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## A Culturally Correct Proposal to Privatize the British Columbia Salmon Fishery

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“[I]ndividual permanent catch quotas of a regulator-determined [total allowable catch may be] only a stage in the development of management from licensing to private rights.”

—*Anthony Scott* (1989)

“[A]boriginal rights . . . must be permitted to maintain contemporary relevance in relation to the needs of the holders of the rights as those needs change along with the changes in overall society.”

—*Lamer, C. J. paraphrasing Lambert, J.A. in Delgamuukw* (1997)

Canada now faces two looming policy crises that have come to a head in British Columbia. The first is long-term depletion of the Pacific salmon fishery by mobile commercial ocean fishermen racing to intercept salmon under the rule of capture (Brubaker 1997). Despite over a century of licensing requirements, gear restrictions, season limitations, and other traditional regulatory restrictions aimed at conservation, the race to intercept salmon persists, and political gridlock leaves little hope for a traditional regulatory

solution. The second crisis results from Canadian Supreme Court case law recognizing and affirming “the *existing* aboriginal and treaty rights of the aboriginal peoples of Canada” under s. 35(1) of the Constitution Act, 1982. These decisions give the aboriginal “subsistence fishery” a fixed priority claim to the seasonal salmon catch over incumbent commercial fishermen and reduce the evidentiary burden on the tribes in perfecting title to traditional tribal lands. The result has been at least one large land settlement and a destabilizing wave of further claims to land and fishing rights throughout British Columbia (Walker 2001).<sup>2</sup> With British Columbia’s salmon fishery on the decline, tensions run high between native and commercial fishermen.

Much of the legal instability over aboriginal rights can be attributed to the Canadian courts’ misplaced reliance on cultural anthropology to frame the legal discourse. Cultural anthropologists have traditionally regarded the northwest coast tribes as “hunter-gatherers” who had the good fortune to reside in an environment naturally “superabundant” with salmon, which they were content to “exploit” to meet their “material subsistence needs.” This view is clearly contrary to any plausible economic interpretation of the historical evidence, and the ethnocentric Marxist terminology used to describe it is ill suited to reconciling aboriginal rights with Crown sovereignty in a way that promotes the Canadian Commonwealth.

In contrast to cultural anthropology, the property rights approach to economic theory emphasizes man’s universal search for growth opportunities. When Europeans made first contact on the coast the tribes had established relatively sophisticated economic institutions—primarily the pervasive potlatch system—to define and enforce exclusive tribal property rights to salmon streams (Johnsen 1986a, 2001).<sup>3</sup> Given that Pacific salmon return to their natal streams to spawn and were beyond the tribes’ ability to intercept prior to that time, tribal ownership of streams effectively included secure ownership of native salmon stocks, including the real option to take advantage of newly discovered growth opportunities. This gave the tribes the incentive to accumulate the stream-specific knowledge to husband these stocks. Rather than being the fortunate beneficiaries of a naturally rich environment, the compelling conclusion is that the northwest coast tribes created the observed superabundance of salmon through centuries of purposeful husbandry and active management of other resources. By any reasonable standard, they were not hunter-gatherers content to meet material subsistence needs; they were institutionally sophisticated salmon ranchers who actively sought and

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proudly achieved prosperity. This view is entirely consistent with the weight of the historical evidence and with the vast body of literature on the economics of property rights.

This chapter relies on the property rights approach to economic theory to identify a joint solution to British Columbia's looming policy crises that would reassign aboriginal fishing rights in a common wealth enhancing way. This would involve a two-party privatization auction in which the Crown recognizes those with vested interests in the mobile ocean fishery as an "incumbent" class of claimants and British Columbia's First Nations as a "rival" class. The Crown would then auction exclusive ownership of the salmon fishery to the highest bidder in a modern variant of the tribes' traditional cultural practice for resolving title disputes known as the "rivalry potlatch." As a precondition of the auction, if the tribes were to win, they would pay the incumbents their losing bid and then abolish the mobile ocean fishery by assigning exclusive stream-based tribal rights to salmon stocks in accordance with each tribe's traditional lands and subsequent intertribal negotiations. Because this institutional structure is a far more efficient form of organization than mobile ocean fishing under the rule of capture, a privatization auction could reestablish the distinctive "core" of aboriginal rights in a culturally correct way that promotes the Canadian commonwealth, while compensating incumbent fishermen for relinquishing their claims.

To lay a proper foundation, the second section describes the crisis facing the British Columbia salmon fishery under the rule of capture. The third section provides a brief historical and cultural background on the northwest coast tribes. The fourth section examines the current law regarding aboriginal rights, beginning with a brief legal history of the tribes followed by a summary of three important Canadian Supreme Court cases that attempt to reconcile aboriginal rights with Crown sovereignty. The fifth section reviews earlier work that demonstrates the role played by potlatching and other tribal institutions in enforcing property rights to salmon streams, diversifying stream-specific risk, and encouraging the accumulation of stream-specific knowledge of salmon husbandry, and shows how judicial reliance on the discourse of cultural anthropology has distorted the case outcomes in favor of land rights over fishing rights. This is followed by a section describing how the British Columbia salmon fishery could be privatized. The possibilities for wealth creation from a negotiated settlement, as opposed to pure wealth transfer from further litigation, are truly promising

and consistent with the Canadian courts' emphasis on the tribes' distinctive aboriginal rights. The principles of corporate finance help explain how the tribes could re-create a modern version of the potlatch system to achieve tribal prosperity, while restoring the British Columbia salmon fishery to its once prolific state.

#### REGULATION OF BRITISH COLUMBIA SALMON FISHERY

British Columbia supports five species of Pacific salmon, with each species exhibiting obvious differences in average size, color, markings, life history, and spawning habits and habitat, with these characteristics varying considerably even within species. From the ocean, mature salmon enter their natal streams to spawn every two to six years in what marine biologists call a "run." In the trunk sections of larger rivers, a run might consist of many different populations of a given species destined for different tributaries within the drainage. In smaller rivers with a relatively uniform spawning habitat, the species' run and population tend to be identical. Larger rivers contain more separate species and more distinct populations within each species. The term "stock" represents the current and future generations of successive populations of a given species, and ownership of a salmon stock can therefore be regarded as a capital asset.

Stream-specific environmental factors influence the number of fish in a run, including cycles of predation, cannibalism, variations in freshwater food supply, parasites, water temperature, stream flow, salinity, and siltation during runoff. Depending on the topography, soil content, vegetation, and other influences within the stream drainage, environmental shocks from extreme weather and other natural influences can affect local conditions quite differently, which in turn affect the survival of fertilized eggs and already hatched smolts. Human factors also affect the number of fish in a run. Through low ranges of fishing effort, an increase in effort applied to a population increases returns, but past some point it decreases returns.

After enjoying centuries of stream-based tribal property rights, tribes in British Columbia quickly lost exclusive ownership of their salmon stocks with the arrival of commercial canneries, first at the mouth of the Fraser River in 1871, and then gradually northward up the coast. It appears that

the canneries began by purchasing substantial quantities of salmon from the natives, but they soon vertically integrated or contracted with boat operators to intercept salmon in tidal waters (Harris 2001, pp. 26, 47). The race was on to intercept salmon in a mixed-stock open-access fishery subject to the rule of capture. The result has been a long downward trend in salmon stocks and social waste on a staggering scale that continues to this day.

The traditional response to declining stocks by government regulators at the Canadian Department of Fisheries and Oceans (DFO) has been licensing requirements, license buy-backs, shortened seasons, and increasingly draconian gear restrictions on remaining licensees in an effort to achieve “maximum sustained yield,” a conservation objective that neglects the opportunity cost of fishing effort in its calculus. As a result, strategic industry participants have invariably stayed one or two steps ahead of the DFO, overfishing various salmon stocks in spite of an ever-tightening web of regulations. Between 1950 and 1997, nearly fifty percent of the salmon populations in British Columbia were wiped out due to overfishing and other intrusions on the fishery. Fishermen routinely put themselves in danger to win the race to intercept salmon, leading to needless accidents and even loss of life (Jones 1997, pp. 4–5).

In 1992, Canada, the United States, Japan, and the Russian Federation signed the North Pacific Salmon Treaty, establishing a complete ban on salmon fishing outside the signatories’ 200-mile exclusive economic zones north of 33 degrees latitude. Industry experts, including DFO regulators, believed that by eliminating Japanese and Russian fishing of Canadian salmon stocks, the looming crisis would be resolved. They were mistaken. By 1994, the salmon fishery was so overcapitalized in relation to available stocks that the British Columbia government was forced to pay out \$63.7 million to idle fishermen in unemployment insurance (Jones 1997). This says nothing of the management subsidy implicit in the DFO’s 1994–95 annual budget of \$49 million, \$45.6 million in excess of the \$3.4 million it collected in licensing fees. Yet, in the same year the Fraser River sockeye fishery reached a crisis when roughly two million expected escapements failed to arrive at their spawning grounds. Prompted in part by a 1994 report that the Fraser sockeye fishery had come within twelve hours of being wiped out entirely, Canada’s fisheries minister closed it entirely in August 1995. The response from command-and-control regulators was yet another wave of draconian gear and licensing restrictions and massive license buy-backs at further expense to taxpayers.

Next to overfishing, degradation of spawning habitat may be the most pressing problem facing Pacific salmon. Industrial pollution, erosion from logging roads, silt deposits due to clear-cutting, organic wastes, dams, changes in water temperature, and amplified changes in water flows owing to real estate development all threaten the reproductive success of salmon in their natal streams. Federal and provincial governments have patchwork authority to address these degradations, but they apparently lack the incentives to act in the absence of a public outcry. Politicians and regulators must balance the interests of land-based industrial interests, boat owners, canneries, environmentalists, specialized boat builders and gear suppliers, the increasingly activist aboriginal fishery, and various foreign interests in coming up with workable regulations. Given that any major regulatory shift is sure to redistribute wealth, the understandable result has been political regulatory gridlock (Brubaker 1997, p. 154).

