

ALASKA'S MULTIBOOMS

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ALASKA'S MULTIBOOMS:

An assessment of Growth of Infrastructure

Booms have been a common element in the development of frontier areas in the 19th and 20th centuries. Most commonly, the booms have been associated with resource development such as the mineral booms of the western United States. Booms usually involve some type of dramatic short-term change which has wide-ranging implications (Gilmore, 1976).

Since the arrival of the Russians in Alaska, six major booms have occurred: furs, whales, salmon, minerals, military, and petroleum. Each of these booms has, to some degree, created changes in the landscape of Alaska, in particular, the infrastructural base, which in turn has facilitated subsequent development, either another major boom, or a smaller development. For example, agricultural development has been enhanced by mineral, military, and petroleum booms in Alaska. The cumulative impact on infrastructure of more than one boom, or multibooms, as it is referred to here, is the focus of this paper.

One problem encountered in studying booms is that there is no general agreement on what constitutes a boom. Detailed studies of booms in communities such as Dixon's (1978) analysis of Fairbanks and Gilmore's multi-community work in the Great Plains—Rocky •mountain regions, contained no specific definition of the term "boom". Yet it was clear in each study that something dramatic had occurred. More general historical studies of the Western mineral bonanzas (Greever, 1963) or the Klondike gold rush (Berton, 1958) likewise suggest a number of factors such as population rise, influx of money, resource extraction, and infrastructure expansion. But in each case, there is no specific factor or define rate of something that specifically qualifies a time period as a boom. In this study, we are concerned with dramatic change of events which have had a major impact on the geographic landscape of an area, As a framework for the initial study, we review those events which have been given attention as boom-type activities in the historical literature of Alaska (Rogers, 1962; Naske and Slotnick, 1987).

PURPOSE AND METHODOLOGICAL PROBLEMS

The purpose of this initial study is threefold:

1. Quantitatively define the major boom periods in Alaska;
2. Define the geographic extent of the booms; and
3. Assess the extent of infrastructural expansion of the booms.

Boom events in a region are difficult to compare quantitatively because they occur in different historical settings. For example, the Russian fur boom (mid- to late 1700s) was dramatic given the small numbers of people involved and the level of development at the time. However, it would be considered insignificant when compared to the petroleum boom of the 1970s. Thus, each boom is considered in its own time frame and against prevailing circumstances during the time of its occurrence.

Since booms are comprehensive in nature, it is difficult, if not impossible, to fully record their magnitude. Data are incomplete, especially of early historical events in Alaska. In this initial study, we have used one data set per boom to reflect the time extent of the event, Recorded data is reported in number of fur hunting vessels, number of whales harvested, number of salmon canneries, mineral revenue, military population, and oil revenue. Obviously secondary data sets would help to more fully define the nature and extent of the boom. Construction activity in the early 1970s would more fully elaborate the extent of the petroleum boom. These secondary data sets will be analyzed in subsequent studies, since they serve only to refine, not define, an overall pattern.

The spatial impact of the booms is equally difficult to define. Generally, the position taken in

this study is that there is a core area, or core areas, where the boom is most intense. Beyond the core is an uneven periphery area of declining boom impact. In this study, the boom area is defined as including the core and important peripheral areas. Clearly, subsequent detailed mapping is necessary to refine the spatial boundaries of the booms.

Infrastructure, for purposes of this study, includes settlements, transportation and communications facilities, and other human-constructed features which have promoted economic expansion in Alaska. One question the study seeks to determine is if certain types of booms in Alaska have had marked effects on subsequent development and if other types of booms have had minimal impacts.

