

UCLA

American Indian Culture and Research Journal

Title

Alutiiq Culture Before and After the Exxon Valdez Oil Spill

Permalink

<https://escholarship.org/uc/item/1jw3k059>

Journal

American Indian Culture and Research Journal , 19(4)

ISSN

0161-6463

Author

Wooley, Christopher B.

Publication Date

1995-09-01

DOI

10.17953

Copyright Information

This work is made available under the terms of a Creative Commons Attribution-NonCommercial License, available at <https://creativecommons.org/licenses/by-nc/4.0/>

Peer reviewed

Alutiiq Culture Before and After the *Exxon Valdez* Oil Spill

CHRISTOPHER B. WOOLEY

INTRODUCTION

Glacier ice, earthquakes, tidal waves, avalanches, volcanic eruptions, and massive storms formed the Gulf of Alaska coast, the traditional homeland of the Alutiiq people. Native people have prospered in this region for more than seven thousand years, in spite of natural and social disasters. On 24 March 1989, the *Exxon Valdez* accidentally released eleven million gallons of crude oil into Prince William Sound, Alaska. After the spill, images of dying sea birds and dead sea otters filled the media, fueling public anger against Exxon Shipping Company (the tanker owner) and Alyeska Pipeline Service Company (the oil company consortium with initial spill response equipment and mandate). Emotions escalated as the spill was labeled a national disaster, as dire predictions were made about the oil's potential impact on the marine environment, and as residents and visitors viewed oiled shorelines. The acute oiling conditions that Alaskans, including myself, encountered in 1989 raised serious questions about the health of local resources, and many people expected the oil to cause long-term ecological disruption. Alaska is a unique land, and, on the surface, the damage seemed unparalleled.

Oiled Alaska beaches reacted much like beaches hit by other large spills.¹ Initial shoreline impacts were acute, but the long-term environmental impact has not been catastrophic. About

Christopher B. Wooley is an anthropological consultant specializing in coastal archaeology and oral history research.

thirteen hundred of the more than nine thousand miles of shoreline in the Prince William Sound /Western Gulf of Alaska region were oiled to some degree, with conditions ranging from large quantities of relatively fresh oil on some Prince William Sound shorelines to weathered "tarballs" hundreds of miles away on Kodiak Island and Alaska Peninsula beaches.

Prince William Sound and the Outer Kenai Peninsula are the ancestral homeland of the Chugach Alutiiq people; the Alaska Peninsula and Kodiak Island are home to the Koniag Alutiiq people. *Alutiiq* is the term that native people use to refer to their own language, culture, and historic territory (formerly labeled *Pacific Eskimo* by anthropologists).² The fifteen modern Alutiiq communities in the spill area are Chenega Bay, Tatitlek, English Bay, Port Graham, Ouzinkie, Larsen Bay, Karluk, Old Harbor, Akhiok, Port Lions, Chignik Bay, Chignik Lake, Chignik Lagoon, Ivanof Bay, and Perryville.

Many sea birds, waterfowl, and sea otters that came into direct contact with oil died as the slick spread; shellfish and other invertebrates were contaminated as the oil washed up on beaches. However, most fish and wildlife customarily harvested by Alutiiq villagers (salmon, halibut, seals, sea lions, deer) were minimally affected by the oil spill. The term *subsistence* in Alaska is used to describe hunting and gathering wild resources for food, fuel, and traditional crafts. *Subsistence* is also used in a more encompassing sense by native people themselves to describe their lifestyle, which includes, in varying degrees, harvesting and communal sharing of wild resources.

THE EXXON VALDEZ OIL SPILL AND ALUTIIQ SUBSISTENCE

It was reported that many Alaska residents, especially Alutiiq (Pacific Eskimo) villagers in the spill area, feared the oil would cause serious and lasting harm to the region's fish and wildlife.³ The rich fish and timber resources of the northern coast of the Gulf of Alaska are harvested commercially by natives and nonnatives, and both public and private lands are the focus of subsistence hunting and fishing, sport hunting and fishing, personal recreation, and a growing tourism industry. Among the user groups, Alutiiq villagers were particularly fearful that oil would contaminate fish and game customarily harvested for personal consumption and distribution among family and friends.

During the summer of 1989 and through 1991, the safety of subsistence food was addressed by the Oil Spill Health Task Force.⁴ Fish, shellfish, deer, ducks, and seals from the spill area were harvested and tested for the presence of hydrocarbon contamination. With the exception of some obviously oiled shellfish, the studies consistently found only normal background levels of hydrocarbons in the tested food. The food quality of salmon, halibut, deer, seals, and terrestrial plants was not affected by the oil. In 1989 and 1990, normal subsistence activities reportedly were reduced because people did not feel comfortable harvesting food from the spill area:

[I]n the first year after the spill, subsistence harvest quantities, the range of subsistence foods used, and participation in the use of subsistence foods declined sharply in the villages of Prince William Sound, Lower Cook Inlet, and the Kodiak Island Borough. During the second year, subsistence harvests were up for all but Chenega Bay and Tatitlek, but generally remained below pre-spill averages. Concerns about possible oil contamination of subsistence foods were a primary cause of reduced subsistence uses during the first post-spill year, and continued to affect the subsistence uses of many families . . . during the second post-spill year as well.⁵

The task force reported to villagers that “most resources taken from the oil spill area are safe to eat, but people should avoid harvesting at contaminated areas and carefully inspect their harvests for signs of oil.” With the recovery of the beaches well underway in the summer of 1991, the task force reiterated,

If you stay informed about these studies, and talk with people, to find out where the oil still is, you don’t need to worry about using subsistence foods, with the exception of clams and other shellfish from presently oiled areas.⁶

Although harvest statistics from 1992 and 1993 surveys indicated that almost all subsistence harvests in the Alutiiq region had returned to prespill levels, some people reportedly had continuing anxiety regarding resource contamination:

There has been a shift in the explanations of the spill’s impacts on resource uses from fear of oil contamination to reduced resource populations. However, contamination con-

cerns persist. The economic and cultural necessities of using subsistence foods have compelled Alaska Natives to resume subsistence harvests even at increased costs of time, money, and health concerns. Their observations of diseased animals created doubts about the health of the environment.⁷

In addition to the Alaska Department of Fish and Game (ADF&G) subsistence harvest studies, other social impact surveys documented and analyzed Alaskans' responses to questions about the oil spill.⁸ These studies report that native villagers responded differently from nonnative area residents to questions about the economic and social impacts of the oil spill and the subsequent cleanup. Analyzing socioeconomic impacts from "systems-based" statistical perspectives, these studies concluded that the spill damaged the Alutiiq system of harvesting and distributing the wild resources, because subsistence activities were curtailed in 1989 and 1990. Attitudes about subsistence were also said to have been affected. Differences in responses by residents of remote Alutiiq villages, residents in larger (hub) villages, and city residents were documented and analyzed.⁹ Researchers described the "social indicators" of oil spill impacts by pointing out that Alaska Native people obtain, use, and share subsistence harvesting tools and resources—and the harvest—differently from nonnatives; and that they reacted to the spill and cleanup differently from nonnatives. These data were later cited as proof of cultural damage by Alutiiq plaintiffs in a class action lawsuit against Exxon.

The surveys and analyses did not collect—nor did they consider—participant observations of Alutiiq culture such as kinship, language, social organization, politics, and religion. There was no attempt to put spill-related impacts in the wider context of ongoing cultural and environmental change. The surveys and statistical analyses may measure accurately short-term socioeconomic impacts in discrete categories such as changes in income, composition of subsistence harvests, adjustments to communal sharing patterns, and friction between those who were involved in the cleanup and those who were not. However, such measurements are divorced from a broader, qualitative assessment of Alutiiq culture and regional environmental change. One needs to define culture, examine how cultures change, and put the spill in a historical context in order to assess the impact of the oil spill on Alutiiq culture.

