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# **American Indian and Non-Indian Philosophies of Technology and Their Differential Impact on the Environment of the Southern Puget Sound**

**GEORGE M. GUILMET AND DAVID LLOYD WHITED**

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This ethnohistoric case study examines the comparative philosophies of technology and the concomitant consequences for nature of two contrasting societies inhabiting the southern Puget Sound basin in Washington State: the Southern Coast Salish and the contemporary urban-industrial society.<sup>1</sup> Figure 1 maps a few contemporary cities, Southern Coast Salish traditional tribal locations and language boundaries, and contemporary reservations.<sup>2</sup>

This case study should also be interpreted in the context of the discussion focused on ecological issues in American Indian and Alaska Native history.<sup>3</sup> We argue that a striking contrast exists between the metaphysical and ethical systems (with respect to technology and the environment) of the aboriginal peoples of the southern Puget Sound basin and those who immigrated to the region following European contact in 1792. Concomitantly, the aboriginal inhabitants constructed a cultural form that maintained a relatively stable ecosystem for thousands of years prior to contact with Western influences. Outsiders, representing for the most part the outward push of several colonial powers, managed to deteriorate significantly the same ecosystem and harm the aboriginal inhabitants in less than two hundred years. Indeed, the most destructive phase of this rapid ecological and cultural transition occurred over the last 130 years following American settlement in the mid 1800s, the creation of Washington Territory in 1853, and the importation of the industrial revolution in the late 1800s.

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turally distinct from other Americans)? Do contemporary “other” Americans share to any significant degree a philosophy of technology which may be in contrast to the contemporary Southern Coast Salish—that is, what attitudes and values define the majority population? From a systems point of view, how much diversity in values and attitudes exists within the contemporary Southern Coast Salish population, and how much do these different components interact? Are there portions of the contemporary tribal community that have sold out to outsider views? Are there ideological and structural outsider variables that support the traditional tribal worldview? If the Southern Coast Salish are only fractionally distinct and the contemporary outsiders display a diverse set of values and attitudes toward the environment, does the contemporary contrast of Southern Coast Salish and outsiders’ metaphysics and ethics truly exist? To what extent are Southern Coast Salish traditional metaphysical and ethical beliefs mere rhetoric in the legal quest for rights to land and resources? If lingering traditional attitudes and values exist among a significant segment of the population, do they impact in any significant way tribal development projects and settlement claims within federally defined trust reservations?

It is our hope that the case-study approach will contribute to a better understanding of these issues. That is the empirical trail we will follow. Before we begin, however, a few issues must be discussed. Consider a *metaphysical system* to be a set of statements defining the nature of existence or being. An *ethical system* will be considered a set of related propositions concerning what one ought to do.<sup>5</sup> We agree with Hans Jonas that placing value on events or phenomena occurs in the context of larger metaphysical systems which, through the definition of the nature of existence or being, define meaning for individuals and collectivities. Stated another way, if we agree that metaphysics is a doctrine of being, and ethics is a doctrine of action then ethical imperatives for action occur relative to metaphysical statements of being.

For the purposes of this paper culture is defined as shared and learned beliefs, behaviors, values, and meanings and their technological and institutional products. This definition includes both ideological and materialist variables. A materialistic definition of culture would include shared and learned technology, institutions, and behavior. An ideological definition of culture would include behavior, values, ideology, symbols, and meanings to culture members. A *value* in this paper is considered an attitude for or against an event or phenomenon based on the belief that it (the event or phenomenon) benefits or penalizes some individual, group, or institution.<sup>6</sup> Consider *technology* to be the implement systems (amplifiers of human motor, sensory, and ratiocinative capacities) and their internal counterparts (sensorimotor, perceptual, and ratiocinative skill).<sup>7</sup>

#### CASE STUDY: THE SOUTHERN PUGET SOUND

One way to provide some answers concerning these issues is to examine the extent to which the differing philosophies of technology have changed or not changed since the time of contact in the face of converging cultural, espe-

cially technoenvironmental, contexts. Do the Indian people in question still maintain their metaphysical and ethical positions toward nature? What of the philosophical orientation of outsiders? If there still is a variance in philosophies of technologies of these two cultures, does this discrepancy make a difference with respect to actions toward nature and human nature?

### **Traditional Southern Coast Salish Philosophy of Technology**

The Southern Coast Salish were aboriginally dependent upon fishing, hunting, and gathering as a means of subsistence.<sup>8</sup> They displayed a complex set of spiritual, ritual, and ceremonial constraints on environmentally inappropriate, degrading action. Being the traditional center of subsistence, the salmon is a key symbol, a window into Southern Coast Salish culture and values.

The first salmon caught in a fishing season was treated with great ceremony so that the harvest might be successful.<sup>9</sup> This ceremony varied from group to group and over time within the same group. Among the Puyallup, the first large catch of salmon after the building of a tripod fish trap was followed by a general feast to which neighboring peoples were invited by the leader of the village which had built the trap. The salmon were cut lengthwise, never cross-wise, or "they would get insulted and not come any more."<sup>10</sup> The salmon were boiled whole, and all the fish had to be consumed to the last scrap: flesh, entrails, gills and bones. The salmon feast was held only for the spring or fall salmon runs and for the rare and good salmon.

Another description of the Puyallup Salmon ceremony was given to a congressional subcommittee by Frank Wright, a Puyallup tribal member, in 1964:

They barbecued the first salmon of the run over an open fire. It is then parceled out to all, in small morsels or portions so all can participate. Doing this, all bones are saved intact. Then in a torchbearing, dancing, chanting, and singing procession, they proceeded to the river where they cast the skeleton of the salmon into the stream with its head pointing upstream, symbolic of a spawning salmon, so the run of salmon will return a thousand-fold.<sup>11</sup>

Among the Nisqually, and probably other Southern Coast Salish tribes, shamans would eat the first salmon.<sup>12</sup> The first salmon ceremony typically included a prayer-song to the salmon and the performance of the salmon dance.<sup>13</sup>

The Southern Coast Salish also prepared the environment so that the salmon would want to come. Among the Skokomish, the river had to be kept clean before the first king salmon came. Rubbish, food scraps, or the like, were not to be thrown in the river, and canoes were not to be bailed out in the water. Women were not to swim in the river during menstrual seclusion.<sup>14</sup> Restrictions on pregnant and menstruating women (especially with respect to bathing in rivers and streams) were widespread throughout the Puget Sound area.<sup>15</sup>

A more contemporary version of the first salmon ceremony was observed among the Tulalip by Vi Hilbert, an elder of the Upper Skagit Tribe:

They invited their friends from many tribes. Then they entered the longhouse and were seated.

Soon a young man arrived. He had some news! It seemed that there appeared to be a very important person coming in to shore. The leader from Tulalip said. "We had better all go down to the shore to meet our visitor who arrives by water." Then the leader sang a song and we all joined him. We went down to the shore, singing as we walked. We could see someone coming. He came. Arrived.

Yes, it is indeed this very important person. It is King Salmon who is the very important person who has arrived to us. King Salmon lands!

The Tulalips have a very nice little bed ready with cedar boughs and ferns for King Salmon to lie on as he is carried from the shore. Two young men hold the sides of the little bed. Then they carry King Salmon up to the longhouse. All sing as they accompany him.

They arrive at the longhouse. They bring King Salmon inside. They thank him now as they take him around the longhouse four times, always singing as they go.

They stop each time they come to the corner of the house. Four times they stop as they reach each corner. They go outside when they have finished thanking this honorable King Salmon.

The people were then called to dinner. They all feasted on salmon. They finished eating.

Then again parts of King Salmon—the head, tail, backbone—are placed on the bed. The young men again hold the sides of it. Again the Tulalips sing. King Salmon is taken down to his canoe.