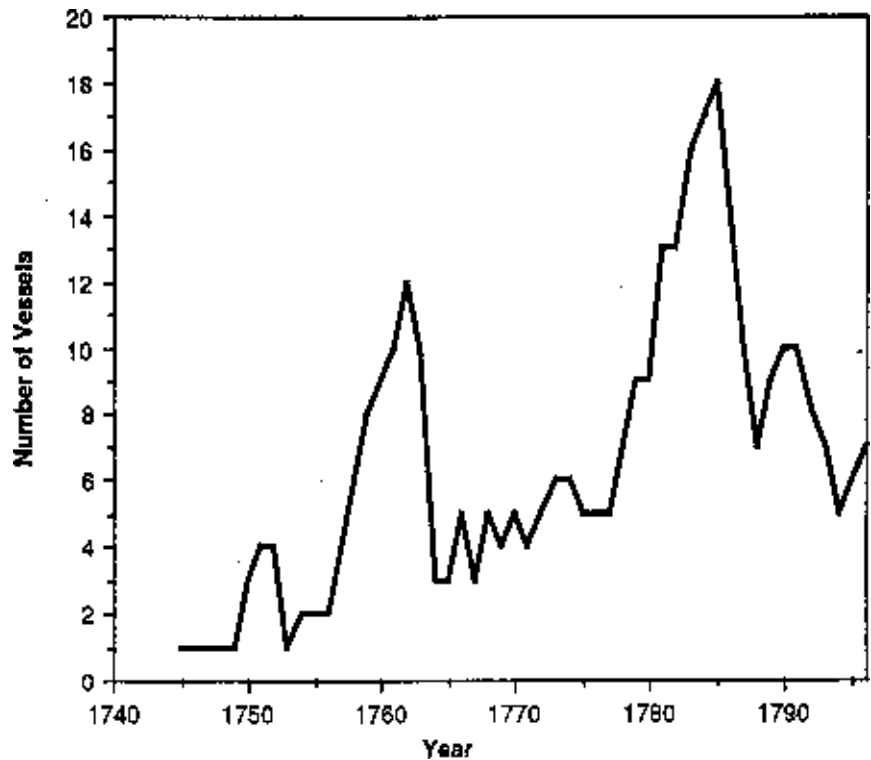


Figure 1a — Russian Fur: Hunting Vessels
source: Black, 1984

RUSSIAN FUR BOOM

Soon after Bering's discovery of Alaska, Russian fur traders made their way to the Aleutian Islands. Their objective was to capture fur seals and sea otters, whose skins were valuable in international markets. The Russian fur boom lasted from 1743 to 1799. During this time, a host of small companies sent vessels into Alaskan waters in search of furs.

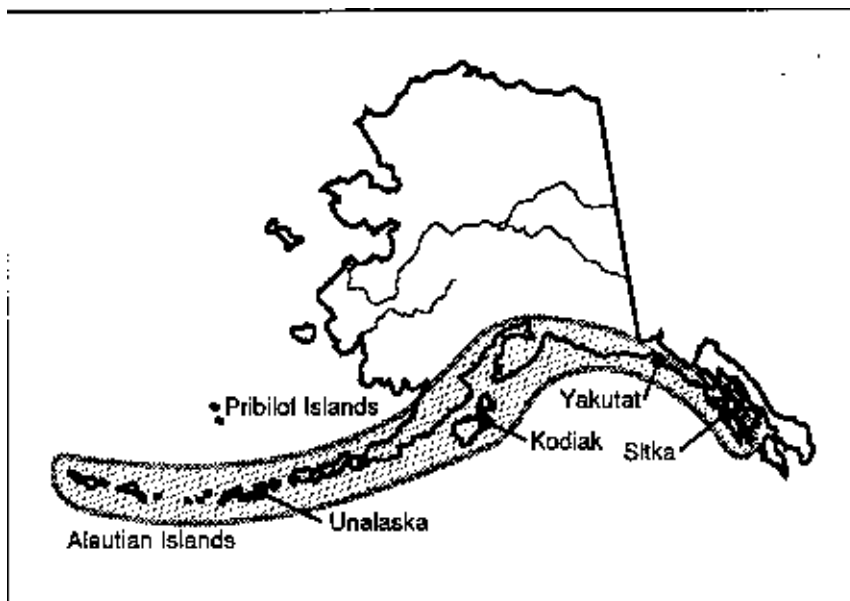


Figure 1b — Geographic Extent of Russian Fur Boom

Thus, the number of fur trading vessels in Alaska during this time gives a fair indication of the size and extent of the boom. By 1799, the Russian American Company was given monopolistic control over Alaska and a more orderly development pattern occurred. Gibson (1976) has identified three time periods of the early Russian fur trade. Each of these periods can be linked to a further geographic expansion.

sion of the fur trade (Figures 1a and 1b). The first occurred from 1743 to 1754, during which time the fur trade moved into the Commander Islands (now in the U.S.S.R) and the Near Aleutian Islands. The second period, from 1756 to 1780, the fur trade moved into the remainder of the Aleutian Islands and to Kodiak Island. The beginning of this period corresponds to the expansion of fur hunting vessel activity. The third period from 1781 to 1799, saw the fur trade move throughout the Pacific Alaskan coast and also into the Pribilof Islands.

The immediate effects on infrastructure impacts of the fur boom were minimal in Alaska. The Aleuts saw their numbers drop precipitously due to disease, conflicts with Russians, and conflicts between Aleut groups. Only a few permanent Russian settlements were established, and this occurred late in the boom. Nearly all economic value gained from the fur trade was expended outside Alaska.

The long-term importance of the fur boom on infrastructure was that it led to the establishment of the Russian American Company. During its 68 year tenure, the Company, together with the Russian Orthodox Church, established and maintained several settlements throughout Southeastern, Southcentral, and Southwestern Alaska. The most important of these settlements existing today include: Unalaska, Kodiak, Yakutat, and Sitka. Russian place names, the Russian Orthodox Churches, and the use of Russian in some areas of Alaska today, attest to the long-term influence of former colonizer.

WHALING BOOM

American whaling vessels began operating in Alaskan waters during the late 1840s when the region was still under Russian control. The bowhead whale capture during this time was so enormous that whalers believed they had overharvested the area and avoided it for a few years (Figure 2a), Vessels returned in 1858 and continued active harvesting until 1870. The downturn in harvest results during early 1860s was due to the American Civil War.

By the early 1870s, petroleum supplies in the United States began to replace whale oil and whaling declined. Whaling did continue, however, and in the 1890s, the first year-round land-based stations in the arctic were established (Bockstoce, 1977, 1978). This new harvesting method expanded the contacts between the whalers and the native Inuit, and brought with it new hunting equipment. However, the new methods did not succeed in reviving the Alaskan commercial whaling industry, and by 1907 it collapsed.

