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SEALASKA HERITAGE INSTITUTE

The Significance of Sharing Resources in Sustaining Indigenous Alaskan Communities and Cultures

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The Significance of Sharing Resources in Sustaining Indigenous Alaskan Communities and Cultures

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INTRODUCTION

Indigenous Alaskan societies have existed and flourished for more than 10,000 years, building sophisticated regional adaptations utilizing natural resources available to them (Langdon 2013). Indigenous Alaskans depended and continue to depend on annual harvests of fish, wildlife, birds, and plants for food and other uses. They developed social and cultural systems to provide for the well-being of the group and its members through various institutions and practices (Langdon 1984, 2013). Their spiritual systems were based on beliefs in the essential similarity of and interconnectedness of humans and other species that respected and sought to sustain the continuous return of the species on which they depended (Fienup-Riordan 2001, Langdon 2019). Central to the spiritual system was the belief that harvests were possible only because other species, as volitional, attentive beings with agency, made themselves available for capture ("give themselves") (Brewster 2004). Humans in turn had responsibilities and obligations of various kinds to take certain actions to respect those upon whom they depended and ritually assure their return (Langdon 2019).

As a central value and practice characteristic of all Indigenous Alaskan societies, sharing subsistence resources was and is a foundation of Indigenous life and livelihood. Sharing is both glue in binding extended families together and lubricant promoting expansion of social ties. Sharing is positioned within a continuum of transfers of subsistence food and other materials that occur within Indigenous Alaskan societies (Brown et al. 2017, Langdon 2012, Pryor 1977, Wolfe et al. 2000). This paper will describe and discuss the position of sharing in Indigenous Alaskan societies and identify its significance in sustaining Indigenous Alaskan communities and maintaining Indigenous Alaskan cultures.

SUBSISTENCE AS WAY OF LIFE

Subsistence is the term in Alaska state law for a specific type of utilization of the fish, wildlife, and birds that co-reside in Alaska with human beings. In Title VIII of the Alaska National Interest Lands and Conservation Act (1980), that type of resource use by Indigenous Alaskans is referred to as "customary and traditional uses" that are legislatively distinguished as of cultural significance for Indigenous Alaskans, a category that does not apply to non-Indigenous Alaskans. Criteria under both legal definitions include distribution and sharing as central characteristics. Indigenous Alaskans consider the term "subsistence" an insult to the "way of life" they value and practice due to its implication of a minimal standard of existence and its limitation to harvests.

Former British Columbia Supreme Court Justice Thomas Berger (1985) held hearings in villages around Alaska in the early 1980s the testimony from which became in part the basis for his book *Village Journey: The Report of the Alaska Native Review Commission*. He heard repeatedly that subsistence was much more than the harvesting for consumption of fish, wildlife, birds, and plants but rather constituted a specific way of living (Langdon 1984). Jonathon Solomon of Fort Yukon told him "The culture and the life of my people are the subsistence way of life. It goes hand in hand with our own culture, our own language, and all our activities" (Berger 1985:52). Testimony like this led Berger to conclude:

Subsistence is more than a means of production, it is a system for distribution and exchange of subsistence products. The system is not random: it operates according to complex codes of participation, partnership, and obligation. Traditional rules of distribution ensure that subsistence products are available to every village household, even those without hunters. (Berger 1985:56)

Usher et al. (2003: 179-180) observe:

In subsistence-based societies...security and well-being tend to be more associated with system maintenance than individual gain. Security and well-being are achieved through cooperative production, wide distribution, and mutual aid, each organized by kinship. This is celebrated, consolidated, reinforced, and reproduced by sharing, feasting, ritual observance, and associated ethical norms.

Similar commentary is provided by Berman (1998), who also identifies the multi-dimensional nature of the subsistence way of life: "The subsistence economy is an entire economic system based on household production and sharing of locally produced goods, with closely integrated social, cultural and spiritual dimensions." (emphasis added)

For Indigenous Alaskans, the term means a totality of existence beyond the material provisioning:

It is through capturing, processing, storing, distributing, celebrating, honoring and consuming naturally occurring fish and animal populations that subsistence societies define the nutritional, physical and psychological health, economic, social, cultural and religious components of their way of life. (Langdon 1984: 3)

Values and ethical standards taught and learned in Indigenous Alaskan societies undergird and generate these perspectives and activities; sharing is a core value and its expression by societal members represents the essential quality of that existence (Langdon 2011).

Indigenous Alaskans have adapted customary and traditional practices of provisioning and cultural traditions to new economic

conditions over the past 200 years. By the middle of the 20th century, Indigenous Alaskans had developed a range of social adjustments incorporating cash and external materials into "mixed economies" (Wolfe and Ellanna 1983). The term "subsistence-based" emerged to identify communities where customary and traditional production, sharing, and associated cultural practices displayed continuity over the generations and were the primary orientation of most community households (Wolfe et al. 1994). Identity and orientations in these communities derive from customary and traditional subsistence practices. A recent study of mixed-economies in northern parts of the globe concluded:

When the relationship to nature, participation in hunting and fishing and consuming traditional foods are regularly emphasized as significant for Inuit [and Iñupiaq] in the Arctic, they...indicate...relationships and activities which are important for the quality of life of people. And, seen in this light, 'market economic activities as parts of the subsistence way of life' offers, perhaps a sufficient description of the mixed economy in many of the Arctic communities when observed through local eyes. (Poppel 2010:360; emphasis added)

SHARING

The maintenance and reproduction of any human society requires the production of materials, their adequate distribution to members of the society, and their consumption. The movement of materials from production to social units is accomplished through various institutions and customary practices.