He is put on board and the two young men paddle King Salmon off shore to deep water. With his head to the West, he is returned to his own country.<sup>16</sup>

One of the most recent Puyallup first-salmon ceremonies, acknowledging the Puyallup people as salmon people and honoring the salmon for their sacrifice, was institutionally supported by Puyallup Tribal Fisheries on August 9, 2001.<sup>17</sup> The fisheries department caught the first salmon for the sacrifice and placed the skeleton of the fish on a platform with cedar, ferns, and prayers. The fish was then placed back in the water with songs and more prayers to let the other salmon know how well appreciated the salmon is for coming home every season and feeding the people. Tribal Fisheries also donated the salmon for the ceremonial dinner. Charles Satiacum, a Puyallup fisherman for over twenty-eight years, cohosted the event with Fisheries and called for witnesses to come forward, share stories, and give thanks and prayers to the salmon. Joe Anderson (witness, tribal member, and Puyallup Tribal Fisheries director) said:

In order for us to give thanks to the salmon today we have to give thanks to those who have taken care of their habitat. To know that the salmon swim up river about 30 miles a day to spawn is great and to be able to read nature is one of our many gifts.<sup>18</sup>

Regarding the ceremony, Connie McCloud (witness, tribal member, and culture coordinator for the Puyallup Tribe) stated:

It [the first salmon ceremony] also helps those who are seeking answers or who are in need of some kind of help. It establishes values and rules for those who understand their responsibility, as they are caretakers. And for those caretaker[s] to follow the rules that are established or we, their people will suffer.<sup>19</sup>

The motive underlying the salmon ceremony is the belief that salmon have a conscious spirit.<sup>20</sup> Before it is safe to eat the salmon, this spirit must be propitiated by a ceremony or offering. Because of this conscious spirit, the salmon can either present itself in abundance or not appear at all. Thus, a second motivation for the ceremony is the appeal for abundance.

A miscellaneous group of salmon tales reinforce the ethics of proper treatment of salmon, making it clear that the welfare of the animal is most important, and the taboos regulate conduct so that his spirit may not be offended.

In Puget Sound, especially the southern end, from the Snoqualmi to the Puyallup, there are numerous short tales each expressing some salmon taboo, as not ridiculing the humpback for his appearance (Snoqualmi), or doubting the return of the salmon (Skokomish), or the quarrel among the varieties of salmon over the use of a stream and the agreement to run at a certain season (Puyallup).<sup>21</sup>

Puyallup fishermen were cautioned to kill only as many dog salmon as they needed.<sup>22</sup> It was believed that if the salmon was over harvested, he would take the soul of the abusing person, resulting in the death of the person when the salmon reached his home.

Similarly, although in a less ritualized manner, Puyallup-Nisqually hunters kept track of the prevalence of game and limited the number of animals killed each year.

The hunter was said to have known the habits of the particular animals which were within his range. He knew the number of beaver dams, the location of the woodchuck holes. He knew the herds of deer and the runways they used. He is said to have kept track of the birth rate and the natural mortality so that he could gauge how much he might kill each year without constituting a drain upon the supply. If he tracked a deer across a creek into the range of a friend, he would make his kill, go to the other and explain the situation, and probably get full rights to the animal. If, on the other hand, his deer crossed into the range of an enemy, he killed and used it only at the risk of incurring added animosity and an almost sure attempt at reprisal.<sup>23</sup>

The concepts of clan, family, and individual rights to harvest at certain spots for game animals, fish, and vegetable resources were well established. These

rights were passed on through family members and were definitely tied to the long-term maintenance of the subsistence-based economic system. A limited number of inheritable names existed in each family, to assure that population growth did not exceed the carrying capacity of the ecosystem by signaling the threat of overpopulation. There was a system of fines and required payment to the "owner" for violation of this resource management system.

The Southern Coast Salish attitude toward animals cannot be understood without reference to the mythology that provides the formal rationale for it.<sup>24</sup> In mythological times, before the culture hero Doquebuth, the Changer, traveled through the world, altering it to its present form, all animals were people. These animal people became animals as they came into contact with one of the culture heroes and met with various incidents. Thus, humans and animals are thought to have a common origin. "The close relationship between man and animals is demonstrated not only by the similarity in their way of life but by the ability of men to change into animals and animals to change into men in mythological times and even in the present."<sup>25</sup> Among the Puyallup, a sea being appears in a myth as a spouse of a young woman.<sup>26</sup>

The Indian people modified their environment to suit their subsistence needs. For example, they started fires to expand grasslands to attract game and built fish weirs and traps. Nevertheless, based on their metaphysical system, the Coast Salish of the southern Puget Sound traditionally defined their role as being one of minimal interference with the other elements of nature. This is not unusual for tribal peoples who live off what natural ecosystems (those with little or no horticulture or agriculture) provide.<sup>27</sup> Those living off hunting, gathering, and fishing live in an uncertain and constantly changing relationship to their sources of food. If animals were to be taken for survival, they must be talked to in the right way and treated with respect so as not to anger their spiritual essences. Animals possess spiritual powers that could take retribution against humans who acted irresponsibly toward them.

The personified-spiritual-power belief system that guided action through concomitant ethical constraints is an effective metaphor which limited individual and group action toward the animals and the ecosystems in which they were embedded within an ecologically acceptable set of choices. This was critical for those who were so intimately and immediately affected by changes in species diversity, population, and habitat location. Not surprisingly, ecologists are finding these indices to be effective indicators of environmental pollution and habitat disruption.

A need existed to include trees, stones, tools, water, all carrying some "spirit," to maintain balance within the entire interrelated ecological/cultural/economic/spiritual world. No one spirit was so powerful or less necessary than another that all should not be considered or consulted. Examples of this system include ceremony and apology to trees or plants harvested. Ceremonials of this type survive and are being integrated into the modern system. Note, for example, the recent ceremonial respect given a canoe tree prior to its cutting among the Suquamish<sup>28</sup> and the song sung to the canoe tree among the Puyallup.<sup>29</sup> This ceremonialism is a symbolic recognition that nature can metaphorically get mad at an individual. If that occurs, one will

have relatively little success in resource utilization. The tree harvested without respect may become a canoe which splits and sinks.

This respect and presumed spiritual interdependence reinforced the existing economic, political, and religious systems. The independence and interdependence of various “spirits” of which humans were only considered to be a part, connected all aspects of the world into a unified entity. Certain penalties existed for not showing enough respect to and placing responsibility upon the utilization of nature. Consistent with the redistributive economy of the Southern Coast Salish, the environment itself received some spiritual and ceremonial resources in exchange for giving the material basis for human survival. In contrast, the accumulative economic system of outsiders took the wealth of the environment and its resources without spiritual and ceremonial exchange and respect by “subjecting” nature to domination and consumption.

A very significant part of maintaining the Southern Coast Salish cultural system is the necessity of instilling shared community norms within the upcoming generation. Basic values are the foundation upon which most interactions with the natural and social worlds are based. Lose the power to educate one’s own children in one’s own language and religious beliefs and practices, and this system becomes fragile indeed. Commenting on the Coast Salish Indian culture generally, Vi Hilbert (the Upper Skagit tribal elder quoted earlier) has noted:

The land we lived on was alive —the creator had given the land and this place life and had given us life. We were taught to respect every part of it. Everything that grew had life and had spirit. So for that reason we were taught to show respect to everything that had been placed here by the creator. Everything had spirit and if you respected everything . . . it would serve us, but we had to show respect first. So this is what all generations were taught and the people spoke of this in their everyday life, as they worked, as they ate, as they communicated with one another. This was the philosophy the people lived by.<sup>30</sup>

Many Southern Coast Salish people lost nearly a century of this ability to influence the education of their own children, especially in the area of values clarification. The introduction of diseases, the banning of “Indian doctoring” in 1871 by the superintendent of Indian Affairs of Washington Territory, the subsequent outlawing of potlatches, and the development of Western schools (especially boarding schools) that prohibited Native language use, were major factors leading to a decrease in traditionality.<sup>31</sup> Language represents in a culturally unique and specific way the values and ceremonials describing the relationship of a culture to the natural world. As language use declined so did the reinforcer of the values imbedded in it. However, recent efforts to strengthen such traditional cultural aspects such as language use, education, canoe ceremonials, and the story-pole ceremony are revitalizing cultural values surrounding the human use of the environment.<sup>32</sup>

Cultural perspectives on economics, ecology, the proper use of nature, what constitutes a surplus, and responsible utilization of any surplus are being reasserted. Many Indian people question the outside system that bases personal

and social power upon what is owned by the individual. Wealth is traditionally defined as how much one owes people or people owe one rather than upon how much material wealth one owns. Traditional wealth constructs featured interdependent family-based wealth. Traditionally, one way of achieving power, which made an individual an important person to consult regarding community decisions, was reciprocal giving, both spiritual and material. A person was rich and powerful if he/she had plenty to give away. Persons of high stature were meaningful arbiters in interpersonal, interfamily, and intertribal disputes.