The recent worldwide trend in fisheries regulation is the creation of individual transferable quotas (ITQs) from a regulator-determined total allowable catch (TAC). ITQs allocate the right to either an absolute quantity of fish or a share of the allowable catch to quota owners. Because the quotas are transferable and, ideally, perpetual, they encourage holders to internalize the effects of their harvesting decisions and to consider the opportunity cost of retaining their quota rights in the face of attractive offers from interested buyers. Though falling short of full private property rights, ITQs avoid the rule of capture and eliminate the race to intercept salmon. Systems of ITQs have been successfully implemented for salmon and herring in Iceland, halibut in Alaska and British Columbia, scallops in eastern Canada, and orange roughy and other species in New Zealand. Interestingly, the move to ITQs in New Zealand is said to have been critical in allowing the government to compensate Maori tribes for their lingering claims to a share of the fishery (McClung 1997). At this time, however, ITQ allocation of the British Columbia salmon fishery is a mere hope and the ongoing crisis remains unresolved.

#### HISTORICAL BACKGROUND OF THE NORTHWEST COAST TRIBES

The northwest coast tribes inhabited the many islands and inland waterways of the rugged Pacific Coast of North America. The region hosts countless

rivers, many of which descend abruptly from rugged coastal mountains into the sea, though several, such as the Fraser River and the Columbia River, work their way over 800 miles inland. All support one or more species of Pacific salmon. From northern California to the Alaska panhandle, the Chinook, Makah, Coast Salish, Nootka, Kwakiutl, Nuxalk, Haida, Tlingit, and Tsimshian tribes, though diverse in linguistic origins, all relied heavily on salmon as their primary source of food and wealth.

During the prehistoric and early contact period, the northwest coast tribes are said to have been very warlike and possessive of their territories. As contact increased, however, there was a general trend away from violence. The British Crown ultimately reinforced this trend as part of the *Pax Britannica*, resulting in a worldwide prohibition on all aboriginal warfare and violence with draconian penalties for transgressors. Throughout the early contact period, the tribes enjoyed high and continuously rising per capita wealth unusual among North American natives. This was due in large part to the advent of European trade, but also to severe population decline from various epidemics (Boyd 1999). There can be no doubt of the tribes' commercial ambitions, which led them to nearly deplete the region's sea otter population when a prolific fur trade developed along the coast during the early decades of the 1800s. Between tribes they traded actively and aggressively in the expanding market economy and often successfully asserted exclusive rights over important trade routes, even against fortified Europeans. Exchange within tribes was generally regulated through an ever-shifting balance of reciprocal relations supported by kinship ties rather than with prices.

The most important social institutions found among the northwest coast tribes were the ubiquitous ceremonial potlatch system of reciprocal exchange, well-functioning capital markets, recognized property rights to salmon streams with hereditary title vested in the local group leader, and a corporate form of group structure that gave the tribe an identity separate from its members. To all this can be added a remarkably unabashed reverence for the accumulation of wealth and a shared system of cultural norms that accorded social prestige to those who most actively redistributed it through ceremonial potlatching.

The importance of salmon to the native economy cannot be overstated. Most tribes' livelihood revolved around the yearly cycle of salmon runs that began in the early summer and continued late into the fall.<sup>4</sup> With the exception of larger rivers such as the Fraser, the broader tribe normally claimed a large territory oriented around one or more contiguous rivers small enough to

be owned throughout their entire length, with the river drainage establishing the limit of the tribe's territory. The tribe consisted of several shifting subdivisions, sometimes described as clans, which were in turn divided into local group houses that were dispersed across various winter villages with houses from other clans. Coastal tribes took much of the salmon harvest in tidal or fresh water with elaborate fish weirs and traps, or with dip nets, harpoons, and spears, primarily at upstream summer villages controlled by local clan-house leaders. Either for lack of technology or economic benefit, the tribes had no means to harvest salmon in the open sea on a scale large enough to endanger stocks.

In many cases, local group leaders appear to have operated along the lines of franchisees to their clan leader, who had a similar relationship with the broader tribal leader. As local resource manager, the leader directed the harvesting and preservation of salmon and allocated a customary share of the output to each member of the house in return for his family's labor services. The same pattern repeated itself up the tribal hierarchy. The general expectation was that tribal leaders would share any residual above the opportunity cost of factor inputs on a discretionary basis with members of the local house, the clan, the tribe, and even between tribes, as variations in productivity and other circumstances dictated.

Almost uniformly up and down the coast, wealthier titleholders were known by a name that translated roughly into "river owner" (Drucker and Heizer 1967, p. 7) and were said to possess secret knowledge of "good" behavior, while the lesser chiefs were "without advice" (Suttles 1960, pp. 301–03). In spite of this designation and the "title" that went with it, tribal leaders had no right to sell rivers and other resource sites outright, although they could have their title divested by potlatch rivals.

Every year throughout the region, ranking titleholders performed the "first salmon rite" at the beginning of the spawning runs. The tribes believed the spirit of the salmon was immortal and voluntarily sacrificed its body for the benefit of man. If the salmon spirit was offended, the salmon run might not return full force in the following years. "Throughout the rite there was constant reference to the run and its continuance, and the first fish caught was usually placed with its head pointing upstream so the rest of the salmon would continue and not turn back to the sea" (Drucker 1965, at p. 95). Following this ritual, the tribal members began fishing, but not without restrictions by their leader on the number of salmon they could take and their allocation.

Potlatching has been described as “the ostentatious and dramatic distribution of property by the holder of a fixed, ranked, and named social position to other position holders” (Codere 1950, p. 63). Although there are many variations on the underlying theme ranging from informal feasts to elaborate regional events, potlatching in fact redistributed wealth both within and between tribes. Several cultural anthropologists have disputed whether potlatch gifts created an obligation to reciprocate, but reciprocation was nevertheless the norm. Any failure by a ranking titleholder to reciprocate, or any shortfall in the amount of the return gift, raised the potlatch rank and social prestige of the more generous party and lowered that of his rivals. The level of formality and the extent to which different tribes kept track of the balance of potlatch gift distributions varied along the coast, but relative success in potlatching was the primary basis for social prestige. As European contact increased, it appears the tribes expanded the formal potlatch system up and down the coast.

#### THE CASE LAW ON ABORIGINAL RIGHTS

English colonists to British Columbia brought with them the English common law which, beginning with the signing of the Magna Carta in 1215, had recognized the public right to fish in tidal waters and beyond, absent legislation to the contrary (Harris 2001, pp. 29, 31). The British Crown entered into a number of treaties on Vancouver Island in the 1850s through which several tribes ceded lands but explicitly negotiated to retain the right to “carry on [their] fisheries as formerly,” an understanding imbedded in subsequent nontreaty Indian reserve agreements (Harris 2001, pp. 34–43). Following British Columbia’s entry into the confederation in 1871, however, Canadian regulators increasingly curtailed the tribes’ fishing practices under the mistaken view that the natives regarded the salmon fishery merely as a “subsistence” activity aimed at securing enough food for daily consumption (Harris 2001, p. 16).

By 1879, Crown regulators had established mandatory licensing on the Fraser River in the name of conservation, with an exemption for natives as long as they fished according to traditional methods and did not sell their catch. Rather than being considered a right, however, fisheries regulators soon began to treat the aboriginal food fishery as a privilege subject to

further restrictions. Allied with sport fishermen, the canneries succeeded in having specific conservation regulations imposed on the native food fishery,<sup>5</sup> especially the native use of fish weirs, which opponents alleged prevented the salmon from reaching their spawning beds and depleted stocks (Harris 2001). The affected tribes bitterly opposed these and other restrictions and were surprisingly effective at using the implicit threat of force, public opinion, and their considerable legal acumen to temporarily resist the tide of settlers. In at least one instance they stated publicly that they and their ancestors had cared for and nurtured their friends, the salmon since time out of mind and had always made provision for them to reach the spawning beds. It was only with the coming of the Whites that salmon stocks began to decline.<sup>6</sup> In spite of their resistance, the inexorable force of English settlement eventually prevailed, with several legal cases in the late 1880s finding that “Crown title underlay Native title” and natives therefore had no rights except those the Crown, in its benevolence, might allow (Harris 2001, p. 73). Concurrent with their eroding fishing rights, Canadian law under the Indian Act gradually restricted and ultimately prohibited ceremonial potlatching, ostensibly because it led the natives to dissipate their wealth and retarded their assimilation into Canadian society (Cole and Chaikin 1990).

The Canadian Constitution Act, 1982, included multiple provisions regarding the rights of all citizens known as the Canadian Charter of Rights and Freedoms; it was conceived somewhat along the lines of the American Bill of Rights. Section 35(1) was simply one provision aimed specifically at recognizing and affirming “existing aboriginal and treaty rights.” Early cases under s. 35(1) upheld prior case law finding that “aboriginal title as a legal right derived from the Indians’ historic occupation and possession of their tribal lands . . . and [had] survived British claims of sovereignty” (*Roberts v. Canada* [1989] at p. 340).<sup>7</sup> As a matter of affirmative policy, however, the Canadian Crown never extinguished aboriginal rights according to established common law principles—cession, conquest, or legislation; these rights continued to exist at the time of the Act and thereby received constitutional protection.

This left unresolved any number of related legal issues and led to three watershed Canadian Supreme Court cases during the decade of the 1990s.<sup>8</sup> The first of these was *R. v. Sparrow* (1990 at p. 385), a unanimous decision of the court. *Sparrow*, a member of the Musqueam tribe, was charged with fishing for salmon with a drift net exceeding the maximum length allowed under the tribe’s food fishing license issued pursuant to regulations predating

the act. Sparrow admitted the charges, but defended his actions as the exercise of a constitutionally protected aboriginal right to fish the Fraser River delta that had existed since “time immemorial.” Though conceding Sparrow’s factual claim to have been fishing in ancient tribal territory, the trial judge denied his defense and convicted him, finding that “existing” aboriginal fishing rights could not arise merely by historic use. The British Columbia Court of Appeal reversed, ordering a new trial, and Sparrow appealed to the Supreme Court of Canada.

