ownership. Granted, even some non-human primates can learn sometimes to defer gratification. But the hunter has little need to do so. If he kills an animal, he and his family will eat it. If the animal is large, he may not be able to eat it all, so he may share it with the community. If large, he probably killed it as part of a team effort anyway. He generally does not -- indeed, often does not know how to -- store the meat for the future. Instead, when the next day comes, he looks for a fresh beast to kill.⁵

By contrast, to a farmer the notion of delayed gratification is basic. A farmer works from spring through summer for rewards that he does not see until the fall. When the harvest arrives, he realizes that the food will need to feed him and his family until spring.

³ See generally Bettinger, et al. (2007); Harari (2015, ch. 5); Chagnon (2013, ch. 11); Cochran & Harpending (2009, chs. 3, 4); Wade (2014, ch. 3).

⁴ Morris-Suzuki (2020, 88-102) theorizes at length about what she describes as the ebb and flow of agriculture among the Ainu. It is hard to interpret this as anything other than an inability (or unwillingness) to distinguish between agricultural and horticultural societies. She also attributes what she believes to be a perceived decline of Ainu agriculture to the employment opportunities in the fishing industry. Morris-Suzuki (2020, 99-101). This obviously misses the fact that agriculture did not become profitable for anyone in Hokkaido until well into the 20th century -- discussed extensively below.

⁵ See generally, e.g., Cochran & Harpending (2009, 114): Abstaining from current consumption was "something that classic hunter-gatherers just didn't do: There was no way for them to store food effectively, so they either consumed it on the spot or shared it with others."

Should the harvest be meager, he realizes that unless he saves some of it anyway, he will have nothing to plant the following spring. As with so much else in this discussion, the process involves evolutionary selection. Potentially, the selection is both cultural and genetic -- after all, the two often change in tandem (Pinker 2002, ch. 4; Henrich 2018; Henrich, Heine & Norenzayan 2010; Richerson & Boyd 2006). According to anthropologists Gregory Cochran and Henry Harpending (2009, 113-14):

Agriculture itself ... must have selected for personalities that can only be called bourgeois One such trait was the ability to defer gratification for long periods of time. This was a practical requirement for farmers, since they had to save a portion of their crop for seed

4. Delegating enforcement. -- (a) Introduction. Crucially, modern law does not just define private claims to capital assets and their yield; it delegates the enforcement of those claims to the community itself. In the modern world, it delegates the enforcement to the state. For law to promote efficient growth, it will need to stop people from using force to steal their neighbor's resources, but it will also need to stop them from redundantly and self-destructively investing in the force necessary to protect their own resources from their neighbors. As Max Weber famously put it, they will need to assign the state a "monopoly on the legitimate use of physical force." Only then will they be able to settle in the dense communities characteristic of agriculture.

(b) The evolutionary logic. -- In contrast to agricultural communities, hunter-gatherer societies have been (by contemporary sensibilities) astonishingly violent. Modern studies in archaeology and physical anthropology make clear that violence in hunter-gatherer and horticultural societies has been both pervasive and brutal. Agricultural societies can also be violent, to be sure. But cognitive scientist Steven Pinker (2011, xxiv) describes the transition from hunter-gatherer communities to agricultural civilizations as one that brought "a reduction in the chronic raiding and feuding that characterized life in a state of nature and a more or less fivefold decrease in rates of violent death."⁶ He (2011, 52) explains that "65 to 70 percent of hunter-gatherer groups are at war at least every two years, 90 percent engage in war at least once a generation, and virtually all the rest report a cultural memory of war in the past."

Other scholars confirm Pinker's observations. Political scientist Azar Gat (1999, 575) finds "that average human violent mortality rates among adults in simple societies may have been in the order of 15 percent (25 percent for the men)." Writes anthropologist Lawrence H. Keeley (1996, 25-26), "the available evidence shows that peaceful societies have been very rare, that warfare was extremely frequent in nonstate societies, and that tribal societies often mobilized for combat very high percentages of their total manpower." Archaeologist Steven LeBlanc (2003, 8) observes:

[I]n many traditional societies ... -- the people of highland New Guinea or the Yanomamo of the Venezuelan rain forest, for example -- 25 percent of adult males died from warfare Twenty-five percent of deaths due to warfare may be a conservative estimate. Prehistoric warfare was common and deadly, and no time span or geographical region seems to have been immune."

⁶ For a recent rebuttal, see Halstead & Thomson (2025).

And anthropologists Gregory Cochran and Henry Harpending (2009, 103) note that:

Primitive warfare was apparently the dominant mechanism limiting population among most foragers before the development of agriculture in the Neolithic period.

The basis to this propensity toward violence lies in the simple principle of evolutionary fitness. Among hunter-gatherers, men fought for women and those who won sired more children who survived to reproductive age. As Pinker (2002, 319) put it:

Studies of warfare in pre-state societies have confirmed that men do not have to be short of food or land to wage war. They often raid other villages to abduct women, to retaliate for past abductions, or to defend their interest in disputes over exchanges of women for marriage.

Again, the logic is straightforward: in hunter-gatherer societies the most aggressive men mated with the most women, and had the most offspring surviving to reproductive age. Necessarily, those offspring tended to share their father's aggression. Crucially, as Pinker (2011, 616) observes, "[b]ehavioral genetics confirms that aggressive tendencies can be inherited" In characteristically Pinkerian (2011, 614) prose, he writes: "Selective breeding of mice for four or five generations can produce a strain that is markedly more or less aggressive than an off-the-shelf lab mouse." In the hunter-gatherer environment, aggression confers an evolutionary advantage. Necessarily, it will persist and become more prevalent over time.

The observation is relevant to this article, because humans cannot live in the dense communities characteristic of agricultural and capitalist societies -- the societies for which modern legal systems were designed -- until this violence recedes. Men and women cannot adopt settled agriculture unless (and until) they stop killing each other so relentlessly.

(c) Chagnon. -- More than anyone else, it was anthropologist Napoleon Chagnon who (in the face of massive outrage from the cultural anthropology community) forced the issue of brutal violence among hunter-gatherers to the academic foreground. Educated at the University of Michigan in the 1960s, Chagnon spent much of the next several decades among the Yanomamo of the Venezuelan Amazon. The Yanomamo lived in small groups, and combined hunting, fishing, foraging, and primitive farming.

And the Yanomamo killed each other. "Among the Yanomamo native warfare was not just occasional or sporadic but was a chronic threat," wrote Chagnon (2013, 26; ital. orig.). "Warfare and the threat of warfare permeated almost all aspects of Yanomamo social life." Within the communities he (2013, 230) studied, "some 30 percent of the deaths among adult males was due to violence, mostly victims shot with arrows"

Yanomamo men did not kill each other for food, much less over trade with modern merchants. Instead, as Chagnon (2013, 26) put it, "most Yanomamo arguments and fights started over women." One day, they might kill to obtain access to women. Another day, they killed to avenge that earlier killing over access to women. Writes Chagnon (2013, 333):

I suggest that conflicts over the means of reproduction -- women -- dominated the political machinations of men during a vast span of human history and shaped human male psychology. It was only after polygyny became "expensive" that these conflicts shifted to material resources By that time, after

the agricultural revolution, the accumulation of wealth -- and its consequence, power -- had become a prerequisite to having multiple mates.

Chagnon (1988, 989) detailed the evolutionary mechanism involved. Among the adult men in his records, 137 had participated in a killing, and 243 had not. The men who had killed had an average of 1.63 wives; those who had not killed had an average 0.63. The men who had killed had an average 4.91 offsprings; those who had not had an average 1.59. Of the men in their 30s, those who had killed had an average 2.83 offsprings and those who had not had 2.02. Of the men over 40, those who had killed had an average 6.99 offsprings, and those who had not had 4.19.

The more violent the man, the greater number of children, and given his access to more resources the greater the number who survived to reproductive age. The logic obviously tracks the behavior among some non-human primates. This violence is not a mere social norm. Instead, it follows from an evolved genetic code, the result of biologically driven natural selection. The genetics are straightforward: aggressive violence is heritable.⁷ And being heritable, whether violence grows or recedes will turn on whether more violent men and women have more or fewer surviving offspring.

By contrast -- and subject to obvious qualifications and exceptions -- the farmer in an agricultural society does not enhance his evolutionary fitness by fighting with his neighbors. Instead, he enhances his fitness by increasing his range of advantageous trading opportunities. Agricultural societies sometimes kill in massive numbers: witness the Holocaust, the Holodomor, and Mao's China. But a hunter-gatherer who attacks and kills the men in the neighboring village increases the food that his offspring can eat. If he captures any women and takes them as wives, he increases the number of surviving offspring even further. By contrast, a farmer increases the food available to his children if he saves enough seeds to plant next year's crop. He increases it if he puts in hours on the farm. He increases it even further if he develops a reputation for honesty that facilitates advantageous trades.

C. A Case Study:

1. Introduction. -- All this suggests that the differences in economic growth across the globe do not necessarily track differences in the institutions introduced by the colonial governments. Instead, sometimes they may track differences in societies colonized. More specifically, this analysis implies that members of hunter-gatherer communities may find it hard to exploit the opportunities presented by rational, modern legal regimes.

In turn, all this suggests a place for some case studies. If the hypothesis turns on whether hunter-gatherer societies can exploit modern law, it suggests a need to explore ways various hunter-gatherer groups have responded to the introduction of rational legal regimes. Exclude African hunter-gatherer societies: after all, Acemoglu and his co-authors assert that they faced "extractive" legal institutions. The obvious alternatives would be the well-studied indigenous groups on the U.S. west coast (east-coast Indians tended to be agriculturalists), the Eskimo of Alaska and the Canadian northwest, or the aboriginal groups of Australia. After all, per Acemoglu, et al., these groups did indeed face growth-promoting institutions.

⁷ For a general overview of the science, see Pinker (2002, 45-51); Pinker (2011, 611-618). For a selection of specific studies, see, e.g., van den Oord, et al. (1994); van Beijsterveldt, et al. (2003); Lighthart, et al. (2005); Eley, et al. (1999); Bouchard & McGue (2003); Raine (2008).

None of these three groups responded to modern law and thrived, of course. But the point may be over-determined. At various points in history, each of these groups famously faced massive slaughter campaigns. Nonetheless, consider each in turn.

2. U.S. -- To descendants of its indigenous groups, the modern U.S. government pays large subsidies. The Government Accounting Office (2024) estimates that in 2024, "\$32.6 billion was approved by Congress for funding and other assistance to benefit tribal communities" (though not all allocated amounts reached Indian communities). Other subsidies come in the form of revenues to the (government sanctioned) tribal casinos. According to a recent UNLV law school study (Szydelko, 2025), "Indian tribes generate about 45 percent of all U.S. gaming revenue, which in fiscal year 2022 was a record \$41 billion. About 270 tribes run more than 500 gaming operations in 29 states."

The subsidies have not bought peace. Although murder rates among U.S. Indians are not unusually high, "per capita rates of violence are more than twice those of the U.S. resident population" (BJS 1999, v). Rates of rape and sexual assault are more than double the rate among African Americans, and more than triple the rate among whites (BJS 1999, 3, tab. 3).

Suicide rates among American Indians are similarly high. According to the Center for Disease Control, among Indians (the study includes "Alaska Native" people), the suicide rate was 23.9 in 2020 but 13.5 among the general U.S. population (Stone 2022). Among Non-Hispanic American Indian/Alaskan Native males in 2023, the CDC calculated an age-adjusted suicide rate of 43.4, but among Non-Hispanic Whites of only 30.0 (OMH 2023).

3. Canada. -- Much the same story describes the Canadian experience. The Canadian government similarly provides a wide range of services to those who identify as part of the indigenous community. Most recently (in 2024), it agreed to pay \$47.8 billion (Canadian) over ten years a total \$3.3 billion U.S. to settle claims arising out of its indigenous child and family services program (Spears 2024). From 2016 to 2024, it spent \$2.43 billion (Canadian) toward housing on indigenous reservations (Canada 2025). It provides subsidies specifically targeting the indigenous groups in child and family services, drinking water, sewage systems, education, for business support, and so forth.

These subsidies have not bought peace either. Political scientist Azar Gat (2015, 111) reports a "rate of violent mortality" among the Inuit of mid-Arctic Canada at 10 times that of that of U.S. in 1990. Anthropologist Lawrence Keeley (1996, 29) describes "the murder rate for the Netsilik Eskimo ... [as] exceed[ing] that of the United States by four times and that of modern European states by some fifteen to forty times."

The violence does not just involve murder. The Canadian government reports "age-standardized suicide rates" among the Inuit (per 100,000, 2011-16) of 72.3, compared the rate among non-indigenous Canadians of 8.0. Among males aged 25-34, it reports rates of 363.2 among the Inuit, but of 11.9 among the non-indigenous (Kumar & Tjepkema 2019).

4. Australia. -- And so too Australia. As in Canada and the U.S., the Australian government funds a wide range of benefits for the aboriginals.⁸ One group (Wild 2023)

⁸ See, e.g., Australia (2023) (for 2023-24, the government paid \$2.4 billion Australian plus \$347 million extra in "dedicated special accounts"; it expected the entities to "generate an estimated \$302.9 million

calculated that "the amount of spending directed towards Indigenous Australians equates to approximately \$39.5 billion [Australian] over one year."

Murder victimization rates (per 100,000, 1993; as in the U.S., the vast majority of homicides in Australia are intra-racial [Broadhurst 1997, 423]) in Australia are 33.28 among the aboriginals but 2.02 among non-aboriginals (Broadhurst 1997, 420). Suicide rates for Australian children (per 100,000, aged 10-14) are 10.15 among the aboriginal and Torres Strait Islander populations, but 0.8 among other Australians (Stoole, et al. 2014 tab. 1).