### **Colonial and Immigrant Philosophy of Technology**

Southern Puget Sound was approached by traders and explorers representing four different colonial powers (Great Britain, Russia, Spain, and France) prior to the first recorded direct contact by members of the British George Vancouver Expedition in 1792. Each group carried with it an image of the usefulness of the region and its natural resources to the colonial center. Furs, agricultural and grazing land to provide fresh vegetables and animal protein, and eventually timber and fish were but a part of the bounty desired. Furs and agricultural stations were of the greatest interest to the British who established the first permanent settlement in the area, Fort Nisqually, in 1833.

The Southern Coast Salish formed a permanent identification with the village site and the surrounding ecological niches. Because of this sense of permanence and membership in the ecological system, all actions toward the environment were measured against the potential consequences of each event. In contrast, most outsiders visited or immigrated to the area to exploit the local resources for trade or sale in outside markets. When whites first arrived they were called “birds” by the local Indian people because they had no permanent attachment to a local ecosystem, they just came and went.<sup>33</sup> However, like the introduced species starlings, English sparrows, and rock doves, they have adapted, multiplied, and partially replaced some of the native populations.

Missionaries followed explorers and traders. The bounty they sought was human souls. The first Methodist missionaries arrived in 1840, a year that also saw Father Blanchet erect a huge cross at the head of Commencement Bay (a traditional gathering place for Puget Sound Indians) to attract Indians to his Catholic mission services.<sup>34</sup>

The United States entered its serious bid for the area when the government-sponsored Charles Wilkes Expedition reached the basin in 1841. The regional goal of the much more extensive expedition was to explore the Northwest country and find a sea route to the area with the hopes of expanding the American West according to the vision of Manifest Destiny.<sup>35</sup> Wilkes warned that premature attempts (prior to overland migration) to end joint occupation might leave the American minority governed by the majority representing other colonial interests.<sup>36</sup> The ideological system which could have sensitized outsiders to the worldview of the aboriginal people, cultural relativism, made little impact on the consciousness and behavior of subsequent immigrants even though the expedition brought with it Charles Pickering

(geographer) and Horatio E. Hale (philologist), two of the first cultural relativists in American anthropology. Pickering wrote *Races of Man* (1848), and Hale, who wrote *Ethnography and Philology* (1846), criticized the anthropologist Lewis Henry Morgan for his Social-Darwinistic views as expressed in *Ancient Society* (1877) and encouraged the young Franz Boas, a founder of relativistic cultural anthropology, to conduct fieldwork on the Northwest coast.<sup>37</sup>

Overland migration of settlers from the East Coast of the United States along the Oregon Trail brought a rapid influx of Americans to the southern Puget Sound beginning in 1845. By 1846 Britain agreed to the forty-ninth parallel as a boundary with Canada. Forests and fish were exported to support the fledgling communities. In 1852 Isaac Ingalls Stevens was appointed governor of the Oregon Territory, superintendent of Indian Affairs for the territory, Indian treaty commissioner to negotiate agreements with the tribes he was serving as superintendent, and head of the most northern of the four transcontinental surveys Congress had authorized to locate a possible route for a railroad to the Pacific.<sup>38</sup>

The conflict of interest under his four hats is clear. To make matters worse for the Southern Coast Salish, Commencement Bay in Tacoma was eventually chosen in 1873 as the site of the deep-water terminus of the Northern Pacific Railroad, a major trade route to the Pacific Rim. The Indian people, especially the Puyallup Indians of Tacoma/Pierce County, and their aboriginal ecosystems were to experience the full and direct impact of the Industrial Revolution. The conflict between the philosophies of technology of the outsiders and the indigenous people was to be acted out over the ensuing years.

Using a series of suspect tactics, including the refusal to make clear the details of the agreement in the Native language even though a skilled interpreter was present at the signing, Stevens completed the Medicine Creek Treaty with the Puyallup and other Southern Coast Salish tribes in 1855. Following the 1855–1856 Indian War that was primarily caused by treaty stipulations, including an attempt to restrict the size of the Puyallup Reservation to a small plot of land away from the sight of the eventual deep-water port, the Puyallup were left with a reservation of a little more than 18,000 acres, a fraction of their original subsistence territory. Unfortunately for the Puyallup people, the primary path to economic “progress,” Commencement Bay, lay within post-war revised reservation boundaries. Following the choice of Tacoma as the terminus of the Northern Pacific Railroad in 1873 and especially the completion of the line in 1887, bankers, merchants, and developers succeeded in attracting enough immigrants to the area to create a land boom. Elwood Evans, a legislator and judge, called upon Puget Sound people in 1869 to encourage immigration to the Puget Sound area:

Human progress, the establishment of American States on the Pacific, the advancement of Civilization, the ameliorization of our species, are all to be subserved by attracting hither the surplus from the overglutted centers of population in Atlantic States and Europe.<sup>39</sup>

He continues by describing the differences in settler and Indian use of the land:

The American settler came here to stay. The mission he had adopted required the exclusive occupancy of land, the cultivation of which destroyed its value as estimated by the Indian. The presence of settlements dissipated the game upon which he subsisted. These invariable concomitants of American settlement fully account for the “irrepressible conflict” between the settler and the Indian race, Because [*sic*] such is the universal sequence does not necessitate the theory that the Indian race is peculiarly bad, nor does it justify the assumption that the settler is unjust or aggressive. That the Indian readily imbibed the latter opinion in this region, where his native prejudices had been schooled by anti-American influences, is not unnatural. It is more surprising that his hostility was not more uncontrollable. Indian country cannot be appropriated to American settlement without a conflict. The settler must abandon the field, or hold it in spite of Indian objection. While the Indian makes no fixed habitation, really occupies no land, and surely reduces none to possession, yet he seeks to exclude others to whom it may be beneficial, not because he needs it, but because it has been his hunting range—here he has acquired subsistence—his dead are gathered here. Our race, following their destiny in obedience to God’s great law that the earth shall be made to contribute to the benefit of His creatures, appropriate it to a useful purpose. Upon this principle earth has been reclaimed to civilization. Christianity and human progress have advanced.<sup>40</sup>

Evans also notes that “[h]eavy capitalists are necessary in just such a country, and for the benefits they bring to our Territorial development, we may tolerate a tyranny which capital exerts.”<sup>41</sup> “Heavy capitalists” did indeed arrive to Tacoma, the “City of Destiny.”<sup>42</sup> When the abundant supply of cheap land that could be utilized easily and quickly was about to run out, power brokers looked to the only huge tract of land left unsubdivided—the Puyallup Indian Reservation.<sup>43</sup> John D. Rockefeller first saw the tide flats of Commencement Bay in 1886. He paid his second visit to Tacoma in 1899 making “a careful study of the tide flats” within the Puyallup Reservation:

His visit was soon followed by appearance in Tacoma of Harriman and shortly thereafter of A. J. Earling, President of the Chicago, Milwaukee & St. Paul Railway. Mr. Rockefeller had pointed out to them the best place for their rails to stop at tidewater.<sup>44</sup>

Harriman was Rockefeller’s “chosen expert” and the individual under which the Union Pacific was reorganized, a railroad in which Rockefeller and Jay Gould owned controlling interest.<sup>45</sup> Indian Agent Edwin Eells, the Indian Office official in charge of the Puyallup Reservation, made a list of 167 reservation land occupiers in 1886. Under the terms of the Medicine Creek Treaty these individuals were granted 17,463 acres in allotments that ranged from 40 to 160 acres.<sup>46</sup> The 585 remaining acres of the reservation, known as the Agency Tract, including the cemetery and the school, were held by the gov-

ernment for the benefit of the Puyallup Tribe. This procedure was consistent with the widespread belief that Indian people should adjust to American concepts of land ownership and subsistence techniques, thus making “productive” use of the land.