WHAT IS CULTURE AND HOW DOES IT CHANGE?

To discuss culture change, one must first make sure that everybody agrees on what culture is. Here, culture is seen as a tool kit and a set of meanings—a set of ideas on the one hand, and artifacts and behavior patterns on the other—by which human beings adapt to the environment, including the social environment. Tools make activities easier and allow people to do things they could not otherwise do; meanings allow people to make sense of their environment, their organizations, and each other.

Culture must always be in two places at once: in people's heads as meaning (ideas, values, and rules that the old French sociologists called "representations") and in the environment (as tools, products, recognized and acknowledged ways of behaving). Anthropologists cannot know "what is in people's heads" any better than anyone else, except in terms of what people say and what they do. Anthropologists attempt to assess all conditions, including self-interest and cultural pressure, when evaluating people's statements.

Culture change can be divided into two sorts: (1) change by increment, which is relatively slow, long-term growth or "development" that occurs when people fine-tune their tools, behavior, and meanings; and (2) change by disaster, which may result from physical disaster or social disaster.

Physical Disaster

Events in the natural environment (short-term such as floods, earthquakes, volcanic eruptions, and hurricanes; or long-term such as desertification) may disrupt the culture in the external world but, in themselves, cannot affect the culture in people's heads. So-called technological disasters occur when elements are either removed from or introduced into the environment so that the way people live has to be adjusted, at least temporarily. Seldom, if ever, do they create cultural dissonance.

Social Disaster

A serious alteration of the social environment (most commonly a conquest or an epidemic) leads to a much higher level of culture change than a natural disaster, because, almost without exception, a social disaster affects both culture in the external world and

culture in people's heads. Social disasters not only destroy but also introduce new mechanisms and new ideas that can turn traditional meanings into nonsense. When people experience dissonance between the ideas and values they hold in their heads and what they find in the environment, the contradiction can lead to severe disruption.

In times of social disaster, underlying cultural premises do not change as they do in times of incremental change. People try to adapt to new situations with the ideas and especially the underlying premises they bring with them from their old situation. Hence, ideas and actions and organizations may spring back up even after they have been repressed or have lain dormant for decades. Alutiiq people have been undergoing a series of social disasters for at least ten generations, since the arrival of Russians in 1741, European diseases, and alcohol. This experience has led to what Alutiiq anthropologist Gordon Pullar calls "generations of baggage."¹⁰

When one disaster after another turns the underlying cultural premises into errant nonsense, people have no place to turn. Alutiiq people and other Alaska Natives have suffered cultural dissonance since 1741. The sale of Alaska to the United States, a succession of fur, gold, fish, and oil booms, Alaska statehood, Great Society programs in the 1960s, the Alaska Native Claims Settlement Act (ANCSA) all brought profound changes. Each time people adjusted, but new changes occurred. As new dissonances arose, still more adjustments were required. The problem becomes, How does one determine how the events meshed and how the impacts were compounded?

"C-DAYS" AND BASELINES

Because all cultures and ecosystems are changing all the time, no natural beginning point or ending point is meaningful except in terms of a specific viewpoint on a specific problem. However, realization of such changes may come in sudden spurts. As small incremental changes accumulate, each one scarcely noticeable, a key event is likely to become a point-of-before-and-after; it reflects the fact that people perceive—usually suddenly—that things are different. Such a date in people's minds can be called a Change Day or C-day.¹¹

All change in the ongoing incremental processes thereupon becomes associated with, and is often said to be caused by, the

event that marks C-day. A vivid example is that, just after World War II, the British told one another, "Things are different since the war." Although the war was not primarily responsible for many of the changes that had been taking place, it became C-day. C-day is the cultural recognition of change, but it falsifies the processes that have led to the change. It assigns a simplistic cause to processes that are, in fact, highly complex.

When anthropologists create what might be called "C-days," they call them "baselines." There was, for decades, the idea that, to study culture change, you had to determine what it changed from. Early twentieth-century anthropologists investigating culture change (Ralph Linton and Lloyd Warner, for example) depicted native cultures as "indigenous" and static entities. Cultures remained "primitive" until outsiders brought change. A similarly static perspective is implicit in socioeconomic damage assessment studies that rely on comparative statistical analyses of survey results to supposedly quantify culture change. Such views and methods overlook the fact that creating a baseline turns culture static. No culture can ever be static; a culture is made up of interconnected processes. Any statement of a culture that turns it static is misleading. It ignores processes. The same is true for environmental baselines. Any baseline focused on a given time (including those drawn for purposes of social impact reports) arrests the processes and turns them static. Cultural and biological processes pay no attention to baselines drawn by anthropologists or biologists. As we shall see, disasters can be turned into C-days.

NATURAL DISASTERS IN ALUTIIQ HISTORY

The 1912 Katmai Eruption

Physical disasters have played an important role in Alutiiq culture change by becoming C-days in the traditions of the people. On 6 June 1912, Mount Katmai on the Alaska Peninsula blew up after having been quiet for many centuries. A series of violent explosions blew six cubic miles of debris weighing more than thirty-three billion tons into the air. The ash drifted toward the east and southeast, covering an area of more than thirty thousand square miles. The city of Kodiak, one hundred miles away, bore the brunt of the clouds of dust and ash and plunged into total darkness—much deeper than night—for sixty hours. Several feet of volcanic ash covered some areas of the city and the surrounding

islands. Three native villages on the Alaska Peninsula were destroyed.¹²

The eruption affected the Alaska Peninsula Alutiiq people most severely; many of the survivors were eventually relocated to a new village, Perryville. Partnow explains that this event altered the survivors' concept of history and culture.¹³ Life before the eruption is now described in idyllic terms. According to Partnow, the Alutiiq survivors of the eruption have essentially invented themselves anew since they founded Perryville. The Alaska Peninsula Alutiiq deal with the Katmai event in their oral traditions as the pivot point in their heritage—the time before which life was unaffected by the outside world, although, in reality, significant cultural change from Euro-American contact had been occurring on the Alaska Peninsula at least since the late 1700s. As we shall see, such pivot points (C-days) can mark a “point-of-before-and-after” in the ongoing process of culture change.

The Great Alaskan Earthquake and Tsunami

On 27 March 1964, an earthquake measuring 9.2 on the Richter scale—“one of the greatest recorded earthquakes of all time”—destroyed much of downtown Anchorage. The quake and subsequent tsunamis devastated Valdez, Whittier, Seward, Kodiak, and Homer and seriously affected the towns of Cordova and Seldovia. Cordova was already suffering from a prior disaster: A fire had wiped out three-quarters of its business district.

Fish and game habitats changed drastically. The intertidal zone of Prince William Sound was altered; shellfish abundance decreased markedly and salmon spawning streams changed course and elevation. In some areas, the land was uplifted as much as fifty feet, while other areas sank. Tsunamis caused untold damage to freshwater lakes near the shore. Destruction of storage tank farms released oil and gasoline, covering Cook Inlet with a thin coat of fuel for several days. Land around Cordova uplifted six feet, which made the tides lower and the harbor shallower and put the canneries far above the water line. Thirty-one people died in Valdez; the town had to be completely relocated four miles from its original site. Its entire waterfront burned for two weeks after the oil tank farm caught fire. Descriptions of “miles of floating oil and wreckage” appeared at the time.