Early whaling operations included little land-based

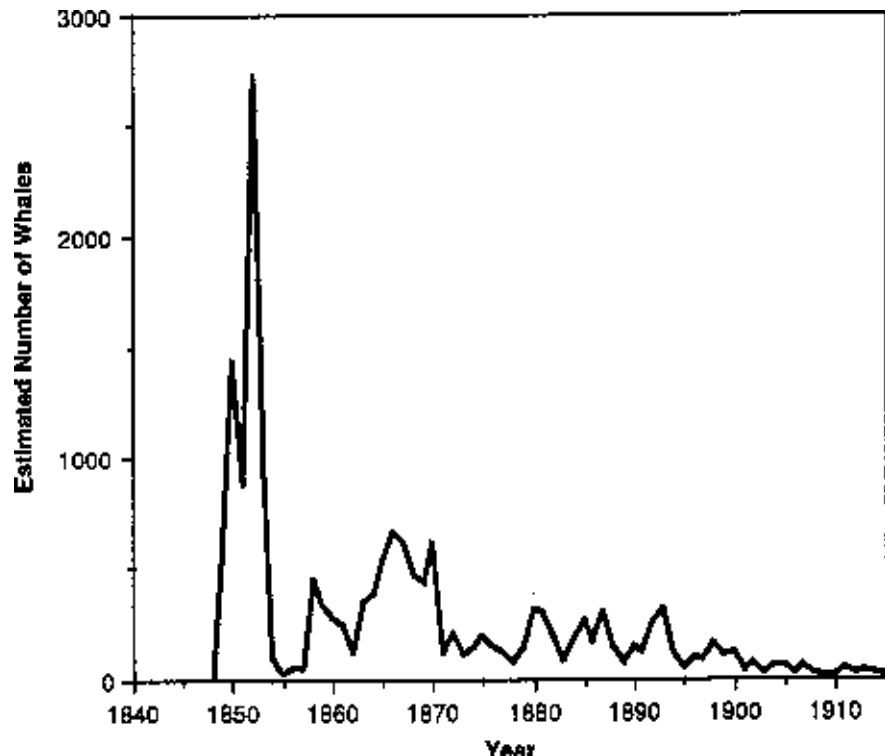


Figure 2a — Bowhead Whale Harvest in the Arctic
source: John Bockstoce, 1978

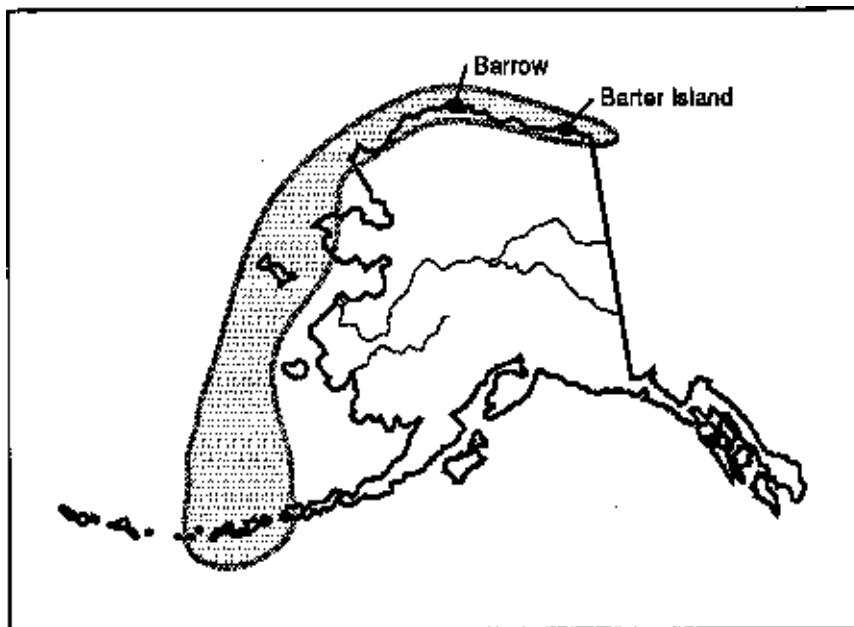


Figure 2b. Geographic Extent of Whaling Boom

activity in Alaska since the vessels were in arctic waters for less than two months. Harvested whale products were processed in Hawaii and San Francisco. The year-round land bases established later had a modest impact on infrastructure, since they led to permanent trading posts at settlements such as Barrow and Barter Island (Figure 2b). Native population numbers remained small. Due to introduced diseases, the introduction of the alcohol trade, and substantial walrus harvest by whalers, the Inuit population actually declined. Walrus were a major Inuit food source.

SALMON BOOM

Alaska's salmon boom began in Southeastern Alaska in 1878 when canneries were established at Sitka and Klawock. By 1882, canneries were established on Kodiak Island and two years later in Bristol Bay (Figure 3a). The industry grew steadily into the early 1900s, and reached a double peak of activity in 1919 and 1929 (Figure 3b). The number of canneries operating in Alaska was used as the measure of the boom since a consolidation of the canneries was considered a mark of stability. Generally, the number of canneries also paralleled the number of cans of salmon packed (National Resources Committee, 1938). The end of the fishing boom period came with the Great Depression, which in Alaska was reflected in the drop in the value of salmon and the decline in the number of