For example, these outsiders thought that tribes like the Puyallup or Nisqually should change from fishing-hunting-gathering on group territorial ranges to farming on private plots. However, farming proved a failure at providing economic self-sufficiency for the local Indian population. The schooling instituted (emphasizing industrial and domestic skills—depending on gender—and discouraging traditional activities such as fishing) was likewise a failure at providing economic independence. The young were being taught to exploit the new economic order by being instilled with a wage-based work-ethic emphasizing individual ownership and self-interest while devaluing shared community interest and human impact on natural resources. The ironic aspect of this was the fact that the outsiders were transforming what was a subsistence activity into a cash-oriented wage-based export business through salting and selling the same salmon which the Indian population was being taught that they should not depend upon. Also, the outsiders were harvesting and marketing the forests which they would later learn sheltered and nurtured the salmon. Finally, the outsiders interrupted the natural flow of the rivers for electrical energy production and flood control, causing a third vector of destruction to the salmon.

Congress reinforced this position in 1887 by passing the General Allotment Act, sometimes simply called the Act. This Act, passed in the same year as the completion to Tacoma of the Northern Pacific Railroad, conveyed a type of citizenship to Indian people and made individual Indians landowners who could sell property under certain conditions. This policy could well have been based upon the belief that the generational passing as elders died would bring to power the students who had been trained in “white” industrial-based values.

This purposeful attempt to change the subsistence base of the Indian people was totally unsuccessful on the southern Puget Sound. Rather than leading to more rapid adaptation of Indian people to outside subsistence techniques, it led eventually to a heightened level of conflict over fishing and other traditional subsistence activities. Individual and tribal conflicts over fishing and subsistence hunting rights persisted through the century as exemplified by numerous arrests of Indian people for fish and game violations and a series of cases in both state and federal court which ultimately reinforced the Indian point of view.<sup>47</sup> This conflict continues as recognized tribes defend their traditional rights to accustomed fishing and hunting areas against non-recognized tribes, some of whom are their relatives.

The salmon resource has been very nearly exhausted in many areas of the state, as demonstrated by the recent Endangered Species Act, which lists many salmon runs as endangered or threatened. This listing triggered federal intervention, the closure of many recreational fishing opportunities, and the strict limitation of commercial harvesting. Historically, total Puget Sound salmon landings were reduced from about sixteen million in 1913 to a little more than

two-and-one-half million in 1967.<sup>48</sup> In 1953, the Washington State Department of Fisheries stated, "The main cause of salmon depletion can be traced directly to the environmental changes which have taken place since the advent of civilization in the Pacific Northwest."<sup>49</sup> Through a combination of enlightened self-interest and a carryover of the ancient pattern of resource allocation and ownership, the tribes have worked cooperatively with state and federal agencies to protect the resource. The important role of the Northwest Indian Fisheries Commission (a project of nineteen Puget Sound and Olympic Peninsula tribes) in restoring salmon habitats and monitoring salmon harvests cannot be underestimated.<sup>50</sup>

The General Allotment Act did not allow for the sale of individual allotments until a twenty-five-year period had passed, a period which could be extended by the president. The purpose of this waiting period was to give the Indian people time to adjust to the changing concept of land occupation/ownership and to protect them from greedy land speculators and settlers. However, local interests pushed both for the sale of much of the "excess" Agency Tract and an exception to the twenty-five-year waiting period for the sale of privately owned tracts. This was accomplished through the passage of the Puyallup Surplus Land Act of 1893.

The Puyallups, cried one civic leader, were a "people who have neither the means, the intelligence, nor the enterprise to improve" the land.<sup>51</sup> This civic leader was Clinton A. Snowden, one-time editor-manager of the *Tacoma Daily Ledger*, secretary of the Chamber of Commerce, and a protégé of an important political figure, S. A. (Sam) Perkins. Tragically for the Puyallup, Snowden was placed in charge of the sale of "surplus" Puyallup lands between 1897 and 1903. Even though his congressionally mandated duty was to protect the interests of the Indian people, land-grab schemes and abuses abounded.<sup>52</sup> The definition of surplus in this case was definitely influenced by the local business community's need to "sell" more land and expand commerce through the transformation of the tide flats into the lucrative deep-water shipping port which the capitalist vision had dictated from the beginning of American colonialization.

This was a kind of corporate ethnocentrism in which the good of the general population was placed over the good of the Indian population, and the good of the corporation was placed above the good of the resident non-Indian workers. The environment was looked upon as a consumable resource which could be turned into profit which equated with material progress. The good of the forest, the streams, and the Puget Sound and its estuaries was not even considered in the corporate equation. This ethnocentrism resulted in economically transformed metaphysical values.

Traditional Indian political, economic, social, and spiritual interdependence was displaced by outsiders. The redistributive economy based upon the interdependence of all things and all people was effectively replaced by the accumulative values which were thought necessary to demonstrate progress. To outsiders, progress meant profits. Fewer standing trees meant profits. Hydroelectric power meant profits. Fish meant immediate profits. All of these were considered only in the short term. Negative environmental impacts on

ecological systems eventually meant profits when the externalities of business-as-usual mentality necessitated local, state, and federally subsidized environmental engineering and clean up by private businesses. Nature turned upon them because of their lack of respect for the interrelated “spirit” of ecological systems. The huge profits decreased as the resource was exhausted and the environment poisoned through industrial production. When the cost of cleanup became too high, international businesses found new and more pristine ecological systems to exploit in the developing world, leaving the enduring questions: Can one “improve” the land by despoiling it? Has the quality of life been improved by material progress? And who reaps the benefits of exploiting nature?

Near the beginning of the twentieth century, political and economic power in Tacoma was closely controlled in the Chamber of Commerce and the Republican Party. Perkins’s influence was heightened through being a private secretary to Ohio Senator Mark Hanna. He came to Tacoma in the boom years, bought the Tacoma Ledger, and built a powerful political machine. “When the Chamber, the Ledger and the Republican party all began to clamor for sale of the Indian lands, it was clear that Perkins had taken an interest.”<sup>53</sup> Elwood Evans, quoted above, joined the new call for land expansion into Indian lands by proclaiming in 1892 that “God’s first great commandment to replenish the earth and subdue it enjoins the appropriation of these lands for American homes.”<sup>54</sup>

Some of the “progress” had definitely been accomplished through ignoring the command to replenish the earth and focusing upon the profits generated through subduing it. The metaphysical aspects in Christianity have been explored by the noted historian Lynn White, in his essay on the historical roots of our ecological crisis. The role of the ministers and educators in inculcating these values in the Indian population is consistent with White’s views. He maintains that “we shall continue to have a worsening ecological crisis until we reject the Christian axiom that nature has no reason for existence save to serve man.”<sup>55</sup> White’s view that Christian metaphysics made possible the development of capitalism is supported by the culture contact situation on the southern Puget Sound. In 1989 Ramona Bennett, a former Puyallup tribal council chair, stated:

The reason white people can go from continent to continent destroying everything is because they believe they’re going to heaven and it doesn’t matter. But we know this is paradise. The spirit world is right here; the ones who aren’t born yet and those who have passed on are with us every day. They teach us things. The young ones depend on us to leave something for them.<sup>56</sup>

The Northwest Council of Churches recently issued an apology to the Indian people of the Northwest for their role in discouraging the continuation of traditional Native religious beliefs and practices.<sup>57</sup>

Matters were made even worse when the twenty-five-year restriction on the sale of private Indian lands ended in 1903. The final blow occurred when

the 1905 Heff decision of the United States Supreme Court opened up the sale of liquor to Indians. According to one authority, there was a striking increase in the amount of drunkenness, crime, and death on the Puyallup Reservation, which “spelled almost absolute ruin and prostration for the Puyallup Indians.”<sup>58</sup> Only six Puyallup families were found to be living on all or part of their original allotments in 1918.<sup>59</sup> By 1974 little more than the tribal cemetery remained as trust property.

Other “heavy capitalists” became involved in industries which severely impacted the natural ecosystems of the southern Puget Sound. Dennis Ryan, “a minor league St. Paul capitalist,” visited Tacoma in 1887 to see the terminus of the Northern Pacific Railroad. Ryan established the Tacoma Milling and Smelting Company and bought fifty acres “hard by a favorite clam bed of the Puyallup Indians.”<sup>60</sup> He built a small smelter in 1888 which Morgan describes as producing “more smoke than profit.” After a buyout and remodeling, the Tacoma smelter became:

a key piece in the high-stakes game being played on Wall Street for control of the metals industry, especially in the rivalry between Harry R. Rogers and the Guggenheim brothers in lead and copper. . . . Rogers began putting rival companies together in one package, ending cut-rate competition and permitting price fixing. After he helped John D. Rockefeller assemble Standard Oil, the papers began calling him the Trust Builder. He created a copper trust that dominated the industry and then in 1896 set out to merge all the major lead producers. That led to a confrontation with the Guggenheim brothers. . . . They refused to enter the trust. Rogers went along without them; the prospectus for his new octopus, the American Smelting and Refining Company, declared it would combine “all the principal smelting works in the United States, except the Guggenheims.” The Guggenheims were up to the challenge. After a series of dazzling maneuvers they wound up with \$45 million in ASARCO stock, enough to give them effective control.<sup>61</sup>

Because of their conflict with Rogers over lead, the Guggenheims became increasingly interested in copper. They eventually purchased the Tacoma Smelter for two reasons. First, its tidewater location was advantageous as a concentration point for ores from around the Pacific rim. Also, they wanted to keep it out of the hands of Rogers or the Rockefellers.