The quake devastated three Alaska Native villages, five others suffered extensive damage, and many outlying seasonal camp-

sites were destroyed. The village of Chenega in Prince William Sound was totally destroyed. Nearly one-third of its residents—twenty-three of seventy-six—were lost. The survivors assembled in Cordova, where they were cared for in the Cordova Community Baptist Church. Most survivors chose not to try to rebuild their village but rather to live in Tatitlek. Almost twenty years later, in 1983, some of them (together with other people) built the new village of Chenega Bay on Evans Island, south of the site that had been destroyed.

On Kodiak Island, the people of Old Harbor, Kaguyak, Afognak, and Ouzinkie suffered greatly. These villagers were evacuated to Anchorage, where they went to shelters operated by the Red Cross. The survivors from Afognak village created the new village of Port Lions, with the assistance of the Anchorage Lions Club.¹⁴

Although both the Katmai eruption and the earthquake were physical disasters that caused great suffering, impacts were primarily local and short term.¹⁵ However, they did not alter the Alutiiq culture very much. Such events have occurred in the region for many hundreds of years. New challenges to the people were obvious, and physical and social adjustments had to be made, but nobody had to change his or her mind about the nature of human society, human endeavor, or methods of doing things. These physical disasters, however, became C-days in the minds of the survivors—artificial baselines of cultural change.

ALUTIIQ SOCIAL DISASTERS

Social disasters affect culture primarily by rendering the idea aspects of a culture meaningless. People must build a new culture from whatever cultural pieces are available. Yet the old cannot be reestablished, because former tools and ideas and behavior have been made inadequate. In colonial situations, the reconstructions themselves may be shattered (and in Alaska they were) when one colonial power is supplanted by another with different cultural ways (as when the Americans bought Alaska) or with changes in policy on the part of the colonial power. New reconstructions thus have to begin every time such a secondary culture-shattering occurs. The gravest loss in any colonial situation is that people lose both the right to and the responsibility for running their own lives.

Colonialism

The ethnographic descriptions of Alutiiq people unintentionally give time depth to cultural patterns that were actually adaptations to postcontact circumstances, not ancient traditions. Mid-nineteenth-century observers describing Alutiiq life assumed that the native elders of the time were the last members of a vanishing culture.¹⁶ Anthropologists assumed that the seasonal movements, ceremonials, and other native customs of the mid- to late 1800s generally reflected the culture as it existed prior to Euro-American contact. In reality, the ethnographic descriptions from the mid- to late 1800s depicted a way of life that had already adapted to changes engendered by the sea otter trade, the Russian Orthodox Church, and the Russian America Company.¹⁷

Archaeological research in coastal British Columbia, southeast Alaska, Prince William Sound, the Kodiak Archipelago, and southwest Alaska indicates that extensive cultural change occurred on the north Pacific coast in the late 1700s and early 1800s during initial foreign contact.¹⁸ Archaeological data indicate that the density of native population at the time of contact was grossly underestimated by explorers and colonists—often by as much as 50 percent—and that the magnitude of cultural change engendered by initial foreign contact was also greatly understated.¹⁹

The first fifty to seventy-five years of contact, in areas where it was intense, were characterized by population loss caused by introduced diseases and increased intergroup conflict. Among the Aleut and Alutiiq, Russian massacres of native people also reduced native populations significantly. The survivors of formerly independent local groups adapted to population loss by amalgamating into “tribes.” In the Alutiiq region, Russian colonization forced a foreign socioeconomic system on the new groups of survivors.

Population loss and the new social system had major implications for subsistence.²⁰ Just prior to contact, local group resource harvest areas were limited by human population density, and one group’s harvest area often bordered on another’s. With extensive trade systems and high coastal population density, some groups could specialize in harvesting and trading a single resource such as whales or salmon. With the loss of at least one-half of the population, with population remnants amalgamating at new villages, and with the scheduling of duties by Russian administrators, seasonal movements and target species necessarily changed.

Colonialism greatly altered Alutiiq seasonal settlement patterns, residence, marriage, religion, and diet, transforming Alutiiq culture, along with every other coastal Alaska Native culture that experienced episodes of intense foreign contact.

Alutiiq culture has continued this transformation into the present, as Davis notes:

[T]here were several different Native groups living in the Chugach Regional area before written history, and since then other peoples have come. Further, in addition to the descendants of the Pacific Aleut, Island Aleut, Tlingits, Yupik, Inupiaq and Interior Indians, there were also Native persons whose ancestry include people who came to work at the Russian posts, in the canneries, mines, and fisheries, and who chose to marry and stay in the area. Thus, the contemporary Chugach Region ethnic and genetic mix is both complex and healthy. This area which was traditionally "mixed" as a crossroads of Native people, is even further mixed today.²¹

Epidemic disease

Epidemic disease may also devastate a culture. Demographically, the society may be precipitously reduced in numbers; economically, people's tasks and the bases of their security may be totally altered. When an epidemic passes, whoever survives must assemble some sort of culture with whatever cultural elements have persisted.

As far as we know, epidemic diseases were nonexistent among Alaskans before they were introduced by Europeans.²² Epidemics of introduced diseases killed large portions of the population, destroying not just people but also the survivors' faith in their traditional healers, calling their worldview into question.

In addition to unrecorded epidemics that may have spread ahead of direct contact, the most significant recorded epidemic was the smallpox epidemic of 1835–40, which killed one-third of all Native Alaskans. In the Alutiiq region, it destroyed families, devastated communities, undermined traditional leadership and belief systems, and changed subsistence strategies. In Kodiak after the epidemic, the Russians consolidated sixty-five settlements into seven. Key storytellers and the rich oral traditions they safeguarded were lost. "The Alaska Natives were never the same after this catastrophe."²³ Alaskans also suffered from epidemics of

foreign diseases that worked less rapidly—tuberculosis and sexually transmitted diseases (particularly syphilis and gonorrhea). Both were absent before European contact. Tobacco and alcohol were also among the slow-working epidemics.

Population loss made obsolete the Alutiiq hunting and gathering strategies that had developed in concert with expanding populations. Depopulation led to a near total change in Alutiiq social and political organization, relations to space, religion, patterns of trust, and methods of obtaining food. Euro-American contact produced the Alutiiq people's first recorded major social disasters.

Contemporary Social Change

Alutiiq population levels have fluctuated greatly over the past two hundred years, primarily because of disease epidemics. Alutiiq people have adapted by living in fewer and smaller villages. Fish and wildlife populations and distributions have changed drastically with commercial and sport harvesting. Alutiiq people have adapted by using new harvest strategies and more efficient modern equipment, such as four-wheelers, rifles, and seines. Change in social organization or use of such equipment does not make people any more or less "native"; society and technology are always changing. Culture is more about how people interrelate, communicate, and allocate resources than about how much money they make or what kind of fishing gear they use. Contemporary Alutiiq people have adjusted to environmental and social changes, and they inter-relate, communicate and allocate resources differently from the way Alutiiq people did in the past.

Land use history in the Alutiiq region reflects constant change in the way people obtain and distribute resources. Prior to Euro-American contact in 1741, Alutiiq subsistence and settlement patterns fluctuated as the environment changed, as species distributions changed, and as new technologies were developed.²⁴ The subsistence and settlement patterns at the time of contact in the mid 1700s, however, differed markedly from hunting and fishing activities of the mid 1800s, which many anthropologists cite as "customary and traditional," for modern regulatory purposes. Contemporary village locations reflect great change. Unlike past settlements, modern Alutiiq villages are situated on sites that were not necessarily chosen for their access to any specific food resources. Modern villages are located in places chosen by Rus-

sian fur traders (English Bay), grew up around the commercial fishing industry (Port Graham, Old Harbor), or were the result of village relocations caused by the 1912 Katmai eruption (Perryville) and the 1964 earthquake (Cheneg Bay, Port Lions).