5. Conclusions. -- None of the three groups encountered modern law and did well -- but again, the test is not fair. In the course of modern history, each of the three faced multiple murderous campaigns. No, none of the three effectively exploited the opportunities that modern, rational legal structures provide. But arguably, none of the three had a fair chance. That none of these three groups thrived proves very little at all.

6. Other hunter-gatherer societies. -- Outside of Africa, few other hunter-gatherer societies survive. As of 14,000 B.C.E., only hunter-gatherers roamed the earth. By 1600 C.E., most hunter-gatherers outside of Africa had already disappeared. By 1900, even fewer remained. In the 1960s, Napoleon Chagnon rediscovered the Yanomamo of the Venezuelan Amazon. Deep in the rain forest, they had survived with almost no modern contact. Table the question of whether the Venezuelan legal system would fit within Acemoglu's definition of "rational." In the 60 years since, modern miners brought disease and disrupted the habitat. The Yanomami probably number a bit over 20,000, but otherwise largely remain beyond the reach of the modern Venezuela.

A smaller group has survived on North Sentinel Island within the Adaman Islands chain. To be sure, the chain had the good fortune to be colonized by the British. But the residents of North Sentinel Island remain famously violent. Precisely because they so often try to murder visitors, the Indian government generally bans foreigners from visiting them. And indeed, in 2018, the Sentinelese famously killed the young Protestant missionary John Chau.

That largely ends the list of modern hunter-gatherers. A few other extremely small groups survive in the Southeast Asian jungles. A few also survive on eastern Siberia and in the Brazilian Amazon. All these groups are small -- and, like the Sentinelese -- have had little contact with the modern world.

III. Ainu and the Transition to Modern Law in Japan

A. Introduction:

In this drought of examples, I offer the Ainu. I offer it not as a proof, but merely as an example. And I offer it as only one example. Yet arguably, few other examples are worth exploring. The hunter-gatherer groups in Africa did not thrive -- but according to Acemoglu they did not face rational legal institutions. The Canadian Eskimos, the west-coast American Indians, and the Australian aboriginals did not thrive either. Each of them faced rational institutions -- but given that the brutal campaigns of slaughter they faced,

in external revenue"; it provided special health program for aboriginals). The South Australian provincial government established its own "Reparations Scheme" in 2015 (South Australia 2025).

their failure is over-determined. The Yanomami, the Sentinelese, and the few other tiny groups also survive -- but largely by minimizing contact with the modern world.

The Ainu were hunter-gatherers on the northern Japanese island of Hokkaido. At the end of the 19th century, they found themselves presented with a modern, rational legal system. Unlike the tiny groups like the North Sentinel islanders, they numbered at least 15,000. Unlike the hunter-gatherer groups in Africa, they did not face a high-disease environment. And unlike the groups in western Canada, the western U.S., and Australia, they did not face a government intent on killing them. Instead, the Japanese government provided small-pox vaccines, free farm land, (often) free farming implements, free education, and a more humane criminal law. It did not try to subsidize their lives, but neither did it try to eliminate them.

The Japanese transition to a "modern" (i.e., Western) legal system began in 1868. That year, military leaders from several outlying areas banded together to overthrow the central (Tokugawa) government in Tokyo (then called "Edo"). In form, they returned the Kyoto-based imperial family to power. In practice, they formed an oligarchy. They reset the calendar to year 1 of the "Meiji" era, and took power.

The new oligarchs understood that they needed an internationally competitive military force. The U.S. government had sent a gunboat into Tokyo Bay in 1853, and demanded a consulate in 1856. The Japanese government had no ships that could sail much beyond the coast. The U.S. sent ships equipped with cannons and sailors carrying guns. The oligarchs had neither.⁹

Both to pay for a modern military machine and for its own sake, the oligarchs set out to grow the economy. Toward that end, they sent promising young men to study in the West. Some of the men returned with engineering degrees (Ramseyer 2025). Others returned with accounts of sharply delineated property rights and court-enforceable contracts. The national and local governments under the Tokugawa period had enforced interests in property and transactions involving those interests too. But the Tokugawa courts had done so in ways that lacked the clarity, systemic logic, and predictability that the young men stressed in their descriptions of the West.¹⁰

As if to convince the few Meiji leaders not yet sold on the need for a new legal system, the Western nations demanded free trade and extra-territoriality. The ban on tariffs deprived the oligarchs of an easily administered revenue source, but it did at least benefit Japan. The extra-territoriality hit national pride with no offsetting benefit. To justify the demand, the Western nations complained about the "primitive" Japanese legal system. Promptly, the oligarchs began the search for a new legal regime.

B. The New Legal Regime:

As part of their planned transformation, the new government began almost immediately to rewrite property law. Tokugawa-era governments had recognized interests in land more generally, to be sure. But they had placed limits on the purchase and sale of paddy fields; they had lacked a national system of land registries; and judges had brought only haphazard legal expertise.

⁹ See generally, e.g., Ramseyer & Rosenbluth (1995, ch. 2).

¹⁰ See generally, e.g., Ramseyer & Rosenbluth (1995, chs. 3, 4, 6).

Upon taking power (December 1868), the new regime promptly confirmed that farmers owned the land they tilled.¹¹ A little over a year later, it confirmed that they could buy and sell that land.¹² Simultaneously, it introduced titling and recordation systems.¹³ And by the end of the 1880s, it had installed land registries around the country.¹⁴

The new government also provided local courts. From 1868, these courts handled criminal cases. They handled civil cases from 1869. And in 1875 the government established a Supreme Court that would handle appeals.¹⁵

To train legal professionals, the government opened a law school in 1871. It established the Tokyo Imperial University in 1877. This new school offered western instructors in law, and by the 1880s several private universities housed law faculties as well.¹⁶

To staff its bureaucracy, the government introduced a civil service examination in 1887.¹⁷ It promulgated a constitution based loosely on the German model in 1889.¹⁸ And it systematized its courts with the Judicial Organization Act in 1890.¹⁹

Now acting through a Diet (i.e., parliament), the government in 1890 passed a Civil Code.²⁰ It based the statute closely on the Napoleonic model, but some leaders disliked the family law provisions. Others complained that the code did not provide for community usufruct rights, even though rights to the commons had constituted an important part of the Tokugawa village economy (discussed below at Sec. x).

For these and other reasons, the government never implemented the new statute. Instead, drafters turned to the planned German Code instead. Using this new Code as a model, they wrote an entirely separate bill, and the Diet enacted it in 1896 and 1898.²¹ The statute took effect as the new Civil Code in 1898. Loosely, it covered property, contracts, torts, agency, estate law, and family law.

C. The New Property Law:

¹¹ Dajokan fukoku 1096 of Dec. 18, 1868; see Miyakawa (1969, 67); Miyakawa (1968, 94);

¹² Dajokan fukoku No. 50 of Feb. 15, 1872; see Miyakawa (1969, 67).

¹³ Okura sho tatsu No. 25 of 1872; Okura sho tatsu No. 83 of 1872; see Miyakawa (1969, 129, 168).

¹⁴ Law No. 1 of 1886; Law No. 13 of 1889; Fudosan toki ho [Real Estate Recordation Act] Law No. 24 of 1899; see Miyakawa (1969, 141, 235).

¹⁵ See generally Ramseyer & Rosenbluth (1995, ch. 6); Asako (2010, 270, 273). The Shiho shokumu teisei [Rules Regarding Judicial Functions], Dajokan unnumbered tatsu of Aug. 3, 1872, created the national court system. The Dai shin'in sho saibansho shokusei shotei [Rules and Duties of the Supreme Court and Other Courts], Dajokan fukoku No. 91 of May 24, 1875, established the Supreme Court.

¹⁶ See generally, Hosei (2012).

¹⁷ Bunkan shiken shiho oyobi minarai kisoku [Regulation on Civil Service Examination and Apprenticeship], Chokurei No. 18, of July 25, 1887; see generally Ramseyer & Rosenbluth (1995, 32).

¹⁸ Dai Nippon teikoku kempo [The Constitution of the Great Empire of Japan], promulgated Feb. 11, 1889; see Ramseyer & Rosenbluth (1995, 33).

¹⁹ Saibansho kosei ho [Judicial Organization Act], Law No. 6 of Feb. 10, 1890.

²⁰ Minpo [Civil Code], Law Nos. 28 and 98 of 1890.

²¹ Minpo [Civil Code], Law No. 89 of 1896 and Law No. 9 of 1898, effective July 16, 1898.

1. Ownership. -- In the Anglo-American tradition, ownership meant what legal scholar Carol Rose (1998) called "exclusive dominion." As William Blackstone (1753, v. 2 p. 2) classically put it, ownership was the "sole and despotic dominion which one man claims and exercises over the external things of the world, in total exclusion of the right of an other individual in the universe." Even Blackstone recognized limits, of course. He discussed them at length, and understood -- in Rose's (1998, 603) words -- that this exclusive dominion was constrained by "intricate webs of military and other obligations."

In this tradition, ownership gave a person the right to possess and use a piece of property. It gave him the right to exclude others from the property. And it gave him the right to transfer the property. The state could (and always did) constrain these rights in multiple ways. But fundamentally, ownership remained (again in Rose's words [1998, 604]) "a small domain of complete mastery, complete self-direction, and complete protection from the whims of others."

Under the new Meiji legal system, ownership meant much the same. The new German-based Code provided, as legal scholar Takashi Uchida (1999, 337) put it, "total dominion." As in the Anglo-American tradition, the owner faced a similar set of constraints (Uchida 1999, ch. 12). But also as in that tradition, he held a Blackstonian dominion (Civil Code, Sec. 206): "the right to use the property freely, the right to profit from the property, and the right to dispose of the property."

2. Use. -- Both the Anglo-American and the Japanese civil law systems specify that non-owners can sometimes hold a right to use property belonging to someone else. Within the Anglo-American tradition, for example, one landowner might have the right to cross his neighbor's land to reach a public road. When he does, the courts call it an "easement."²² Another person might have the right to fish in his neighbor's stream.²³

Scholars in the European tradition call a right to use a "usufruct." The concept fit the Japanese status quo, for villages sometimes held rights to use land for specified purposes even if they did not own it. They held the rights by custom. They might have the right to enter an adjacent mountain, for example, to collect firewood or assorted "mountain vegetables." They might have the right to graze their cattle on the foothills of the mountain. Under Section 294 of the Code, they could hold these communal usage rights to areas where someone else held the residual right, and under Section 263, they could hold communal usage rights to areas where they held the residual right themselves. In both cases, local custom defined the terms of their right, and in both cases, the right was in rem.

IV. The Legal Transition in an Agricultural Society -- Outside of Hokkaido:

The transition from the Tokugawa legal system to the new constitution and codes produced several characteristic problems. The problems that developed outside Hokkaido are easy to understand. Tokugawa law had recognized private ownership, and had delegated enforcement to the community or to the state. Yet the legal details could differ from those under the new Code, and the surrounding economic context had changed as well. More specifically, the new and old legal systems sometimes identified different types

²² Thomas v. Primus, 148 Conn. App. 28 (2014).

²³ Though rights to hunt and fish do not necessarily follow the language of easements and servitudes. See generally, e.g., Sigmon (2004); Reidy (2024).

of private interests and imposed different requirements. Sometimes that meant that customary practices now had legal implications that they had lacked under the old regime. What is more, the Meiji legal transition occurred at a time of rapid economic and social change. Those external -- non-legal -- changes created tensions internal to the private law regime itself. All told, confusion (or deliberate obfuscation) could result. Consider three examples.²⁴

A. Perpetual Lease:

The new legal regime specified several types of land leases. The Tokugawa regime had recognized leases as well, of course, but the legal transition created new problems. For example, some tenants had held their leaseholds in perpetuity. Over the two-and-a-half centuries of Tokugawa rule, developers had dramatically expanded the number of irrigated paddies. Sometimes, they had developed the land in tandem with would-be farmers. The developers might provide the capital, for instance, while the would-be farmers provided the labor. The pair split the inputs (capital and labor), and sometimes then split the resulting interests: the farmer held the right to cultivate the farm in perpetuity, and developer held the residual rights in perpetuity. Nothing was in writing.²⁵

In a stable economy, the distinction between a perpetual leasehold and a year-to-year leasehold largely did not matter. A tenant with a perpetual lease would till the land year after year, and pay the owner rent. A tenant with a year-to-year lease, however, would also till it year after year and regularly pay rent. After all, if the economy is stable, a lease that is mutually profitable in year 1 will (by definition) be mutually profitable in year 10.

In Section 270, the Meiji Code recognized the right to farm in perpetuity as a right in rem. Owners and farmers could also negotiate leases for terms, of course, but when they did the farmer held only an interest in personam. If the owner tried to sell the farm, a tenant with an interest in rem could enforce it against a buyer of the owner's interest. A tenant with an interest in personam could only sue the selling owner for damages (e.g., Uchida 1999, ch. 13).

The Meiji economy was anything but stable. As the economy grew, people moved to the cities. Many owners of suburban farms found they could use their land more profitably by building housing for the young couples who came to work in the new factories. If a tenant held a lease for term, the owner could decline to renew it and build an apartment house. If the tenant had a perpetual lease, however, the tenant could veto the change.

Faced with the conflict, courts had to decide whether a tenant had inherited his leasehold from an ancestor who had held a perpetual lease, or instead from one who had held a term lease. A perpetual leasehold will continue indefinitely, but a term tenant will often renew indefinitely as well. And in Tokugawa Japan, the long-dead original tenant and owner would not have drafted a written document.

Lacking much by way of serious evidence, Meiji courts generally declared contested leases to be term leases. And to legislate the problem out of existence, the Diet provided that perpetual leases would expire after fifty years. When lessees protested, it

²⁴ I take the following three examples from Evans & Ramseyer (2024, 2025), and Ramseyer (2024, ch. 3).