Logging companies sprang up in the early 1850s in Seattle, Steilacoom, and Tacoma to export pilings, ship spars, and lumber to San Francisco and other destinations. Trees were as important to the potential farmers of the Northwest as those who came to build sawmills and profit on lumber.

Settlers arrived short of supplies and cash and faced the need to acquire at least the former while clearing their claims. Many worked for a time in sawmills or logging camps to support their families. With labor a scarce commodity, wages were attractive.<sup>62</sup>

The purchase in 1900 of 900,000 acres of land by Frederick Weyerhaeuser from the Northern Pacific Railroad (originally obtained by the railroad through land grants from the federal government) and subsequent Weyerhaeuser acquisitions dramatized the increasing concentration of Washington timber under the control of larger operators.<sup>63</sup> While Weyerhaeuser and other large corporate interests have long initiated programs for the cultivation of high-yield second and third growth forests, old growth forests have been almost completely consumed.

The fishing business had become profitable on Puget Sound even before logging and lumbering were recognized as industries.<sup>64</sup> Schooners traded with Indians for whale oil and salmon, bringing their goods to San Francisco. The early commercial industry, offering salted fish and fish oil, began in 1853 and lasted about twenty-five years. Most of the fishing during this period was done by Indians, while outsiders did the packing and selling of the product. The first salmon cannery operated on Puget Sound in 1877. Technological butchering of salmon began in 1905 with the invention in Seattle of a completely mechanized machine known as the Iron Chunk which could prepare salmon at a rate of sixty per minute.<sup>65</sup>

### **Contemporary Conflicts and Divergent Philosophies of Technology**

A revitalization movement initiated in the early 1960s and continuing through the 1970s focused on fishing rights, land rights, economic development, and the provision of health care. This tribal-political-development movement, resulting in part from federal self-determination policy, drastically reversed the loss of tribal resources for the Puyallup and other Indian people of the southern Puget Sound.<sup>66</sup> A recent Puyallup land-claims settlement (one of the largest in United States history) with local governments in Pierce County, the State of Washington, the United States of America, and certain private property owners is the latest in these events.<sup>67</sup> The revitalization movement has included the resurgence of native language use and the performance of traditional ceremonies.<sup>68</sup>

The conflicting philosophies of technology with respect to the environment have given rise to an increasing rate of court suits and other legal actions which pit the Indian people against land developers, municipal planners, and polluting industries. Indian people have simply refused to accept the decimation of fish runs, increasing pollution of land, water, and air, and the idea that nature is to be consumed in an entropic fashion for human use. The cognitive and ritual structures of the Indian people are persistent in the face of rapid and often devastating technological and social change.

On the other hand, the tribes have been practical economically. In the face of extremely high unemployment rates they have begun to "hunt and gather" in the ecological "niches" available. They have developed part of their new economies by evoking their powers of self-governance to exempt state taxes in order to gain a distinct market advantage on such activities as liquor and cigarette sales, bingo and gambling operations, and other economic activities such as export/import activities and marina development. These activi-

ties are used to provide tribal members with jobs and revenue for education and social services. As we were told recently by one tribal individual who supported this type of development, "We will worry about the consistency of our economic development and traditional values when our 60% unemployment rate is much lower."

One major element in the struggle has centered on Indian fishing rights as guaranteed in the Medicine Creek and other treaties with the Southern Coast Salish.<sup>69</sup> The Indian people displayed a persistent desire to maintain their reliance on fishing as a primary means of subsistence. After these rights were secured following the 1974 Judge Bolt decision and subsequent court suits and legislation, the focus on fishing turned to water quality, water rights, and the preservation and enhancement of fish runs.<sup>70</sup> The flagship organization in this effort is the Northwest Indian Fisheries Commission noted above. The purpose of this commission is to provide a group effort (both political and scientific) toward furthering tribal fishing treaty rights. The commission had a staff of sixty in 2000, with fifty professionals, including biologists, ecologists, computer modelers, policy analysts, and lawyers.<sup>71</sup> The mission of the organization is to conduct laboratory and field research in fish genetics and fish health. Puget Sound Indian leaders helped negotiate the 1985 United States–Canada Salmon Treaty; met with Third World United Nations delegations and swung key votes to outlaw the "Curtains of Death," high-seas gillnets; sparked the negotiations leading to the timber/fish/wildlife agreement between state, industry, tribes, and environmentalists; and played a key role in the Tribal Rights–Endangered Species Joint Secretarial Order which gives deference to tribal resource management when federal officials administer the Endangered Species Act.<sup>72</sup>

The Puyallup people, for example, have continually questioned: (1) the disappearance of spawning grounds and estuaries for young fish due to the filling of river deltas and other wetlands; (2) the destruction of spawning habitat by the dredging of the Puyallup River; (3) the pollution of Commencement Bay due to the concentration of manufacturing and pulp and paper industries on the filled delta; (4) logging practices that both strip the Puyallup River and its upland riverine system of shady fish habitats and lead to heavy concentrations of silt due to bared land surfaces; and (5) air pollution which further contaminates the wetlands necessary for fish propagation.<sup>73</sup> They have voiced their opposition to a garbage incinerator project under development in the area.<sup>74</sup> Further, they have also criticized farmers for overuse of pesticides:

We got after the farmers for their use of large quantities of pesticides—that stuff washes down into the rivers; it kills the salmon, it poisons the bugs, and the birds that eat the bugs. The hawks were laying eggs that were soft, that wouldn't hatch. The food chains were disrupted.<sup>75</sup>

Water quality and even the gross reduction in the water flow of streams has also been a major point of contention between Southern Coast Salish tribes

and other state and local governments. The Skokomish have battled the relicensing of the Cushman Dam on the North Fork of the Skokomish River based on its impact on native fish runs.<sup>76</sup> The Nisqually objected to a landfill development in their area fearing that contamination would move downstream and decimate salmon runs.<sup>77</sup> The Muckleshoots have paid close attention to Tacoma's continued attempts to use increasing amounts of the Green River water.<sup>78</sup> It is interesting to note that fully one-third of Tacoma's total water consumption is attributed to a single paper mill located on Tacoma's tide-flats. The mill, of course, also contributes to the aroma of Tacoma and water pollution through the discharge of "used" water. Water rights seem to be an area in which the litigation defining tribal and general population rights and responsibilities certainly has a court-decided future.

The Port of Tacoma recently restored and set aside a new wetland area near the Puyallup River upon the insistence of the Puyallup Tribe.<sup>79</sup> This action was connected to the provisions of the settlement agreement of 1990. It was a trade-off for relinquishing tribal rights to deep-water port land and landfills in the old river bed. The tribe established a new fish hatchery in 1988 on a Puyallup River tributary with the potential of releasing approximately 2 million chinook, 2 million chum, and 1.5 million coho salmon per year.<sup>80</sup> Likewise, the Muckleshoot Tribe recently completed a hatchery designed to enhance spring chinook salmon runs.<sup>81</sup> More than 49 million hatchery salmon and steelhead were previously released into area waters in 1987 by the treaty tribes of western Washington.<sup>82</sup>

In the recent land-claims negotiations, the newly formed Environmental Commission of the Puyallup Tribe sought a significant role in determining and enforcing environmental policies on non-Indian property within the boundaries of the Puyallup Reservation.<sup>83</sup> This move was a major stumbling block in the negotiation process because of outsiders' fear of Puyallup resistance to industrial development.