Contemporary Alutiiq people harvest fish, game, and other resources in remote areas of Prince William Sound, Lower Cook Inlet, Kodiak Island, and the Alaska Peninsula. Villages are relatively close-knit societies whose members share harvested food with friends and relatives within villages and with outside friends and relatives. This activity resembles but is quite distinct from that of the region's precontact maritime hunters and gatherers, some of whom were the ancestors of modern Alutiiq people. For management purposes, the ADF&G Subsistence Division has focused on how this activity reflects past use by documenting "customary and traditional use" of subsistence resources so that harvesters can be included in statewide resource management as a "user" group.²⁵ As we have seen, historical factors (disease epidemics, declining resource populations, and changes in human settlement) and external cultural influences (Alutiiq intermarriage with Russians, Americans, and Scandinavians; state and federal regulation of hunting and fishing) have changed the broader cultural matrix of contemporary harvesting and sharing. Recent laws (ANCSA, ANILCA) and pending lawsuits resulting from these acts have changed the political matrix as well.

The greatest changes in Alaska Native life in the twentieth century began around the time Alaska became the forty-ninth state in 1959. The survivors of the epidemics had adjusted to new lives in a region experiencing the growth of commercial resource industries (whaling, fishing, logging, mining) and the influx of nonnative residents. Nevertheless, the social and cultural situation in Alutiiq villages was relatively uncomplicated by outside bureaucracy and involved communal harvest and sharing of wild resources. Around the time of statehood in 1959, an interesting set of dynamics fell into place, centering around the requirements of statehood, the Great Society programs of the Kennedy-Johnson years, and the discovery of major oil reserves on Alaska's North Slope in 1968. Social, political, and technological elements introduced during this era have complicated life in even the most remote Alaskan villages.

Among the many problems of vital importance to the new state, three issues stood out: (1) need for clear fish and game laws, (2) creation of municipal and borough governments, and (3) clearing

the title of all lands in Alaska (which had been clouded by the treaty with Russia at the time of the purchase) so that lands could be transferred from federal to state control.

After statehood, licensing arrangements for commercial fishing, as well as for sport fishing and hunting, were considered essential. The previously unnamed category of rural Alaskan hunting and fishing “for personal use” also had to be officially recognized and named. The word *subsistence* was chosen to mark the special rights of people (both native and nonnative) who used fish and game for personal consumption. *Subsistence* was an ordinary English word; it had long been used by anthropologists to indicate economies in which people hunt or gather their own resources and do not depend solely on a market mechanism. However, it has very special meaning in Alaska, where it has been adopted by Alaska Natives as a cultural symbol with meaningful ties to the past. *Subsistence* has become a maxim for contemporary Alaska Native cultural identity.

Also after statehood, villages had to be integrated into the new state government. Yet governing councils organized under the I.R.A. (Indian Reorganization Act of 1934) remained separate—as part of federal law but impacted by state law. The I.R.A. tribal government, borough government, and municipal government each require different organizations, all to be dealt with by villagers.

Title to all Alaskan lands was, from the standpoint of American law, clouded by the Act of Purchase from Russia, which had recognized aboriginal claims. Problems arose after statehood when the state of Alaska conveyed land and permitted activities on lands without involving native people in the process. The state and the natives were only two of the many claimants of Alaskan federal lands. Federal agencies also made huge claims, and conservationists loudly demanded that wilderness be retained. The state of Alaska needed lands so that it could control economic development. The natives had rights—both claims of original ownership and clauses in the treaty of purchase with Russia. The total claims for land exceeded the total amount of land in the state.

Alaska Natives were, for the first time, in a powerful position. The need to develop the newly discovered oil fields at Prudhoe Bay and to construct a pipeline made settling land claims imperative. As a result, the state, the native organizations, and the oil industry worked to get legislation through Congress so that pipeline construction could begin. Construction was eventually

completed in 1977. Because Congress wanted the oil as much as anybody else—and in order to avoid the kind of difficulties inherent in Indian land claims in other states—Congress listened carefully to the native lobby (as well as other Alaskan lobbies).

Villages were physically transformed between 1960 and 1980, with new housing, schools, stores, electricity, telephone service, and television. Social changes have been significant but have varied regionally and even among neighboring villages.²⁶ In Alutiiq villages, ANCSA has been a principal source of cultural change:

Changes to the political and economic institutions of the village have had wide consequences that have affected relations among residents, household economies, family-household organizations, subsistence pursuits, and other key elements of village culture.²⁷

The act recognized the rights of Alaska Natives as indigenous land holders but extinguished those rights in return for specific pieces of land granted each village and each of the twelve regions. In the view of its framers, the act recompensed natives for the loss of their lands by giving them title to about 10 percent of the land area of the state (some forty million acres). The act also formally established a statewide social structure, based on the principle of the shareholder corporation. This new social system was in no way indigenous to any of the diverse Alaska Native cultures and was full of inherent contradictions.²⁸

Many problems were manifested only after ANCSA was passed—the poor formal education system, health problems, and social problems such as alcoholism, drugs, and family violence. Many of these problems had already existed, but native people now had a better forum through which to make difficulties evident. In retrospect, people had inflated expectations of ANCSA. Although some may blame ANCSA for not making everything better when they fully expected that it would, that inadequacy in addressing the problems cannot be the fault of ANCSA.

The villages have all the weight of this new social organization resting on them. Village life in the post-ANCSA era has become extremely complex. Villagers have been smothered in bureaucracy. Village societies that somehow adjusted to the trauma of postcontact epidemics and colonialism and, because of their relative isolation, retained some cultural autonomy, have been

sucked into the vortex of shareholders' meetings, land use regulation and enforcement, and corporate politics.

The mingling of native and American culture has expanded with television and increased formal educational opportunities. Fax machines and television sets and a social system based on nonprofit regional corporations, for-profit regional corporations, village corporations, government bureaus, state regulations, tribal councils, the Alaskan Federation of Natives, and government welfare agencies were the norm long before the *Exxon Valdez* oil spill of 1989. Although life is very different in the contemporary villages and towns, Alutiiq cultural values such as sharing and extended family social organization persist and are centered around hunting, fishing, and gathering. These values are part of an Alutiiq worldview that has been transformed by Russian Orthodoxy, Christianity, and the American work ethic. Although life in the villages no longer is centered solely around hunting, fishing, and gathering, subsistence has become the symbol of contemporary Alutiiq culture.

Disregard for the history of social and cultural change in the Alutiiq region has led to stereotyped perceptions of Alutiiq people by some nonnatives. Some nonnatives believe that Alaska Natives, including Alutiiq people, are "culturally bankrupt"²⁹ and wish to become like nonnatives. Other nonnatives have the paternalistic attitude that Alutiiq people are a victimized minority who need to be protected from the outside world.³⁰ The Alutiiq people were not propelled from the Stone Age into contemporary American life by the oil spill. Such distortions result from a misunderstanding of culture and how it changes. The key elements of contemporary Alutiiq culture—marriage patterns, ancestry, language, settlement patterns, religion, and economy—are different from those of the past. The cultural context of subsistence has changed, yet the Alutiiq culture survives in a new form.