²⁵ See, e.g., Kato v. Kitagawa, 15 Saihan minshu 790 (Sup. Ct. Apr. 24, 1936); Ito v. Ito, 3979 Horitsu shimbun 11 (Sup. Ct. Apr. 9, 1936); Nakano v. Fujii, 2568 Horitsu shimbun 5 (Osaka D. Ct. May 29, 1926).

revised the statute to allow instead the owner to buy-out the lease at end of the fifty-year term.²⁶

Whether a tenant held a lease in rem or in personam depended on the original contract. In Tokugawa Japan, the distinction largely had not mattered. In disputes over the nature of a tenancy, Meiji courts sometimes had no idea what the original contract might have been.

B. Coastal Fishing:

The Code said nothing about any rights that coastal villagers might have to fish in their local waters. Typically, the households in each coastal hamlet had held a customary right to fish in those waters. The details had varied by the location, the species of fish, and the type of fishing technology. For the most part, during the Tokugawa and Meiji periods the villagers had enforced that right by force. Sometimes, they contested the adjacent boundaries. Routinely, they tried to extend the area in which they fished, and routinely, their neighboring villages fought back. Violence occasionally ensued. In the sections that follow, I focus on the violence within hunter-gatherer societies. Obviously, violence occurs among agricultural societies as well -- even if, as discussed at length below -- in lower numbers.

As legal sociologist Toshitaka Ushiomi (1954, 106) put it:

[F]ishing communities face the constant threat of incursion from another village to take fish. When such incursions occur repeatedly, they become a customary right in common. Through the Fisheries Act, those repeated incursions have grown or can grow into the fishing rights that a group might hold in common. The factual relations are structured through violence, and those relations can then grow into a right in rem.

To prevent over-extraction, fishermen often bound each other to detailed constraints. They might enforce starting and stopping times during the day, the starting and stopping days of the season, the types of nets allowed, the type of boats allowed, and -- crucially -- the men and women who could do the actual fishing.

Courts tried to enforce whatever that local custom in a community might have been. In 1875, the government declared that:²⁷

Civil trials should be handled according to custom where there is no statute, and by deduction from principles where there is no custom.

In 1898, it passed a statute to the same effect:²⁸

Customs not contrary to the public order or good customs [have] the same effect as statutes.

²⁶ Minpo shiko ho [Civil Code Implementation Act], Law No. 11 of 1898, Sec. 47.

²⁷ Saiban jimū kokoroe [Considerations Regarding Matters of Trials], Dajokan fukoku 103, June 8, 1875, Sec. 3.

²⁸ Horei [Choice of Law], Law No. 10, of June 21, 1898. See generally Murakami (1998). In turn, this generated a "technical" legal problem. The 1898 Civil Code (Sec. 175) included a "numerus clausus" provision -- i.e., it recognized only those in rem rights specified in the Code. See Merrill & Smith (2000); Uchida (1999, 327). The Code did not specify fishing rights. In 1910, the Diet resolved the issue with a "Fisheries Act." It declared (Sec. 23) that a "fishing right is treated as though it is in rem, and the provisions relating to land apply mutatis mutandi." See Gyogyo ho [Fisheries Act], Law No. 58 of 1910, Sec. 23.

The town of Hanamabuto lies along the coast in Chiba prefecture, within sight of a small island known as Niemon.²⁹ Legend has it that warlord Minamoto Yoritomo retreated there during the 12th century Gempei War. Legend also has it that the 13th century itinerant monk Nichiren once worshipped there. But for more recent generations, the island had been under the control of the local Hirano house. By custom, the house held the exclusive right to fish for abalone in the local waters. It claimed to have held this right since the 12th century, but it had held it at least since the late Tokugawa period.

Hanamabuto illustrates Ushiomi's statement about what "custom" actually meant. Come the Meiji period, the village demanded control over the abalone crop. Custom ruled, of course, so the village lost. The Hirano house kept control. But when the villagers found the leader of their litigation team dead in the local river, the leader's sons attacked Niemon, and killed several members of the Hirano family. Custom or no custom, the Hirano family deferred, and agreed to share the abalone equally with the village. Yet the village wanted still more. When the head of the Hirano family became sick, the family tried to dock their boat at the village to take him to the hospital. The village refused. And so it continued.

Yes, custom governed. But as Ushiomi put it, "factual relations are engineered through violence." What custom might have been was something the parties could engineer through violence.

C. Rights to the Commons:

As noted earlier, the 1898 Meiji Code recognized customary rights to the commons. Villagers sometimes held title to the underlying residual interests, and sometimes not. Where the commons lay at the foothill of a largely inaccessible mountain, the underlying title did not much matter. No one wanted the mountain.

Several years into the Meiji period, the new government tried to record title to all lands. Because remote and inaccessible mountains had little value, local farmers did not much care about title. They had their customary right to graze cattle on the mountain or to gather wild vegetables, and nothing else much mattered. Occasionally, disputes arose over use. When they did, the farmers typically turned to the asset-allocation and dispute-resolution mechanisms that Elinor Ostrom and her colleagues so carefully described the world over.

By custom, the local farmers might have collectively "owned" the mountain. But if the government registered it as government land, sometimes they let it do so. If nothing else, it saved them the taxes they would otherwise pay. Sometimes they registered it in the name of a village leader. Doing so spared them the trouble of going into town to change registration every time someone new moved into the village.

The hamlet of Kotsunagi lay among the mountains of Iwate prefecture. It was a post town, with a few inns and restaurants. Given how cold it could be, farmers did not build many rice paddies. Routinely, however, they did graze their draft animals on the local mountain or gather grass and firewood. Occasionally, they cut trees.

In 1892, the railroad arrived and connected Kotsunagi to Tokyo. In the process, it would eviscerate the economic logic that had for centuries held the commons together.³⁰ In 1891, metropolitan Tokyo had had a population of 1.33 million. By 1901, that

²⁹ See generally, Ramseyer (2024, 71-72), based on Ushiomi (1954, 80 et seq.).

³⁰ This account is taken from Evans & Ramseyer (2024).

population would grow to 2.02 million, and by 1911 to 2.73 million.³¹ To house the new arrivals Tokyo needed enormous quantities of lumber.

A fire broke out in 1915 in Kotsunagi village, and destroyed most of the homes. When the villagers went to the mountain to cut timber, however, they found their way blocked. The new registered owner of the mountain, Kamekichi Kashimura, had decided to grow lumber for the Tokyo market, and had hired out-of-town strongmen to stop them. Kashimura himself was an out-of-town loan shark. He traced his title to the local village priest, but (according to the villagers) the priest had simply held title in trust for the village itself.

The resulting violence and litigation (both civil and criminal) lasted five decades. In the end, nothing definitive came of it. Again, private rights turned on custom. But the villagers had cared only about their customary right to use the mountain. They had not cared who owned the residual interests. After all, that residual had had no serious value. When the railroad arrived, the mountain suddenly had enormous value. The villagers asserted "custom," but offered no evidence. Some judges thought the village owned the mountain. Other judges thought Kashimura did. Ultimately, "custom" provided no one any help, and the question remained unresolved.

V. The Legal Transition in a Hunter-Gatherer Economy -- Among the Ainu

A. Introduction:

Beyond Hokkaido, Meiji Japan was an agricultural and incipient industrial economy. In this world, men and women understood the concept of land ownership. They understood the value of investing in land and other capital assets, and the gains to delaying gratification. They understood the need to delegate the enforcement of their economic claims to the police and the courts.

Other than in the area closest to the rest of Japan (i.e., Oshima peninsula), Hokkaido was a hunter-gatherer economy. Its residents made such no ownership claims to the land. Most of the people were Ainu, and for them only the current right to use held value. Because they did not farm, they had no interest in "owning" any particular piece of land. They had vastly more land than they needed. Given that it was not scarce, they did not define ownership in it. "Ownership" is a legal term. Whether by the Japanese legal definition or the Anglo-American, Hokkaido was terra nullius.³²

³¹ Tokyo to no jinko [Population of Tokyo], available at www.toukei.metro.tokyo.lg.jp.

³² Under Japanese law, the Ainu did not claim the land as private property. Recall the Blackstonian definition in the Japanese Civil Code: ownership is "the right to use the property freely, the right to profit from the property, and the right to dispose of the property." Given the way that they lived, the Ainu had no need to claim the land as private property.

Settler-colonial scholars of Japan shift almost immediately from this positive observation to a normative claim: regardless of whether Ainu did or did not claim legal ownership, we should treat them as if they did hold it. Note two complications.

First, the Ainu would be but the most recent of a long stream of claimants. If the Ainu have a normative claim against the Japanese government, the Nivkh have an equally valid normative claim against the Ainu. The Ainu only lived in Hokkaido in the 19th century because they had expelled (more probably, killed) the Nivkh during the 11th century. Nor should one stop with the Nivkh. After all, the Nivkh took the land from still others. At root, it is lethal violence all the way down.

Consider first the principal English-language studies of the Ainu (Sec. B). Turn then to the history of the Ainu themselves (Sec. C, D).

B. Western Literature on the Ainu:

1. The basic studies. -- Mark Hudson (1999) examines the Ainu in the context of Japanese "ethnogenesis." He couples his account of the (pre-)history of the archipelago with a more extensive study of the development of modern Hokkaido. Ainu were part of the process, he suggests, by which other Japanese came to understand what it meant to be Japanese.

David L. Howell (2005) examines pre-World-War-II Ainu history. He combines that history with a study of the Japanese under-class known as the "buraku." Through the two accounts, he writes that he "illustrate[s] how institutions that originated in the core polity embroiled the Ainu and other peoples on the peripheries of the policy, even when those peoples formally lay outside the purview of the Japanese state."

Brett L. Walker (2001) provides a history of the Ainu through 1800. His account thus falls largely outside the scope of this article. Bruce L. Batten (2003) similarly focuses mostly on the pre-Meiji history of the Ainu. Tessa Morris-Suzuki (2020) primarily examines the ties between the Ainu on the one hand, and Japan and the areas like Sakhalin immediately beyond Hokkaido on the other.

Two anthropologists have done extraordinarily sensitive work on the Ainu in English. In the 1960s and 70s, Hitoshi Watanabe (1972) produced an ethnography in the classic tradition of cultural anthropology. Through it, he gives the reader a nuanced account of the Ainu society at the beginning of its interaction with modern Japan. More recently, Richard Zgusta (2015) locates the Ainu among the small hunter-gather (and other) groups on the Asian northeast. He is sensitive both to cultural interchange and to historical context. I rely heavily on both of these studies.

2. "Settler-colonial" studies. -- Several contemporary English-language scholars describe Ainu history as one of "settler-colonialism." Anticipating Patrick Wolfe's work on the concept by several years, social historian Richard Siddle (1996) did not himself mention the term in his study of the Ainu. Like the scholars who would follow him, however, he (1996, 2) stressed racism:

By focusing on the dynamics between racialisation and ethnic domination within the context of colonial relations of domination, this study considers Ainu 'ethnicity' as a creative response to marginalisation and racism.

Second, any violent disposition would not be peculiar to the settler-colonialists' usual suspects. Hirano (2023, 27) describes the modern concept of property as a "history of dispossession," and "part of a larger global movement in which Indigenous peoples in Australia, Canada, Russia, and the Pacific Rim were seeing systems of plunder erected upon their lands." In fact, however, dispossession lies at the basis of virtually every contemporary society everywhere. Prior to Holocene, all humans lived as hunter-gatherers. Today, virtually no one does. Beginning in Middle East about 12,000 years ago, small groups began to settle into denser communities and deliberately grow crops. As they did, they successively displaced (probably killed) the people who had lived there before. The villains in this process are not just Hirano's "Australia, Canada, Russia, and the Pacific Rim." They include the Arab communities in Said's Middle East. They include the Black communities in Fanon's Algeria. They include the agricultural Indians on the American east coast. It is not just lethal violence all the way down. It is lethal violence everywhere, all the way down.

The more self-consciously settler-colonial scholars quickly followed. Historian Katsuya Hirano (2023, 23-24) describes "Hokkaido's 'opening' as a history of encounter brought about by settler colonialism" In turn, he defines the concept as "a particular historical condition created by a state-led capitalist program designed to plunder and rob another society." Following Siddle's focus on racism, he asserts that the Hokkaido settler-colonialism was "primarily formed by the politics of racialization," and "founded on the systemic use of violence for dispossession and destruction."

Likewise discussing Hokkaido, historian Tristan Grunow and anthropologist Fuyubi Nakamura (Grunow 2019, 600) write:

[S]ettler colonialism always entails violence and power targeting Indigenous peoples in the process of nation-building. This is a violence of deracination and cultural genocide of Indigenous inhabitants

Anthropologist ann-elise lewallen (original in lower case) adds (Grunow 2019, 612):

Dispossession of Ainu lands, dismemberment of Ainu communities, and the intersectional forms of violence which destroyed Ainu family and community bonds are rooted in the complementary operation of heteropatriarchy,³³ settler colonialism, and indeed, genocide.

Because, she explains (Grunow 2019, 612), "settler colonialism at its core is fundamentally genocidal."

Hirano (2023, 40), again, locates the Hokkaido genocide in racism:

As Foucault put it, 'race or racism is the precondition that makes killing acceptable Once the State functions in the biopower mode, racism alone can justify the murderous function of the State'

But lest anyone have any doubt, lewallen (Grunow 2019, 612) adds that Hokkaido history "clearly demonstrates Japanese attempts at ethnic cleansing."