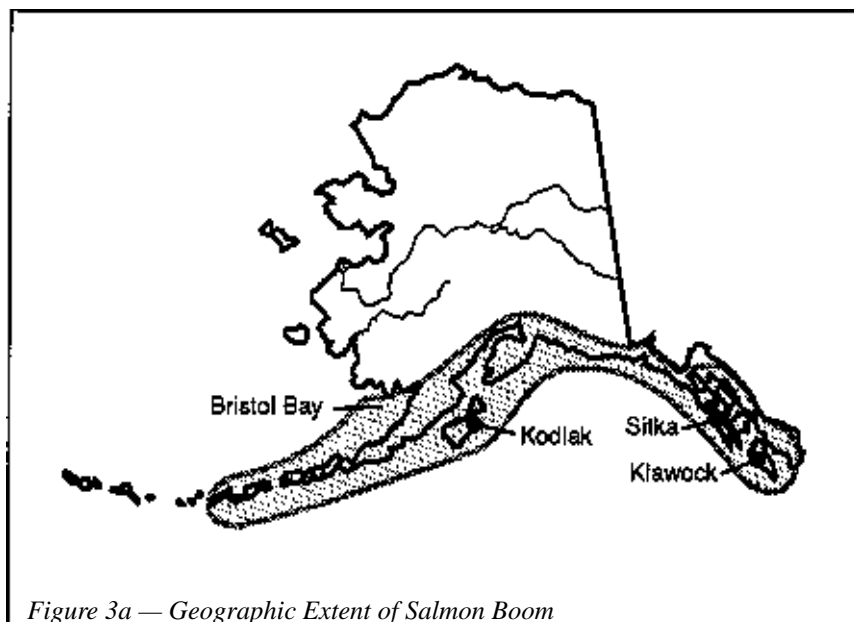


Figure 3a — Geographic Extent of Salmon Boom

canneries in the mid-1930s (Cooley, 1963). Later growth spurts did occur in the salmon industry, especially in the 1960s. However, these occurred in the same areas, and are regarded as continuations in a fluctuating resource industry, not major booms.

The salmon boom had a number of parallels with the Russian fur and American whaling water-based booms. The owners of the cannery operations were non-Alaskans; the fishermen were mostly Europeans hired from the states in the Pacific Northwest; and

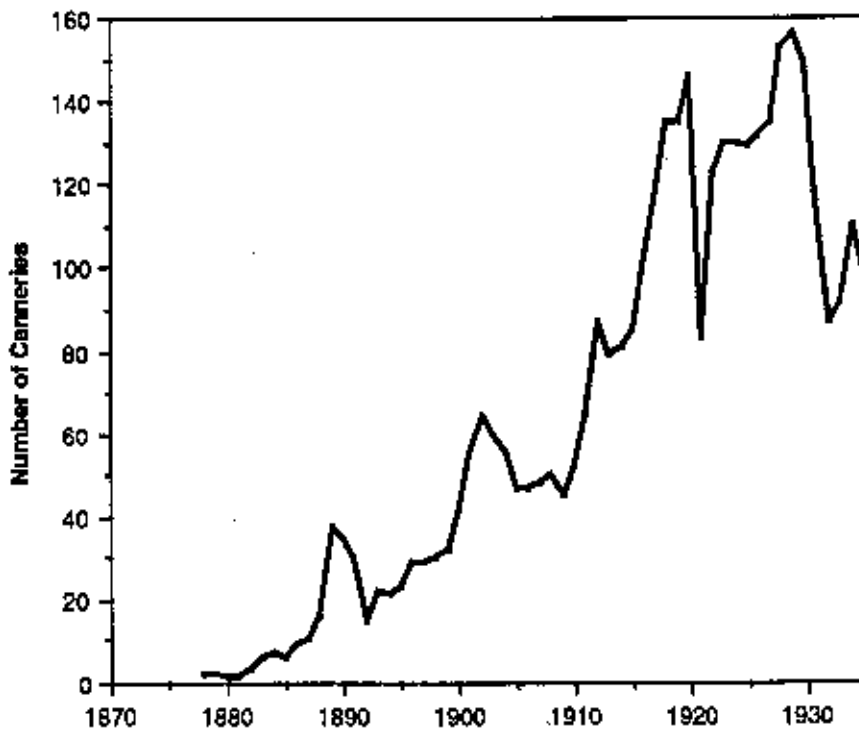


Figure 3b — Number of Canneries Operating in Alaska
 source: National Resources Committee, 1938

the cannery workers, often Chinese, were imported for the fishing season. Overfishing problems were common as few regulations existed and enforcement was minimal. For Natives, the loss of salmon streams to commercial operations hastened the decline of traditional settlements in favor of salmon cannery sites.

Infrastructure development from the salmon boom was modest, since the industry was based on seasonal harvests of fish and the importation of labor. Nevertheless, the industry did provide a basis for continued settlement at places such as Ketchikan and Petersburg in Southeastern, Cordova and Homer in

Southcentral, and Dillingham in Southwestern Alaska. Ocean transportation linkages, including port facilities, were established between key Alaskan settlements and Seattle. Also, the salmon industry served as the major tax base for the territorial government (Haycox, 1989). Thus, indirectly, the industry provided a financial base for governmental-based infrastructure expansion throughout the territory. Finally, the strong control of the fishing industry by non-Alaskan interests was a spur to many territorial residents to seek statehood and greater control of local resource development (Cooley, 1963; Gruening, 1968). Indirectly, then, the salmon industry acted to change the character of Alaskan resource control.