The court identified the following four issues courts must address when assessing claims of aboriginal right: 1) whether the defendant has an existing aboriginal right; 2) whether the right has been extinguished; 3) whether there has been a prima facie infringement of that right; and 4) whether the infringement is justified by substantial and compelling legislative objectives. Based on factual expert testimony from a noted cultural anthropologist, the court had no difficulty concluding that Sparrow was exercising an existing right to fish in ancient tribal territory. And according to established case law, the sovereign’s intent to extinguish an aboriginal right must be “clear and plain.” Nothing in or under the Fisheries Act “demonstrates a clear and plain intention to extinguish the . . . aboriginal right to fish” (pp. 400–01). The court flatly rejected as “arbitrary” and “unsuitable” the Crown’s view that the fishing regulations in place immediately prior to the passage of the Act should determine existing aboriginal fishing rights. This “frozen rights” view would read into the constitution a patchwork of regulations differing from place to place and tribe to tribe. Instead, the court sought to interpret “existing aboriginal rights” in an abstract and flexible way that would allow for historical evolution to meet changing circumstances.

Having found an existing and unextinguished aboriginal right to fish, the court addressed the nature and scope of the right. On appeal, Sparrow argued that the Musqueam actively bartered salmon prior to contact and cited recent case law recognizing that holders of aboriginal hunting rights may exercise those rights for any purpose and according to any nondangerous method. To leverage these decisions, he asserted that his existing aboriginal right included the right to fish for commercial purposes. The court was sympathetic but cautious. In light of the anthropological evidence indicating that the tribe’s fishing practices had always been an “integral part of their distinctive culture,” the court agreed with the lower court’s finding that the nature and scope of the aboriginal right to fish for food went beyond providing for mere “subsistence”

using traditional methods (p. 402). In addition, it surely included the right to fish in a contemporary manner to provide for social and ceremonial needs. But because government regulation in proper keeping with s. 35(1) no doubt could be used to regulate constitutionally protected aboriginal rights, this was as far as the court would go. Noting mounting tensions between natives and participants in the mobile ocean fishery, it confined its decision to the aboriginal right to fish for food as the parties had characterized it at the trial, leaving the question of commercial fishing for another case.

The court then turned its attention to whether the net length regulation imposed by Sparrow's food fishing license demonstrated a *prima facie* infringement and, if so, whether the regulation was justified based on substantial and compelling legislative interests. In light of Sparrow's plausible assertion of a virtually unlimited constitutional right to fish, the court deemed it necessary to first establish a framework for interpreting s. 35(1). It began by reviewing the history of unjust political and legal treatment of Canada's aboriginal peoples, culminating in a 1973 policy statement by the Crown evidencing its newfound willingness to recognize aboriginal land claims regardless of formal documentation and to provide compensation for lands that had been taken. In the court's view, s. 35(1) was the constitutional manifestation of this political sentiment. At the very least, s. 35(1) protects natives from the legislative power of the provinces and provides a "solid constitutional base on which subsequent negotiations can take place." Beyond that, it mandates a "just settlement for aboriginal peoples" and renounces the "old rules of the game" in which the Crown acknowledged existing aboriginal rights but denied courts of law the authority to review its adverse assertions of sovereignty (p. 406).

Given the gravity of a constitutional amendment, the court reasoned that s. 35(1) must be construed in the light of its underlying purpose. A *purposive* approach mandates a "generous, liberal interpretation," with any doubt to be resolved in favor of the natives. In carrying out this charge, the court emphasized the importance of fair treatment and due regard for native traditions. But although the "honour of the Crown" establishes a fiduciary duty to native peoples in resolving aboriginal rights, these rights are not absolute. The Crown must retain its power to legislate in general and specifically with respect to aboriginal peoples. This framework demands compromise in balancing the *sui generis* nature of aboriginal rights against other substantial and compelling governmental interests, with the Crown

bearing the burden of justifying any infringement or denial of aboriginal rights on a case-by-case basis.

The court emphasized the importance of being sensitive to the aboriginal perspective on fishing rights, which “are not traditional property rights. They are rights held by a collective and are in keeping with the culture and existence of that group. Courts must be careful . . . to avoid the application of traditional common law concepts of property as they develop their understanding of . . . the ‘*sui generis*’ nature of aboriginal rights” (p. 411). Under the facts of Sparrow’s appeal, the court found that a *prima facie* presumption of infringement would arise if the facts indicated an “adverse restriction” on the Musqueam in their exercise of the right to fish for food (p. 411).

Because Sparrow successfully raised this presumption, the court considered whether a substantial and compelling legislative objective justified the net length restriction. The party defending the restriction has the burden of proving that the legislative objective behind the restriction, and the restriction as applied, are both valid and consistent with the fiduciary duty owed to native peoples. The court specifically identified conservation of the resource as a valid objective, noting its consistency with “aboriginal beliefs and practices.” But even in the area of fisheries conservation, there must be an appropriate link between justification and the allocation of priorities to the fishery. Established case law would place paramount priority on conservation measures, followed by the native food fishery, the nonnative commercial fishery, and finally the nonnative sport fishery.

*R. v. Van der Peet* (1996) arguably raised the very issue of aboriginal rights to fish commercially that the court declined to resolve in *Sparrow*.<sup>9</sup> Van der Peet, a member of the Sto:lo tribe, was charged with selling ten salmon her husband had caught in the lower Fraser River under the authority of an Indian food fishing license that prohibited the sale, barter, or offer of sale or barter of any fish. She admitted the charges but claimed her constitutional right to fish for salmon included the right to sell fish. Relying on anthropological expert testimony, the trial judge determined that Van der Peet’s constitutionally protected right to catch salmon for food and ceremonial purposes did not include a right to sell fish for money. He therefore found her guilty, with no further need to address the constitutionality of the licensing restrictions.

Van der Peet’s appeal eventually made it to the Supreme Court of Canada, where she claimed the court below had turned an aboriginal “right into a relic” in defining aboriginal rights as “practices integral to the distinctive

cultures of aboriginal peoples” rather than more generalized “legal rights,” in finding that the purpose of the Act was merely to protect natives’ “traditional way of life,” in requiring that claimants “satisfy a long-time use test . . . and demonstrate an absence of European influence,” and in failing to “adopt the perspective of aboriginal peoples.” With two justices dissenting, the court rejected Van der Peet’s arguments, pointing out that the purpose of the Act was not to accord aboriginal rights the same “liberal enlightenment” status as general rights accorded to all citizens under the Charter. In the court’s words, our task is “to define aboriginal rights in a manner which recognizes [they] are rights but which does so without losing sight of the fact that they are rights held by aboriginal people because they are aboriginal” (p. 535). Although courts must be sensitive to the aboriginal perspective, they must “do so in terms which are cognizable to the non-aboriginal legal system” (p. 551).

The court rejected any characterization of Van der Peet’s actions as the sale of fish “on a commercial basis.” Given the wording of the regulations and the defendant’s pleadings, it was necessary to determine only whether she has the right “to exchange fish for money (sale) or other goods (trade)” (p. 563). Further, the court found that the test for establishing constitutional protection under s. 35(1) is whether the activity being claimed as a right was “an element of a practice, custom or tradition integral to the distinctive culture of the aboriginal group claiming the right.” In addition, this test requires a trial court to determine the time period relevant to that inquiry. To be integral, an activity must be “one of the things that truly made the society what it was.” To be distinctive, the practice cannot be true of every human society, nor can it be only “incidental or occasional” to the society, as the very point of the constitutional analysis is to reconcile the distinctive features of the aboriginal society with Crown sovereignty (pp. 553–54).

The moment for determining whether a practice is integral and distinctive to the society claiming the right is the moment of European contact, rather than the moment of European sovereignty, because contact caused those practices to depart from their unadulterated form. This does not mean the aboriginal society claiming the right must meet the impossible evidentiary burden of proving the exact nature of the practices in which they engaged prior to contact. It need only prove the practice was integral to their distinctive culture in postcontact times and had “continuity” with the precontact period. The continuity requirement is the primary means by which *existing* aboriginal rights can be interpreted flexibly to evolve over time rather than

becoming “frozen,” as the *Sparrow* court had warned. What is more, trial courts must adapt the rules of evidence to the “difficulties in proving a right” claimed to have originated prior to the existence of “written records” and must avoid undervaluing “the evidence presented by aboriginal claimants simply because that evidence does not conform precisely” to modern evidentiary standards (pp. 558–59).

The court reviewed the trial record to determine whether the sale of fish for money or other goods was integral to the distinctive culture of the Sto:lo. Drawing on anthropological expert testimony from the trial record, it noted that “trade was incidental to fishing for food [, and that] no regularized trade in salmon existed in aboriginal times. . . . It was the establishment by the Hudson’s Bay Company at the Fort at Langley that created the market and trade in fresh salmon” (pp. 567–68). What is more, “such limited exchanges of salmon as took place in Sto:lo society [prior to contact] were primarily linked to the kinship and family relationships on which Sto:lo society was based.” In the court’s view, these findings support the conclusion that the exchange of salmon for money or other goods was not a significant, integral, or defining feature of Sto:lo society. Finding no evidence of “clear and palpable error” by the trial judge, the court held that Van der Peet had failed to carry the burden of proving her sale of salmon qualified as an existing aboriginal right constitutionally recognized and affirmed under s. 35(1).

In dissent, Justice McLachlin (as she was then) looked to existing precedent to determine, empirically, how common law courts had identified the scope of aboriginal rights in the past. She noted that the common law routinely recognized all kinds of aboriginal interests, even those “unknown to English law.” As a matter of affirmative treaty policy, moreover, settlers had accepted “the principle that the aboriginal peoples who occupied what is now Canada were regarded as possessing the aboriginal right to live off their lands and the resources found in their forests and streams to the extent they had traditionally done so.” The fundamental understanding behind settlement in Canada had always been that “aboriginal people could only be deprived of the sustenance they traditionally drew from the land and adjacent waters by solemn treaty with the Crown, on terms that would ensure to them and to their successors a replacement for the livelihood that their lands, forests and streams had since ancestral times provided them.” (p. 646).

According to Justice McLachlin, the aboriginal right to use the land and adjacent waters for sustenance is “safely . . . enshrined in s. 35(1) of the

Constitution Act, 1982.” But in her view, it includes the right to trade to the extent “necessary to provide basic housing, transportation, clothing and amenities—the modern equivalent of what the aboriginal people in question formerly took from the land or the fishery, over and above what was required for food and ceremonial purposes” (pp. 648–49). Because she inferred from the evidence that aboriginal societies did not generally value “excess or accumulated wealth,” this measure of aboriginal rights will seldom “exceed the basics of food, clothing and housing, supplemented by a few amenities.” As to the allocation of further priorities, she found that “commercial and sports fishermen may enjoy the resource as they always have, subject to conservation,” which is a necessary precondition for the resource to exist in the first place (p. 665).