In Indigenous Alaskan societies, sharing is part of a continuum of practices through which subsistence harvests are distributed or circulated according to certain rules and traditions. First, a distinction needs to be made between allocation and distribution. Then sharing is considered a type of distribution. When resource harvests occur within Indigenous Alaskan societies, recognized allocations follow (Braund 2018, Brewster 2004, Kofinas et al. 2016, Langdon 2011). Where more than one individual is involved in the production and processing of the harvests, a system of shares allocates the harvest to those who have participated in the harvest through their labor, equipment, or other material support. These are sometimes referred to as "participatory shares" (Braund et al. 2018:16), or "helping shares" (Burnsilver et al. 2016:3). These shares are based on "some type of contribution" to the harvest (Kofinas et al. 2016:20). In Wainwright, all village households receive a "community share" from the communal beluga harvest (Kofinas et al. 2016: 21). Worl (1980) sees this process (participating in the harvest) as generating a property right to determine the use of what is obtained through allocation in any manner after its receipt. Then additional processing may occur leading to subsequent consumption, transfer, or storage of various products.

The division of portions of a bowhead whale by Iñupiag hunters is an example of how allocation among participants in joint production occurs (Braund 2018:18, Brewster 2004: 135). Similarly, portions of beluga whale are identified by coastal Yup'ik for allocation among those who participated in their harvest (Fienup-Riordan 1986b). When each party has received the requisite portion from the harvest, they are by rule and custom entitled to make distributions of various kinds including sharing. Those who receive products through sharing or other forms of distribution may in turn engage in additional sharing to others. Worl (1980) referred to these as primary and secondary distributions. Secondary distribution recipients often make tertiary distributions to others and may hold special meals to broaden the network of sharing even further. An Utqiagvik whaling captain commented that he is aware that family in Anchorage who receive whale products "spread them far and wide" to others in Fairbanks, Palmer, Wasilla, Tok, Glennallen, Bethel, and Seward (Braund 2018:25).

Figure 1. Types of Subsistence and Nonsubsistence Exchanges in Alaska



Source: Wolfe et al 2010:3

Figure 1 shows the current definitions of and distinctions between forms of subsistence and nonsubsistence "exchange" in Alaska recognized by state and federal management authorities. Langdon and Worl (1981:54-55) identified the following types of customary and traditional distribution/circulation practiced by Indigenous Alaskans: ceremonial distribution, sharing, partnership, trade, and commercial exchange. Trade may also be referred to as barter while commercial exchange refers to the limited cash transactions defined as

Figure 2. Distribution and Exchange of Subsistence Products by Indigenous Alaskan Regional Groups

INDIGENOUS ALASKAN REGIONAL GROUP	HISTORIC	RECENT
Ahtna	Potlatch ceremonies, sharing, intertribal trade	Potlatch sharing, subsistence exchange
Aleut/Unangan	Ceremonial distribution, sharing, formal sharing, intervillage trade	Sharing, subsistence exchange
Inupiaq (Arctic Slope)	Ceremonial distribution, formal sharing, kin and non-kin formal partnerships, intertribal trade, intercontinental trade	Ceremonial distribution, sharing, formalized sharing, subsistence exchange, customary trade
Inupiaq, Sivuqaqmiut, Yup'ik (Bering Straits)	Ceremonial distribution, sharing, formalized sharing, kin partnerships, intertribal trade, intercontinental trade	Ceremonial distribution, sharing, formalized sharing, subsistence exchange, customary trade
Yup'ik, Alutiiq, Dena'ina (Bristol Bay)	Ceremonial distribution, sharing, formal sharing, non-kin partnerships, intervillage, intertribal and intercontinental trade	Sharing, subsistence exchange, customary trade
Yup'ik, Dena'ina (Calista)	Ceremonial distribution, sharing, formalized sharing, kin partnerships, intervillage and intertribal trade	Ceremonial distribution, sharing, subsistence exchange customary trade
Alutiiq (Chugach)	Ceremonial distribution, sharing, formalized sharing, kin partnerships, intervillage and intertribal trade	Sharing
Dena'ina, Alutiiq (Cook Inlet)	Potlatch ceremonies, sharing, kin and non-kin partnerships, intertribal trade	Potlatch ceremonies, sharing, subsistence exchange, customary trade
Koyukon, Gwich'in, Tanana, Upper Tanana, Tanacross, Han, Upper Kuskokwim (Doyon)	Potlatch ceremonies, sharing, kin and non-kin partnerships, intervillage and intertribal trade	Potlatch ceremonies, sharing, subsistence exchange, customary trade
Alutiiq (Koniag)	Ceremonial distribution, sharing, formalized sharing, intervillage and intertribal trade	Sharing, subsistence exchange
Inupiat (NANA)	Ceremonial distribution, sharing, formal sharing, kin and non-kin partnerships, intervillage, intertribal, and intercontinental trade	Sharing, formalized sharing, partnerships, subsistence exchange, customary trade
Tlingit, Haida (Sealaska)	Potlatch ceremonies, sharing, intervillage and intertribal trade	Potlatch ceremonies, sharing, subsistence exchange, customary trade

Source: Langdon and Worl (1981:64)

"customary trade" that are legal under state and federal law (Brown et al. 2017, Langdon 2012). Barter and customary trade are linguistically distinguished from each other in Alutiiq, Haida, Tlingit, and Central Yup'ik (Langdon 2012:24-25, Wolfe 1981:211). Kishigami (2004) proposes "nine types of sharing: giving based on rules, voluntary giving, demand giving, exchange based on rules, voluntary exchange, demand exchange, redistribution based on rules, voluntary redistribution, and demand redistribution."