THE MYTH OF A PRISTINE ENVIRONMENT

Although Prince William Sound and the northern Gulf of Alaska are commonly characterized as pristine or "untrammled" wilderness, deserted fox farms, fish canneries, salteries, mines, whaling stations, sawmills, and other ruins are present on many remote beaches in the region, indicating, by Alaska standards, intensive land and resource use over the past two hundred years. For example, by 1927, timber in a remote bay on Knight Island in

Prince William Sound had been logged once, and second growth timber was already being harvested, probably for use in commercial fishing and fur farming endeavors.³¹ Ironically, photos of this bay have been used to portray Prince William Sound's pristine quality.

The Russian fur trade (1785–1869), the American fur trade (1869–1910), whaling (1840–1930), fox farming (1918–1935), commercial fishing (1890–present), mining (1900–present), and sport hunting (1900–present) have cumulatively reduced some fish and wildlife populations in the region and altered species diversity. By the 1930s, almost one hundred years of commercial hunting had driven North Pacific whale populations nearly to extinction. Commercial fish traps hastened a precipitous decline in Alaska's salmon populations. Foxes, released on islands to be harvested for their pelts, destroyed or depleted hundreds of sea bird colonies and caused "the worst ecological catastrophe experienced in Alaska."³² Deer, elk, and farmed oysters have also been introduced to the region by humans. Wild Pacific salmon stocks, already damaged by overfishing throughout the early twentieth century, have suffered additional ill effects from the more recent introduction and harvesting of millions of hatchery fish.³³ The abundant, diverse resources that sustained Alutiiq populations for millennia prior to Euro-American contact have been severely altered.

With increased industrialization and population growth came the human introduction of additional hydrocarbons, beyond those that occur naturally in the region. The source of most hydrocarbons found in recent assessments of subtidal sediments and archaeological sites in the oil spill area is not crude oil spilled from the *Exxon Valdez*.³⁴ Much of the oil originated in natural seeps located at Cape Yakutaga (just east of Prince William Sound) and on the Alaska Peninsula or came from previous minor spills of crude oil and refined hydrocarbons (diesel fuel, fuel oil, aviation fuel, or other fuels and lubricants) associated with oil transport, commercial fishing, copper mining, World War II defense activities, and fuel storage facilities destroyed during the 1964 earthquake.³⁵ A crude oil spill affected shorelines in the Kodiak area in 1970, killing thousands of sea birds and oiling some of the same beaches that were oiled in 1989.³⁶

Hydrocarbons were present in the environment before the *Exxon Valdez* oil spill. The spill caused environmental and social disruption, but these impacts did not destroy the local environ-

ment or the Alutiiq culture. To claim that they did understates the vitality and adaptive nature of human culture and the northern Gulf of Alaska coastal environment.

THE MEDIA AND LITIGATION INFLUENCE ALUTIIQ PERCEPTIONS OF THE SPILL

Since the spill, annual cycles of winter storms have scoured the shores, and extensive cleanup over four summers by hundreds of beach crews—many of which included or were composed of Alutiiq village residents—have helped remove virtually all of the remaining oil. The patches of weathering residue that remain are not harming the environment,³⁷ and restoration programs are proceeding.³⁸ However, media coverage continues to reflect on the acute oiling conditions of 1989.³⁹

Calamitous predictions of serious, long-term environmental impacts are common in the media after major oil spills and probably influence public perceptions of spills and their impacts. In this case, continuing litigation was influential in creating a story that generated media coverage, contributing to an atmosphere of mistrust and suspicion. Although Alaska is a remote and sparsely populated state, telecommunications are advanced. Many Alaskans, including Alutiiq villagers and elders, relied on live news via satellite and broadcast news via cable television for oil spill information and heard predictions of an impending long-term environmental nightmare in their region on national shows such as *CNN News* and *Nightline*.

Although media interest focused more on litigation and settlement activity, the oil spill cleanup continued throughout the summer of 1989 and ended in 1992. A \$900 million criminal settlement was reached between Exxon, the state of Alaska, and the United States in October 1991. Prior to the final settlement, native corporation attorneys attacked the initial proposed government settlement with Exxon, bringing native rights issues to the litigation forefront.⁴⁰ Other attorneys representing a number of Alutiiq people filed a class action lawsuit against Exxon and Alyeska in July 1989, shortly after the oil was spilled and prior to any oil impact assessments. The suit sought more than one billion dollars in compensation for harm to the Alutiiq “culture” and “subsistence way of life.” The issue of cultural damages was dismissed as noncompensable under federal law by Judge H. Russel Holland.⁴¹ Twenty million dollars in economic damages to

subsistence resources were addressed in a separate out-of-court settlement between Exxon and the plaintiffs approved in September 1994.

The oil spill case occurred at a time when issues pertaining to native subsistence on state and federal lands were the subject of other complex litigation. Alutiiq people and native corporations clearly had legitimate interests to protect and, like other Alaskans, were concerned that the region be restored. The goal of the cultural damages suit, however, was either a large monetary settlement or a jury award. The presence in the villages of legal advisors to the native "class" of litigants may have served to intensify actual impacts and masked more subtle and uniquely Alutiiq responses to the oil spill. What transpired in the villages was described as "litigation mania"⁴² caused by the presence of lawyers sowing great expectations immediately after the spill. The potential for litigation impacts was acknowledged by ADF&G: "Another social effect of the oil spill has been the prolonged litigation over damage claims."⁴³ Fall and Utermohle note the impact of legal decisions on the villagers and on social science data:

Rulings in federal court which ruled ineligible claims by the Alaska Native Class concerning injuries to their way of life were especially disheartening to the people whose subsistence uses had suffered following the spill. In some cases, these rulings discouraged people from participating in this research. They concluded that additional studies were pointless. The settlement with Exxon regarding the replacement value of lost subsistence harvests was viewed by subsistence users as, at best, only a partial compensation of the Native Class claims. A view persisted that the cultural importance of subsistence to the Alaska Native communities of the spill area and the injury that this culture suffered had not yet been acknowledged by the judicial process. Appeals of these rulings were in preparation as this report was being completed. This continuing litigation remains another long-term impact of the spill, and should be considered in impact assessments for future Outer Continental Shelf development.⁴⁴

CRYING WOLF: OIL SPILL LITIGATION AND CULTURAL CLAIMS

At the time of the Alutiiq lawsuit, I was a consultant for Exxon Company, USA, dealing with archaeological issues related to the

oil spill cleanup along with more than twenty-five fellow archaeologists representing Exxon, state and federal agencies, and Alutiiq native corporations. A site identification and protection program kept the cleanup in compliance with state and federal historic preservation laws.⁴⁵ I became aware of the Alutiiq lawsuit in 1992 and was asked by Exxon to assess plaintiff claims. My initial request to conduct anthropological fieldwork in the villages was denied, because plaintiffs' attorneys forbade my interaction with their "clients." A short time later, I discovered that, in 1989, independent anthropological fieldwork had begun in the Alutiiq villages. However, the project was eliminated and plaintiffs' attorneys hired their own consultants to conduct interviews in the villages.

Unlike traditional anthropological studies involving extended periods of participant observation, much of the fieldwork consisted of "one-point-in-time" social impact studies.⁴⁶ Conventional elements of culture such as kinship, language, environmental adaptations, social organization, politics, and religion went uninvestigated. Privately funded, open-ended interviews sought negative anecdotal data about the oil spill and the cleanup primarily in 1989 and 1990, when spill disruption was at its height. Plaintiffs' researchers identified themselves as representatives of the attorneys, a situation that likely restricted the objectivity of the respondents. These data were then presented in expert reports as proof that the spill had destroyed the Alutiiq culture.