MINERAL BOOM

The mineral boom was dominated by gold mining and, secondarily, copper mining. In 1880, gold was discovered in Juneau, followed by discoveries in other areas of Southeastern including Ketchikan. After 1886, the Yukon gold boom led to staging sites to the Interior at Haines, Skagway and Valdez. The Klondike discovery in 1896 provided the major stimulus. The gold boom spread widely in Alaska. (Brooks, 1953). In 1899, Nome became the center

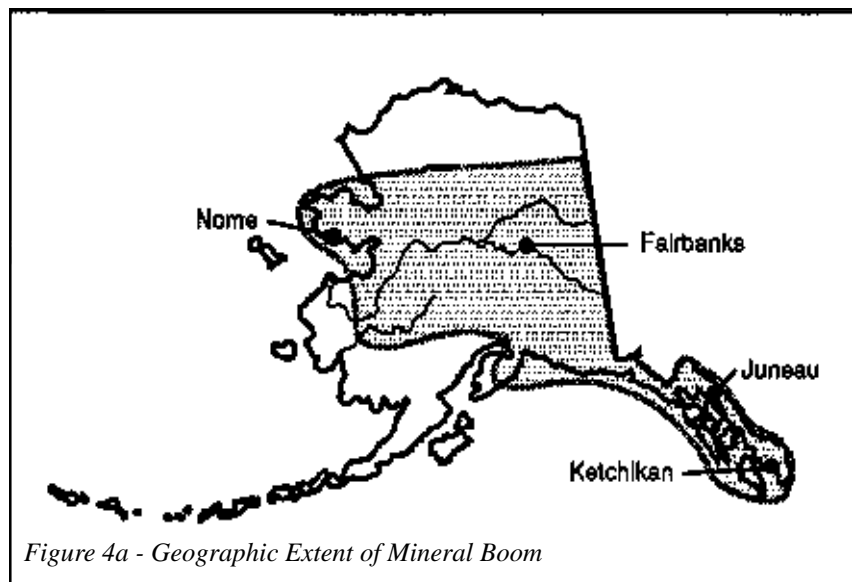


Figure 4a - Geographic Extent of Mineral Boom

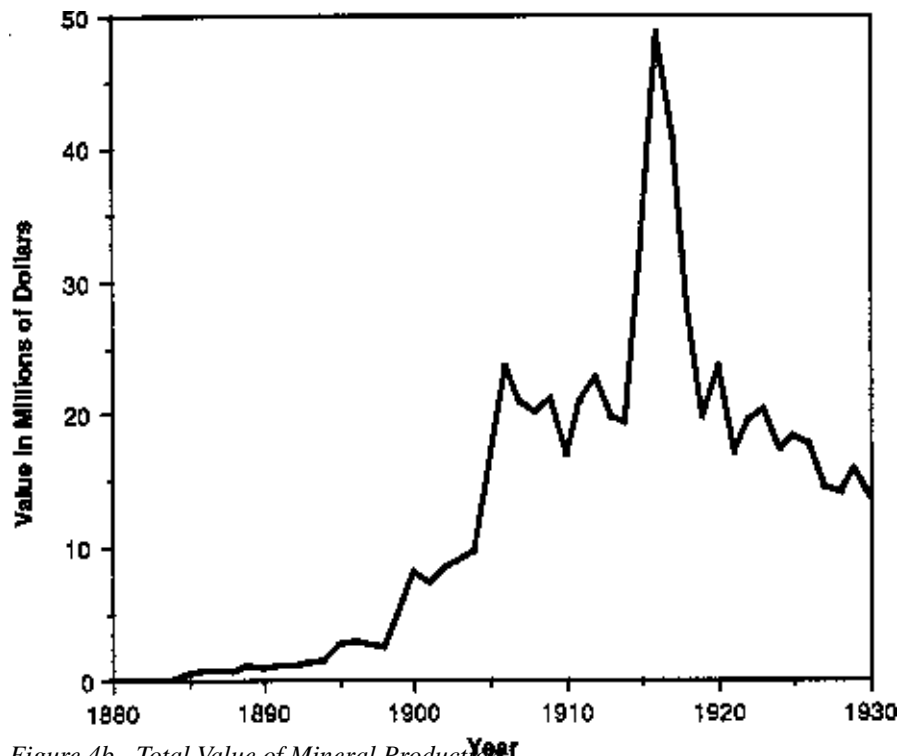


Figure 4b - Total Value of Mineral Production
 source: Johnson and Jorgenson, 1963

for a boom followed by Fairbanks in 1902 (Figure 4a).

Paralleling the gold boom was the development of copper in the Wrangell Mountains of Southcentral, beginning in 1911 and extending into the 1930s. The value of mineral production rose sharply with the Fairbanks discoveries and peaked during the early years of World War I, when both gold and copper were in high demand. The end of the boom period came in 1917 (Figure 4b). At that time, the Treadwell mine near Juneau, the largest operation in Alaska, flooded and subsequently closed. Also, gold prices were stabilized and

mining profits declined.