Indigenous Alaskan languages often have various words for sharing in order to specify the social contexts or certain specifics about the objects given. For example, in Tlingit, Haida, and several Dene (Athabascan) societies, a terminological distinction is made between what might be termed general giving/sharing and the giving/sharing that occurs during potlatch ceremonies.

In the following discussion, ceremonial events that include feasts and other forms of food consumption are considered a form of sharing though in some cases such distributions are culturally obligatory. Langdon and Worl (1981: 61-63) identified 27 named ceremonial events that included food in historic Indigenous Alaskan societies. Figure 2 shows traditional and contemporary presence of these practices among Indigenous Alaskan regional groups. Sharing is one of the practices identified in every region.

The next section provides information on sharing from different perspectives.

What is sharing?

Sharing is the transfer of a good or other item, such as subsistence food, owned by one person or group to another. According to Price (1975) such transfers typically are undertaken without calculation or expectation of return. The Gwich'in of Venetie stipulated that "unrestrained sharing" was the most frequent manner for distributing harvests among village residents (Kofinas et al. 2016:60). Similarly, research in six Alaska Peninsula Alutiiq villages found that "Respondents consistently stated that sharing is practiced as a deeply embedded cultural value without any calculated ulterior intention"

(Hutchinson-Scarborough et al. 2020:339). The "...prevailing view among Bristol Bay Yup'ik people, especially among the Elders, [is] that subsistence resources are to be shared generously and without bargaining or the expectation of an immediate, equivalent replacement" (Krieg et al. 2007:21). A Tlingit from Hoonah who distributes and shares abundant amounts of herring eggs from Sitka stated, "somebody making money off [herring eggs] is a totally different idea than subsistence" (Thornton 2019:139).

Sahlins (1972:194) proposed the concept of "generalized reciprocity" as a pattern in which transfers from one party to another are "putatively altruistic" as "the expectation of a direct material return is unseemly"; while the expectation of return is implicit, failure to reciprocate does not cause the donor to cease giving. Woodburn (1998) offered the term "delayed reciprocity" to account for societies in which expectation for return from sharing was high but not for immediate return. Sahlins' concept of "generalized reciprocity" is a broader notion that is clearly distinct from "balanced reciprocity" (exchange such as barter or sale in most cases) where participants view value received (either another item or money) as equivalent, and from "negative reciprocity" in which one side seeks to maximize their return at the expense of the other party (Sahlins 1972). As will be discussed below, sharing occurs in many contexts and institutional forms.

Indigenous Alaskans have terms in their languages that make distinctions among various types of transfers of resources and contexts for those transfers. For example, among the Central Yup'ik the term *cikir*- means to give and *cikiun* refers to a gift and with both terms "there is no expectation of an immediate return for the shared item" (Krieg et al. 2007:15). Indigenous Alaskan languages conceptually distinguish sharing (giving a gift) from trade/exchange/barter and from exchange for money (sale).

Why does sharing occur?

Sharing occurs for a number of reasons. Indigenous Alaskans who have been asked why they share have given the following reasons. Three hundred and fifty-three respondents from Alaska bowhead

whaling villages reported in order of frequency the following: "tradition or custom, others need food, means of survival, to assure a good hunt, brings joy to everyone" (ACS et al. 1984:209). Okada (2010) reported eight reasons for sharing given by Iñupiat residents of Barrow, Kaktovik, and Wainwright: maintaining cultural traditions, avoiding waste, seeking to benefit from "good luck," providing a good feeling, giving and taking (balanced reciprocity), forming a relationship with animals, remembering hard times, and gaining a sense of pride.

Values. The foremost reason is that sharing is a strongly held cultural value in all Indigenous Alaskan societies. Those values are translated into moral and ethical obligations for producers and those with resources to give to others particularly if they are in need and without expecting a return (Braund 2018, Langdon and Worl 1981, Langdon 1984). Among Iñupiat in the bowhead whaling communities, 60% stated the primary reason for sharing was custom and tradition (ACS et al. 1984:206). The research also showed that those with more education cited cultural values as the most important reason for sharing at a higher frequency than those with less education (ACS et al. 1984:209). In mixed or subsistence-based economies cultural values and practices "of sharing and cooperation enable risk sharing, improve food security, improve health and equity outcomes, and contribute to group identity and cohesion" (Baggio et al. 2016:13708).

Food Security. The concept of "food security" addresses the degree to which humans have adequate food to meet life requirements. The definition of food security from the US Department of Agriculture is "access by all people at all times to enough food for an active, healthy life" (Fall and Kostick 2018). In subsistence societies, productive capabilities of households differ substantially for various reasons. Across many societies practicing the "domestic mode of production," about 20-30% of households fail to provide for their own livelihood (Sahlins 1972: 41-99). Allan (1965) reported that the rest of the society typically produces a "normal surplus of subsistence" that reaches and supports those experiencing shortfalls. In Alaska, research has demonstrated that 30% of Indigenous Alaskan "superhouseholds"

Table I. Contribution of Low, Middle, and High Third of Households to Annual Wild Food Harvests

Culture Area (HHs)	Low Third	Mid Third	High Third	
Tlingit-Haida (N=567)	1.6%	16.7%	81.6%	
Alutiiq (N=405)	4.1%	21.4%	74.5%	
Aleut (N=251)	3.0%	16.8%	80.2%	
Yup'ik (N=740)	5.2%	22.7%	72.1%	
Iñupiat (N=402)	4.2%	21.5%	74.3%	
Athabascan (N=335)	2.8%	17.5%	79.7%	
All Areas (N=2,700)	3.8%	20.2%	76.0%	