Writing in the American Historical Review, historian Michael Thornton (2022, 573) similarly describes Japanese policy as a straightforward "project of settler colonialism." Yet, where basic settler-colonial theory apparently requires that the government have committed genocide, the Meiji government never tried to kill the Ainu. To this disjunction between theory and fact, Thornton (2022, 574) responds by positing new facts. The "spread of disease to indigenous communities," he writes, "became a conscious tool of the Japanese state." Thornton cites no source for this astonishing assertion and provides no evidence.³⁴

Given the "conscious tools" that the Japanese state did adopt, one would not expect to see any evidence for Thornton's claim. In 1817, smallpox broke out in the Ishikari fishery where Ainu worked (Nagano 2022, 45, 52). Of the 2,137 people at the fishery, 833 died. In 1845, smallpox broke out in the Mitsuishi fishery. This time, the government and the fishery managers immediately sent the uninfected Ainu into the mountains. They

³³ To be sure, the Ainu and Japanese societies were both patriarchal. Given that the latter tolerated gay sex more freely than most of the West, what "hetero-" might add to "patriarchy" is a puzzle. In a footnote (Grunow 2019, 609 n.19), lewallen tells us that "Heteropatriarchy refers to the imposition of social systems in which patriarchy and heterosexual relations are instituted, normalized, and all other social relations, including those with the non-human world, are seen as aberrant." Perhaps some puzzles are better left unanswered.

³⁴ Thornton later writes that "Walker [2001] illustrates how the unintentional and intentional spread of new organisms -- particularly disease -- helped undermine Ainu society" In fact, nowhere does Walker claim (or even hint) that anyone intentionally spread disease among the Ainu.

followed the next day with food to tide the Ainu over until the outbreak ended. Of the 211 people in the fishery, this time only 8 died (Nagano 2022, 42, 51-56). In 1849, a Dutch physician brought the smallpox vaccine to Japan. By the 1850s, the government was running vaccination campaigns among the Ainu (Nagano 2022, 65, 145). Note simply: This is not a state that used the "spread of disease" as "a conscious tool." And this is not genocide.

Thornton (2022, 575) also objects to an experimental agricultural station that the government established in Hokkaido. It built the station to explore what crops might grow on the island. To Thornton (2022, 5), however, it was an "incubator for [Japanese] ecological imperialism" that would transform "Hokkaido into a neo-Europe." After all, he bizarrely explains, "apples, grapes, and peaches were new to Japan."

Bizarrely -- because none of the three was "new to Japan." The first reference to apples in Japanese history appears in the 10th century (Ringo 2011). The fruit seems to have originated in Kazakhstan, and travelled east to Japan over the silk road. Peaches and grapes go back farther still. Both appear in the 8th century classic, *Kojiki* (1882, 43-44). Note simply again: This is not ecological imperialism. And this is not neo-Europe.

If Thornton responds to the mismatch between settler-colonial theory and the Hokkaido facts by positing new facts, lewallen (2016, 65) responds by positing new definitions. The Japanese government encouraged intermarriage, writes lewallen, and that encouragement itself constituted genocide: The "colonial settler state of Hokkaido adopted a policy that would ensure the eventual disappearance of the Ainu people as a distinct racial entity, effectively a bloodless genocide."

"Bloodless genocide." If (a) theory decrees that settler-colonial societies necessarily commit genocide, but (b) the settler-colonial society in question did not deliberately kill anyone, then apparently (c) it must have committed "bloodless" genocide. To thine own theory be true, as Polonius put it. Recall that this is also the scholar who claimed that the Japanese government engaged in "ethnic cleansing." Given that it did not kill the Ainu, this was apparently "bloodless" ethnic cleansing.

Hirano (2023) follows lewallen along this line, but only after embroidering her bloodless catastrophe with Frantz Fanon. Why, asks Hirano, did Ainu women choose to marry non-Ainu men (he does not ask why non-Ainu men chose to marry Ainu women). He (Hirano 2023, 46-47) concludes:

Ainu women attempted to free themselves from the curses of racism by marrying Japanese men. ... As Franz Fanon posited ..., colonized men's masculine subjectivity was negated while male colonizers became the object of longing and desire for colonized women.

Quoting Fanon, Hirano (2023, 47) continues:

A woman of color would "try, in her body and in her mind, to bleach (the world)." ... All she wants is "a kind of lactification. For in a word, the race must be whitened" Ainu women's strategy of survival was defined by the aporia in which their liberation was imaginable only by way of self-effacement.

Table the question of how best to characterize these comments. Turn instead to Occam's razor, and consider a possibly simpler explanation. Within a few decades, many non-Ainu had joined the Ainu in Hokkaido. They crossed paths. Perhaps many young Ainu women (like many young women the world over) sometimes simply fell in love with young men they happened to meet.

C. The Ainu:³⁵

Men and women have lived on the Japanese archipelago at least since 14,000 B.C.E. This being the Pleistocene, global temperatures were lower then. Polar ice masses were larger, and ocean levels consequently lower. Land bridges connected Siberia to Alaska, and sometime around 14,000 B.C.E. migrants crossed over from Asia into the Americas. At about the same time, some may have entered Japan. Other scholars suggest that humans might have settled Japan as early as 40,000 B.C.E. -- the matter is unclear (e.g., Hanihara & Ishida 2019, 311).

Whether the immigrants came from the south or from the north is also unclear (e.g., Hanihara & Ishida 2019, 318-19), but they eventually settled the entire archipelago. They hunted, fished, and gathered, and eventually began to leave pottery that archeologists call "Jomon." They lived in small settlements in pit-dwellings covered with straw. They did not write. Some evidence suggests ties to the humans on the land mass that eventually became (as the earth warmed and water levels rose) the Indonesian archipelago (e.g., Hanihara 1991, 345).

Much later (perhaps as early as 1000 B.C.E., but perhaps as late as 300 B.C.E.), an entirely different group of men and women arrived on the northern tip of Kyushu island. They came from the Korean peninsula, settled in dense villages, and grew rice. Within a few centuries, they would construct the meticulously graded paddies and build the elaborate irrigation facilities that together define the contemporary Japanese countryside. They left pottery that archaeologists call "Yayoi."

Over the course of the next millennium, the Yayoi displaced the Jomon from most of central Japan. They inter-bred at times, but the Yayoi probably also killed or crowded out many of the Jomon. Agriculturalist groups have displaced hunter-gatherers the world over, and archaeologist Steven LeBlanc (2003, 143) suggests they usually displaced them by force:

The world had not been filled with foragers who became farmers. Descendants of farming groups expanded and took over most of the world. The so-called Agricultural Revolution was much more than that: It was a major repopulating of large portions of the world ... and one that, in reality, involved considerable warfare.

The Ainu and the residents of Okinawa and some of the outlying islands retain the strongest traces of the Jomon genetic signature.

The Yayoi left the Jomon mostly alone on the northern end of Honshu island (the Tohoku region) and Hokkaido island. The growing season was short, and summer temperatures were low. For the most part, rice simply did not grow.

The Jomon in northern Honshu and Hokkaido hunted, fished, and gathered. Like their pre-Yayoi ancestors, they lived in small bands in pits covered with straw. They hunted deer and bear when they could. They caught salmon when it swam upstream to spawn, and preserved and ate it through the winter. In time, they would learn to scatter some seeds. Given that they neither weeded nor fertilized, the land ceased to yield much harvest after two or three years. When that happened, the Jomon simply moved on.

³⁵ This material is available from many standard histories in Japanese. A careful English-language study is Zgusta (2015, ch. 2).

Over time, the Yayoi agriculturalists expanded north to the end of Honshu island. Sometimes, the Nivkh and possibly other hunter-gatherers on Sakhalin expanded south into Hokkaido. And sometimes, the hunter-gatherers on Hokkaido expanded north into Sakhalin and the Kuril Islands. The contacts led to cultural shifts, and by the 13th century the people on Hokkaido had adopted the distinctive culture that modern archaeologists call "Ainu."

D. Hokkaido at Mid-Century

1. Population. -- As the 19th century opened, roughly the same number of Ainu lived on Hokkaido as non-Ainu. The island was about the size of Maine (the entire country of Japan is smaller than California). The non-Ainu mostly lived on the Oshima peninsula adjacent to Honshu island. There, they mostly specialized in trade with the Ainu for salmon and game.

As of 1870, about 15,000 Ainu lived on Hokkaido. Table 1 collates estimates of Ainu population from a variety of sources. Readers should take these numbers as crude approximations. The Ainu did not register at city hall. They did not report births and deaths. Some lived near other Japanese settlements, but many lived in transient bands in remote and inaccessible areas. The most ambitious left the Ainu areas and ceased -- in effect -- to be Ainu at all.

[Insert Table 1 about here.]

In other words, the figures in Table 1 mask two off-setting sources of error. On the one hand, the older the census, the less likely any government auditor would have found a small band of Ainu living near a mountain stream, far from any Japanese road or village. On the other, the newer the census, the larger the number of talented and enterprising Ainu who left the community and identified only as Japanese.

2. Agriculture in Hokkaido. -- Only in the 20th century did many people in Hokkaido begin to farm. Table 2 collects estimates of the amount of rice paddies in cultivation over time. Granted, Hokkaido residents had devoted more land to other crops than to rice (Takakura 1954, 38; see Sec. x, below). But as of 1900, they had put barely 10,000 hectare (roughly 25,000 acres) into rice production.

[Insert Table 2 about here.]

Would-be farmers faced two basic constraints. First, Hokkaido is cold. In a typical year, the first frost arrives on September 26, and does not disappear until mid-to late May. This leaves a growing season of 130 to 160 days, 40 or so days shorter than in north-eastern Honshu (Yajima 1947, at 17). Second, the soil in Hokkaido is less fertile than the prime farmlands elsewhere in Japan. In 1945 a hectare of paddy (1,000 square meters) produced 1.353 koku (1 koku is about 150 kg) of rice nationally. In Hokkaido, it produced barely 0.692 koku (Yajima 1947, at 49). Because of these limitations, Hokkaido paddies sold for less than a quarter of the national average price (Table 3). Hokkaido did become a major rice producing prefecture by 1960, but only because of new production techniques and rice varieties.

[Insert Table 3 about here.]

VI. Legal Transition in Hokkaido -- The Potential

A. Property and Investment:

Per North & Thomas, modern law facilitates economic growth by helping to align social and private returns. It does so by defining and enforcing private rights to scarce resources. The success with which it does this, however, will turn on how readily residents understand and exploit the opportunities presented.

The recent studies in Section I on the effectiveness of different legal regimes implicitly assume that societies do not differ in this regard. Yet the extent to which men and women exploit the opportunities created by modern law do indeed vary. They vary in part because of what anthropologist Robert Boyd and his co-authors call the "difficulty of evolving social arrangements suitable to agriculture."

Most specifically, the extent to which people exploit the opportunities presented by modern law will turn -- I argue -- on whether they can (a) integrate private "rules of ownership" and (b) recognize the potential gains to deferring consumption. And it will turn on whether they (c) delegate the enforcement of those rules to community institutions with what Weber called a monopoly on the legitimate use of force.

B. The Household:

Typical of hunter-gatherers more generally, Ainu households did not own land. They built their homes in a location convenient to their hunting and fishing, but the home itself was little more than "a ground-level rectangular structure with a wooden frame and walls and roof made of reed" (Zgusta 2015, 39). They bought the land from no one. When they moved on, they sold the land to no one. They merely found another convenient location and built a new home.

The Ainu farmed, but only haphazardly -- and the absence of a sense of ownership followed (Yoshida 2005, 315-16). The Ainu did not construct elaborate rice paddies. They did not burn off the grass, or fertilize the land. Primarily, they grew a few varieties of millet. They plowed the top few inches of the ground, and scattered seeds. They weeded once or twice. By the third year or so, the yield fell. They abandoned the plot, and moved on.³⁶

For the Ainu, land simply was not scarce. As Harold Demsetz (1968) pointed out, property rights are not free. People develop and enforce private rights to property only when a resource is scarce. In Japan prior to the Meiji era, land in Hokkaido was not scarce. What Ainu households wanted was the right to use the land. They wanted the right to hunt and fish. If they began to till a plot of land, they wanted to be able to exclude a rival claimant. For them, that was all that mattered.

C. The Groups:

1. The component groups. -- The Ainu lived, hunted, and fished within several progressively larger groups. They held their rights to use resources through these groups, and through them they held their rights to exclude. The various groups controlled access

³⁶ Hayashi (1969, 20); Takakura (1954, 14-15); Watanabe (1972, 41).

to different resources, and the nature of the customary right that an Ainu held depended on the group that controlled access to that resource. As anthropologist Hitoshi Watanabe (1972, 56) put it:

Though various types of territories were held by the Ainu, all were concerned with the exploitation of natural resources found thereon. Ainu territorialism was a part of the spatial structure of their community which had a direct relevance to their adaptation to habitat. ... Territories as held by the Ainu fall into two categories: one, the territory inhabited and utilized exclusively by a river group as a whole ..., and the other, inner-territories stewarded as gathering sites by individual groups within the river group, i.e. local groups, cooperative groups and simple families."

First, mid-19th century Ainu lived in bands of up to 10 families. They called these settlements "kotan." Typically, they located a kotan near a stream. Within the kotan, they built each dwelling some 100-500 m from the others. They located each kotan some 4-8 km from its nearest neighboring kotan (Watanabe 1972, 9).

Second, each kotan was part of what Watanabe (1972, 10) calls a "local group." Some local groups included only a single kotan, but others could include several (Watanabe 1972, 11). Watanabe (1972, 12) writes that, on the one hand, the local group did not itself engage in many "collective activities." It did not itself do much. On the other hand, for "all economic purposes the local group was self-sufficient." Members kept to themselves, and "[s]ocial intercourse beyond the local group seems to have been rare."³⁷

Third, each local group was part of a still larger "river group." "The river group was an aggregation of all the local groups which lived along a river," explains Watanabe (1972, 16). Hokkaido contained five principal river systems. As some rivers had multiple "river groups," Watanabe (1972, 57) identifies 10 primary "river groups" on the island.