Interestingly, some Alutiiq people, including elders, cited in plaintiffs' and ADF&G field notes claimed that, while the spill was disruptive and upsetting, their culture was not damaged. Some field notes also document responses by village "super-harvesters"—those who hunt and fish for their kin and elders—who avoided impacted areas and were able to harvest and share normal quantities of fish and game. Data contradicting plaintiffs' damage assertions—not to mention anecdotes noting positive impacts from the cleanup wages and a perceived increase in the cultural value of subsistence resources—were disregarded in plaintiff expert reports.

Plaintiff consultants claimed that the spill caused extensive harm to subsistence resources, damaging what they construed to be a traditional, integrated hunter-gatherer culture. They concluded, "The oil spill ripped the fabric of the Alutiiq community by damaging the core element: first the natural resources (the material foundation of Alutiiq culture) and with it, the subsis-

tence harvest." Were this true, the Alutiiq culture would have been on the verge of extinction. Subsistence species would have been in short supply and so contaminated as to be unusable. There would have been major outmigrations from Alutiiq villages. Commercial fishing and guided sport hunting in the region would have dropped sharply. The ongoing Alutiiq cultural revival would have ended. Such a scenario might come to pass after a major nuclear accident,⁴⁷ but it certainly was not the result of spilled oil.

In the worldview of a cultural group like the Alutiiq, an event such as the *Exxon Valdez* oil spill can become a point-of-before-and-after, a Change Day or C-day. Such events reflect the fact that people perceive—usually suddenly—that things are different. These changing perceptions have more to do with the recent complicated and complex culture change in Alaska and the Alutiiq region than with any single event.

The contemporary Alaska Native worldview is a product of recent episodes of intense cultural change, described by Fienup-Riordan as "seven overlapping stages in the relationship between Alaska Natives and the people who came to live among them: resistance, co-existence, population disruption, attempted assimilation, global incorporation, dependency, and empowerment."⁴⁸ In this century, the Alutiiq culture has adapted to the new social and environmental realities engendered by colonialism, statehood, and industrialization. Alutiiq people are empowered and retain the ability to determine their own future. The oil spill was not a welcome event in the Alutiiq region. It was a disruption that affected different Alutiiq people differently, but it was not the source of significant cultural damage or change.

The ultimate conclusion about the spill that Alutiiq people reported to ADF&G was their perception of reduced populations of marine resources important for subsistence harvesting and sharing. As noted above, this maritime region, while stunningly beautiful, is not static and pristine. The composition of wild resource populations of key species (such as sea mammals, birds and salmon) has fluctuated, particularly over the past one hundred years, because of resource overharvesting and human manipulation of the natural environment. The Alutiiq people had been adjusting to these environmental changes long before the oil spill and long before social scientists began trying to measure oil spill impacts.

THE OIL SPILL: A MODERN C-DAY

The cultural aspects and social fallout of the spill are as complex as the ecological aspects. Although some studies have been undertaken and numerous questionnaires have been administered (an experience some Alutiiq villagers have found troublesome), most cultural aspects were scarcely studied. Disruption naturally resulted from the *Exxon Valdez* oil spill and cleanup, as hundreds of people worked long hours to ensure that oiled shorelines would recover quickly. However, these negative impacts were short-term, and government and Exxon-funded village cleanup and monitoring programs, cooperative subsistence food distribution programs, food safety testing programs, and supplemental food programs helped offset them. Because of the litigation, however, the overall relationship between most Alutiiq villagers and Exxon was strained. What could have been a manageable, cooperative restoration process became a legal battle in which culture was used as a tool to obtain a damage award.

The spill caused human impacts. Diet was temporarily affected, raising issues of both the availability of wholesome food and the definition of wholesomeness—that is, potential consumers of subsistence food considered the risk for human consumption. The always-fluctuating relationship between subsistence efforts and wage-labor was altered significantly. Income levels of many people suddenly rose, which led to envy in others. With the influx of money,⁴⁹ differences of opinion arose about the fairness of wage employment opportunities. These differences led to bad feelings in some communities. However, the increased cash earned in 1989 likely had a positive net benefit by enabling people to purchase subsistence harvest gear and supplies. Studies in Alaska have shown that an increase in per capita household income in villages is related to an increased harvest of subsistence foods by those households.⁵⁰

The spill caused short-term impacts, and Alutiiq native villages reacted differently from other towns in the region. However, all of the impacts need to be considered in context: prior and concurrent logging impacts, overfishing and hatchery stocking of fish, sport hunting, and the introduction of exotic species; the social impact of the litigation; ongoing native adjustments to Alaska statehood, ANCSA, and increasing bureaucratization of subsistence in the villages; increased industrialization of commercial fisheries; normal fluctuations in the environment and in fish and game populations. Other important factors such as the very cold winter of

1989, native participation in spill cleanup crews, donated fish and game from other villages and from Exxon, tons of groceries provided to cleanup crews, the implications of increased cash income for subsistence harvesting, a widespread distrust of state and federal resource management agencies, and the effect of ongoing litigation on subsistence reporting have generally been discounted or ignored by oil spill social impact studies.

As is the case with most disasters, positive impacts occurred. Some people's awareness of their own self-worth and cultural identity was heightened. Subsistence foods, some of which were in short supply for a year or two, were more appreciated. The economic benefits of the cleanup, the entrenchment of native issues in the Oil Pollution Act of 1990, the potential benefit of \$900 million in settlement funds being dispersed through the oil spill trustees for restoration of natural resources or acquisition of habitat (including native corporation land), a new Alutiiq cultural center and museum financed with spill funds, and increased focus on cultural heritage issues, including Alutiiq archaeology, are other positive impacts.

Alutiiq subsistence harvests occur in cultural and natural environments that have always fluctuated. Alutiiq culture, like all human cultures, adapts as conditions change. Sometimes change occurs suddenly and violently, as was the case during the Russian occupation in the mid-1700s. In such an instance, the causes of cultural change were readily apparent, but the adaptations took years to occur. Sometimes, as is the case since World War II, the underlying causes of change are not readily apparent, but small adaptations occur almost imperceptibly. Lacking a single external source of change, a milestone event, such as the 1964 earthquake or the 1989 oil spill, becomes a point-of-before-and-after, an event that brings into focus previously unperceived changes.

Some claim that the *Exxon Valdez* oil spill was a disaster that irreparably damaged Alutiiq culture. In fact, the spill was a C-day. It was a dramatic event that provided an idiom in which people could perceive cultural processes—regardless of whether any particular process was causally related to the spill or whether it was going on before the spill, or whether it was a displacement of other discomforts onto the spill. “Things are different since the spill,” became the way of explaining change, whether or not the spill had any causative role to play in that change.

The *Exxon Valdez* oil spill and the cleanup became the idiom in which new social realities and cultural pressures were discussed.

Pressures that had nothing to do with the spill (hard times during the Alaska recession of the mid-1980s; increased pressure from outside tourists, sport fishermen, and sport hunters; changes in the Alaska political scene; new offshore fisheries development) slopped over into thinking about the spill. Political instabilities and factions within the local communities were accentuated—and blamed on the spill. That mode of thinking led to the feeling—indeed, the conviction—of culture change where there was none.

The *Exxon Valdez* spill occurred in a region in transition. The impacts were felt by people who had experienced and adjusted to great social change prior to the spill. This is not to downplay the spill, rather to focus on actual impacts. The two years of lost or disrupted subsistence harvests and subsequent litigation influenced perceptions among a portion of the Alutiiq population that their world had changed since the oil spill and that the spill was the sole cause. The media as well as plaintiffs' lawyers and anthropological consultants characterized the spill as an environmental holocaust and claimed that the Alutiiq culture was irreparably harmed. A less sensationalistic and less litigious response might have resulted in an entirely different set of collected data. As it was, plaintiffs' lawyers conditioned the Alutiiq response to oil spill surveys by almost immediately filing lawsuits for their "clients." Prior to any objective impact assessment being conducted, damages were assumed to have occurred, and this mentality pervaded the plaintiffs' experts' data collection—and may have affected data collected by public agencies.