Source: Wolfe et al.. (2010)

capture more than 70% of harvested "wild foods" (Wolfe et al. 2010). As shown in Table 1, the most productive third of the harvesting households range from 81.6% to 72.1%. However, virtually all households participate in harvesting and production to some degree. Sharing is one of the primary institutions through which the harvests of the high producing "superhouseholds" reach others, especially those in need (Wolfe et al. 2010). An Iñupiat hunter characterized his experience as follows:

It has always been our custom to allow the good hunters to catch more than the current limits and share with people who are berry pickers or green pickers or fishermen, who in turn would share their crop and catch with the hunters. (Berger 1985:56) Providing food for others was cited by Indigenous Alaskan bowhead whalers as the second most important reason for sharing by 28% and another 5.1% shared because it was a means for survival of those receiving (ACS et al. 1984:209). Among the Iñupiat of Utquiagvik and elsewhere in bowhead whaling communities, "Sharing meat enables people who do not have the necessary hunting resources or skills to obtain the meat which they consider essential to survival" (ACS et al. 1984:206).

The value and pleasure of subsistence harvesting along with the desire to participate in generalized reciprocity prompt households in the lower third to produce and share to a limited extent. However, recent research indicates that anywhere from 10% to 20% of households in Indigenous Alaskan villages do not produce any subsistence foods (BurnSilver and Magdanz 2019, Kofinas et al. 2016, Magdanz et al. 2019).

Concerns over food security are significant in many rural Indigenous communities across Alaska. Recent research in upper Yukon and North Slope villages found between 20-25% of households reporting recurrent concerns about availability of food (Kofinas et at 2016). In a recent Alaska Department of Fish and Game study, 30 of 99 subsistence-eligible communities were found to have low to very low food security, many of them located on the road system (Fall and Kostick 2018: 6). Of those, six villages had more than 40% of households reporting low to very low food security. A comparable figure for the United States as a whole is 13% (Fall and Kostick 2018). Sharing is the primary mechanism for ensuring adequate food in many cases where food security is an issue, especially in times of extreme need.

Nutrition and health. Subsistence foods are nutritionally of high quality and consumption of them is important to both physical and psychological health. A diet composed of foods traditionally consumed by northern coastal Iñupiat consisted primarily of proteins and fats with only 2% carbohydrate (Draper 1978:141). Draper (1978:131) found that the "aboriginal Eskimo diet, despite its lack of variety, is capable of furnishing all the nutrients essential for nutritional

health, provided it is available in adequate amounts and is prepared according to traditional methods." Enough ascorbic acid was obtained "from having fresh meat every day and don't overcook it, there will be enough [vitamin] C from that source alone to prevent scurvy" (Draper 1978:140). Research among Iñupiat in the 1970s found in contrast to expectations that Elders who continued to follow a traditional diet showed no evidence of arterial sclerosis or heart disease among any of the evaluated adults.

Indigenous Alaskans regard certain foods as having important medicinal value and so they are among the foods most commonly shared. Eulachon oil in Southeast Alaska produced from fish runs on the Chilkat, Chilkoot, and Nass Rivers is shared throughout the region and is highly regarded for its medicinal qualities (Magdanz 1993). Similarly, herring roe-on-kelp, widely shared and distributed from Sitka, is also considered important for health purposes (Thornton 2019). Seal oil is also considered an important contributor to health in all regions where seals are harvested. Other types of medicinal foods are also shared.

The sharing of traditional foods with Elders is especially important as they are a necessity for feeling healthy and staying active and are believed to contribute to longevity. It is believed by many Indigenous Alaskans that Elders who have lived on locally produced subsistence foods for their entire lives have developed physiological and possibly psychological dependence on such foods (Langdon 2011). For example, Margaret Cooke, a Yup'ik who testified to the Alaska Native Review Commission chaired by Justice Thomas Berger, remarked, "...believe me, my body must have seal oil. I eat it almost daily...My body is used to seal oil and must have seal oil...no matter what" (Mander 1991:300). Similar comments can be obtained from Indigenous Alaskans in both urban and rural contexts, particularly Elders and those raised on such foods.

Indigenous Alaskans often have a strong preference for subsistence foods. "Native preferences for foods are strongly held and differ from preferences in mainstream society" (Duffield 1997:194).

These preferences are a major catalyst to production and sharing of subsistence foods.

Preferences are established for traditional foods as children and continue over lifetimes. Some foods in each region are regarded as delicacies or specialty items and significant efforts are made to acquire them. In addition, Elders may have special foods that they prefer such as among the Tlingit, for whom red, post-spawning sockeye salmon are a highly desirable food.

Researchers examining the contribution of subsistence foods to the Iñupiat residents of Little Diomede determined that "store bought foods were not an adequate replacement for subsistence foods" (Braund 2018:32). They found that:

...the replacement of subsistence foods by store bought foods has been demonstrated to be associated with deficiencies in [vitamins] A, C, D, and folic acid, imbalances of calcium metabolism, and increases in obesity (associated with carbohydrate and sugar consumption increase and diabetes), dental caries, acne, and iron deficiency anemia. (ResourceEcon et al. 2011)

Sharing of subsistence foods provides key nutritional values that are important to the maintenance of health and well-being especially for households with Elders who lack harvesters or abilities to independently produce subsistence foods.