2. The group rights. -- The Ainu located their kotan near the spawning bed at which they fished. They also hunted the nearby forests. During the hunting and fishing seasons (but only during those seasons), no outsiders -- even members of other kotan within the same river group -- could hunt or fish in those areas (Watanabe 1972, 62-63).

The local group consisting of neighboring kotan did not itself possess its own hunting and fishing rights.

The river group claimed authority over an entire river and the adjacent land. As Watanabe (1972, 16) put it, they "regarded the river basin as their own territory, claiming exclusive rights to exploit all its resources, which they defended against the trespass of outsiders" What is more, this authority was not seasonal. A local kotan claimed authority over its spawning and hunting grounds only during fishing and hunting seasons; the river group asserted authority that extended year-round (Watanabe 1972, 62-63).

In addition, the river group exercised authority over the spawning and hunting areas along the river that were not claimed by any of the local groups. Members of the river group could use these areas without obtaining permission.

The river group also coordinated the bear hunts (Watanabe 1972, 65).

³⁷ Watanabe (1972, 12). Consistent with the sense that Watanabe's "local group" has less clear roots in Ainu tradition than the kotan and the river group, in summarizing Watanabe, the Sapporo District Court in the Raporo case (see Section xx below) refers to the "local group" using Watanabe's English phrase. See Raporo Ainu Neishon v. Japan, 2024 WLJPCA 04189009 (Sapporo D. Ct. Apr. 18, 2024).

3. Permitted usage. -- Members of the relevant kotan, local group, or river group could use a resource freely, but Ainu outside of that relevant group could use it only with permission. Watanabe (1972, 62), again:

[I]nter-river-group-territorialism ... induced them to refuse a stranger or outsider to exploit any kind of its resources without permission, whether in season or out of season.

As one writer put it (Kono 1911, 6-7), the Ainu "do not allow Ainu from other areas to enter and fish or hunt." Instead, outsiders could exploit such an area only with permission. What permission the outsider needed to obtain depended on the resource he wanted to exploit.

D. Ownership and Sovereignty:

As this discussion makes clear, the Ainu shared the concept of sovereignty over land but not of its ownership. The distinction matters. Each river group asserted authority over spawning and hunting grounds. It enforced that authority against rival Ainu who might try to breach it.

This sovereignty, however, was a collective right. It was a right of the larger river group against members of the other river groups. It was not a right of any individual member of the group. For purposes of economic growth, what matters is the alignment between the interests of the men and women who till, improve, and maintain a piece of land, and the men and women who capture the returns to that effort. This is the alignment that overcomes the common pool problem that otherwise causes underinvestment. And this is the alignment that lies at the heart of Blackstone and the German and Japanese Codes.

This private land ownership is what the Ainu did not have. It is also, of course, what the South African Bantu (described above, Sec. xx) did not have. The river group could claim the right to exclude Ainu from other river groups, but given the size of each group the common pool problems remained. Only if the individual men and women within the river group were to allocate the land among themselves would they have overcome the common pool problem. Only then, by Anglo-American or Japanese law, would they have "owned" the land.

E. Inter-temporal Substitution:

On some dimensions, the Ainu did plan ahead. Granted, some contemporary accounts describe them as thinking only of the present. And their agricultural practices might indeed suggest such an approach. But at the very least, the Ainu understood that the salmon they captured during the spawning season would need to feed them through the winter. They dried and preserved the salmon, and ate it during the months when the snow seemed to cover anything else they might want to consume.

F. Violence:

1. Introduction. -- Given the obvious economies of scale and scope to a centralized authority that defines and enforces rights to scarce resources, efficient economic growth requires that people delegate that enforcement to the community at large. Crucially, the Ainu lacked such a tradition. Instead, like so many other hunter-gatherer societies, the Ainu were violent. They routinely protected themselves against rival Ainu. They routinely

attacked rival Ainu. And they did all this with an astonishing (to modern sensibilities) lethality.³⁸

In this Subsection F, I describe the (lack of) order among the Ainu at perhaps disproportionate length. I do so because so many scholars insist so vehemently that the Ainu maintained a "peaceful" society. In a 2019 exchange, for example, Grunow, Nakamura (Grunow 2019, 597) and lewallen (Grunow 2019, 609; similarly Hirano 2023, 23) decline to refer to "Hokkaido." The name came from the Japanese settler colonialists, they write. Instead, they refer to the island as "Ainu Mosir." Such is the name that the Ainu gave the island, they (a bit preciously) tell us, and means "the peaceful land of human beings." So peaceful was it, writes anthropologist anne lewallen (Grunow 2019, 610-11), that the Japanese government could force modernization on the Ainu only by compelling them "under the threat of violence to violate their covenants with non-human relatives such as the herring"

How the herring understood those covenants lewallen never tells us, of course, but a "peaceful land" Hokkaido was not. The Ainu fought each other regularly, and for at least two reasons. First, they fought to protect their sovereignty (Sec. 2, below). But second, they fought their neighbors simply to kill their men, steal their women, and take whatever else they could grab. The violence was gratuitous, and it was brutal (Sec. 3, below).

2. Policing territory. -- The Ainu routinely fought to protect their sovereignty. When other Ainu hunted or fished within a group's self-defined territory, the local Ainu responded brutally. Consider the accounts of one early settler, John Batchelor. Batchelor arrived in Hokkaido in 1877, and lived among the Ainu until the war broke out in 1941. Sent by the Church of England, he taught himself the Ainu language, published both an "Ainu-English-Japanese Dictionary" and an "Ainu Grammar," and founded a school and a hospital for the Ainu. In an 1892 book on the Ainu, he detailed the Ainu violence at length (1892, 286-89). Often, he wrote, that violence began with a trespassing hunter or fisherman (Batchelor 1892, 287):

The quarrels and fights were generally caused by the men of one village or district hunting over the grounds recognised as belonging to the people of another; for, in ancient times, the Ainu divided the land amongst themselves.

This violence could consume a village (Batchelor 1892, 286-87):

Sometimes a whole district would make war upon its neighbour, and at other times a village would quarrel with another, and have a fight. Sometimes the people used to fight with their bows and arrows, and at others with stones and sticks. ... The wooden war-clubs ... seem to be entirely Ainu, for I have never seen any amongst the Japanese. The bows and arrows are likewise Ainu instruments They also seem to have been in the habit of fighting with daggers. ...

A 1933 government study on crime among the Ainu similarly observed the way that trespass could lead to violence. "In the past, there were repeated instances of violent fights between villages and the shedding of blood," the report (Suzuki 1933, 27) noted, and the reason lay in the violation of river group's sovereignty over fishing and hunting grounds.

³⁸ There are contrasting reports -- as I observe below in note xx. I find them inconsistent with the broader tenor of the contemporary observations, and with modern scholarship on hunter-gatherer communities more generally.

The many remains of Ainu forts across Hokkaido reflect this pervasive intra-Ainu violence. Known as "chashi," these areas can be identified by the raised platforms on which the Ainu had built their fortifications. Scholars have identified over 600 remains, and some observers estimate the total at 700 to 1000 (Utagawa 1983, 3; Kawakami 1990). Dutch explorer and cartographer Maarten de Vries visited the eastern coast of Hokkaido in 1643. As he described the chashi:³⁹

[O]n the mountain on which they were placed was a small road steep to climb, and round on the four sides palisades were placed at the height and length of 1-1/2 man's length; within this stood two or three houses. There were large fir doors in the palisades with strong clamps; when they were closed, two stout bars were passed through the clamps and thus fastened to them. At two corners of these square placed palisades, a high scaffolding is made of fir planks, for a lookout; further, the palisades are well fastened together with cross bars.

Fortifications like these are common among hunter-gatherer societies, and reflect intra-mural violence. "The most unequivocal evidence of armed conflict consists of human skeletons with weapon trauma," writes archaeologist Lawrence H. Keeley (1996, 36), "and fortifications." The chashi represent exactly those fortifications.

Reflecting the jealousy with which they defended their hunting and fishing grounds, the Ainu built most of these chashi on high grounds near streams and prime hunting grounds.⁴⁰ Some western scholars have claimed that the Ainu built these fortifications to block Japanese colonization efforts.⁴¹ In fact, they built only a small fraction along the south-east coast to which Japanese invaders might have come. They built most of the forts inland, away from any location any Japanese ever visited.

3. Gratuitous violence.⁴² -- (a) The night-time raids. Call it "gratuitous violence" - violence unrelated to any effort to stop outsiders from hunting or fishing on one's territory. Accounts of the pre-Meiji Ainu report regular, lethal attacks on rivals. And many of the chashi reflect this apparently gratuitous violence as well.

We may never know how the Ainu handled conflict during the years before close contact with Japan. Such is what scholars have come to call the "contact paradox." Consider it an anthropological variation on the Heisenberg principle. We cannot know how the hunter-gatherer societies functioned before people from literate societies approached them, because once they arrived the hunter-gatherers necessarily changed their behavior. Yet some (not all) of the earliest outsiders to visit the Ainu did indeed record Ainu recollections of that past. Throughout these accounts, the narrators make disturbing references to a brutal world.

³⁹ Quoted in Bickmore (1868, 368).

⁴⁰ See Tsuji (2012, 85); Takasugi (1982, 289).

⁴¹ Hudson (1999, 216) claimed this in 1999: "it is widely accepted that their primary function was defensive in the face of growing Japanese encroachment in Hokkaido." As noted below (Sec. x), more recently he observes that the chashi were probably defenses to night-time Ainu raids.

⁴² One should note that there are also contrasting, very positive accounts of the Ainu. Some of these are collected in Oelschleger (2014). One traveller, for example, described the Ainu as having "more politeness, more gentleness, more seriousness and maybe greater intelligence than in any nation of Europe." Quoted in Oelschleger (2014, 31).

Relevant here, the Ainu did not build their chashi only to police their fishing and hunting grounds. They built them to guard against deadly raids. Recall that the Ainu lived near their hunting and fishing grounds. To say that they built chashi near those grounds is also to say that they built them near the kotan where they lived.

Because attacks on the kotan were common. In 1892, Batchelor described the raids (1892, 288):

Not infrequently, ... the Ainu made night raids, which they called topat-tumi, one upon another. On such occasions nearly the whole of the male population were murdered during sleep, whilst the women and children were carried off as slaves to work in the gardens, [and others] were kept as concubines.

Writing again in 1901, Batchelor stressed the frequency and lethality of these night-time raids (Batchelor 1901, 14-16):⁴³

After carefully talking the matter over with the people, I have come to the conclusion that strife among the clans, as much as wars with the ancient Japanese, ... had as much to do with the decrease of the race as anything else. It is said that different parties used to make night raids upon one another, and put as many of the adult males to the sword as possible, while the women and children were carried off and used as slaves.

In part, the Ainu built the chashi as defenses against these raids. As archaeologist Mark Hudson put it (2017, 703-04):

[C]onflict within Ainu society was also common. Such conflict often involved raids known as topattumi Records of such raids are often associated with one of the most important archaeological signatures of violence in the Ainu culture period, the chashi. Chashi are located on hills or ridges and are usually interpreted as forts or stockades

(b) Nemuro peninsula. Some 32 chashi dot the Nemuro peninsula, and 24 especially well-preserved examples are designated national monuments. The peninsula itself lies at the northeastern corner of Hokkaido where the island meets the Kuril Island chain. That chain leads to the Kamtchatka peninsula, which in turn leads to Siberia. Ainu also lived on these Kuril Islands.

German explorer Georg Wilhelm Steller⁴⁴ spent several years on the Kamchatka peninsula in the mid-18th century. In 1774, he (1774, 182) described raids by the Kuril Ainu:

These Kuriles were invincible because they invaded unexpectedly, coming in baidaras from the ocean and paddling back again to their islands, where the poor Kamchadals could not follow. ... They seldom had open skirmishes; rather, they secretly and suddenly attacked each other at night, the intent being more pillage than murder.

⁴³ Writers sometimes attribute the lower population levels to epidemics. Batten (2003, 258) plausibly notes that the population density in Hokkaido was so low that any epidemics would likely have been self-limiting. He limits the statement to "at least in very early periods of history." Note, however, that at the start of the 19th century, the 20,000+ non-Ainu Japanese lived mostly on the Oshima peninsula closed to Honshu; elsewhere, only 20,000+ lived on the entire island.

⁴⁴ Published in English translation by the University of Alaska Press, 2003.

Once the violence began, it could continue at length. Again, according to Steller (1774, 267):

If one man killed another, the relatives of the deceased avenged him by killing the murderer. ... But in case the murderer was not handed over and the whole village took his side, ... war broke out between them. ... Whichever party defeated the other took the others prisoners as slaves, the women and girls as concubines, and killed whatever men they got hold of so that they would not have to fear them in the future."

(c) Hokkaido 1918 survey. A Hokkaido prefectural survey in 1918 similarly noted the lethal brutality among the Ainu. Like Batchelor, it blamed the violence for the Ainu population stasis: the failure of the population to grow, it (Hokkaido 1918, 421) concluded, was a result of the "internecine fighting among their people." It elaborated (1918, 421-22):

In the past, even if there was close reciprocal interchange between communities, once the peace was broken there would be brutal battles. This is the cause of a non-trivial part of the population decline.

Further, the survey observed (1918, 437):

In the past, the [Ainu] lived with their [principal homes] in various places. Sometimes, there would arise strife among villages, or among areas comprised of several villages. These would lead to the start of violent battles. However, among the [Ainu] there were no mechanisms to preserve peace. Once a war broke out, all healthy people -- whether male or female -- would have no choice but to head to the battle ground. It was natural that this would leave to extreme numbers of deaths and injuries in battle.