Justice McLachlin took care in pointing out that her empirical approach has two distinct advantages over the principled approach favored by the majority. Where the court finds, as in *Gladstone* (a companion case to *Van der Peet*) that commercial fishing *was* integral to the tribe’s distinctive culture, the aboriginal right has no internal limit under the principled approach. This will invariably require the court to establish an expansive concept of justification to “cut back the right on the ground that this is required for reconciliation and social harmony” (p. 659). When aboriginal and nonaboriginal claims to the commercial fishery conflict, for example, the court will ultimately find itself in the tenuous position of having to reconcile the conflict politically. But political expedience falls short of being a “substantial and compelling” legislative objective necessary to justify infringement of an existing aboriginal right.

In her view, an empirical approach avoids this problem because it places its own internal limit on the aboriginal right to engage in commercial fishing based on “equivalence with what by ancestral law and custom the aboriginal people in question took from the resource” (p. 665). Aside from truly substantial and compelling legislative restrictions—such as conservation measures necessary to ensure the resource continues to exist—the right is then regarded as a legally fixed entitlement. This, Justice McLachlin explained, represents the *Sparrow*’s court’s “solid constitutional base upon which subsequent negotiations can take place.” Further reconciliation of aboriginal and nonaboriginal interests should be left to negotiated settlements, which will naturally accommodate the aboriginal perspective, with the courts playing a less important role.

*Delgamuukw v. British Columbia* (1997) involved claims by hereditary chiefs of the Gistskan and Wet'suet'en tribes to aboriginal title covering 58,000 square kilometers land in central British Columbia. The case raised any number of issues critical to the settlement of aboriginal rights and generated a staggering trial record consisting of some 85,000 pages of testimony, exhibits, and argument. Owing to what the trial judge perceived as bias in favor of the claimants, as well as a general lack of credibility, he excluded the testimony of two anthropological experts regarding the nature of the tribes' relationship with their claimed lands. He admitted into evidence the tribes' oral histories regarding their ongoing occupancy of the claimed lands on a hearsay exception, but he found these histories deserved zero evidentiary weight. As a result, he concluded, the plaintiffs failed to establish the exclusive use and occupancy of these lands at the time of sovereignty required under the common law to establish aboriginal title.

On appeal, the Supreme Court of Canada was unwilling to overturn the trial judge's findings of fact regarding the credibility of the anthropological experts, but it rejected, as a matter of law, his refusal to give weight to the tribes' oral histories. In the court's words: "[t]he implication of the trial judge's reasoning is that oral histories should never be given any independent weight" (p. 1074). Given that these histories are often the only available record of the tribes' past, this would effectively bar all claims to aboriginal title. Because the trial judge made his evidentiary rulings prior to the court's judgment in *Van der Peet*, liberalizing the evidentiary burden on aboriginal claimants, he was unable to follow this approach. Reluctantly, the court found, a new trial was in order.

The court took the opportunity to elaborate on the content of aboriginal title under s. 35(1). To establish title, claimants must indeed demonstrate exclusive use and occupation of the land by, for example, establishing the construction of dwellings, cultivation and enclosure, or regular use for hunting, fishing, etc. "In considering whether occupation sufficient to ground title is established, the group's size, manner of life, material resources, and technological abilities, and the character of the lands claimed must be taken into account" (p. 1018). Unlike the requirement for establishing aboriginal rights, generally, the claimant need not independently show that the land is integral to its distinctive aboriginal culture; occupation, by itself, establishes this requirement. And whereas the time for the identification of aboriginal rights is first contact, the time for the identification of aboriginal title is the moment the British Crown asserted sovereignty over the land in 1846. Among

PROPOSAL TO PRIVATIZE THE BRITISH COLUMBIA III

other reasons, this is because occupation alone is sufficient to establish aboriginal title, with no need to distinguish between unadulterated aboriginal practices and those influenced or introduced by European contact.

Because aboriginal rights are held communally, according to the court, they may not be alienated to third parties but may be surrendered to the Crown in exchange for valuable consideration. Although aboriginal title encompasses the exclusive right to use the land for a variety of purposes, the uses to which the claimant puts the land must not be inconsistent with the nature of its attachment to the land so as to constitute equitable waste. Otherwise, the aboriginal peoples must surrender the lands to the Crown. Notwithstanding the exclusive occupancy requirement, joint title can arise from shared exclusivity, and shared, nonexclusive rights permitting a number of uses can be established if exclusivity cannot be proved. In this connection, “[t]he common law should develop to recognize aboriginal rights as they were recognized by either de facto practice or by aboriginal systems of governance” (p. 1019). In ordering a new trial, the court emphasized that it was not suggesting the parties should resolve their dispute through further costly litigation. Instead, it reminded them that negotiated settlements, “reinforced by judgments of this Court,” will ultimately achieve s. 35(1)’s basic purpose of reconciling aboriginal rights with Crown sovereignty (p. 1124).

THE ECONOMICS OF NORTHWEST COAST  
TRIBAL PROPERTY RIGHTS

The study of primitive man, including the northwest coast tribes, has traditionally been considered the exclusive work of cultural anthropologists, who have questioned the relevance of economic theory to primitive societies because they lack organized exchange markets or monetary systems for which its analytical tools are thought to be specifically suited.<sup>10</sup> Beginning with Nobel Laureate Ronald H. Coase’s pioneering work, *The Nature of the Firm* (1937), economists have made tremendous progress understanding the forces affecting nonmarket exchange. As Nobel laureate Douglass C. North and coauthor Robert Paul Thomas state in their classic 1977 economic history essay, “The First Economic Revolution,” man’s transition from hunting and gathering to settled agriculture “has been almost entirely the province of archaeologists and anthropologists. . . . There simply was no applicable [economic] theory that could be used to explain the Neolithic revolution.

This situation has changed with the recent development of theory to deal with . . . the evolution of property rights” (pp. 229–30). This theory is now widely known as the property rights approach to economic theory, a broad and scientifically powerful field of inquiry focusing on the role of social institutions in reducing economic frictions known as transaction costs.

The property rights approach postulates that individuals make decisions as if they consciously maximize *wealth*, defined as the capitalized value of future expected income.<sup>11</sup> Contrary to popular misconceptions, wealth consists of more than material goods; it includes anything of subjective value to the decision maker, whether tangible or intangible, present or future (Johnsen 1986b). More to the point, wealth reflects the stock value of a capital asset, such as the cumulative flow of services from a durable good or the future generations of a given population of salmon. One of the primary implications of wealth maximization is that individuals will undertake all investments that increase their expected wealth net of the transaction costs of capturing the associated returns.

Property rights in the broad economic sense result from the constraints social institutions impose on members of the group to assure those in a position to invest to promote the common wealth that they will capture a sufficient share of the returns to make the investment worthwhile. Formal law is one example of such an institution, but others include purposeful private ordering and a group’s distinctive web of spontaneous cultural norms. Property rights in the narrower legal sense are a subset of economic property rights, just as law is one among many institutions that help to assure the capturability of investment returns (Barzel 1997). Although the exact scope of economic property rights over an asset depends on the context at hand, it generally includes some measure of the right to exclude, the right to transfer (or alienate), and the right to use the asset to derive income (Cheung 1969). Because numerous events beyond the owner’s control can cause productivity to vary, the right to derive income is risky and is often characterized as the right to derive residual income, or the residual claim (Jensen and Meckling 1976).

### *Potlatching, Property Rights, and Salmon Husbandry*

The famous ethnographer, Franz Boas (1966), and the many students of cultural anthropology that followed him to the Northwest Coast, deserve much of the credit for recording northwest coast tribal culture. Rather than

engaging in the ethnocentric exercise of trying to explain tribal culture through the lens of Western civilization, however, Boas sought to record the tribes' culture from "their own perspective."<sup>12</sup> Because he and his followers (ethnocentrically) assumed the tribes inhabited a region superabundant with salmon and other natural resources easily exploited to meet material subsistence needs, they also "generally assumed . . . potlatch exchanges had little or no relationship to problems of livelihood" (Suttles (1990, p. 85)). In Boas' view, ceremonial potlatching was primarily a means of establishing social rank. Codere, an adherent of this view, later went a step further. Observing that the tribes were very warlike and possessive of their territories in prehistoric and early contact times, and that warfare declined with contact while ceremonial potlatching increased, she argued the two were substitutes in tribal leaders' "limitless pursuit of a kind of social prestige which required continual proving to be established or maintained against rivals" (1950, p. 118).

In contrast, Suttles (1960, 1968) and Pidcocke (1968), whose interests included the emerging field of ecology, proposed that potlatching provided a form of social insurance against local hardship resulting from variations in resource productivity, including the occasional failure of salmon runs. Drucker and Heizer (1967), who viewed potlatching strictly as a basis for social stratification, rejected this proposition. Given the tribes' superabundant resource base, they disputed the factual claim that variations in resource productivity were severe enough to cause local hardship. Donald and Mitchell (1975) performed the first empirical analysis of tribal resource productivity, finding that variability could indeed have been substantial and not unlikely to cause local hardship in the absence of potlatch wealth transfers.

Ceremonial potlatching evolved to define and enforce exclusive tribal property rights to salmon streams and—given the tribes' limited ability to intercept salmon in the open sea—their native salmon stocks. The historical record clearly demonstrates that the coastal tribes were extremely protective of their streams, with trespassers often being summarily executed. In the face of unpredictable stream-specific variations in resource productivity, however, the tendency was for unfortunate tribes to encroach on their more fortunate neighbors.<sup>13</sup> One tribe would see or hear of another enjoying relative prosperity and send its warriors to capture a share of the bounty (Ferguson 1979).<sup>14</sup> The tribes' oral histories and the records of early Europeans indicate that violence was the default method of property rights enforcement. But because violence imposes transaction costs on both encroacher and incumbent, the

inexorable tendency is to replace it with less costly, institutionalized forms of property rights enforcement.