Cultural Reasons. Clear preferences for subsistence foods and the subsistence way of life are demonstrated by investments in technology, active production, distribution, sharing, and consumption of subsistence resources. Among the Yup'ik, displays of cultural identity that assert and confirm the membership in a group or community that values subsistence as a component of their identity are ongoing through public verbal statements among group members (Hensel 1996). While sharing of subsistence resources constitutes a mark of cultural membership and valuation of cultural beliefs and practices,

it is also thought of as a characteristic distinguishing Indigenous life from that of the dominant American culture. In Venetie, Kofinas et al. (2016:62) found that "sharing and cooperation were described as cultural markers that distinguish the indigenous user from other harvesters such as urban hunters seeking trophy animals."

The social transition and recognition of young males as adults has traditionally been acknowledged by the first harvest of a core resource (such as a seal) and its distribution through sharing to others in the community. Whether through formal ceremonial recognition (see discussion of Yup'ik seal party below) or informal acknowledgment by family and relatives, the transition to the new social position is evident in many respects. New responsibilities and expectations accompany the change in status associated with sharing.

Sharing sustains ongoing bonds and creates new relationships thereby enhancing the emotional and physical well-being of those who give and receive. The feeling and recognition of co-membership increases positive self-worth and strengthens community well-being providing the "good feeling" of social cohesion and caring (Kofinas et al. 2016:62).

Sharing with others in the community—Elders and those in need—is especially significant to young people. In the village of Klawock, I observed:

...on many occasions young people return from beach seining [for salmon], collecting seagull eggs, [herring] fish egg collecting or deer hunting with the fruits of their labor. I have watched as the share is divided and a portion taken to their grandparents, elderly or other indigent or disabled in the community. It has seemed to me that more than the thrill or esteem comes from the harvest; it is the spiritual bond between the gift-giver and the gift-recipient that seems to provide the greatest sense of self-worth to these young people. It is that joy that is so important to them. (Langdon 2000:123)

Participating in the communal sharing that accompanies celebrations, ceremonies, and feasts is another behavioral hotspot where identity and well-being are manifest. These collective and communal displays are both highlights and performances of commitment to sharing with community members. They create a powerful sense of pride and membership and are emotionally uplifting —creating positive endorphins.

Spirituality. Sharing for many Indigenous Alaskans is part of a spiritual covenant of existence that is required in order to sustain continuity of the total system of which humans are a part. "To a [bowhead] whaling captain, sharing is not about choice, but a cultural and spiritual obligation to their community" (Braund 2018:9). An Utqiakvik captain stated that participation in producing and sharing brought "contentment"—a "sense of satisfaction" and "peace of mind" "created and nurtured by hunting and providing others with food through sharing..." (Bodenhorn 2000:27)

A central concept underlying spiritual conceptualization of sharing is respect. It is respect for those with whom one shares, for ancestors who passed down the traditions, for collective heritage and for the wildlife that has offered themselves as food so humans can live. Respect is part of the expression for the valuation and right to existence of other spirits that co-occupy the world and universe.

What forms of sharing are there?

Sharing occurs in a number of ways. These can include generalized sharing as normally occurring between households that can be considered to a degree customary and obligatory. Sharing is often part of an ongoing near-daily flow between households related by kinship. Sharing occurs at feasts when guests are invited to share in subsistence products and consume foods harvested and prepared by hosts. Sharing also occurs at ceremonies, celebrations, and feasts held by all Indigenous Alaskans where many contribute subsistence foods of various kinds that are consumed by event attendees.

Sharing can be an expression of sociality and connectedness even though the consumption of exactly the same product occurs over and over just with different givers and receivers. Among the Klawock Tlingit when drying cohos in the fall, coho tails are roasted over the fire while drying is taking place. Families then invite others to a "taste" or take the tails to where other families are drying and give them some. Because they are fresh, the giver and recipient will typically consume them together at the time of transfer. It is precisely the same item being shared thereby demonstrating generosity and connectedness rather than other aspects of resource sharing. Similarly, the Captain's Feast among Iñupiat bowhead whalers follows shortly after a successful harvest and is given by a captain after the whale has been processed; this feast also delivers the same foods to whomever comes to the captain's house upon each occasion (Braund 2018).

Ceremonial forms of sharing are a ubiquitous feature of Indigenous Alaskan societies. All Indigenous Alaskan groups as noted earlier have a number of ceremonial events that typically include a host group and an invited group and address specific culturally defined purposes. As part of the event, the host group will stage a feast, give away food or both. These occasions that are typically reciprocated by the guests later represent moments of substantial sharing. Several examples of ceremonial sharing are discussed below.

Yup'ik Uqiquq (seal party). Among the Central Yup'ik living on the Bering Sea coast the seal party is a critical ceremony acting as a crucible for social transformation (Fienup-Riordan 1980). The seal party has two social forms serving somewhat different social purposes (Fienup-Riordan 1986a:174-176). In Yup'ik society, when the hunter enters the community with his harvest, he immediately turns it over to his wife and it becomes her property. She then processes it and for the most part makes subsequent decisions about sharing and distribution. The first type of event is the annual practice of each male hunter giving his first bearded seal of the year to his wife who in turn distributes a portion to all of the other households in the community with a male hunter. Each male hunter and wife engage in the same pattern. Thus, the sharing of the first seal is a statement of commitment to the community and of respect for all the other households. The

second manifestation is the female seal party. When a woman's son has brought home his very first bearded seal, she invites the mothers of all the young women who are potential spouses for her son to attend a seal party. This event announces and celebrates the fact that her son is now eligible for marriage as he has made his own bearded seal harvest. At the same time, it marks his social passage into male adulthood. The hostess gives invitees who are the mothers of a potential spouse for the young man pieces of seal and other gifts.