No matter how emotionally upsetting the *Exxon Valdez* spill may have been, the Alutiiq people did not lose their culture due to the temporary effects of an oil spill. On the contrary, as I observed among Alutiiq crews on beaches during the cleanup, during archaeological site protection, and in postspill anecdotes of village life in agency researchers' field notes, the Alutiiq people are moving into the twenty-first century with a renewed sense of who they are and with increased political power and resources to determine their fate as Alaskans and Americans.

In summary, put into the context of socioeconomic change and adjustments to past social disasters that Alutiiq people have experienced, the *Exxon Valdez* oil spill was not a determinant event. Its chief distinguishing characteristic is that blame could be attached and lawsuits filed, causing problems that the oil spill itself never could have caused. The spill could thus become the

scapegoat for many of the changes in the Alutiiq environment (physical and cultural) that have occurred in the twentieth century.

NOTES

1. James E. Mielke, *Oil on the Ocean: The Short- and Long-Term Impacts of a Spill*, Congressional Research Service Report for Congress (Washington, DC: Library of Congress, 1990).

2. Gordon Pullar and Philomena Knecht, "Continuous Occupation of Larsen Bay /Uyak Bay by Qikertarmiut" (Paper prepared for Native American Rights Fund, 1990).

3. Special Oil Spill Issue, *Alaska Fish and Game Magazine* 21: 4 (July–August 1989). Similar accounts were reported in the local and national press during the summer of 1989.

4. This group was organized by the federal Indian Health Service (IHS), the Alaska Department of Health and Social Services, Exxon, and the ADF&G Subsistence Division to coordinate research on the safety of subsistence foods in the spill area. For a description of tasks and results, see Thomas Nighswander, "The Response Process: The Goals of the Oil Spill Health Task Force" (Paper presented at the Third Symposium on Environmental Toxicology and Risk Assessment: Aquatic, Plant, and Terrestrial, American Society for Testing and Materials, Philadelphia, 1993).

5. James A. Fall, "An Update on Subsistence Uses in Alaska Native Villages Following the Exxon Valdez Oil Spill" (Paper presented at the nineteenth annual meeting, Alaska Anthropological Association, Fairbanks, 1992), 8.

6. Oil Spill Health Task Force, *The Oil Spill Health Task Force June 1991 Report* (Anchorage, AK: Division of Subsistence, Alaska Department of Fish and Game), 4.

7. James A. Fall and Charles J. Utermohle, ed., *An Investigation of the Sociocultural Consequences of Outer Continental Shelf Development in Alaska*, OCS Studies MMS 95-010 through 95-015, Technical Report 160 (1995), abstract.

8. See Joseph Jorgensen and S. McNabb, *Social Indicators Study of Alaskan Coastal Villages VI. Analysis for the Exxon Valdez Spill Area, 1988–1992*. Prepared by Human Relations Area Files for the U.S. Department of the Interior, MMS Alaska OCS Region, Anchorage, AK; Technical Report 157; MMS Report 93-0064. See also Impact Assessment, Inc., *Economic, Social and Psychological Impact Assessment of the Exxon Valdez Oil Spill*, 1990 (New Haven, CT: Human Relations Area Files).

9. Native residents in the Alutiiq region at the time of the spill included nonlocal Athapascan, Inupiat, and Yupik natives in addition to Alutiiq and Eyak people.

10. Gordon L. Pullar, "Ethnic Identity, Cultural Pride, and Generations of Baggage: A Personal Experience," *Arctic Anthropology* 29:2 (1992): 182–91.

11. Paul Bohannon, *How Culture Works* (New York: Free Press, 1995).
12. See "Alaska's Volcanoes," *Alaska Geographic* 18:2 (1991).
13. Patricia Partnow, "The Days of Yore: Alutiiq Mythical Time" (Paper presented to the Twentieth Alaska Anthropological Association Conference, Anchorage, 1993).
14. Nancy Yaw Davis, "The Effects of the 1964 Alaska Earthquake, Tsunami, and Resettlement of Two Koniag Eskimo Villages" (Unpublished Ph.D. dissertation in anthropology, University of Washington, Seattle, 1971). See also Davis, "Disasters and Social Impacts: Volcano, Earthquake and Oil Spill" (Paper presented at the Arctic Science Conference Valdez, Alaska, 11 September 1992).
15. Davis, "Contemporary Pacific Eskimo," in *Handbook of North American Indians (Arctic)*, vol. 5, ed. D. Damas (Washington, DC: Smithsonian Institution, 1984).
16. See Kaj Birket-Smith, *The Chugach Eskimo*, Ethnografisk Raekke 6 (Copenhagen: Nationalmuseets Skrifter, 1953); and Donald W. Clark, "Pacific Eskimo: Historical Ethnography," in *Handbook of North American Indians* 5: 136–48.
17. See James R. Gibson, *Otter Skins, Boston Ships and China Goods: The Maritime Fur Trade of the Northwest Coast 1785–1841* (Seattle: University of Washington Press, 1992); Antoinette Shalkop, "The Alaskan Russian Church Archives: Records of the Russian Orthodox Greek Catholic Church in North America—Diocese of Alaska" (Washington, DC: Manuscripts Division, Library of Congress, 1984); Barbara Sweetland Smith, *Russian-America: The Forgotten Frontier* (Tacoma, WA: Washington State Historical Society, 1990).
18. See James Haggarty and Richard Inglis, "Historical Resources Site Survey and Assessment of Pacific Rim National Park," Environment Canada, National Historic Parks and Sites Branch, restricted internal report, 1985; Christopher Wooley and James Haggarty, "Tlingit-Tshimshian Interaction in the Southern Alexander Archipelago" (Paper presented at the Sixteenth Annual Alaska Anthropological Association Meeting, Anchorage, 1989); M.L. Moss, J. Erlandson, and R. Stuckenrath, "The Antiquity of Tlingit Settlement on Admiralty Island, Southeast Alaska," *American Antiquity* 54:3 (1989): 534–43; Richard Knecht and Richard Jordan, "Nunakakhnak: An Historic Period Koniag Village in Karluk, Kodiak Island, Alaska," *Arctic Anthropology* 22:2 (1992): 175–35; and R.D. Shaw, R.K. Harritt, and D.E. Dumond, eds., "The Late Prehistoric Development of Alaska's Native People" *Aurora: Alaska Anthropological Association Monograph* 4 (Anchorage, AK: Alaska Anthropological Association, 1988).
19. See Inglis and Haggarty, "Cook to Jewitt: Three Decades of Change in Nootka Sound," in *Le Castor Fait Tout: Selected Papers of the Fifth North American Fur Trade Conference, 1985*, ed. Bruce Trigger, Toby Morantz, and Louise Dechene (St. Louis, MO: St. Louis Historical Society, 1987), 193–222. The extensive social adjustments in Northwest Coast culture required by participation in the sea otter trade were underestimated by twentieth-century anthropologists, and, in the Alutiiq region, the same can be said for the adjustments dictated by Russian colonization and by participation in the commercial fur trade.

??

20. Jon Erlandson et al., "Spatial and Temporal Patterns in Alutiiq Paleodemography," *Arctic Anthropology* 29:2 (1992): 42–62.

21. Davis, "We Help Ourselves to Nurse Back to Health (*Gqwangkumtenek Sungcarluta*)" (Anchorage: North Pacific Rim Health Department, 1978), 16.