Even if fully able to defend itself in an absolute conflict, the problem the incumbent faced was that its opportunity cost of violently defending its territory was relatively high compared to the encroacher precisely because its marginal product of labor from fishing was relatively high.<sup>15</sup> The economic theory of property rights predicts that the incumbents should be willing to make concessions to encourage encroachers to leave in peace, a prediction clearly confirmed by widespread accounts of war parties being met with gifts and invited to an elaborate feast by their intended targets. With the incumbent having a comparative advantage in fishing and the encroacher having a comparative advantage in warfare, there were clearly gains from peaceful, as opposed to violent, exchange.

As an institutionalized form of reciprocal exchange, potlatching dramatically lowered the transaction costs of enforcing exclusive tribal property rights. To mitigate the encroachment problem, participating tribes essentially entered into a multilateral commitment that those among them who experienced unexpectedly high productivity would make protection payments to those whose productivity was unexpectedly low. Given that all tribes faced the possibility of a poor salmon run at one time or another due to factors at least partially beyond their control, the encroachment problem was reciprocal. Unless those tribes whose productivity was relatively low expected to be paid off, the system of recognized tribal property rights would have broken down, with enforcement reverting to mutually destructive warfare.<sup>16</sup>

Absent something more, this solution fails to explain why the tribes bothered to enforce exclusive property rights at all. Imagine early man's perception of the salmon fishery once the glaciers receded from the coast around 10,000 years ago. Each of five species of Pacific salmon has one or more life histories, many rivers support multiple populations of multiple species bound for spawning beds in different tributaries, and all salmon populations are subject to innumerable unknown influences during their life cycle. There would have been too much noise in the system for early observers to recognize salmon return to their place of birth to spawn and that protecting their upstream migration was therefore crucial to the productivity of future runs. The entire coastal salmon fishery would have appeared to be an undivided common resource base naturally subject to open access. A nomadic hunter-gatherer lifestyle was the likely response to local productivity variations, with

“rights” to salmon being determined by what the group could capture and consume as it wandered the coast.

Rather than open access, the archeological evidence indicates that for thousands of years prior to European contact, the tribes were sedentary and enjoyed some measure of exclusive territorial property rights. But exclusive property rights do not simply happen. Because they are costly to enforce and require the owner to suffer unpredictable local variations in resource productivity, they must have generated offsetting benefits. The benefits came from the incentive they gave the tribes to invest in husbanding their salmon stocks. At some point, tribal leaders clearly recognized the anadromous character of the Pacific salmon. The widespread first-salmon rite, in which the chief warned that improper treatment of the salmon might result in their failure to return, provides casual support for this conclusion. But any doubt is laid to rest by a mid-nineteenth-century report that “[i]t is common practice among the few tribes whose hunters go far inland, at certain seasons, to transport the ova of the salmon in boxes filled with damp mosses, from the rivers to the lakes, or to other streams” (Sproat 1868). Transplanting fertilized ova would be a complete waste of time unless salmon were known to return to their natal streams to spawn.

By reducing the transaction costs of enforcing exclusive tribal property rights, potlatching encouraged tribal leaders to make stream-specific investments in husbanding their salmon stocks. The evidence suggests that they engaged in at least rudimentary husbandry. They surely recognized, for example, that too much or too little fishing effort would reduce the size of returning salmon populations and that proper husbandry was, in part, a matter of optimizing fishing effort. The tribes went beyond rudimentary husbandry, however, and actively specialized in accumulating stream-specific knowledge of salmon husbandry. This kind of prospecting for knowledge is unlikely to occur in the absence of exclusive property rights. As economic historians North and Thomas put it, when open-access rights exist over resources “there is little incentive for the acquisition of superior technology and learning. In contrast, exclusive property rights . . . provide a direct incentive to improve efficiency and productivity, or, in more fundamental terms, to acquire more knowledge and new techniques. It is this change in incentive that explains the rapid progress made by mankind in the last 10,000 years” (1977, p. 241).

As Codere argued, ceremonial potlatching was indeed a substitute for warfare. But she failed to explain why either one generated social prestige,

or why tribal leaders valued social prestige more than the wealth they spent to get it. Tribes that accumulated superior knowledge of salmon husbandry undoubtedly generated greater increases in the productive capacity of their salmon stocks than their potlatch rivals. This allowed their chiefs to gain social prestige by distributing more wealth at potlatches *and* to retain more for tribal consumption. Abstracting from differences in tribal leaders' managerial talent, over time wealth transfers through the potlatch system would have roughly balanced, with all tribes experiencing an absolute increase in wealth. The threat of losing social prestige was a cultural constraint on those who would free ride by strategically underinvesting in knowledge accumulation and hosting few or meager potlatches. But the desire for social prestige was not "limitless" nor was social prestige an end in itself; it was merely instrumental to the social goal of promoting the commonwealth of tribes.

Potlatching obviously transferred wealth from tribes whose circumstances were relatively good to those whose circumstances were relatively poor, as both Suttles and Piddocke proposed and Donald and Mitchell confirmed. But this would be unnecessary under an open-access regime in which all tribes fished an undivided common resource base. By assigning residual claims to specific streams, exclusive tribal property rights *created* stream-specific risk for individual tribes at the same time it increased their expected returns from accumulating knowledge about the avoidable causes of low productivity. This is a straightforward reflection of the standard risk-return tradeoff from financial theory, which also predicts that individuals will diversify away asset-specific risk if possible. Rather than providing insurance against local hardship as such, the potlatch system allowed the tribes to diversify stream-specific risk by giving them access to the market portfolio.

Because they are extremely "heritable," it would be difficult to find a genus in the animal kingdom better suited to scientific knowledge accumulation than Pacific salmon. As George P. Marsh reported in 1874, "[f]ish are more affected than quadrupeds by slight and even imperceptible differences in their breeding places and feeding grounds. Every river, every brook, every lake stamps a special character upon its salmon, . . . which is at once recognized by those who deal in or consume them" (p. 108). For Pacific salmon, the time between generations is short enough, and the struggle to reproduce keen enough, that over the course of a man's lifetime the characteristics of a given stock can evolve dramatically in response to even minor changes in its environment, whether induced by nature or by human influences.

The tribes' fishing technology was ideally suited to the accumulation of stream-specific knowledge of salmon husbandry to harvest salmon. Many tribes along the coast relied on fish weirs, which involved a substantial capital investment and in many cases were built to span an entire stream. The only way for salmon to pass was to enter a holding trap, which gave the attendants complete selectivity over which salmon were allowed to continue on to the spawning beds. Given the heritability of salmon, the use of fish weirs in privately controlled streams with no effective means to intercept salmon in the open sea would have given tribal leaders a relatively noiseless information feedback mechanism, and allowed them to accumulate stream-specific knowledge of salmon husbandry relatively rapidly. It is entirely plausible that the tribes actually engaged in purposeful genetic selection of salmon stocks to develop populations with preferred biological characteristics.<sup>17</sup>

Tribal organization, which was essentially corporate, was also ideally suited to knowledge accumulation. Tribal chiefs held title to streams and other resources on behalf of their tribe and, as professional managers, had the exclusive right of control over resources and the labor services of resident members. They uniformly demanded that anyone who wanted to pass through upriver sites seek their permission to do so and that under no circumstances were the salmon to be disturbed in their upstream migration or in the spawning beds. As we would expect of any entrepreneur, the chief received the residual income (Alchian and Demsetz 1972), which he shared with members on a discretionary basis. A tribal leader's reputation—social prestige, if you like—was part of his residual payoff from superior salmon husbandry. By allowing him to borrow against future expected income, it capitalized his superior management skill and thereby allowed him to finance wealth-increasing investment projects. It was therefore unnecessary for tribal members to incur transaction costs to carefully monitor their leader's managerial inputs; outputs conveyed the important information.

Equally important, tribal chiefs were widely known to possess a *corpus* of "secret" knowledge about how best to use their resources to create wealth. Children were taught to respect the salmon and to take great care in observing their habits and characteristics and, although primogeniture was the norm, chiefs often bequeathed resources and the associated knowledge to the child identified as having the best mental capacity. It is exactly this knowledge that the tribes revered and their chiefs touted at potlatches as the basis for their manifest prosperity. By perpetuating this knowledge, the tribe, like the

corporation, had the potential for unlimited life supported by a perpetual capital stock.

### *Economics, Anthropology, and Law*

Rather than being an exogenous fluke of nature, the observed “superabundance” of salmon on the Northwest Coast at the time of contact was the endogenous outcome of evolved property rights institutions that encouraged the tribes to husband their salmon stocks. Theorists can argue endlessly from first principles, but the true test of any scientific hypothesis is testability, that is, its ability to predict “phenomena not yet observed” and capable of not occurring (Friedman 1953). The available evidence regarding tribal institutions is consistent with the predictions of the property rights approach but inconsistent with the predictions, if any, of the theories put forth by cultural anthropologists. My hypothesis that potlatching served as an alternative to violence in enforcing tribal property rights predicts, for example, that the frequency and intensity of potlatching should have risen with the English prohibition on native violence, just as the historical record shows (Johnsen 1986a). And my hypothesis that the tribes engaged in salmon husbandry predicts that tribal property rights along the trunk section of larger rivers such as the Fraser—which was subject to “shared exclusive ownership” by multiple tribes and the interception of salmon by downstream tribes—would have been much less aggressively enforced than along the coast, where smaller river systems were subject to ownership in their entirety by a single tribe. The historical record clearly confirms these predictions (Johnsen 1986a, 2001).

Two pieces of casual evidence support the endogeneity of salmon abundance. First, contrary to the popular image of native North Americans as wise and mystical conservators of natural resources, in many cases they failed miserably as environmental stewards. The key to success or failure was the extent to which they developed exclusive property rights over resource stocks (Anderson 1996). With regard to salmon, the northwest coast tribes performed admirably, while other North American natives systematically hunted once-abundant large mammals to extinction (Smith 1975). With European contact and the advent of the fur trade, however, the northwest coast tribes quickly depleted the region’s sea otter population, no doubt because of the high transaction costs of enforcing property rights to stocks that migrated across tribal boundaries.<sup>18</sup>

Second, not only did northwest coast tribes behave “as if” they maximized wealth, but uniformly up and down the coast they shamelessly revered the accumulation of wealth, which ultimately derived from their salmon streams and other resources. They were not content merely to meet “material subsistence needs,” as most cultural anthropologists have assumed.<sup>19</sup> Instead, they actively sought to prosper, and took great pride in doing so (Grumet 1979). They achieved one of the highest standards of living among all North American natives, developed highly refined tangible and performance art, traveled widely for social purposes, and actively shared their aesthetic achievements and secret knowledge within an established network of allied tribes.