Tlingit <u>k</u>*u.éex*'. Among the Tlingit, the <u>k</u>*u.éex*' (meaning "to invite") is a formal ceremonial event staged by a hosting clan group following the death of a clan member to which their clan in-laws and relatives from other interrelated clans including father's, grandfather's, and daknooxoo ("outer shell") clans from the opposite moiety are invited (White and White 2000). The ku.éex' begins with the mourning portion (Gaax) during which four sorrow/grieving songs and opposite clan responses of their own sorrow/grieving songs are performed (often called "the removal of grief ceremony"), which is followed by giving of feasts, gifts of food and blankets and other goods, feeding of ancestors, bestowal of names, and other ceremonial actions. The transition in the ku.éex' from mourning to celebration closes the mourning period for the grieving clan and the ceremony as a whole restores societal balance that was disrupted with the death (Kan 1989). The favorite foods of the deceased are served and great quantities of customary and traditional foods are given to the guests.

The surpluses of distributed food not immediately consumed by guests are taken home for consumption later. While the Tlingit <u>ku.éex'</u> can be staged for a number of different reasons, the most significant is the mortuary <u>ku.éex'</u> given to honor, remember, and ritually treat recently deceased persons. In providing protocols for the conduct of a mortuary <u>ku.éex'</u> for the Tlingit of *Huna kaawu*, White and White (2000: 133-136) stipulate four separate events for the distribution of food: fire bowls, first meal, fruit bowls, optional second meal, and berries. These different occasions of giving constitute the fulfillment of critical social and spiritual requirements of feeding the ancestors and restoring societal balance following the death.

Iñupiat Nalukataq (and other ceremonies). Among the north Alaska coastal Inupiaq bowhead whalers, highly specific and formalized types of ceremonial feasts are staged during the course of the year (Braund 2018, Kishigami 2013, Worl 1980). Each of these events involves a host giving portions of the whale to an invited group—small or large—or to the community as a whole. In Point Hope, there are eight such feasts spread across the year. The most prominent of these events is the Nalukatag, a celebration that occurs at the end of the spring whaling season and is named after the blanket toss event. In Utqiagvik, all whaling captains who have captured whales during the previous season ring the plaza with their crews and distribute shares of whale to all who come. Other events are spaced over the course of the year and allow the high producing households to both empty their ice cellars and take care of kinsmen and community residents. Just prior to the start of preparations for the upcoming spring whaling season, the Spring Feast is held in which all of the remaining bowhead whale portions are brought out of the ice cellars and given away (ACS et al. 1984: 219). The sharing of the final bowhead portions is a manifestation of the belief that whales (in this case) give themselves to those who are respectful and in need and because the humans have given all they received, they are now in need again and worthy of receiving a whale.

Feasting is a pronounced form of commensalism in human societies. Commensalism in human societies refers to the consumption of food in the company of other humans. Such practices include events from family meals to extraordinary events that often are named events. As discussed above they are often a central component of ceremonial events but there are many events in which joint consumption of food is the sole purpose of the gathering. Wrangham (2009) contends that this behavior is the cornerstone of human sociality, is the preferred form of eating by humans and distinguishes humans from other primates. Standing alone apart from ceremonial appurtenances, it is most typically associated with special events in the lives of families, related persons, or friends.

Feast events are panhuman and can be coupled with many other cultural events (Dietler and Hayden 2001, Jones 2008). Special forms of feasting jointly can be elevated in importance to be a major component of a ceremonial event that typically involves a host entity and invited guests. When part of a larger ceremonial event, sumptuous feasts may be linked to claims to power or part of a solicitation for political support by the sponsor or host. Presidentially sponsored and hosted "state dinners" at the White House clearly fit this characterization.

Demand sharing. Demand sharing (Peterson 1993) is the practice of a nonproducer requesting some portion of the harvest from a producer, which may be either spoken or unspoken. Langdon and Worl (1981) found that this practice occurs at various times in Indigenous Alaskan communities. It can be in order to acquire foods that are needed or desired from others in the network of familial distribution who are known to have them. It may occur if a party is in need of specific foods or additional amounts if they are hosting a ceremonial event that includes feasting or other forms of food sharing. It may also be a means to test the strength of ties between parties. An example of demand sharing can be identified in the following:

One woman in Barrow said when she heard of someone getting muktuk from a family in Wainwright, 'She is a cousin of mine. I can ask her for some muktuk.' (ACS et al. 1984:206)

In fact, demand sharing for bowhead whale products is a common occurrence especially by those who live elsewhere (Braund 2018). Senders indicated that they shared with people they did not know personally who used Facebook to contact them (Braund 2018: 52). One Nuiqsut captain stated, "When they ask for it, it is something a captain or whalers cannot say no to" (Braund 2018:10). Orientation toward sharing among the Iñupiat is underscored by explicit valuation revealed in the following quotation "It's Good to Know Who Your Relatives Are but We Were Taught to Share with Everybody" (Bodenhorn 2000).

For Sitka producers and receivers of herring eggs, demand sharing is a common occurrence. While producers try to accommodate requests, even from people they don't know, the decreasing quantities of the harvest make demand sharing increasingly problematic and frustrating (Thornton 2019:88-90).

Demand sharing is reported as a small proportion of their distribution by Venetie hunters who termed it as giving to "people who ask" (Kofinas et al. 2016:60). Such requests are not in most cases resented by producers but it may be easier for some to ask than others.

Research findings from the Alaska Peninsula villages found that there was little evidence of explicit demands for resources but there were "certain traits of demand sharing ...extant among the study communities" (Hutchinson-Scarborough et al. 2020:330). Examples include indirect requests through inquiries from relatives elsewhere about how harvests were going in the villages.