It continued (Hokkaido 1918, 437):

Also, the [Ainu] would sometimes commit burglaries at night. When they did, the men of the attacked village would almost all be killed in their sleep. Women and children were routinely kidnapped. These sorts of events occurred frequently before the [Meiji] Restoration.

(d) Other accounts. A 1933 government study on crime among the Ainu noted (Suzuki 1933, 116):

According to the historical records, among the Hokkaido Ainu [robbery] was less a crime by an individual, as a group crime among communities. It was particularly committed against ethnic Japanese. This group robbery always involved murder. The men of the attacked community were almost all killed in their sleep. Their wives and children were then kidnapped, and forced to work in the paddies as slaves."

The wars between Ainu neighboring groups appear in non-Japanese accounts as well. According to Richard Zgusta's (2015, 96) study of northeast Asia: Oral traditions and Chinese history indicate "continuous warfare between the advancing Ainu and the Sakhalin indigenous inhabitants"

And like Batchelor, early 20th century Polish ethnologist Bronislaw Pilsudski ascribed Ainu population decline in part to internecine battles (reprint 1998, 267):

The following factors contributed to the decrease in population of this once strong tribe: devastating wars with the Japanese, and later bloody uprisings; wars

with neighbors -- Gilyaks and Oroks -- and among themselves; earthquakes and floods; epidemic diseases; syphilis, consumption, scurvy and other diseases; changes in economic conditions of life; continued political oppression.

4. Subarctic violence. -- (a) The north Pacific rim. The violence among the Ainu was part of a broader pattern of violence among the many small Arctic and Subarctic groups that encircled the north Pacific: from northern Japan to the Kuril Island chain, and from there to the Kamchatka peninsula, to north-eastern Siberia, across the straits to Alaska, and then down to western Canada. These groups -- the Ainu among them -- shared variations of a common culture.⁴⁵ By the 12th century, writes Zgusta (2015, 343), the Ainu had conquered "the southern third of Sakhalin Island and the entire Kuril chain of islands as far as Kamchatka peninsula"

From the south-western tip of this Subarctic rim, the Ainu connected with the other groups through two routes. One ran "along the western coast of the Sea of Okhotsk and the other along the Kuril chain" (Zgusta 2015, 349-50). The former tied the Ainu to the Nivkh on Sakhalin island and the various groups in the Amur River basin. The latter tied them to Asiatic Eskimo, and through them to the Inuit (including the Inupik) in Alaska.

Anthropologist Chester Chard (1960, 238) described the area more broadly, as "an ancient arc of related culture and population around the entire rim of the North Pacific from Kamchatka to Puget Sound, along which individual traits may have readily diffused in either direction. I would conceive of this arc as a belt of sedentary maritime peoples sharing a common cultural tradition ..." Or as Zgusta (2015, 348), again, put it, "[t]he coastal tradition of the North Pacific between Hokkaido Island and the Bering Strait" is represented "by the Ainu, Nivkh, the Amur complex, Itelmen-Kamchadal, and partially Koryak cultures." The "extension of this cultural belt in North America" then extends "as far south as the Olympic Peninsula and Puget Sound."

Relevant to this study, these Subarctic groups could be -- routinely were -- brutally violent, in much the same way as the Ainu. North of the Kuril Island chain starts the Kamchatka peninsula. The Russian government mapped the area over the course of their second expedition of 1731-1742. Explorer Stepan Krasheninnikov travelled with the expedition, and published what would become the first careful description of Kamchatka.

The Kamchatkans rarely fought to increase their power or expand their territories, wrote Krasheninnikov. Instead, like so many hunter-gatherers, they fought in part over property, in part for slaves, and in part over women (Krasheninnikov 1764, 176-77): "[Their] vices occasion frequent quarrels and wars among them sometimes with their neighbours, not from a desire of increasing their power, but from some other causes, such as the carrying off their provisions, or rather their girls, which is frequently practiced as the most summary method of procuring a wife." As a result, (Krasheninnikov 1764, 199-200), "they had such frequent quarrels among themselves that seldom a year passed without one village or other being entirely ruined."

Recall the roughly contemporaneous German explorer, Georg Wilhelm Steller. He noted much the same set of incentives behind the endemic lethal violence in Kamchatka (Steller 1774, 181): "two internal tendencies, envy and lust, caused the people to disturb their own peace and quiet and to create disunity among themselves The desire for

⁴⁵ See also, e.g., Matsumura (2009, 121); Ishida & Kida (1991, 29).

women, the desire to lord it over others and use them as servants, and then the desire for all kinds of household utensils and furnishings caused the wars on Kamchatka."

One of the most common strategies among the Kamchatkan hunter-gatherers was the night-time raid so frequently used by the Ainu (Krasheninnikov 1764, 200):

Their manner of attacking is this: in the night-time they steal into the enemy's village and surprise them, which may easily be done as they keep no watch; thus a small party may destroy a large village, as they have nothing more to do than to secure the mouth of a hut, and suffer no body to come out, which only one can do at a time

And they were nothing if not cruel (Krasheninnikov 1764, 200): "The male prisoners which they take ... are treated with all manner of barbarity, such as burning, hewing them to pieces, tearing their entrails out when alive, and hanging them by the feet."

(b) Inuit. When social anthropologist Ernest S. Burch, Jr. studied the Eskimos (the Alaskan Inuit or Inupiaq) some 200-odd years later, he found roughly the same phenomena. Like the Ainu and the Kamchatkans, the Inupiaq raided their neighbors before dawn. "Normally, raids were made at night," wrote Burch (2005, 71), "under cover of darkness, when everyone in the target settlement was asleep." If successful, the attacking group slaughtered everyone (Burch 2005, 69): "A conclusive victory for one side and defeat for the other consisted in the death of everyone, every man, woman, and child in the target population" More fully, according to Burch (2005, 118):

Prisoners were taken rarely and hostages never. Women were sometimes taken as slaves, but in most of the cases I heard about they were raped, tortured, and killed before their captors reached their homes. Occasionally a warrior who had run out of arrows surrendered to the members of a victorious enemy force, but he was killed anyway, usually after being tortured first.

Anthropologist Lawrence H. Keeley (1996, 29, ital. orig.) noted a similar phenomenon among other Arctic groups. "[I]n one Copper Eskimo camp of fifteen families first contacted early in this century, *every* adult male had been involved in a homicide. Other Eskimo of the high arctic who were organized into small bands also fit this pattern." They, too, used the pre-dawn raid strategy that Burch described among the Inupiaq, and that the Ainu had used in Hokkaido (Keeley 1996, 65): "One common raiding technique (favored by groups as diverse as the Bering Straits Eskimo and the Mae Enga of New Guinea) consisted of quietly surrounding enemy houses just before dawn and killing the occupants"

Writing about these groups that ringed the north Pacific, anthropologists Herbert Maschner and Katherine Reedy-Maschner (1998, 39) observed that attacks "were launched only on unsuspecting enemies." The attackers then "typically killed all the men, except certain males that were retained for slavery or were destined for torture, and took only the women and children as prisoners"

Archaeologist Steven LeBlanc (2003, 118) stressed the indiscriminate brutality of it all: "The goal in all warfare among these Eskimos was annihilation [W]omen and children were normally not spared, nor were prisoners taken, except to be killed later."

VII. Legal Transition in Hokkaido -- Ainu Policy

A. Introduction:

Such is the Ainu society that the Meiji government found on Hokkaido, and within which it hoped to foster economic development. Toward that end, it implemented a portfolio of policies apparently designed (1) to promote economic growth in Hokkaido, (2) to transform the Ainu into self-reliant farmers, and simultaneously (3) to protect the Ainu from dishonest Japanese investors. Unlike the governments of Canada, the U.S., and Australia, the Japanese government did not enact generous subsidies specifically targeting its indigenous citizens. Instead, those provisions that it did adopt to protect the Ainu tracked closely the provisions it used to try to protect the former samurai that it recruited to Hokkaido.

In attempting to turn the Ainu into self-reliant farmers, the Japanese government failed. Growing crops on Hokkaido was hard enough for an experienced farmer. For men and women raised as hunter-gatherers, it proved impossible. Only after risk-taking non-Ainu invested decades in exploring alternative agricultural techniques and plant varieties did farming become profitable on Hokkaido.

Eventually, the Hokkaido economy did grow. But it did not grow because of the efforts of the Ainu. The Ainu inter-married with the non-Ainu, and as a distinct ethnic group largely disappeared. Instead, it grew because non-Ainu entrepreneurs moved to Hokkaido to take advantage of the opportunities framed by the modern legal system.

Consider first the land law in Hokkaido (Sec. B) and several legal restrictions on Ainu cultural practices (Sec. C). Finally, turn to contemporary government policy (Sec. D).

B. Hokkaido Land Law:

1. Early policies. -- The Meiji government implemented the first of its policies to promote Hokkaido development in 1872.⁴⁶ In "Rules for the Sale and Lease of Hokkaido Real Estate," it explicitly recognized private ownership in land (1872 Rules, Sec. 1). Interested parties could buy up to 33 ha (1 ha = 10,000 sq. meters = 2.47 U.S. customary acres), tax free for 10 years, according to a three-tier price structure that turned on land quality (Secs. 1, 2, 3, 7). Should the purchaser not put the land to use within 1 to 2 years, he forfeited it to the state (Sec. 6).

In 1879, the government further declared that all land in Hokkaido was now either privately owned or owned by the government.⁴⁷ In some areas, it straightforwardly allocated the land used by Ainu households to them as private land (Osaka 2023, 32). Elsewhere, it declared that the government owned the land under Ainu houses (1879 order, Sec. 16). They could continue to use the land freely, but simply did not owe taxes on it (Takakura 1954, 98). The land allocated came to a generous amount. Based on a partial sample, Taku Osaka (2023, 22) calculates that the government allocated a mean 1,025 square meters (1 sq. meter = 10.8 sq. ft.) per Ainu house. In the heavily populated Sapporo area, it allocated 3,295 square meters per house.

⁴⁶ Hokkaido tochi baitai kisoku [Rules for the Sale and Rental of Hokkaido Real Estate], Dajokan futatsu No. 304 of Oct. 10, 1872, and the accompanying Jisho kisoku [Title Rules], Sept. 1872. See generally Yoshida (2005, 309); Kumagai (1988, 42-44). The 1872 Jisho kisoku of Sept. 1872 seemed to anticipate that Ainu individuals and communities could be allocated land with full private ownership (Sec. 7). However, for two contrasting interpretations of this provision, see Osaka (2023, 21).

⁴⁷ Hokkaido jiken hakko jorei [Rules for Issuance of Land Titles in Hokkaido], Tatsu No. 15 of Dec. 1879. See generally Yoshida (2005, 309); Emori (2007, 394-95); Takakura (1954, 39).

Immigrants arrived from elsewhere in Japan, but the first to come failed to make money. Faced with families unable to earn a profit, in 1886 the government expanded its incentives.⁴⁸ To each applicant who would farm, it again promised 33 ha (1886 Rules, Sec. 2) -- but gave him 10 years to put the land to use and charged no rent during that period (Secs. 3, 6, 10).

In fact, most immigrants still did not successfully develop the land. From 1886 to 1896, the government conveyed 405,312 ha to 117,078 claimants under its "lease" program. For the most part, the claimants did not succeed. Instead, they forfeited the vast majority of the land.⁴⁹

2. Policies for the former samurai. -- The Meiji government also tried to encourage the now-out-of-work former samurai to settle Hokkaido as part of an agricultural militia. Toward that end, in 1890 it offered 5 to 6.6 ha to each applicant (depending on rank).⁵⁰ From 1874 to 1899, it settled 7,227 households with 23,000 ha (Takakura 1954, 79). To protect these former samurai from unscrupulous lenders (or perhaps from their own avarice), the government declared that the samurai could not transfer the land or assign security interests in it for 30 years (1890 law Sec. 4). The samurai did hold the land tax-free so long as they served in the militia, and for 20 years thereafter (Secs. 3, 8). If at the end of 30 years, the samurai had not yet developed the land, they forfeited it to the state (Sec. 5). And indeed, many did forfeit it (Takakura 1954, 81).

3. The 1897 and 1899 statutes. -- At the close of the century, the government passed two additional statutes: one to expand the incentives for Hokkaido development even further, and one to promote farming among the Ainu.⁵¹ Over the course of the decades that followed the government would change the details multiple times, but in 1897 it enacted the first of these statutes. To promote general development, it would now allow much larger farms -- up to 496 to 826 ha.⁵² The land would be free, both upon its initial distribution, and upon transfer of title at successful development (1897 Law, Sec. 3). Should a farmer fail to develop the land within 10 years (some extensions possible; Secs. 9, 10), he forfeited it to the state. A majority of the recipients did. Only 26.6 percent of the grants resulted in the transfer of title (Furano 2012).

In 1899, the government passed the second of these statutes: the "Act for the Protection of Hokkaido Aborigines."⁵³ Deliberately modelled on the U.S. Dawes Act

⁴⁸ Hokkaido tochi haraisage kisoku [Rules for the Distribution of Land in Hokkaido], Kakurei 16 of June 29, 1886. See generally Yoshida (2005, 310).

⁴⁹ See Takakura (1954, 73-82).

⁵⁰ Tondenhei tochi kyuyo kisoku [Rules Regarding the Provision of Land to the Agricultural Militia], Law No. 79 of Sept. 6, 1890. See generally Takakura (1954, 61, 80-81).

⁵¹ Hokkaido kokuyu mikaichi shobun ho [Law for the Distribution of National Undeveloped Land in Hokkaido], Law No. 26 of March 30, 1897, and Chokurei No. 98, 1897, under Sec. 3 of this statute. See generally Yoshida (2005, 308-10).