The Nisqually Tribe has likewise continued a major effort to preserve the relatively untouched Nisqually River system and its delta in the face of rapidly mounting developmental pressures. Indeed, they recently cosponsored the water ceremony "A Gathering of Waters" with an environmental group "to raise public awareness about the immense river basin and its interconnections with water systems throughout Puget Sound."<sup>84</sup> The Nisqually Tribe has voiced resistance to the development of a proposed 320-acre landfill based on threats to water quality and salmon on Muck Creek, and other animals including Roosevelt elk, black tail deer, and pileated woodpeckers; one existing landfill on this water system is already a superfund cleanup site.<sup>85</sup> The Muckleshoot Tribe has been concerned with the overuse of Green River and White River water for municipal use and irrigation leaving diminished run-offs during fish-spawning seasons.<sup>86</sup>

The Puyallup Indian people's conflict over ecological issues stems from decades of environmental abuse by outsiders who in their zeal for wealth and "progress" transformed Commencement Bay into one of the top ten most polluted bodies of water in the United States.<sup>87</sup> Among a multitude of other travesties, slag from the ASARCO copper smelter was used to fill a log yard on

Commencement Bay.<sup>88</sup> This slag contains high concentrations of arsenic, lead, and other heavy metals. Several areas in the Port are United States Environmental Protection Agency Super Fund sites. The estimated minimal cost of the necessary cleanup was \$63 million in 1988.<sup>89</sup>

The entrepreneurs who originally brought “progress and civilization” to the “City of Destiny” either did not realize that their activities and those which would emerge later from their efforts would seriously pollute Commencement Bay and the surrounding area, or did not care, choosing the path of maximum short-term profit over multigenerational public good. The costs of cleaning up the entire Puget Sound have been estimated to be \$1,000 for every man, woman, and child living around the sound.<sup>90</sup> Tacoma residents have been warned that diseased Commencement Bay “bottom fish may endanger public health.”<sup>91</sup> The Puyallup Tribe has even aided United States Environmental Protection Agency officials in monitoring toxins in Commencement Bay fish.<sup>92</sup>

Further, the National Oceanic and Atmospheric Administration recently reported that: (1) PCB concentrations in southern Puget Sound harbor seals are among the highest found anywhere in the world; (2) harbor porpoises have virtually disappeared from the southern Puget Sound (high levels of PCBs are suspected); (3) high copper and mercury levels in Puget Sound birds were found; (4) birds from the industrialized areas of Puget Sound were found to have some of the highest levels of PCBs found in birds anywhere; (5) concentrations of contaminants in sediments may be a thousand times higher than they are in water; and (6) Tacoma’s waste-water treatment plant at the mouth of the Puyallup River is the city’s major source of mercury contamination.<sup>93</sup>

One of the most publicized examples of airborne pollution in the Tacoma area was again caused by the American Smelting and Refining Company’s smelter. Local residents have been advised that eating produce from family gardens may be injurious to their health. Parents are warned to keep small children from crawling around on the soil. Until its recent closure, the smelter was the nation’s number one arsenic polluter.<sup>94</sup> Yet as Murray Morgan, the noted northwest historian, stated in 1982:

People in Tacoma think environmentalists are just bothersome elitists. . . . This is a blue-collar town, and environmentalists are seen as a threat to jobs. There has never been any obvious benefit to having things like cleaner air.<sup>95</sup>

## FINDINGS AND DISCUSSION

Let us return to the key questions posed at the beginning of our discussion:

**To what extent did the differential philosophies of technology lead to incongruous technological actions toward the environment and thus highly diverse consequences for impacted ecological niches?**

Once established over generations of interactions between ecosystems, technology, and sociocultural formations, the differential philosophies of tech-

nology definitely resulted in differential impacts on the environment of the Puget Sound basin. The Southern Coast Salish had the technological ability to overexploit the environment; however, their direct subsistence dependence on multiple naturally existing resources and seasonal variations in the same led to the development of ritual constraints which prevented the exhaustion of a single resource. In contrast, the philosophy of technology of the outsiders supported actions which impacted one natural resource at a time as new technologies arrived and were applied. This often led to the exhaustion of natural resources.

**To what extent were the differential consequences on the environment a result of two diverse technological-economic cultures, the philosophies of technology being only reflections of differential techniques and modes of production?**

It is also true that the two philosophies of technology arose as reflections of two diverse technological capacities and economic realities. Learned and shared ideological formations always develop in technological-ecological contexts. The hunting/gathering/fishing subsistence system supported a healthy respect for nature and a fear of resource depletion, and contributed to the rise of a redistributive economy to spread both subsistence plenty and scarcity throughout the population. It also led to a population control system which limited population growth. The Southern Coast Salish subsistence system is reinforced by a ritual complex and a metaphysical view of humans as only one part of the natural system.

The introduced market-industrial-accumulative economy thrived on the increasing exploitation of nature, the creation of increasing demand for material production, and the continual innovation of technological-productive capacity. The ideology of "progress," which developed concomitantly with this material base, supported increasing rates of consumption resulting in the exhaustion of many natural resources. The importation of the developing techniques of the industrial revolution rapidly increased the outsiders' capacity to exploit nature to acquire wealth. The positive feedback between increasing capacity for consumption and production and the ideology of "progress" led to radically different consequences on the environment.

The philosophy of technology of the outsiders was reinforced ideologically by a Christian worldview which functioned as a set of organizing and goal-setting principles authorizing the exploitation and conquest of nature. Indeed, the statements above of Elwood Evans and those of others who sought "progress and civilization" substantiate Lynn White's thesis that Christianity bears a huge burden of guilt for our ecological crisis.<sup>96</sup> It indeed appears that outsiders' "Christian belief in a God who absolutely transcends the world, and in man created in this God's image with the right to absolute domination over nature, has made possible the development of a scientific technology which aims at 'the conquest of nature for the relief of man's estate.'<sup>97</sup>

The documentation of the purposeful attempts by Christians to destroy the traditional religious beliefs of the Indian people of the area (what Lynn

White unfortunately calls pagan animism) is beyond the scope of this article.<sup>98</sup> However, his thesis that this process made it possible for humankind to exploit nature in a mood of indifference to the feelings of natural objects appears to be strongly supported with one exception: the Indian people never totally relinquished their belief in their metaphysical and ethical worldviews toward the environment. Indeed, an ongoing revitalization in the traditional spiritual worldview has increasingly undone the spiritual damage that Christian missionaries, doctors, and government agents caused.<sup>99</sup> The presence of Christian beliefs seems to have been a metaphysical precondition for the development of capitalism and industrial expansion on the southern Puget Sound. This metaphysical position acted as a filter through which many outsiders perceived, through their own cultural filters, the nature of existence.

The metaphysical positions and ethical actions of the outsiders was dominated by another philosophical orientation: the position of Francis Bacon which aims knowledge at power over nature (including human nature) and uses this power over nature for the improvement of the human condition. Access to this power over nature through scientific technology is made possible in this view by reliance on sensory information, rational thinking, and scientific method, as opposed to the understanding of nature through contemplation. Implicit in a strict adherence to this "objective science" orientation is the notion that the scientific process is value free; that knowledge and understanding of a phenomenon for its own sake, and sometimes for the purpose of "objective" control over nature and human nature, are the goals of science. Science above all is to be progressive and cumulative, a subset of the Western ideology of liberalism which Grant has defined as "a set of beliefs which proceeds from the central assumption that man's essence is his freedom and therefore that what chiefly concerns man in this life is to shape the world as we want it."<sup>100</sup>

The validity of this Baconian ideal aside, the uses of science and scientific technology on the southern Puget Sound were clearly not value free. Profit, greed, expansionism, disregard for the environment, and an uncaring attitude toward the needs of the tribal people, all are evidence that science did not approach the culture contact situation in an objective manner. The uses of science were extremely selective based on a specific set of metaphysical positions. As but one example, simply recall the presence of Pickering and Hale on the Wilkes Expedition. Their cultural relativist position was largely ignored in favor of a convenient populist ideology. Populist thought viewed the Indian people as impediments to "progress," "civilization," "manifest destiny," "the amelioration of our species," and "the fulfillment of the Divine Goodness."

Contemporary Southern Coast Salish people explicitly and selectively incorporate modern technological innovations into contemporary life. Computer use is taught in their tribal schools, story poles are raised with cranes rather than by man-power and ropes, and fishermen now use power boats and nylon gillnets. However, there is a persistently stated acknowledgment that these are only tools to be used in the service of traditional values

toward nature and humankind, which are one and inseparable. Science as a means to an end in the context of traditional Southern Coast Salish culture would lead to the redistribution of wealth and harmony with the environment.