Indigenous Alaskan societies explicitly value generosity and often publicly recognize such activity. Generous people in fact are the most highly regarded persons and will be spoken of with respect. The underlying premise of generalized reciprocity is that people, whether truly generous or not, will reciprocate and provide return of some kind at some point for what they have received. However, there is also the flip side for those who violate norms and do not share or reciprocate. In fact, in Dena'ina society, there is a traditional story of Dusgada Tukda, a qeshqa (leader) living in upper Cook Inlet, who lost his status because of his failure to distribute the wealth he obtained generously to his followers (Fall 1987). There are also insults that may be used to characterize ungenerous behavior. Among the Haida, the word sk'áada is used for a person who is reluctant to share or stingy. The existence of such terms and the embarrassment of being publicly labeled certainly appear to be prods to persons to share in order to escape being thought of as a stingy person. Among the Yup'ik, however, the appropriate behavior of a generous person would be pointed out to others and commended as a lesson.

Among the Haida, where a strong ethic of household subsistence productivity holds, giving to others known to be in need has to be accomplished carefully. Demand sharing may be limited by such unsolicited giving as described in the following quote. Alma Cook of Hydaburg stated:

I remember as children we used to have to deliver boxes of food and we had to deliver them at night because it's scary. We don't have lights. This is how much feeling they had for one another. You didn't want to have other people see you giving to other people. (Langdon 2012: 24)

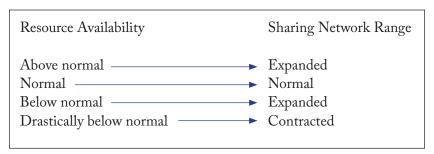
One of the reasons for careful forms of sharing was to ensure that there would not be a perception that the receivers were not able to provide food for themselves.

When does sharing occur?

Sharing can occur at many times. It may occur immediately after harvest and allocation or later at many other times and events. It may be frequent, random, structured, or unusual. Conditions of availability and abundance influence the amount of sharing.

Sharing can be examined based on resource abundance and social connectedness. In research with the Coast Salish (Indigenous group in southern British Columbia and western Washington) Mooney (1978) found that sharing networks (number of entities with whom foods were shared) expanded and contracted in response to resource availability as shown in Table 2. The research demonstrated sharing occurred to a greater or lesser number of others based on occasions of resource availability and other factors. A normal network range of family and extended family were shared with when abundance was at an average or expected level. When larger amounts were available an expanded range of households and individuals in the network received resources. Similarly, if levels were below normal, and especially if some households outside the network were known to be experiencing shortage, then expanded sharing also occurred. Only when resource availability was drastically below normal to the point of survival

Table 2. Sharing Network Range Related to Resource Availability



Source: Mooney 1976

did the sharing range become contracted perhaps to the household. Only in the most extreme cases of starvation would hoarding at the household level occur.

Recent research by Kofinas et al. (2016) in three northern communities found similar patterns. In Venetie, Gwich'in respondents' predominant answer was that "when successful share more/ unsuccessful share less" (Kofinas et al. 2016: 61). In Wainwright, Iñupiat respondents' first answer was that there was "no difference" while a slightly smaller number said they "share less when animals were scarce" (Kofinas et al. 2016: 57). In Kaktovik, respondents' answers reversed the order from Wainwright stating they "share less when resources are scarce" as their most frequent reply and "no difference" as their second (Kofinas et al. 2016:54).

In several Indigenous Alaskan groups there are special institutions or practices that are obligatory and therefore ensure sharing. Among the Iñupiat of Bering Strait, a special sharing practice called *ningiq* was part of the culture. Although the term is translated as "sharing" and used as a general term elsewhere among the north Alaskan Iñupiat, in the Bering Strait region the term refers to a more specific practice as well (Bogojavlensky 1969). Bering Strait Iñupiat hunters spent a large amount of time hunting at the ice edge a substantial distance from their villages for seals at their blowholes. When a hunter

captured a seal, he would head back to the village dragging the seal across the ice behind him. If any other hunter observes him and meets him prior to reaching the village, the successful hunter must provide a specified portion of the seal to the claimant. Sharing in this case is obligatory and highly specified form of demand sharing.

Among the Tlingit of Klukwan, Oberg (1973:96) found that sharing was an ongoing, virtually daily activity:

The collectively produced food of the house-group is often shared among the other houses of the same clan. If the men of the house-group are fortunate in getting a large catch of fish or game, they will take what they think they can use and leave the rest on the beach. The other houses of the same clan then send the women of their house-groups to take as much as they can use. If there is still some left over, the original owners parcel it out and take it to their fathers and brothers-in-law who are the opposite phratry.

In Togiak during a research project on Yup'ik village economy, I witnessed two significant instances of the sharing of subsistence products that demonstrate the types of resources shared, mechanisms of sharing and the range of receivers (Langdon 1991). In the first case, I was visiting a "superproducer" household whose extended kinship network included approximately 10 households. Two of the hunter's sons returned from a skiff outing to obtain clams with several large full bags. The wife and daughters took one of the bags and began cleaning and preparing the clams while the other bags were placed on a large table near the entrance to the house. The hunter then picked up the CB, the then-current means of local communication, and called various members of his kindred (bilateral relatives) and announced that clams were available at his house. His sons told him they had stopped by several households on the way up from the skiff to let them know about the clams. Soon, two adult women and one teenage girl appeared at the door and were allowed to take clams under the eye of the hunter's wife. Other individuals came shortly after and eventually

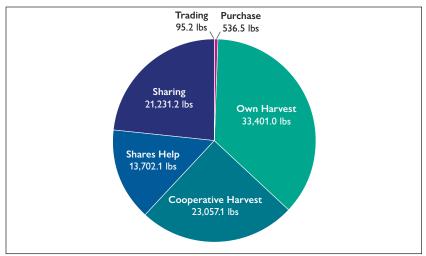


Figure 3. Mechanisms of Subsistence Resource Flow in Venetie

Source: Kofinas et al. 2016:178

all the clams had been shared to a large number of households. It was my impression that all of those who obtained clams were part of the network of extended family associated with the Elder and his wife.