⁵² Chokurei (1897), Sec. 1 (1.5 million maximum for farmland; 2.5 for forestry and pasture). See Furano (2012).

⁵³ Hokkaido kyudonin hogoho [Law for the Protection of Hokkaido Aborigines], Law No. 27 of March 2, 1899. See generally Yoshida (2005, 306).

(governing American Indians),⁵⁴ the law offered each Ainu 5 ha of land at no cost (1899 Law, Sec. 1). If poor, the Ainu recipient received free farming implements and seed as well.⁵⁵ As with the program for the samurai, the recipients could not sell, mortgage or pledge the land (Sec. 2). They could lease it for a term, but not in perpetuity.⁵⁶ If a recipient did not develop the land within 15 years, he forfeited it to the state (Sec. 3; see Takakura 1954, 102).

Susumu Emori (2007, 443) estimates that by 1916 the government had distributed 9,656 ha to Ainu households under this program. Of the 4,430 total Ainu households, 2,369 were in agriculture as of 1916 (Emori 2007, 443). This may make the program appear more successful than it was. Takakura (1954, 102) writes that as of 1923, the Ainu held 7,632 ha. Of this, only 3,438 ha was actually in use, and the Ainu themselves farmed only 1,464 ha.

4. Limitations on title. -- "Settler-colonial" historian Katsuya Hirano complains that the Ainu received their land subject to the limits on alienation, and attributes it to racism. "The racist view of the Ainu's innate incompetence in self-governance, production, and self-management," he (Hirano 2023, 43) writes, "came to form the very basis of their relation to the land." As a result (Hirano 2023, 43):

[The 1899 statute] imposed strict regulations on even the terms of acquisition and ownership of land that the Ainu people manage to obtain from the government by cultivating it. The rights of pledge, mortgage, easement, retention, and priority were all denied, and no right of lien or statutory lien was granted. ... This amounted to a virtual denial of jus disponendi and therefore violated modern terms of private ownership that guaranteed owners the rights to use, profit, and disposal.

In fact, of course, the Meiji government conditioned the land it gave to the Ainu by the same limits that it imposed on the land it gave to the former samurai. To the new government, neither the former samurai nor the Ainu brought the economic sophistication necessary to handle large transactions. Lest the members of either group find themselves negotiating with far more sophisticated traders, it limited the transactions to which they could bind themselves.

C. Other Restrictions upon the Ainu:

1. Hunting and fishing. -- Concurrently with these land policies, the government did ban several distinctive Ainu traditions. Western scholars tend to miss the context to these practices. Anthropologist Ann-Elise Lewallen (Grunow 2019, 610-11), for example, writes that the market economy "disrupted reciprocal relationships that Ainu had cultivated with herring and salmon." Never mind whether the salmon who found themselves speared while laying their eggs thought it a "reciprocal relationship." As noted earlier, Lewallen also believed that the market forced the Ainu "to violate their covenants with non-human relatives such as the herring"

⁵⁴ See Kanekura (N.D.).

⁵⁵ See Emori (2007, 440-41); Takakura (1954, 101).

⁵⁶ Sec. 2; see Yoshida (2005, 311); Emori (2007, 440-41).

At root, lewallen misses the incompatibility of Ainu hunting and fishing techniques with any serious attempt to share the island with other Japanese.⁵⁷ Most obviously, the Ainu needed to change the way they hunted. The Ainu had hunted deer and bears primarily by setting concealed spring bows loaded with poisoned arrows. The government hoped that non-Ainu Japanese would move to Hokkaido and settle. Unless it stopped the Ainu from hiding spring bows throughout the national forests -- spring bows laced with poisoned arrows, no less -- families were not going to relocate in Hokkaido.

Accordingly, the government progressively eliminated these practices. It began to impose hunting license requirements in 1875, and banned trap bows and poison arrows entirely in 1876.⁵⁸

Nor were the Ainu hunting in anything approaching a sustainable fashion. According to archaeologist Mark Hudson (2017, 701), skeletal remains suggest that the Ainu were already over-hunting deer in the 15th to 16th centuries. With the increased trade in the late 19th century, the demand for deer and bear rose higher still. In 1875 hunters took 76,500 deer skins. By 1880, they took only 10,000 (Yoshida 2005, 310).

Accordingly, in 1875 and 1876, the government began to restrict deer hunting. Over time, it expanded the areas subject to the rules, and by 1889 had eliminated any exceptions for the Ainu (Yoshida 2005, 310).

The Ainu also needed to change the way they fished. The Ainu had fished for salmon, but primarily by spearing them when they came up-stream to spawn. Small numbers of hunter-gatherers can spear spawning species without threatening extinction. But once again, increased trade brought higher levels of demand. Killing the salmon as they swam upstream to spawn was a fast path to extinction.⁵⁹

Accordingly, the government moved steadily to restrict the traditional fishing strategies. By the end of the century, it had banned Ainu from taking salmon in the rivers entirely.⁶⁰

2. Forced tattooing of girls. -- The 19th century Japanese government did not consider all cultural practices equally acceptable. First, it found it straightforwardly unacceptable to tattoo -- forcibly -- large images on the faces of very young girls. By custom, the Ainu had tattooed huge lips onto the face of their women. Typically, they began this disfiguring process when the girls were still very young. Isabella Bird (1885, 125) travelled to Hokkaido in 1878, and recounted what she saw:⁶¹

⁵⁷ A point that seems to be lost on many western scholars of the Ainu. See, e.g., Howell (2005, 178): "between the Restoration and about 1882 the Development Agency followed a mostly negative policy, attacking both Ainu cultural practices and what remained of the traditional economy without making more than a token effort to replace them"

⁵⁸ See Kanekura (N.D.); Emori (2007, 396-97)/

⁵⁹ Ainu bunka (N.D.); Raporo Ainu Neishon v. Japan, 2024 WLJPCA 04189009 (Sapporo D. Ct. Apr. 18, 2024).

⁶⁰ See Yoshida (2005, 310); Ainu bunka (N.D.); Kanekura (N.D.).

⁶¹ Bird (1885, 125); see also Sutherland (1948, 210): "The tattooing was commenced as a small area above the upper lip when the girl was six or seven years old and was gradually extended and completed just before marriage" Howell (2005, 179) writes merely that this was a "Ainu custom[]" that struck [the Government] as most different from their own."

The process of disfigurement begins at the age of five ... I saw the operation performed on a dear little bright girl this morning. A woman took a large knife with a sharp edge, and rapidly cut several horizontal lines on the upper lip, following closely the curve of the very pretty mouth, and before the slight bleeding had ceased carefully rubbed in some of the shiny soot which collects on the mat above the five. ... The pattern on the lips is deepened and widened every year up to the time of marriage

Anthropologist Ann-Elise Lewallen (2016, 150) would have us understand this "as an elaborate, permanent form of makeup." The Japanese government banned the practice in 1871.

3. Corporal punishments. -- Second, the Japanese government refused to enforce the criminal sanctions that the Ainu had customarily imposed. Legal scholar Mark Levin (2001, 435) writes that the government abrogated "Ainu tribal dispute resolution processes in favor of Japanese national and Hokkaido colonial judicial authority." Note what those "tribal dispute resolution processes" involved. According to John Batchelor (1901, 285):

For breaking into the storehouse or dwelling of another, a very sound beating was administered for the first offence; for the second, sometimes the nose was cut off, sometimes the ears, and in some cases both the nose and ears were forfeited.

Other sources report instead that the customary Ainu penalty for theft was to amputate two fingers for the first offence, and additional fingers for the second (Kato 2022, 78).

Batchelor (1901, 286) recounts the penalty for murder:

For murder it is customary to cut the tendons of the feet in two, thus maiming a person for the remainder of his life. The tendons were severed close to the heels.

Obviously, the murderer would either starve or find himself devoured by wild animals. Other sources (Kato 2022, 78) write that the Ainu customarily pierced both of the murderer's eyes with a needle, placed him under his victim's corpse in a coffin, and buried him alive.

Ayako Kato (2022, 11-12) studied court practices in Sakhalin before the Second World War. As a Japanese colony, the island government enforced both Japanese civil and criminal law, reports Kato, but self-consciously tried to apply customary Ainu law in cases involving Ainu. Nonetheless, it refused to apply the customary criminal punishments. Kato (2022, 85) located 15 cases involving Ainu crimes in Sakhalin. Rather than apply Ainu customary punishments, the courts imposed either a fine or a term of imprisonment in each case.

D. Modern Policy:

1. Introduction. -- The Ainu had hunted, fished, and gathered. They had casually farmed small lots. They did not purport to own land. They did not invest in land or in any other capital assets. They did hunt in a way that threatened anyone else in the forest. They fished in a way that threatened the salmon with extinction.

The Meiji government tried to transform the Ainu into farmers. In this, it failed. It was hard enough for anyone to farm in Hokkaido. The Ainu brought none of the necessary skills.

What is more, the Meiji (and subsequent) governments made no effort to keep the Ainu a distinct ethnic group. Where the Canadian, American, and Australian governments have plied their various indigenous groups with large direct or indirect subsidies, the Japanese government has paid the Ainu very little.⁶² As a result, the Ainu have had little to gain from continuing to identify as Ainu, and most have not. Instead, they have intermarried with the non-Ainu. They identify as Japanese rather than Ainu, and have largely faded into the general Japanese population.

Settler-colonial scholars seem determined to find this appalling. They work with an astonishing blindness toward the popular hostility against the activists on whom they rely. Within the popular press, Japanese writers complain about the people they call the "professional Ainu" who -- as they put it -- invent non-existent discrimination to extort subsidies from the government (e.g., Yamashita 2019). Settler-colonial scholars blithely continue on their way.

2. Violence. -- It is not as though the Japanese government has not faced pressure to take a different approach. In the 1970s, segments of the New Left adopted the Ainu as their cause. The most active group seems to have been the East Asian Anti-Japan Armed Front. In 1976, a perpetrator claiming a connection to the Armed Front planted a time bomb in the Hokkaido prefectural office in Sapporo. The bomb exploded, and killed 2 people and injured 81.

At trial, the defendant Katsuhisa Omori said he moved to Hokkaido to "study the Japanese imperialist invasion of the Ainu moshiri." He had been determined "to fight to liberate the Ainu people." It was part of the "battle from within Japan against Japan and the Japanese who have for many centuries forcibly occupied, colonized, and stolen the Ainu moshiri and obliterated the Ainu." He was fighting "to recover Ainu primitive communism."⁶³ The court convicted Omori, and sentenced him to death.⁶⁴ The High Court affirmed.⁶⁵

But Omori continues (unsuccessfully) to appeal his conviction and sentence. Still in prison, he runs an active blog post.⁶⁶ When not discussing his own case, he sometimes posts essays on international trade. Sometimes he cites Paul Krugman.

3. Legislation. -- From time to time, the Japanese government does legislate in the Ainu field. In 1997, it replaced the 1899 Act with a new statute.⁶⁷ The goal was to promote Ainu culture, the statute stated -- though Ainu activists declared it unsatisfactory.

⁶² Yoshida (N.D., 24 n. 13) estimates that the Japanese government paid subsidies for Ainu cultural promotion in 2009 of 352 million yen and in 2020 of 324 million yen. To raise Ainu living standards, it paid in 2009 792 million yen, and 2010 708 million yen.

⁶³ Kuni v. Omori, 1087 Hanrei jiho 33 (Sapporo D. Ct. Mar. 29, 1983), aff'd, Kuni v. Omori, 1281 Hanrei jiho 22 (Sapporo High Ct. Jan. 21, 1988) (quotations from Sec. 1.9 of High Ct. opinion).

⁶⁴ Kuni v. Omori, 1087 Hanrei jiho 33 (Sapporo D. Ct. Mar. 29, 1983).

⁶⁵ Kuni v. Omori, 1281 Hanrei jiho 22 (Sapporo High Ct. Jan. 21, 1988).

⁶⁶ <https://ameblo.jp/omorikatsuhisa/>.

⁶⁷ Ainu bunka no shinko narabi ni ainu no dentoto ni kansuru chishiki no fukyu oyobi keihatsu ni kansuru horitsu [Act Regarding the Promotion of Ainu Culture and the Dissemination and Improvement of Knowledge Regarding Ainu Tradition], Law No. 52 of 1997.

Whatever the case, a decade later the United Nations intervened. In 2007 the organization passed (with Japan voting in favor) the "Declaration on the Rights of Indigenous Peoples."⁶⁸ The declaration stated in Article 26(2):

Indigenous peoples have the right to own, use, develop and control the lands, territories and resources that they possess by reason of traditional ownership or other traditional occupation or use ...

And in Article 26(3):

States shall give legal recognition and protection to these lands, territories and resources."

In 2019, the Japanese government returned to the field. This time, it replaced the 1997 statute with the Ainu Policy Promotion Act.⁶⁹ It explicitly declared that the Ainu are the "indigenous people of Hokkaido" (Sec. 1). It does provide some subsidies, but not massive. At least one scholar (Gayman 2024) calls them "subsidies for community and tourism development." The local Hokkaido newspaper put the total subsidies over the first five years at 11.6 billion yen (Kimura & Muto 2024) -- at the June 2024 exchange rate, \$74 million U.S.

4. Litigation. -- And Ainu activists litigate. Perhaps the most prominent case involved a dam in the Hidaka area on the Saru river. The area had once been prime Ainu territory. The Japanese government had begun planning for the dam in 1973.⁷⁰ This new Nibutani dam would provide badly needed flood control. It would supply water for irrigation, to private homes, and to industrial plants. It would generate electrical power.

The dam would flood some local homes, of course. The government offered to buy the land from the affected residents, and most agreed. Several Ainu objected (the land played a sacred role in Ainu religion, they argued), but the government took the land by eminent domain (in 1987) anyway. Although the objectors filed suit, the government continued with the construction and finished the dam in 1997.