In the introduction to his otherwise excellent book on northwest coast tribal slavery, cultural anthropologist Leland Donald puzzles over the tribes’ prosperity. In his words, “although [the northwest coast tribes] were hunter-gatherers, their modes of subsistence and environments supported one of the densest known nonagricultural populations,” exhibiting social traits “more usually associated with agricultural peoples” (1997, pp. 2–3). This leads him to ask how “the Northwest Coast peoples achieve[d] such rich and complex cultures on a foraging subsistence base?” North and Thomas (1977, pp. 230, 241) had already solved the puzzle twenty years earlier. In their words:

[T]he transition from hunting/gathering to settled agriculture [was not] the crucial development occurring during the first economic revolution. . . . [I]t was not the type of economic activity so much as the kind of property rights that were established that accounts for the significant increase in the rate of human progress [by creating] an incentive change for mankind of fundamental proportions.

Seen in this light, when Europeans first made contact, the tribes had long since put the Neolithic revolution behind them. Having established both the property rights institutions and the knowledge base to husband their salmon stocks, they were not “hunter-gatherers” but institutionally sophisticated salmon ranchers.<sup>20</sup>

Much of what cultural anthropologists have found worth understanding about the northwest coast tribes is either pure white noise—neutral mutations with no explanatory power—or a reflection of arbitrary coordinating devices. Whether the tribes strictly followed matrilineal rules of descent or considered themselves the children of Coyote or Raven are simply irrelevant to helping Canadian courts understand their distinctive rights. The following

statement of Lord Sumner from *In Re Southern Rhodesia* (1919) makes a telling, and necessarily ethnocentric, point:

Some tribes are so low in the scale of social organization that their usages and conceptions of rights and duties are not to be reconciled with the institutions or the legal ideas of civilized society. . . . On the other hand, there are indigenous peoples whose legal conceptions, though differently developed, are hardly less precise than our own. When once they have been studied and understood they are no less enforceable than rights arising under English law.

The truth is that until native claims began making their way into Canadian courts, few cultural anthropologists considered tribal “legal conceptions”—or their contribution to tribal prosperity—worthy of serious attention.<sup>21</sup> How else can one explain their view of the tribes after over a century of intensive study as mere hunter-gathers and potlatching as mere ceremony? The property rights approach to economic theory is far better suited than cultural anthropology to understanding tribal legal conceptions because it provides a general theory to explain social institutions in a wide variety of settings, with the cost of transacting being the key explanatory variable. It is of course important to consider the aboriginal perspective in seeking to understand the facts regarding northwest coast tribes’ legal conceptions but, according to the property rights approach, once having done this there is nothing especially unique or difficult to understand. Like all Neolithic societies, they aspired to prosperity, they relied on property rights institutions to exclude others from their resource stocks, and they actively accumulated knowledge to enhance their prosperity through long-term capital investment; only the transaction costs differed.

One culturally distinctive characteristic of the northwest coast tribes was their reliance on highly institutionalized reciprocity to enforce exclusive tribal property rights in the absence of formal legal enforcement by a hierarchical nation state. But this is nothing new to property rights economists. As Nobel laureate Vernon L. Smith and others have shown, reciprocity is an important method of property rights enforcement in a variety of settings in which legal enforcement is unavailable (Hoffman, McCabe, and Smith 1998).<sup>22</sup> The truly distinctive thing about the tribes is that they succeeded in enforcing exclusive tribal property rights to entire salmon stocks. In this regard, their legal conceptions were far *more* precise than our own, which have treated the Pacific salmon fishery as an undivided common subject to open access under

the rule of capture and persistently dissipated it ever since the canneries began intercepting salmon in 1871.

The tribes' exclusive stream-based ownership of salmon stocks represents the core of their distinctive culture. What began as an expectation by the early arrivals to the coast of the open-access "right" to capture salmon indiscriminately, and to exclude others from consuming only *those* salmon, ultimately evolved into the expectation of an exclusive right to harvest a specific river's salmon stocks in perpetuity. But a salmon stock does not exist independent of man's perception of it. It is an abstraction that relies on institutional arrangements for its practical "existence." Social institutions—whether formal law or formalized reciprocity—parse value flows from an otherwise undivided commons and reify them as cognizable assets in the sense that it pays their owner to specialize in identifying the causes of high and low productivity and to adjust accordingly to enhance their capital value (Johnsen 1995).<sup>23</sup> The tribes recognized salmon stocks as exclusive "property" because doing so increased their common wealth net of the transaction costs of enforcing the associated rights.

#### PRIVATIZING THE FISHERY: A NEGOTIATED SETTLEMENT

Exclusive ownership of "assets in place" includes the real option to take advantage of growth opportunities resulting from knowledge specific to the asset (Myers 1977). Even if the tribes did not engage in active commercial trade of salmon prior to contact, by securing exclusive ownership over salmon stocks, their tribal institutions gave them that option when contact occurred, and they routinely recognized and actively took advantage of such opportunities. Although exclusive ownership of salmon stocks, including the real option to manage them for commercial purposes, is easily cognizable to the Canadian legal system and well within the limits of *Van der Peet's* principled approach to aboriginal fishing rights, the court will probably be reluctant to follow through and apply the letter of its own law by restoring stock ownership to the tribes. The social upheaval from such a judicially orchestrated transfer of wealth would be devastating, and avoiding it may for all practical purposes be a substantial and compelling objective. Despite the looming crisis,

incumbent mobile ocean fishermen have legitimate investment-backed expectations in the British Columbia salmon fishery for which they have shown themselves willing to organize and fight, both politically and otherwise, when necessary.

In arguing for a self-limiting conception of the aboriginal right to fish, Justice McLachlin's dissent in *Van der Peet* provides the court with a plausible fallback position. Her approach would divest the tribes of their real option on postcontact growth opportunities in the Pacific salmon fishery by converting their residual claim to a fixed priority claim (similar to converting a corporate equity claim to a debt claim) to enough salmon to provide a moderate livelihood roughly equal to what they would have enjoyed *but for* the arrival of English settlers.<sup>24</sup> This fixed claim against the fishery, together with the many tribal claims to native lands following *Delgamuukw*, reflect both a shift in property rights and a clarification of those rights that reduces the transaction costs of reassigning them to their highest valuing users in a privatization auction.

Privatization rests on the assumption that if the tribes were asked to rank the values they attach to various aboriginal rights in keeping with their distinctive cultural perspective, the current assignment of rights includes too much land and too little in the way of fishing rights. As Sproat commented in 1876 regarding early land negotiations with British Columbia's tribes, "if the Crown had ever met the Indians of this provinces [sic] in council with a view to obtain the surrender of their lands for purposes of settlement, the Indians would, in the first place, have made stipulations about their right to get salmon. . . . [L]and and water for irrigating it would have been, in their mind, secondary considerations" (Harris 2001, p. 34). The tribes have no culturally based advantage in managing vast tracts of land whose highest valued use is for hunting, mining, logging, hydroelectric generation, gaming, traditional agriculture, or commercial development.<sup>25</sup> They do, however, have a culturally based advantage in managing selected salmon stocks, both because their traditional stream-based property rights are vastly more efficient than the current mixed stock institutional structure and because they may yet possess accumulated knowledge, or at least general know-how, regarding salmon husbandry practices capable of completely revitalizing the British Columbia fishery.

The converse of the relatively high value the tribes place on the right to manage salmon stocks is that nonnatives place a relatively low value on

such management—as evidenced by the long history of stock depletion and the current deplorable state of the fishery<sup>26</sup>—and a relatively high value on the vast tracts of land subject to tribal claims. There are clearly potential gains to incumbent commercial fishermen, the tribes, and Canadian society as a whole from recontracting because the transaction costs of doing so are sufficiently low in relation to the gains to make doing so worthwhile. One reason for the low transaction costs is the availability of a culturally correct mechanism for valuing and transferring the associated rights known as the “rivalry potlatch.” Although the tribes’ rights to resources were held communally and are therefore said to have been inalienable, title disputes invariably threatened to divest a tribe of its rights.<sup>27</sup> On such occasions, according to Drucker (1955, p. 128), the rival claimants held a potlatch to resolve the dispute, which he describes in the following passage:

When two chiefs claimed the same place, the first one would give a potlatch, stating his claim; then the second would try to outdo him. Finally, one or the other gave away or destroyed more property than his opponent could possibly equal. The one who had been surpassed had no recourse. He could no longer contest his claim, for, in the native mind, it came to be regarded as ridiculous that an individual of few resources (and of course this involved not only the man, but his entire local group) should attempt to make a claim against someone who had demonstrated power and wealth.

The modern analogue of the rivalry potlatch is a second-price sealed bid auction in which the winner pays the loser an amount equal to the loser’s bid rather than paying the proceeds to a third party. In general, a second-price sealed bid auction has the advantages of being incentive-compatible—both parties will bid their reservation price—while allowing the winner to retain the rents from its superior ability to enhance the asset’s capital value.<sup>28</sup> A second-price compensatory auction would require the Crown to recognize those with vested interests in the mobile ocean fishery as an “incumbent” class of claimants and British Columbia’s tribes as a “rival” class. The details are best left to investment bankers experienced in privatizations, but an approximation would be for the Crown to require each tribe interested in making an exclusive claim to a river system in which salmon spawn to create a tribal corporation that would issue a majority of common shares, say sixty percent, to its members and forty percent to a central British Columbia First Nations-holding company organized as a publicly traded corporation.

In exchange, the First Nations Corporation would issue back a controlling interest, say sixty percent, of its own stock to the shareholding tribes in proportion to an independent valuation of the shares they contributed to the holding company. Collectively, the tribes would control the holding company, and each tribe would individually control its own tribal corporation. With the Crown's mandate, the incumbent class could also be organized as shareholders in a representative corporation. After arranging financing, these corporations would then submit sealed bids for the exclusive and perpetual right to control and collect the residual income (say, the excess above the tribes' total current fixed claims according to Justice McLachlin's approach) from the British Columbia salmon fishery, with the winner paying the loser the amount of its losing bid.