22. Jared Diamond, "The Arrow of Disease," *Discover* (October 1992), 64–73. Epidemic diseases cannot survive in small populations, because there is no constant supply of new cases, so the disease dies out.

23. Robert Fortuine, *Chills and Fever: Health and Disease in the Early History of Alaska* (Fairbanks: University of Alaska Press, 1989), 230.

24. Richard Knecht, "Late Prehistoric Culture Change on Kodiak Island, Alaska" (Paper presented at the Alaska Anthropological Association Meeting, Anchorage, March 1995).

25. See Dennis Kelso, *Subsistence Use of Fish and Game Resources in Alaska: Considerations in Formulating Effective Management Policies*, Technical Paper 65, Alaska Department of Fish and Game, 1982; and see Thomas Lonner, *Subsistence as an Economic System in Alaska. Theoretical and Policy Implications*, Technical Paper 67, Alaska Department of Fish and Game, 1980.

26. Ernest S. Burch, Jr., "The Land Claims Era in Alaska," in *Handbook of North American Indians* 5.

27. Human Relations Area Files, *Social Indicators Study of Alaskan Coastal Villages* (New Haven, CT: U.S. Department of the Interior, Minerals Management Service, Alaska Outer Continental Shelf Region, 1992), 19–21.

28. See Steve J. Langdon, "Contradictions in Alaska Native Economy and Society," in *Contemporary Alaska Native Economies*, ed. Steve J. Langdon (Anover, MD: University Press of America), 1986.

29. Ann Feinup-Riordan, *Culture Change and Identity among Alaska Natives: Retaining Control* (Anchorage, AK: Institute of Social and Economic Research, Alaska Native Policy Papers, 1992), 11.

30. For example, Christopher L. Dyer, Duane Gill, and J. Steven Picou, "Social Disruption and the Valdez Oil Spill: Alaskan Natives in a Natural Resource Community," *Sociological Spectrum* 12 (1992): 105–26, state, "The oil spill cleanup also contributed a considerable degree of 'cultural pollution.' Examples include intrusion of oil spill workers, lawyers, state and federal personnel, as well as the introduction of nontraditional foods and plastics in native villages" (p. 120). Other reports—Lawrence A. Palinkas, Michael A. Downs, John S. Petterson, and John Russell, "Social, Cultural, and Psychological Impacts of the Exxon Valdez Oil Spill," *Human Organization* 52:1 (1993): 1–13; and Charles W. Smythe, "In the Second Year: Continuing Village Impacts of the Exxon Valdez Oil Spill" (Paper prepared for the 1990 Alaska Science Conference, 8 October 1990)—contain circumscribed or one-sided representations of oil spill impacts.

31. Diary of T.E. Murray, 1927, Chugach National Forest Ranger Notes and Diaries, collection on file, Anchorage Museum of History and Art Archives.

32. Edgar P. Bailey, "Alaska's Alien Animals," *Alaska Geographic* 19:3 (1992): 98.

33. Wilda Nehlsen, Jack E. Williams, and James A. Lichatowich, "Pacific Salmon at the Crossroads," *TROUT* 33:1 (1992).

34. Albert A. Dekin, Jr., "The Impact of the *Exxon Valdez* Oil Spill on Cultural Resources" (Paper presented at the *Exxon Valdez* Oil Spill Symposium, Anchorage, February 1993); see, also, recently released studies on the persistence of oil from the 1964 earthquake in Prince William Sound by USGS geochemist Dr. Keith A. Kvenvolden, cited in the *New York Times*, 1 December 1993.

35. D.S. Page et al., "Identification of Hydrocarbon Sources in the Benthic Sediments of Prince William Sound and the Gulf of Alaska Following the *Exxon Valdez* Oil Spill" (Paper presented at the Third Symposium on Environmental Toxicology and Risk Assessment: Aquatic, Plant, and Terrestrial, American Society for Testing and Materials, Philadelphia, 1993).

36. Department of the Interior, Federal Water Pollution Control Administration, "Documentation of Kodiak Oil Pollution Incident," March 1970. Manuscript on file, Natural Resources Library, Minerals Management Service, Anchorage.

37. See National Oceanographic and Atmospheric Administration's (NOAA) "1991 Review of the Status of Prince William Sound Shorelines Following Two Years of Treatment." This summary report to Coast Guard Admiral Ciancaglini noted that, although some subsurface oil remained, it was "not mobile and not a significant hazard to terrestrial or aquatic organisms as it is not readily available to them. . . . The NOAA monitoring program indicates that, even where there is direct contact with weathered oil, intertidal organisms have shown extensive recovery." See also Jerry M. Neff et al., "Condition of Shorelines in Prince William Sound Following the *Exxon Valdez* Oil Spill: Part 1—Shoreline Oiling" (Paper presented at the Third Symposium on Environmental Toxicology and Risk Assessment: Aquatic, Plant, and Terrestrial, American Society for Testing and Materials, Philadelphia, 1993). See also R. Hartung, "Assessment of the Potential for Long-Term Toxicological Effects of the *Exxon Valdez* Oil Spill on Wildlife" (Paper presented at the Third Symposium on Environmental Toxicology and Risk Assessment).

38. Invitation to Submit Restoration Projects for Federal Fiscal 1996 and Draft Restoration Program: FY 96 and Beyond. *Exxon Valdez* Oil Spill Trustee Council, Anchorage, 24 March 1995.

39. *PBS News Hour*, 24 March 1993; *Anchorage Channel 2 News*, 2 April 1993.

40. Darrin J. Quam, "Right to Subsist: The Alaska Natives' Campaign to Recover Damages Caused by the *Exxon Valdez* Spill," *The Georgetown International Environmental Law Review* 5 (1992): 177–213.

41. Judge H. Russel Holland, Order 190, 23 March 1994.

42. Davis, "Disasters and Social Impacts: Volcano, Earthquake and Oil Spill." See also Davis, "Preliminary Impacts of the 1989 Oil Spill on Chugach Region Native Residents," part 1, draft report to North Pacific Rim, Bureau of Indian Affairs, Native Residents (31 October 1989 revision).

43. James A. Fall and Charles J. Utermohle, eds., "An Investigation of the Sociocultural Consequences of Outer Continental Shelf Development in Alaska," executive summary.

44. *Ibid.*, 5.

45. See C.M. Mobley et al. (with an appendix by W.B. Workman and K. Workman), *The 1989 Exxon Valdez Cultural Resource Program* (Anchorage: Exxon Shipping Company and Exxon Company USA, 1990); J.C. Haggarty et al., *The 1990 Exxon Cultural Resource Program: Site Protection and Maritime Cultural Ecology in Prince William Sound and the Gulf of Alaska* (Anchorage: Exxon Company USA, 1991).

46. The only detailed participant observation data on the Alutiiq response to the spill I have seen exists in ADF&G subsistence researchers' confidential field notes recorded during village visits to conduct food safety tests and to measure subsistence harvests.

47. See Sue Ann Curtis, "Cultural Relativism and Risk-Assessment Strategies for Federal Projects" *Human Organization* 51:1 (1992): 68.

48. Ann Feinup-Riordan, *Culture Change and Identity among Alaska Natives*.

49. In 1989, Veco, the primary cleanup contractor, paid individuals more than sixteen dollars per hour to perform manual labor cleaning up oiled beaches, and Exxon chartered hundreds of local fishing vessels to assist with the cleanup.

50. Jack Kruse, *Alaska Inupiat Subsistence and Wage Employment Patterns: Understanding Individual Choice* (Anchorage, AK: Institute of Social and Economic Research, 1990).