The expansion of the physical infrastructure from the mining industry in Alaska was enormous. First, the need to transport people, equipment, and minerals required the building of an extensive transportation network. Roads and trails were established through the passes in Southeastern and Southcentral Alaska, and to mining centers in Interior and Western Alaska. In Southeastern, the gold boom, along with the salmon boom, forced the federal government to establish lighthouses and buoys to enhance the safety of ships. Railroads were built into the Yukon from Skagway, to Kennicott from Cordova, and from Seward and Anchorage to Fairbanks. Alaska's airstrips, although developed after the boom period, reflected the geographic pattern of mining communities. Alaska's first telegraph system in 1903, came in response to the rapid population expansion throughout the mining regions. (It should be noted here that there was a paralleling decline in the Native populations as a result of introduced diseases.) Second, numerous towns came into existence. While many were boom and bust towns, a few became major regional centers: Fairbanks, Nome, Anchorage, and Juneau. Juneau's importance as a gold mining community led to its selection by Congress as Alaska's capital city.

MILITARY BOOM

Before World War II, Alaska was not considered strategically important to the U.S. military. Only one military base, located at Port Chilkoot (Haines) defended the territory. With the Japanese attack on Pearl Harbor and invasion of the Western Aleutians, both naval and army units were rushed into Alaska. By 1942, over 150,000 troops were in Alaska. The headquarters for the military command was established in Anchorage with key naval bases located at

Sitka and Kodiak. Fairbanks and Nome were important centers for the Army Air Force because of the lend-lease program with the Soviet Union. After the war, troop strength dropped to 20,000. In

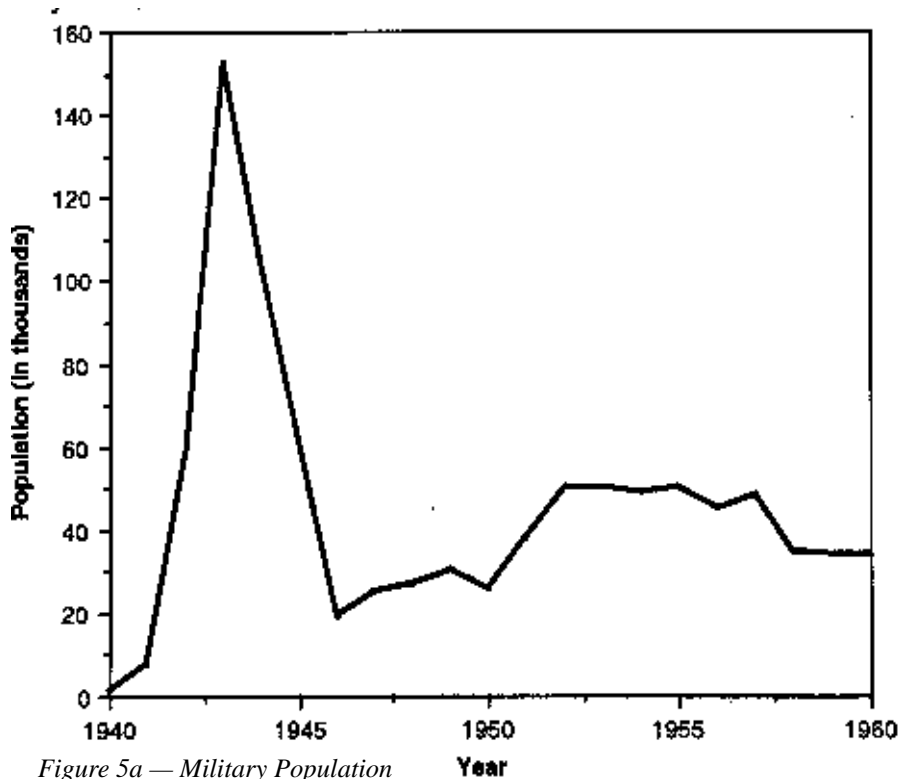


Figure 5a — Military Population
source: Rogers and Cooley, 1963

the early 1950s the Korean Conflict and the Cold War troop strength increased to over 50,000 until 1958, when numbers dropped to 40,000. This 1958 decline can be considered the end of the second phase of the military boom (Figure 5a). This second phase of the military boom is included since it involved a significant reworking of the established infrastructure and a major expansion into new regions (Figure 5b).

The military expansion of World War II required the establishment of a physical infrastructure that would permit the stationing and movement of troops and supplies. Consequently, the Alaska Highway was built, an

oil pipeline linking Haines and Fairbanks was completed, ports and harbors throughout the Territory were built and improved, airfields were built and expanded, and communication linkages were likewise upgraded.

The Cold War provided a strategic need to improve and further expand facilities. Indeed, new bases were established in the Aleutians, the Arctic (DEW Line) and in the Interior to meet the new

Soviet threat. More than any previous boom, the military provided dramatic demographic growth and infrastructure expansion.