**Are the contemporary Southern Coast Salish a separate and distinct enclave in American Society (that is, can we specify the degree to which they are socially and culturally distinct from other Americans)?**

The individual tribes of the Southern Coast Salish are recognized as sovereign governments with their own legal, medical, educational, economic, and, therefore, social systems. Even the urban Puyallup Tribe meets the criteria of an urban enclave as defined by Abrahamson.<sup>101</sup> The tribe is a concentration of Indian residents sharing a distinctive status which defines their identity. It has tribally authorized economic institutions such as smoke shops, bingo halls, a casino, and a marina. It also offers social institutions such as a K–12 school, health facilities, an elders' organization, a court system, and a police department which reinforce their members' distinctive lifestyles. The tribe's links between its lifestyles and the surrounding geographic areas are defined legally by a federally recognized reservation boundary.

**Do contemporary "other" Americans share to any significant degree a philosophy of technology which may be in contrast to the contemporary Southern Coast Salish—that is, what attitudes and values define the majority population?**

Contemporary other Americans in the Puget Sound basin are a highly heterogeneous population. Development interests contrast with those who support the preservation of natural habitats. Other groups (for example, the urban poor) are more ambivalent to the development/preservation dichotomy due to their survival needs in the rapidly growing urban areas of the region. However, it is fair to propose that development interests still dominate the land-use plans of the government entities within the region. Major economic entities such as Boeing, Microsoft, Weyerhaeuser, and a constellation of smaller corporations wield significant power in influencing land use and plant/animal preservation laws. Timber interests have played a particularly crucial role in the negotiation of natural resource policy. Local interests in real-estate development and those focused on the perpetuation of unconstrained private property rights also effect land-use and resource decisions.

It is true, however, that the contemporary power of corporate entities to manipulate land-use patterns are mediated by competing interests reinforced by federal, state, county, and city regulatory agencies (for example, the Environmental Protection Agency, the State Department of Ecology, the Marine Fisheries Commission, etc.) Indeed, some sectors of the outside system express environmental values which converge with traditional tribal values—environmentalists, sports fishing and hunting groups, commercial fishery, recreational interests (hikers, campers, boaters, rock climbers, and the multimillion dollar tourist industry), and citizens conscious of the negative health consequences of

air, land, and water pollution. Various coalitions arise among these groups in opposition to specific proposals by development interests.

**From a systems point of view how much diversity in values and attitudes exists within the contemporary Southern Coast Salish population and how much do these different components interact?**

The contemporary Southern Coast Salish population, like the “other” Americans, is highly heterogeneous. Some “traditional” factions are marginal to the outsiders’ economic system. They subsist on fishing, hunting, gathering, and participation in traditional ceremonies and activities. These individuals usually see all forms of economic development as problematic. Others buy into economic development and concomitant educational means of achieving upward mobility, yet visualize this development as coinciding with traditional activities and values: fish and shellfish farming, open-space land-use (tourist facilities for camping, hiking, and boating), and forest use (selective logging). Some in this faction see bingo and casino gambling development as an extension of traditional gambling activities such as bone games and horse racing. Another faction cares less about the relationship between traditional activities/values and economic development. They see tribally controlled economic development as the key to maintaining tribal independence and an increasingly improved quality of life. Even these individuals, however, see tribal enterprise as a means to a culturally defined end: the continuation of autonomous tribal culture in contemporary form. These factions within the Southern Coast Salish interact on a continual basis through local, regional, state, tribal, and federal political initiatives and institutions.

**Are there portions of the contemporary tribal community that have sold out to outsider views?**

“Selling out” must be seen from many different perspectives. To some outsiders (perhaps radical environmentalists and some ethnographers) selling out would be any tribal activity that is not traditional; that is, an activity that was observed at the time of first contact with Europeans. Only a few extreme traditionally oriented members of the Southern Coast Salish community would share this outsider perception. To other outsiders, selling out might mean the buying into capitalism through the development of casinos and destination resorts. Some traditionally oriented members of the Southern Coast Salish population share this perception. Others, both outsiders and members of the Indian population, see tribally controlled economic activity as an appropriate contemporary hunting/fishing/gathering strategy. In order to survive, the tribal entities may utilize the available resources including the availability of wealth. This is seen as acceptable if the outcome of the process is shaped by such ongoing cultural values as wealth redistribution, the primacy of community over individual interest (collectivism), and living in harmony with nature. Southern Coast Salish tribal groups have rarely if ever actuated economic development strategies which explicitly or purposely defile nature; for example, the development of garbage or nuclear waste dump sites,

or the construction of power-generating facilities based on nuclear fuel, coal, or the burning of municipal garbage. If such projects are proposed by tribal planners or council members, they are usually dropped in the face of the criticisms of environmentalists and traditionally oriented tribal members.<sup>102</sup> Similarly, when tribal fishermen were caught endangering the geoduck-clam population by illegally dumping low-grade geoducks, Southern Coast Salish tribes and the Northwest Indian Fisheries Commission worked with Washington regulatory agencies to correct shell-fishing practices.<sup>103</sup>

**Are there ideological and structural outsider variables that support the traditional tribal worldview?**

The pro-environmental outsider factions described above support in varying degrees (according to the specifics of each tribal initiative) the traditional tribal worldview. Tribes sometimes receive support from sport and commercial fisheries groups when protesting habitat loss. Similarly, ecological organizations will sometimes team with tribal entities to protest the destruction of forest ecosystems or river estuaries and wetlands. Coalitions of tribal and outsider groups do occur when shared interests, such as habitat, animal, and plant preservation, coincide.<sup>104</sup> Once in a while, all local factions support the tribal worldview. For example, the Tacoma city council, the Federal Way city council, the Tacoma Port commissioners, and the Puyallup tribal council joined together to oppose a plan by the federal Energy Department to ship spent nuclear fuel from foreign research reactors through the Port of Tacoma to storage sites in the United States.<sup>105</sup>

Coalitions of tribal and outsider groups can also form around shared economic interests. For example, outsiders who stand to profit by the tourist dollars attracted by tribal museums or gambling operations often support tribal economic development. Outsider businesses that benefit from tourist dollars dependent on a clean environmental image for the local area also support tribal ecological perspectives.<sup>106</sup>

**If the Southern Coast Salish are only fractionally distinct and the contemporary outsiders display a diverse set of values and attitudes toward the environment, does the contemporary contrast of Southern Coast Salish and outsiders' metaphysics and ethics truly exist?**

If tribal and outsider values toward nature are conceived as historically distinct with some overlapping contemporary values, the picture becomes clear. While a subset of outsider values coincides with those of the traditional Southern Coast Salish, the overlaps between the two sets are minimal and often temporary. For example, some conservationists view open space as wilderness free of human use, while tribal people see the same space as an environment for subsistence and ceremonial use.<sup>107</sup> Further, the metaphysical bases for the temporarily shared values are widely divergent. Sports fishery groups may fight the destruction of habitat to support a recreational tourism industry, while the Southern Coast Salish support the same to maintain treaty rights for guaranteed subsistence fishing.

**To what extent are Southern Coast Salish traditional metaphysical and ethical beliefs mere rhetoric in the legal quest for rights to land and resources?**

All ideological systems exist in the context of a society and its material base. To that extent, Southern Coast Salish traditional metaphysics and ethical beliefs are rhetorical mechanisms for maintaining and reacquiring resources. However, these metaphysical and ethical systems are also the heart-felt traditions of a culture that has survived for thousands of years in the habitat of the Puget Sound basin. They still serve as the mechanisms which guide, not shape deterministically, the interrelationships between the Southern Coast Salish people and their traditional land.

**If lingering traditional attitudes and values exist among a significant segment of the population, do they impact in any significant way tribal development projects and settlement claims within federally defined trust reservations?**

The direction of tribal development is always guided by a compromise between the various factions of the individual tribe, between those favoring traditional ways and those seeing the development of tribally controlled capital as a means to financial independence and cultural autonomy. The traditional factions, often composed of many respected and influential elders, exert a profound influence on tribal development projects and the investment resulting from settlement claims.