If the incumbents were to win the auction, as the current owners of the residual claim they would in essence pay themselves the amount of the tribes' losing bid and thereafter hold the exclusive right as a group to commercially harvest salmon under the watchful eye of Canadian fisheries regulators, possibly pursuant to a plan to create ITQs. The tribes' traditional cultural practice would require them to relinquish any residual claim to the fishery in excess of their total current fixed claims. They would then content themselves with their subsistence fishery and the management of their new lands in nontraditional activities compatible with continued use by future generations. If the tribes were to win the auction—which is the most likely outcome—they would pay the incumbents their losing bid. Consistent with traditional cultural practice, they could then abolish the mobile ocean fishery by assigning exclusive stream-based tribal rights to salmon stocks in accordance with each tribe's traditional lands and subsequent intertribal negotiations.

Under plausible transaction cost assumptions, this institutional structure is far more efficient than mobile ocean fishing under the rule of capture. A privatization auction could reestablish the distinctive core of aboriginal rights in a culturally correct way that enhances the Canadian commonwealth. There is no guarantee the tribes would win the auction. But the capitalized returns from husbanding selected salmon stocks in a system of stream-based tribal rights would so dramatically exceed those under ocean-based common group rights to mixed stocks under the rule of capture (and even under ITQs) that the resulting increase in the tribes' expected wealth would easily allow them to prevail. The incumbents would be compensated according to their

revealed valuation of their residual claim to the British Columbia salmon fishery under its current institutional structure.<sup>29</sup>

To finance its bid, the First Nations Corporation could issue its remaining forty percent of common shares to outside investors, including tribal corporations, who could pay for it out of retained or pending cash settlements and other sources. It could also borrow from the Crown by pledging the fishery in its entirety as collateral. Presumably, the Crown would be willing to lend an amount equal to the incumbents' losing bid, which would necessarily reflect the capitalized value of the fishery in its best alternative use, that is, under the current institutional structure.<sup>30</sup> Alternatively, both to help finance the First Nations Corporation's auction bid and to secure the additional financing necessary to begin operations, the tribal corporations could borrow from the Crown by pledging much of their newly acquired land as security or by reselling those lands (or pending land claims) back to the Crown. If the tribes take their distinctive culture seriously, they should be willing to relinquish much of this land to reestablish their exclusive stream-based ownership of salmon stocks.<sup>31</sup> Finally, both the First Nations Corporation and the separate tribal corporations could issue nonvoting or low-vote common stock to interested outside investors.<sup>32</sup>

The analysis thus far assumes that each tribe asserts ownership to an entire river system. For the many smaller river systems once owned by single tribes, such as the Cowichan River near Nanaimo, this presents little problem. At the other extreme, the Fraser River presents problems of ownership by multiple tribes. Although the *Van der Peet* court's notion of "shared exclusive ownership" has been legitimately criticized as an oxymoron,<sup>33</sup> it accurately reflects the patterns of actual precontact ownership on the Fraser, albeit with the institutional details left unstated. The problem with the Fraser was that, in many places, salmon destined for upstream spawning beds were subject to interception by downstream tribes. The resulting institutional equilibrium was a substantial improvement on a pure open-access commons subject to the rule of capture. Granted, in many cases this was because of upstream tribes' threats of encroachment and severe retribution on downstream tribes, as well as the promise of reciprocal sharing for cooperative "conservation."<sup>34</sup>

In such situations, privatization would require all tribes with valid claims within any river system to begin by forming a common trunk corporation. Initially the trunk corporation would harvest salmon at or near the trunk stream's mouth using a fixed net technology, being careful to avoid

systematically discriminating against salmon destined for the spawning beds in any particular tribe's claimed territory. Even though the optimal point for effective husbandry is closer to the spawning beds because this reduces noise in the information feedback mechanism, trunk stream harvesting would be necessary because salmon destined for upper tributaries tend to deteriorate in quality the longer they remain in fresh water. But the rate of physical deterioration is probably not an immutable constant. By selectively harvesting individual salmon that deteriorate rapidly and leaving the slow deteriorators to spawn, upstream tribes could, conceivably, genetically engineer subspecies less prone to deterioration.<sup>35</sup>

Within the constraint of transaction costs, it is important to devolve control of individual salmon stocks to the separate tribes in the river system's upper reaches. This would require the trunk corporation to "underharvest" to allow upstream tribes to engage in more selective harvesting of their individual stocks to meet local conditions, with the trunk corporation gradually relinquishing control to upstream tribes. No doubt some management decisions are best made by the trunk corporation, as where it is necessary to bring suit against polluters that impose spillovers on all tribes' stocks. Eventually, however, the trunk corporation should find it worthwhile to spin off various tribal subsidiaries, leading to a corporate structure similar to the First Nations holding company.<sup>36</sup> In this way, the undivided population of salmon entering a larger river system could eventually be reified into selectively managed individual stocks subject to exclusive, as opposed to shared, tribal ownership. The overall system would constitute a nested hierarchy of corporate holding companies, with local tribal corporations exercising entrepreneurial control over salmon husbandry decisions to their own stocks.

This organizational structure mirrors the potlatch system, whose benefits included diversification of stream-specific risk and a reduction in the transaction cost of enforcing exclusive stream-based tribal ownership of salmon stocks. To achieve these benefits, each trunk corporation and, in turn, the First Nations Corporation, would have to hold a value-weighted portfolio of the individual "upstream" tribal corporations' stock based on the public prices of nonvoting outside tribal corporation shares. This is because the value of each tribe's stock in the First Nations holding company would be determined in appropriate part by the value of the other tribes' stock in the holding company portfolio. Just as in the potlatch system, this would diversify each tribe's stream-specific risk. And any action a tribe might take to

inefficiently impose spillovers—to encroach—on other tribes, as for example by intercepting others' salmon or breeding its own race of exceptionally predatory salmon (say, aggressive ocean feeders), would lower the value of its holding company stock (Hansen and Lott, 1996). No doubt individual tribes would find it appropriate to hold ceremonial potlatches at which their tribal leader hosted other tribes to publicly declare his success at managing tribal resources when handing a check to the “downstream” corporation's manager for its share of the dividend distribution.

Tribal corporations' majority voting stock (held by tribe members) could be freely alienable to other coastal tribes or tribal members, but sale to nonnatives could be restricted. This would ensure the viability of an ongoing market for corporate control in which inefficient tribal management could be displaced by rival claimants, similar to the rivalry potlatch (Manne 1965). Outside, nonvoting “minority” shares in the various tribal, trunk stream, and First Nations corporations should be freely transferable. No doubt an active market for such shares could be relied on to value the “productivity” of the associated enterprises and to provide valuable information from a forward-looking efficient market regarding proper resource allocation. As always, the default rules of provincial corporation law in a federal system, together with privately tailored bylaws and articles of incorporation, could be used to ensure competitive governance and prevent majority interests from acting opportunistically toward minority interests.

Privatization stands to create tremendous value compared to mobile ocean fishing for several reasons. First, even under ITQs, mobile ocean fishing is a mixed stock fishery, subject to noisy information feedback. With exclusive stream-based husbandry of individual salmon stocks, noise can be dramatically reduced, with a corresponding increase in dynamic efficiency. Second, the increased productivity of stream-based stock ownership can, to some extent, be used to compensate dispossessed incumbent fishermen for relinquishing their vested interests. The corporate form of organization would allow them to purchase contingent claims, such as financial options on corporate stock, for example, and, as with the second-price auction itself, could be used to induce them to self-select for such claims based on their true reservation valuations. Third, part of the current threat to salmon stocks comes from stream degradation as a result of siltation and other forms of pollution. By assigning residual claims to the productivity of each river system to a specific tribal corporation, responsibility for pressing claims against polluters

would be much more focused than under the current system. Experience in Iceland, Scotland, and elsewhere shows that owners of salmon stocks are inclined to take aggressive action against polluters and other transgressors where ownership is clear (Brubaker 1997).<sup>37</sup>

Fourth, by placing management of salmon stocks in private tribal hands, the ongoing involvement of command-and-control regulators subject to political influences in managing the salmon fishery can be avoided along with the problem of political gridlock. Fifth, under the current system, sport fishermen have the lowest priority to the salmon catch, but, pound for pound, they place a dramatically higher value on catching the marginal salmon. Yet the transaction costs of negotiating a value-enhancing reallocation are extremely high, making political resolution more likely. With privatization, the First Nations Corporation would in all likelihood be willing to issue salt-water sport licenses for reasonable fees, no doubt relying on sport fishermen to generate information regarding the movement of various stocks in inland waters. Trunk-stream corporations would surely be willing to sell fresh water sport fishing licenses as well. Finally, harvesting of salmon bound for natal streams in Canada by US fishermen would gradually select in favor of salmon that remain in Canadian waters while at sea, thereby reducing reliance on political solutions with United States fisheries regulators.<sup>38</sup> What is more, with Canadian fishermen leaving all salmon stocks in Canadian waters largely unmolested, international disputes would be far easier to address, possibly leading to similar privatizations in Alaska, Oregon, and Washington.

#### CONCLUSION

In *Van der Peet* the trial court accepted expert testimony from cultural anthropologists to determine whether the practice in question was “integral to the distinctive culture” of the defendant’s tribe at the time of European contact. It is of course natural that Canadian courts have relied on expert testimony from cultural anthropologists to understand the nature and scope of the tribes’ fishing rights. But although the world owes Franz Boas and his followers a great debt for their factual ethnographic work on the tribes, the theoretical work in cultural anthropology that followed has proven less than helpful, either to Canadian courts or to the tribes. By ignoring the relationship between tribal institutions and tribal livelihood, and by uncritically

accepting the tribes' status as hunter-gatherers content with a subsistence livelihood—in spite of overwhelming evidence to the contrary—cultural anthropology has proven itself largely irrelevant to the legal resolution of aboriginal rights.

Economists have access to the same factual record as cultural anthropologists. But facts do not speak for themselves, and the power of economic theory in drawing inferences from the recorded facts completely transcends anything cultural anthropologists have to offer.