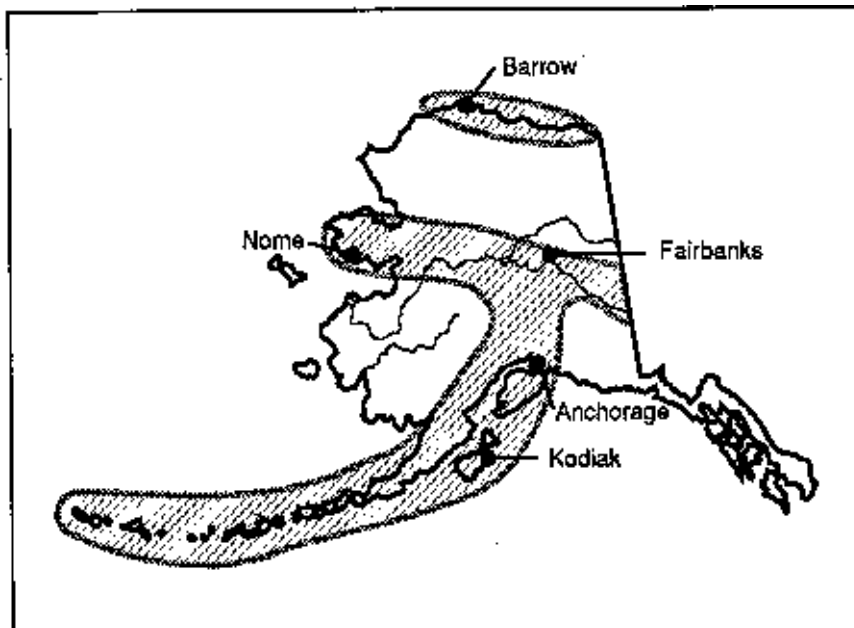


Figure 5b — Geographic Extent of Military Boom

OIL BOOM

In 1958, just prior to statehood, oil development occurred on the Kenai Peninsula and extended into Cook Inlet. While this development was important to Southcentral Alaska, it did not constitute a real boom. Economic activity and population expanded, but not dramatically. However, the establishment of the industry headquarters in Anchorage and the expansion of the infrastructure, provided a basis for locating the Prudhoe Bay petroleum development headquarters there,

The discovery of Prudhoe Bay oil field in 1968, after initial delays, led to the construction of the trans-Alaska pipeline from 1973 to 1977. The construction project led to a dramatic increase in population and economic activity throughout the state, but especially along the pipeline route and in the Anchorage region. The construction boom was followed by a rapid and dramatic increase in petroleum revenues to the state (Figure 6a). The decline of world oil prices in the early 1980s shortened the oil boom period, and after 1985, a dramatic decline occurred in petroleum revenues to the state. Thus, 1985 marks the end of the pipeline boom—a 12 year phenomenon.

The boom boosted Alaska's population from 300,000 in 1970 to 550,000 in 1985. Much of this growth took place in the Anchorage region, while Fairbanks witnessed a moderate population increase. Infrastructure expansion included the building of the Dalton Highway from the Yukon River to Prudhoe Bay, the expansion of the port of Valdez, and the improvement of the Alaska Railroad. (Figure 6b). Indirect infrastructure improvements included state financing of new schools and public facilities throughout Alaska.

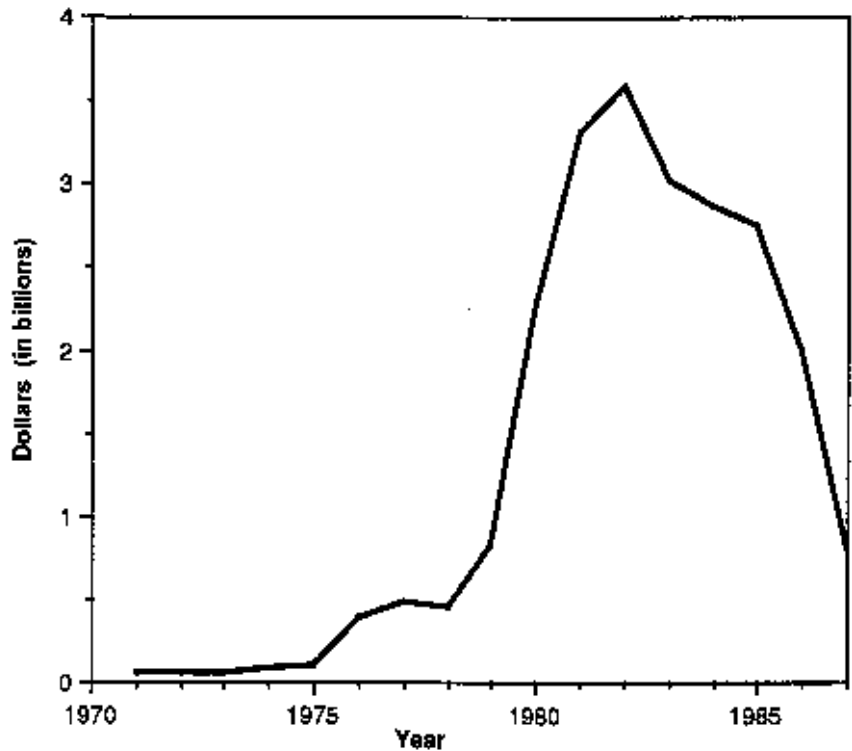
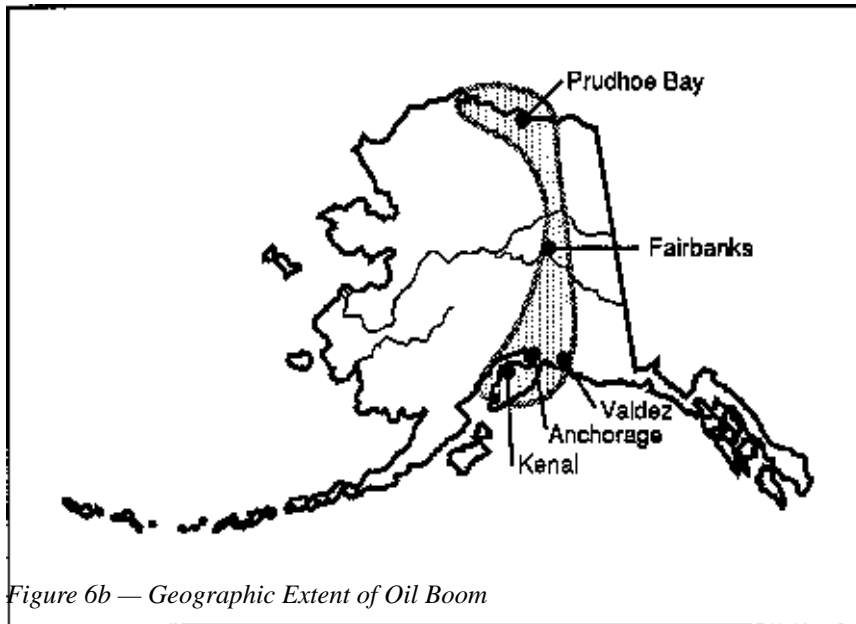