In the same year (1997), the Sapporo District Court issued its opinion. It observed that the government's job was to implement a balancing test, and its own job was generally to defer to that legislative judgment. The benefits that the dam brought were straightforward (flood control, water supply, and power). The costs were subtle, however, and the court wrote that in tallying the costs the government had paid insufficient attention to the harm to the Ainu community. The dam, though, was finished. And given that it was finished, the court held that the balancing test pointed toward keeping it operational.

Journalists and scholars paid less attention to the holding than to the dicta. The Ainu were an indigenous minority with a distinctive culture, the court wrote. The mountains and rivers so important to the Ainu were not just "historical artifacts." They were "extremely significant" means by which the Ainu "continue their ethnic tradition into the

⁶⁸ United Nations Declaration on the Rights of Indigenous Peoples, Gen. Ass. Resolution of Sept. 13, 2007.

⁶⁹ Ainu no hitobito no hokori ga soncho sareru shakai wo jitsugen surutame no shisaku no suishin ni kansuru horitsu [Act Regarding the Promotion of Policy to Realize a Society that Respects the Pride of the Ainu People], Law No. 16 of 2019.

⁷⁰ Kayano v. Hokkaido shuyo iinkai, 1598 Hanrei jiho 33 (Sapporo D. Ct. Mar. 27, 1997). See generally Levin (2001).

present." And the Ainu as a group held rights entitled to protection under Article 13 ("all people shall be respected as individuals") of the Constitution.⁷¹

The Sapporo District Court decided a second prominent Ainu case in 2024 (the case is on appeal). This dispute involved a group from the traditional Ainu center of Tokachi who sued to confirm their right to catch salmon on the Urahoro river.⁷² In fact, of course, they had no such right. The government had banned most river-fishing of salmon in the 19th century, and Section 28 of the modern Water Resources Protection Act confirmed that ban.⁷³ The plaintiffs cited Watanabe's ethnography, and noted (correctly) that the local Ainu kotan had held such a right once. Their rights as an indigenous people under Art. 13 of the Constitution, they reasoned, trumped the statutory ban.

The court returned to the Nibutani balancing test. The Ainu interests were not the only factors at stake. The Diet could -- and did -- properly consider the effects on the environment and the food supply. Salmon live their four years in the ocean, and return at the close of their lives to swim upstream, lay their eggs, and die. To let people catch them before many had been able to reproduce threatened immediate extinction. The Diet could properly ban that fishing, and Article 13 gave the plaintiffs no right to trump that ban.

Hokkaido University professor Jeffrey Gayman (2024) celebrates the litigation as stressing "the importance of access to land and resources as a condition to engage in cultural praxis. Only then," he writes, "will the Ainu be reinstated to the subsistence-based livelihood practices of their ancestors" Gayman does not ask whether any Ainu actually want to return to "subsistence-based livelihood." Symptomatic of the conventional Western approach to indigenous groups, however, he insists that the 2019 statute "should be revised" to "provide the grounding for additional financial subsidies." With no sense of irony, he explains: "Ainu-controlled funding should be established to allow for economic self-determination."

5. Assimilation. According to the historical accounts (non-quantitative to be sure), the Ainu may have been as violent as the Inuit and the Australian aboriginals. Scholars increasingly believe that virtually all hunter-gatherers were violent, and the Ainu and the Inuit share a common cultural (and probably genetic) ancestry besides. Yet while both the Inuit and aboriginal communities suffer from very high rates of crime and suicide, a scholar will search in vain for any accounts (whether official, journalistic, or even gossip) of crime or suicide among descendants of the Ainu.

Instead, the Ainu have quietly merged into the Japanese mainstream. Prior to the 19th century, the Ainu did not generally intermarry with the non-Ainu Japanese for a simple reason: their paths did not cross. To be sure, for those Ainu who worked at the Japanese-run fisheries, inter-marriage would have been possible. But those living and hunting away from the coasts simply would not have crossed paths with many non-Ainu Japanese. The Hokkaido government has regularly surveyed those residents whom it can identify as having Ainu ancestry. In 1993, it located 23,830. By 2023, it could find only 11,450 (Hokkaido 2023, 3). Those identifiable Ainu were old. Of all residents in their

⁷¹ Kayano v. Hokkaido shuyo iinkai, 1598 Hanrei jiho 33 (Sapporo D. Ct. Mar. 27, 1997).

⁷² Raporo Ainu Neishon v. Japan, 2024 WLJPCA 04189009 (Sapporo D. Ct. Apr. 18, 2024).

⁷³ Suisan shigen hogo ho [Water Resources Protection Act], Law No. 313 of 1951, Sec. 28.

municipalities, a mean 53.3 percent were 65 or older. Of the Ainu, 71.5 percent were 65 or older (Hokkaido 2023, 6)

Ainu are not marrying other Ainu. Of all Ainu surveyed, 23.3 percent were married to an Ainu. But of those under 30, none were married to an Ainu, and of those in their 30s, only 16.7 percent were married to an Ainu (id., 53). Only 14.8 percent had both parents being Ainu. Of those under 30, only 9.4 percent had both parents Ainu and of those in their 30s, only 7.1 percent (id., 53).

Instead, the descendants of the Ainu are marrying into the general population. As they do, they and their children disappear from the government records. If they face any unusual problems, little trace of it appears -- not in government records, not in journalistic accounts, and not even in pronounced internet gossip.

VIII. Outcomes:

In the decades since Meiji, Hokkaido has developed economically. It seems not, however, to have grown because of the Ainu. Instead, it has grown because the private ownership enforced by the late 19th century legal system gave those who bought property the incentives necessary to innovate. Given the way that the legal system gave owners the right to profit from any innovations they developed, some owners experimented. They tried different crops. They developed new varieties of existing crops. They invented new techniques. Eventually, they hit on crops and techniques that worked in Hokkaido.

Existing accounts give no reason to think that these entrepreneurs who experimented came from the Ainu. Instead, they seem to have moved from the rest of Japan to Hokkaido for the land. The Ainu had not farmed. They brought no education. Instead, the extant material suggests they simply left the community, intermarried, and entered the broader Japanese landscape.

The Meiji government had envisioned Hokkaido's future in agriculture. Toward that end, it devised the programs to distribute land on the cheap to those who would try to farm. Yet the government focused on rice, and the varieties available in the late 19th century did not grow in Hokkaido.

Among the first farmers to succeed were those who experimented with dairy cattle. They experimented because the private ownership enforced by the modern law let them capture any gains should they succeed. They did succeed. Hokkaido could grow the pastures on which dairy cows could thrive. In turn, the new contact with the west brought a demand for milk, cream, and butter. As of 2021, Hokkaido produced 56 percent of the national dairy output.⁷⁴

Farmers also discovered other crops that would grow on the island. They learned to raise a variety of vegetables. They now produce almost 10 percent of the national vegetable output (2020). They produce over 60 percent of the national output of wheat (2022).⁷⁵ Rice took longer. By 1960, however, entrepreneurs developed a variety and a

⁷⁴ Hokkaido nogyo no gaiyo [Summary of Hokkaido Agriculture], Kokudo kotsu sho, Hokkaido kaihatsumyoku, https://www.hkd.mlit.go.jp/ky/ns/nou_seeki/ud49g70000006f4q.html. Accessed July 27, 2025.

⁷⁵ Hokkaido nogyo no gaiyo [Summary of Hokkaido Agriculture], Kokudo kotsu sho, Hokkaido kaihatsumyoku, https://www.hkd.mlit.go.jp/ky/ns/nou_seeki/ud49g70000006f4q.html. Accessed July 27, 2025.

set of techniques that made rice farming possible. Hokkaido now produces more rice than any other prefecture except Niigata.

Hokkaido also developed a thriving non-Ainu fishing industry. The Ainu had speared salmon in the river. Modern fishermen catch their fish at sea. In 2022, Hokkaido fishermen produced 31 percent of the total national catch. They harvest a particularly large production of scallops, sardines, pollock, and salmon.⁷⁶

Finally, Hokkaido maintains a thriving forestry industry. Forests still cover 71 percent of the island. This constitutes 22 percent of the national forest area. And from this land, Hokkaido produces large quantities of lumber.⁷⁷

During the early 20th century, Hokkaido had been a major source of coal. After the war, however, Japanese industry increasingly switched from coal to oil. By the 1980s the industry had disappeared.

IX. Conclusions

Over most of the Japanese archipelago, the transition from indigenous customary law to the German codes proceeded relatively smoothly. Japanese society had been agricultural for 2000 years. People understood the concept of private property, of the need to defer gratification, of the importance of developing a reputation for honesty in commercial transactions, of the benefits to delegating legal enforcement to the state.

Over most of Japan, the transition to the German codes raised predictable -- but solvable -- problems. Where the outcome under the new regime turned on characteristics that had not mattered under the old regime, for example, courts found it hard to decide cases. Where economic developments altered the relative value of various assets, that exogenous change could complicate a court's job further still. But these were fixable problems, and fix them people did. They made profitable use of the new legal codes, and the economy boomed.

Until the 19th century, the Japanese government had largely ignored the northernmost island of Hokkaido. Left alone, the Ainu hunter-gatherers had lived in small bands along riverbanks. They had hunted deer and bears, fished for salmon, and grown a small amount of maize. Like hunter-gatherers the world over, they had had no sense of land ownership, little incentive to defer gratification, and a propensity to fight lethal battles with their neighbors. Faced with the new legal codes, they seem largely to have let the economic opportunities pass them by.

This discussion returns us to the recent studies -- by Shleifer, Klerman, Acemoglu, and their many co-authors -- of the effect that legal reform can have on economic performance. Modern legal systems let risk-takers capture the returns to any innovation they devise. The Japanese outside of Hokkaido had been agriculturalists, and understood the concept of private ownership. They understood the potential returns to investment, entrepreneurship, and delayed gratification, and were happy to delegate the use of force to the state. They innovated, and the economy boomed.

⁷⁶ Mizuage ryo zenkoku No. 1 [Greatest Production in the Country], Hokkaido fan magajin, Sept. 21, 2022. Hokkaido deeta bukku 2024 suisangyo. Accessed 7/27/2025

<https://www.pref.hokkaido.lg.jp/ss/tkk/databook/193561.html>.

⁷⁷ Hokkaido deeta bukku 2023 ringyo. Accessed 7/27/2025. Available at <https://www.pref.hokkaido.lg.jp/ss/tkk/databook/160011.html>

Crucial to the recent debates among Shleifer, Klerman, Acemoglu and co-authors, however, hunter-gatherers faced different incentives than agriculturalists. The Ainu had not made the agricultural transition. When faced with the same institutions as other Japanese, they seem to have left the opportunities unexplored. Rather than innovate and invest, they simply intermarried and disappeared as a group. Hokkaido itself thrived, but not because of the Ainu. It thrived because the modern legal system gave the non-Ainu agriculturalists the incentive to come to Hokkaido, invest in the land, innovate, and develop industries suited to the northern island.

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**Table 1: Ainu and Non-Ainu Population
in Hokkaido, Over Time**

	Ainu	Total Hokkaido
1804	22,271	45,417
1809	21,696	
1822	21,768	62,000
1855	14,429	82,000 (1854)
1859	16,136	
1866	11,649	
1872	15,275	111,196 (1873)
1875	17,130	
1880	17,141	191,172 (1878)
1885	15,251	227,900 (1884)
1890	17,108	308,600 (1898)
1895	17,314	466,100 (1893)
1900	17,298	766,900 (1898)
1905	17,632	994,300 (1903)
1910	17,554	1,322,400 (1908)
1915	18,670	1,650,100 (1913)
1920	16,720	2,359,183
1925	15,340	2,498,679
1930	15,703	2,812,335

Sources: Ainu population largely from Hokkaidocho Naimubu, *Kyu donin ni kansuru chosa* [Survey of Former Local People] (1918) (reprinted in Ken'ichi Tanigawa, ed., *Ainu* (Shin Jinbutsu Oraisha, 1972), at 420-515. As necessary, supplemented by: Yanaginosuke Okamoto, *Nichi Ro kosho Hokkaido shi ko* [History of Russo-Japanese Negotiations and of Hokkaido] (1898) at 4; Motonaga Matsuo, *Ainu fuzoku ryaku shi* [A Short History of Ainu Customs] (Sapporo: Hokkaido domei, 1892), at 18-22; Yushichi Suzuki, *Ainu no hanzai ni tsuite* [Regarding Crimes by Ainu], *Shiho kenkyu*, 18: 1, 6-9 (1933). Hokkaido population from e-stat. As necessary, supplemented by Suzuki, *supra*, and Susumu Emori, 2007. *Ainu minzoku no rekishi* [The History of the Ainu People] (Urayasu: Sofukan, 2007), at 429; Murao, Motonaga. 1892. *Ainu fuzoku ryaku shi* [A Short History of Ainu Customs]. Sapporo: Hokkaido domei), at 16-28.

Table 2: Wet Rice Agriculture in Hokkaido

	<u>Area in cultivation</u>
1895	3,820
1900	9,200
1905	19,300
1910	34,800
1915	54,300
1920	81,200
1925	127,500
1930	186,900
1935	191,400

Unit: hectare

Source: Hokkaido nosan kyokai, Hokkaido no komezukuri
[Rice Growing in Hokkaido] (Hokkaido, 2011), App. 1.

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Table 3: Rice Paddy Prices, yen/ha

	<u>Hokkaido</u>	<u>National Average</u>
1913	59	301
1915	49	254
1920	158	594
1925	125	540
1928	128	538

Source: Nihon keizai tokei soran, Sokan 50 shunen
kinen [Japanese Economic Statistics Compendium, 50th
Anniversary Edition. Asahi shimbun, 1930.