It is truly ironic that in an effort to understand the tribes from their own perspective, Boas and his followers inadvertently cast them as ambitious status-seekers indifferent to generating more than a subsistence livelihood from their environment. Though cultural relativism may have gotten them in the courthouse door, it has painted them into an ethnocentric corner in regard to their fishing rights. The apparent purpose of s. 35(1) is not simply to hand aboriginal peoples an entitlement, but to bring them into the modern era with a reasonable prospect of achieving prosperity through diligent and determined reliance on their distinctive cultural rights. Because tribal ownership of salmon stocks represents the core of these rights, the Crown's fiduciary duty requires that they be given the opportunity to reclaim them. By compensating incumbent fishermen to voluntarily relinquish their claims, British Columbia's tribes can once again aspire to prosperity, while contributing proudly to the Commonwealth of Canada.

#### NOTES

1. The author thanks David Haddock, Jon Klick, Moin Yahya and participants in the Robert A. Levy Fellows Workshop at George Mason University School of Law for helpful discussions. This paper has benefited from presentations at the University of Calgary School of Law and the University of Alberta School of Law. The Donner Canadian Foundation and the Earhart Foundation provided generous support for the production of this Chapter.

2. Walker observes: “[l]ast April, the Nisga Treaty gave the band of 5,000 about 770 square miles of land in northern British Columbia, plus cash and benefits worth C\$250 million, and the right to self-government.” According to the BC Treaty Commission, claims by 55 BC First Nations are currently being addressed in 45 separate treaty negotiations (see British Columbia Treaty Commission, 2004). Critics believe these claims are being given exaggerated legitimacy and have resulted

in unjustifiably generous land and cash settlements to a virtual handful of natives (see Lippert 1998).

3. Throughout this essay, I borrow freely from my earlier work to keep citations to a minimum.

4. The tribes possessed the knowledge to preserve large quantities of salmon through the winter months.

5. A similar process was at work in Washington State (Higgs 1982).

6. In several cases, tribal leaders on the Nass and Skeena Rivers refused to buy licenses to fish in their own territories and insisted regulators had an obligation to remit all fees they collected from nonnatives for the right to do so (Harris 2001, pp. 61–65). Harris reports that the increasing treatment of native fishing rights as privileges may have been the residuum of a broader eighteenth century shift in the English legal conception of sovereignty to treat all customary rights as privileges (2001, p. 73, no. 244).

7. See also *Guerin v. The Queen* (1984).

8. The last of these, *Delgamuukw v. British Columbia* (1997), addressed aboriginal title to traditional lands, although others specifically addressed the aboriginal right to fish.

9. *R. v. NTC Smokehouse Ltd* (1996) and *R. v. Gladstone* (1996) were two companion cases to *Van der Peet*.

10. Unlike cultural anthropologists, I use the term *tribe* rather loosely. First, I use it contextually to refer to any layer in a nested hierarchy of kinship groups that variously functioned as the resource managing unit, whether the local-house, the clan, or the broader tribe. Second, I generalize across tribal groups throughout the northwest coast based on patterns common to all of them. Cultural anthropologists emphasize the many differences between the tribes. These differences are overwhelmed by the similarities, which in any event are sufficient to establish the distinctive cultural basis of northwest coast tribal property rights.

11. To be more complete, wealth is the present value of an expected flow of net returns discounted at the appropriate interest rate (Johnsen 1986b).

12. Boas is regarded by many authorities as the father of cultural anthropology. The question I have always had about Boas is how he decided which aspects of culture were worth recording absent an underlying theory or intellectual issue to guide his work. It is now widely recognized that his lifelong agenda was to validate cultural relativism, and this no doubt guided his focus in recording tribal culture.

13. Even two streams within very close proximity can be differentially affected by natural environmental shocks such as flooding, drought, and variations in salinity or temperature.

14. Professor Ferguson's work on tribal warfare eluded me until very recently, which is unfortunate because it uniformly supports my analysis.

15. Even in the absence of productivity variations, there would always have been an incentive for the members of one clan to encroach on another's private fishing

territory because the marginal product of labor to an encroacher equaled the average product of labor to the incumbent (Cheung 1970).

16. Potlatching provided the ancillary incentive for the tribes within the system to assist in defending the territories of allied tribes from external aggressors.

17. Salmon have any number of biological characteristics subject to purposeful genetic selection, including the average size of fish, the timing of their upstream run, the duration of the run, etc. To increase the average size of fish in a run, a chief would have had to impose a rule on his labor force to harvest the smaller fish in the run, thereby leaving the larger fish to spawn. Because larger parents give birth to larger offspring, over time the average size of fish would increase. Note that it would take substantial experimentation to discern this result, which is counterintuitive. Being more desirable, the natural tendency would have been to harvest the larger fish now. Following a small-fish harvesting rule therefore involves an up-front investment the return from which, if any, would not be fully realized for several generations.

18. It seems likely that prior to the earliest contact, the tribes had established a fairly stable and violence-free system of tribal property rights, but that the advent of the fur trade set off a wave of violence as they struggled to establish ownership to elusive sea otter stocks. This hypothesis awaits further investigation and testing.

19. I can only speculate that this mischaracterization is responsible for Justice McLachlin's mistaken conclusion that the northwest coast tribes "were not generally societies which valued excess or accumulated wealth."

20. Their situation was similar to western ranchers on the American plains who turned branded cattle out onto the open range free from systematic molestation. See Anderson and Hill (1975) and Morriss (1998).

21. Two notable exceptions are Garfield (1945) and Oberg (1934, 1973).

22. Barzel, Habib, and Johnsen (2006) argue that modern investment bankers rely on a system of reciprocity very similar to potlatching to make initial public offerings of corporate securities, a setting in which encroachment by rival banks is problematic but where the legal system is unable to prevent it.

23. To make it worthwhile to incur the transaction costs of reifying value flows into cognizable assets the productivity of the assets must be imperfectly correlated with the productivity of the undivided commons, thus generating gains from specialized ownership. Merely dividing the commons into *pro rata* claims that are, by definition, perfectly correlated does not reify assets.

24. This approach is supported by substantial legal precedent in Delaware corporation law regarding majority shareholders' fiduciary duty to the minority in cashout mergers. Minority shareholders' appraisal rights in a cashout merger are limited to a fixed valuation of their share of the enterprise at the moment the majority seeks to take advantage of its call option on the growth opportunities motivating the merger. The problem with this analogy is that, at least in hindsight, it is the tribes whose legal conceptions would have produced the greatest capital value for the Pacific salmon fishery.

25. Except for hunting, the tribes' distinctive culture never had much if anything to do with these activities and, although they asserted exclusive claim to hunting lands, as with sea otters, the migratory nature of most large prey left them unable to assert effective dominion or to exercise effective husbandry over most of the associated stocks.

26. In an essay apparently ignored by both case law and the academic literature, Walter, M'Gonigle, and McKay (2000) argue that the tribes' historical fishing rights included both the right to harvest and the right to *manage* the salmon fishery, and that, based on constitutional legal principles, the Crown's regulation of the Pacific salmon fishery constitutes equitable waste that fundamentally conflicts with these rights. I reach the same conclusion based on an empirical economic analysis of tribal institutions. It is truly remarkable when scholars far apart on the ideological spectrum as Professor M'Gonigle and I agree on such an assessment. Although Walter, M'Gonigle, and Kay characterize their solution as "environmentally sustainable" "community-based management" relying on "clean production," it ultimately unravels to exclusive tribal property rights to salmon stocks. And whereas they would urge the court to effect a huge wealth transfer from incumbent commercial fishermen to the tribes, I propose to have the tribes compensate the incumbents to voluntarily relinquish their residual claim.

27. Because tribe members had the option of shifting their residence and labor resources to the prevailing tribal leader, the rivalry potlatch may have been a close analogue to the hostile corporate takeover in which the acquiring firm displaces inefficient incumbent managers (Manne 1965).

28. A second-price compensatory auction is probably not purely incentive-compatible because the putative loser might be tempted to strategically raise its bid to just shade the likely winner's bid to capture a share of the differential rents. This strategy is obviously risky if the parties face uncertainty over one another's reservation values, and the problem may therefore be one of second-order smallness. Interestingly, if the auction is multilateral this problem would seem to vanish as the number of bidders rises. My thanks to David Haddock for this point.

29. The creation of ITQs represents a plausible growth opportunity to which the current institutional structure may convey a real option.

30. The appeal of this form of financing is that it automatically makes continued ownership of the salmon fishery contingent on the tribes' ability to generate returns in excess of the debt service on the capitalized value of the current institutional structure (Johnsen 1995; Habib and Johnsen 1999; Habib and Johnsen 2000). Looking forward, the First Nations Corporation's willingness to borrow on such terms would serve as an implicit bond of its owners' expectations.

31. It is possible that some tribes would prefer to retain their land rights and forgo the opportunity to reestablish their exclusive stream-based ownership of salmon stocks. If so, dispossessed incumbent fishermen could be given financial options to purchase stream-based fishing rights with a strike price roughly equal to the those streams' proportionate value of the incumbent corporation's losing bid.

32. No doubt an army of “socially responsible” investors would emerge to provide ample equity financing. For a discussion of how cross-portfolio holdings can be used to ensure socially responsible actions by portfolio companies, see Johnsen (2003).

33. See Lippert (1998).

34. The resulting equilibrium probably contributed to the unique “subsistence” ethic reported of the Musqueam and Sto:lo in *Sparrow* and *Van der Peet*. Any downstream tribe on the lower Fraser that took more than it “needed” faced retribution by upstream tribes if too few salmon appeared in the spawning beds. Shared exclusive ownership under an uneasy truce of subsistence-only harvesting was somewhat unique and by no means representative of other coastal tribes. A testable implication is that downstream tribes on the Fraser River followed a different ethic when fishing their wholly owned tributaries along the Fraser.

35. What is more, the effect of deterioration on the value of migrating salmon is not immutable. Upstream tribes could gradually develop relatively attractive markets for the flesh of more highly deteriorated salmon, which are lower in oil content than during their time at sea.

36. This would surely be true for tribes claiming territory and streams with spawning grounds near the mouth of the river system.

37. To the extent tribes sell their claims to extensive tracts of lands along river banks to finance purchase of the river’s salmon stocks, they can impose restrictive covenants on the Crown and subsequent purchasers that reduce the transaction costs of mitigating externalities.

38. Fraser River sockeye that return through Johnstone Strait or hug the southern tip of Vancouver Island would gain a reproductive advantage. If this were a heritable characteristic, over time it would dominate the gene pool.