Figure 6a — Alaska State Petroleum Revenues
source: Alaska Department of Revenue, 1988



CONCLUSIONS

Since the beginning of the Russian fur boom in 1743, Alaska has witnessed six major booms (Figure 7). Five of these have been related to resources and one to strategic defense needs.

The areas affected by the largest number of booms have witnessed the greatest degree of development. The one area experiencing five of the six booms has been Southcentral. In particular, the Anchorage region has been directly affected by the three major land-based booms. Anchorage was the headquarters for the Alaska Railroad, a key transportation facility for development in Southcentral and Interior regions. During World War II, it was the center for the Alaska Command which required a modern infrastructure.

The demands of the Cold War imposed similar demands. Oil development, first in Southcentral and later at Prudhoe Bay, also had its headquarters in Anchorage. One consequence of this centering of activity has been the increasing growth and concentration of population. Today, over 40 percent of Alaska's population is located in the Anchorage area. In contrast, in areas where there were no boom effects, Alaska remains at its most rural. The subsistence economy is still important.

The booms can be further distinguished between land-based and water-based. The primarily water-based booms, Russian fur, whaling, and salmon, were largely seasonal in nature and required only limited land-based infrastructures, including settlements. The mineral, military, and petroleum booms were largely land-based. They each required a substantial infrastructure in terms of transportation and communications systems as well as settlement development and growth.

The relationship between land-based versus water-based booms and development is clearest in the extreme cases, but becomes muddled in areas affected by two or three booms. Arctic Alaska has been impacted by the whaling, military, and oil booms, but has had minimal demographic and infrastructure growth. Alternatively, Southeast has been impacted primarily by the fishing and mineral booms. Clearly numerous historic and geographic factors affect development patterns. This study suggests that booms play a major part in that process.

Dilsaver (1986), has noted that the California gold boom led to a significant rise in agriculture after the fading of the gold economy. His analysis suggests that the gold boom, in part, provided an infrastructure base and an expanded market population for agricultural development. In Alaska, too, agriculture has benefited from many of the booms (Lewis, et. al., 1987). It was initiated by the Russian colonists, and extended by American settlers in the 1920s and 1930s following the construction of the Alaska Railroad and the mineral booms. It received further stimulation with the military boom and especially the oil boom.

The multiboom model provides a framework for understanding the spatial and temporal patterns of growth in an area as they relate to the major booms. Also, if the agriculture sketch is correct, the boom model also puts in perspective the pace and the pattern of expansion and contraction of smaller economic activities in a region.

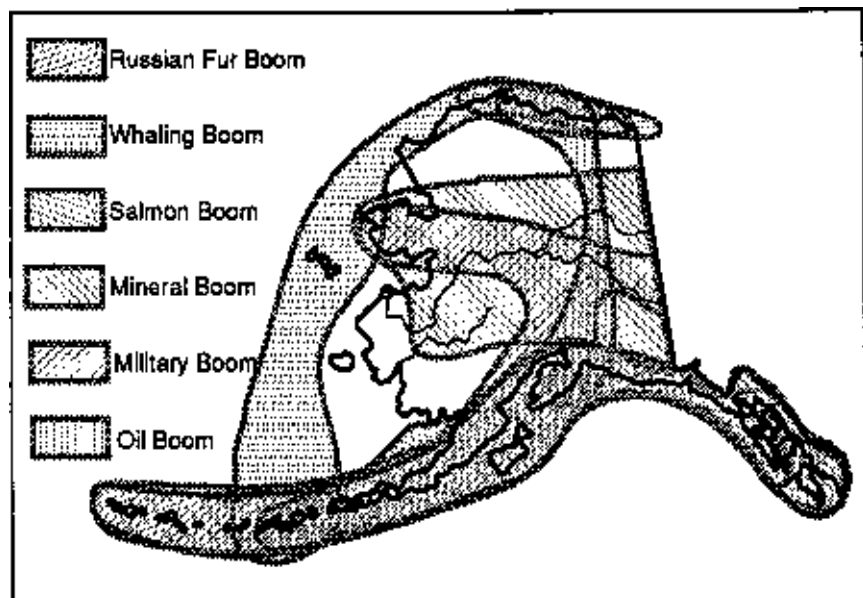


Figure 7 — Geographic Extent of Six Major Booms

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