For example, in spite of the fact that seasonal subsistence provides a small fraction of needed resources for tribal members of the southern Puget Sound, it is a major cultural priority. Despite its relative economic unimportance at present, the Southern Coast Salish wish to increase their subsistence-based economy in the face of past governmental attempts to alter their subsistence base, and the presence of a multitude of other occupational choices provided by the introduced urban-industrial milieu. In addition to the contemporary cultural importance of subsistence activities, they also represent significant property rights and the potential for increased economic return in the future through tribally supported natural-resource restoration.

Traditional cultural values toward fishing and other animal and plant-based subsistence activities persist in the face of new and introduced forms of technique. The philosophy of technology of the Southern Coast Salish with respect to the environment has surely been modified somewhat by the presence of a cash economy and a highly technological milieu. However, its basic form has persisted in spite of the nearly two-hundred years of post-contact experience. And, its function continues as a set of organizing and goal-setting principles which prohibit the exploitation and conquest of nature.

## CONCLUSIONS

We believe the lack of accommodation of Southern Coast Salish people to outside lifestyles is by choice. Many Indian people simply prefer to live in a style consistent with their traditional metaphysical and ethical beliefs. Indeed, most view the philosophy of technology of outsiders and the consequent

actions of corporate and municipal interests with a high level of suspicion. The discrepancy between Indian and non-Indian philosophies of technology becomes exceedingly clear when one spends some time in Indian households in the middle of a city that has surrounded their culture. In some ways it would be easier for them to abandon their metaphysical and ethical positions and simply assimilate the dominant worldview of outsiders, and in some cases this does happen, at least for a time in the life cycle of an individual, particularly the teenage years. Nevertheless, the traditional worldview draws individuals back to a fundamental opposition to the exploitation-of-nature-as-usual mentality of the general population. It is important in the formation of the cultural identity of the group and the values of individuals. The Puyallup tribal council begins every tribal resolution with a statement that reifies and affirms the fact that “the Puyallup Tribe of Indians has existed since creation as the aboriginal people, who are the owners and guardians of their land and waters.”

We do not mean to say that all Indian people prefer fishing as a subsistence means, or that Indian people never work in the outside labor market. Rather, given a choice, many tend to subsist in tribal enterprises that are more consistent with traditional philosophical positions. Further, most tribal people support the expansion of the set of choices for existence within tribal frameworks and usually attempt to find sustenance within this expanding web. We believe this is solid evidence for the persistence of their traditional worldview including their philosophy of technology with respect to the environment. It is also solid evidence that culturally constructed philosophies of technology can remain powerful determinants of individual and group action toward the environment.

The traditional philosophy of technology functions both as a set of principles around which daily existence is organized, within the limits of necessity (as culturally defined), and a set of goals toward which the general flow of technological interactions with the environment are aimed. Even when choices are made counter to this set of principles, for example, when the Puyallup Tribe temporarily sought to produce income by attracting a garbage incinerator on trust land, the eventual outcome tends to gravitate toward a position consistent with their culturally constituted philosophy of technology.<sup>108</sup> In the incinerator case, as noted above, the tribe eventually reversed its position on this technology to an opposite perspective consistent with traditional metaphysical and ethical positions with regard to the environment.<sup>109</sup>

To paraphrase Gary Nabhan, what the pioneering environmentalist John Muir called wilderness, the Southern Coast Salish call home.<sup>110</sup> Ramona Bennett, the former Puyallup tribal council chair mentioned above, has stated that if anyone should be protecting resources on the Puyallup River, it should be the Puyallup Indians. They have lived there for thousands of years and the fish always came back.<sup>111</sup>

Perhaps an existentialist perspective on this case study is important. Given the fact that many outsiders are becoming much more environmentally conscious in the face of rapid regional population growth and recent information on past abuses to the environment, perhaps one could argue that both cul-

tures are simply learning similar lessons, although at different times, about the ecological nature of existence, the ultimate technoenvironmental constraint. It may be that many in our society have missed a critical fact, a fact these Indian people knew very well, and we are just beginning to learn: we can not predict with any certainty the entire set of consequences of technological action against nature. Thus it is best, in order to support human survival and quality of life, to be conservative with respect to introducing technological action against the ecosystems of which we are a part.

Mitcham and Mackey have suggested that one way to create a metaphysical position which allows for the restriction of modern technology might be to utilize "Heideggerian anthropology":

Could the Heideggerian anthropology be interpreted so that disclosing would be the one human activity to be perfected, with all others being subordinated to this?<sup>112</sup>

Let us define Heideggerian anthropology as an anthropological approach that is informed by the philosopher Martin Heidegger's existential metaphysics.<sup>113</sup> This approach considers the disclosing of modern technology of the nature of existence to be only a part of a much larger nondominating human capacity for disclosing through activities undertaken by those standing further outside the influence of technology, such as the artisan, visual artist, musician, and poet. While this seems like a reasonable path to pursue, Mitcham and Mackey note that this might be a problem since in his theory disclosing is equally present in all sorts of particular activities. Further, we must still face the issue of the role of freedom in technological choice. If we know the ecological path through disclosing, do we have the freedom to choose it in a modern technological society?

Nevertheless, ecological attitudes toward the environment were disclosed to the Southern Coast Salish in their long tenure on their land. Outsiders are just beginning to recognize the impact of their technological actions being blinded by a set of metaphysical precepts that breed greed in the face of a plethora of relatively "unused" natural resources. Because of the "feedback" from nature by way of disappearing animal and plant species, and toxins in air, food, and water, outsiders are realizing what those who preceded us already discovered in their close association and direct dependency on nature: we must be cautious in our innovative technological actions. When the outcome is in doubt, it is best to err on the conservative side of intervention into natural systems.<sup>114</sup>

Many in our contemporary culture still may believe that we have distanced ourselves from dependence on nature. But the overwhelming evidence from this case study begs for a different conclusion. Our urban-industrial society is ultimately subject to ecological constraints. Scientists, engineers, entrepreneurs, politicians, and planners have simply not been paying attention, or do not care, and now they must learn the lesson the Southern Coast Salish people long ago integrated into their philosophy of technology. Reflecting on the Southern Coast Salish experience generally, Vi Hilbert recently stated:

The land has been impacted in many, many ways since the Changers have come here. The people have used and abused our land. They have polluted with pollutants that maybe they didn't realize how greatly this could impact all of life by using poisons to spray on all the land, on the greenery that is part of the world that we live in. They have used poisons in the work to earn money and have made that, in fact, their priority to get a product out regardless of how much damage it did. Maybe in the beginning they didn't realize that there was a lot of damage being done. Pollutants. Pollutants. Everybody has to get there fast so they can't use the old-fashioned methods. . . . I don't know if we have a way to reverse all of this. I think that people are becoming aware of things they have done in the last 100 years that have not been beneficial to the land. I think, "Better late than never that they are taking a look at ways how not to continue polluting the water and the air." So now that people are aware that they have been doing this, they can stop doing as much as they have been doing. Maybe our land can be a little healthier because of it.<sup>115</sup>

In the final analysis, we cannot generalize from the Southern Coast Salish case study to other American Indian and Alaska Native contexts. While we can expect to find similar examples, each culture and historical context must be viewed anew. However, it is clear that the traditional philosophy of technology toward nature of the Southern Coast Salish continues to influence their interactions with and management of their land. Further, this tradition also guides the tribes' attempts to influence comparable management practices by non-tribal resource management agencies that have an affect on tribal treaty resources. With regard to the 1974 Judge Bolt decision noted above, Billy Frank Jr., a Nisqually Indian who is chairman of the Northwest Indian Fisheries Commission, has recently noted:

That judge listened to all of us. He let us tell our stories, right there in federal court. He made a decision, he interpreted the treaty, and he gave us a tool to help save the salmon. . . . He gave us the opportunity to make our own regulations, our own management systems. We have to think about what he did for us; that's a responsibility we have. We can't ever forget that responsibility.<sup>116</sup>

The knowledge of their environment that was disclosed to them over thousands of years of subsistence still influences their attitudes and actions toward nature. The migratory "birds" are learning similar lessons.

## NOTES

1. An earlier version of this paper was presented at the Twelfth Biennial International Conference of the Society for Philosophy and Technology, Center for Philosophy, Technology and Society, University of Aberdeen, Scotland, July 9–11, 2001. The title of the conference was Nature and Technology.

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