Several days later, a party went out by skiff to Round Island with the intention of harvesting a walrus. Later in the afternoon, I was told that the party had been successful and was down at the city dock where the walrus they harvested had been butchered. The four hunters had taken their shares of the walrus—portions they desired—and a public announcement was made to the community that anyone could come down to the dock who wanted walrus. As I made my way down to the dock, I observed ATVs and trucks heading down from all directions. Soon after I arrived, all the walrus portions were taken. A large portion of the community beyond just the extended families of the hunters were thus able to share in the walrus.

There are many mechanisms that provision households in subsistence-based communities with mixed economies. The actual routes may vary in different regions. Figure 3 displays the ways in which subsistence foods flow through the Gwich'in community of Venetie. Nearly 25% of subsistence foods flow directly through sharing among households. It is noteworthy that trade and purchase comprise an extremely small segment of the total flow of subsistence foods.

What subsistence foods are shared?

Almost any traditional subsistence food can be shared given the right conditions and contexts. In most Indigenous Alaskan communities many subsistence foods are shared. Sharing of large harvests or large organisms (whale, sea lion, and bearded seal) always occurs typically in a formal institutionalized manner. In each region there are typically 3-5 significant resources that are the foundation for food security that are termed "core" resources by Kofinas et al. (2016). Examples include salmon, moose, caribou, bowhead whales, beluga whales, and bearded seals. These are dietary staples that are relied upon for food security and as such, they generally will be most widely shared even if abundance is low. In addition, there are specialty or delicacy foods in each region due to rareness or limited period of availability that are highly valued and likely to be shared widely. Herring roe-on-kelp in Southeast Alaska is an example of a highly valued, temporally limited resource that is shared widely (Thornton 2019).

Virtually all other subsistence resources will be shared to some degree or another. Research on sharing among Indigenous bowhead whalers found a total of 15 resources shared with a core of seven being shared by virtually all households (ACS et al. 1984:210). Among Gwich'in of Venetie, more than 20 resources were documented as being shared (Kofinas et al. 2016: 101-102) with seven—including moose, caribou, and salmon—comprising the core. Venetie households also reported receiving bowhead whale, beluga whale, bearded seal, and other seals (Kofinas et al. 2016: 102). Table 3 provides evidence on the frequency, amount, and range of core resources shared in the Gwich'in community of Venetie. Caribou, moose, and salmon represent the staples but berries, geese, and even grayling are in constant flow throughout the community.

Table 3. Flow of Core Resources in Venetie

	Flows (edible pounds with mean replacements)				
Resource	N of Flow Reports	Sum	Mean / flow	Median / flow	Std. Dev.
Caribou	190	29,924.9	157.5	68.0	259.2
Geese	186	4,286.1	23.0	11.3	33.3
Bearded Seal	17	74.6	4.4	1.3	6.5
Grayling	294	5,105.5	17.4	6.8	44.1
Beluga	8	82.3	10.3	6.8	9.0
Bowhead	17	2,193.9	129.1	5.0	501.2
Ducks	182	2,342.2	12.9	6.0	28.2
Berries	227	1,894.3	8.3	5.0	11.0
Salmon	166	17,810.7	107.3	24.0	289.2
Moose	289	28,319.5	98.0	26.9	203.5
All Resources	1,576	92,034.0	58.4	10.2	174.5

Source: Kofinas et al. 2016:178

The Alutiiq residents of six villages on the Alaska Peninsula report sharing between 15 and 20 items (Hutchison-Scarborough et al. 2020). The type and number of shared subsistence resources varies from region to region and community to community.

Who are the recipients of sharing?

The recipients of sharing are determined by several variables including abundance, specific resource, health or well-being, occasion, need and demand. The recipients of sharing are also patterned by the type of sharing that occurs. It is possible to distinguish between general sharing (both generalized and balanced reciprocity), obligatory sharing, demand sharing, and ceremonial sharing.

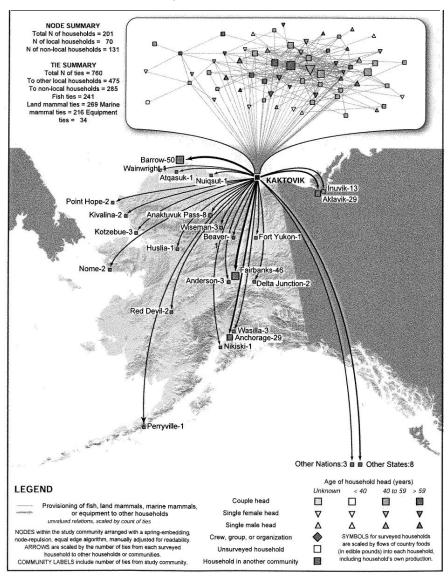
All studies of sharing of subsistence resources report that the most common recipients are those related to the producers or to relatives of those who receive initial distributions. Approximately 65-85% of recipients of shared subsistence foods are related by kinship to the givers (Magdanz et al. 2020). Immediate and extended family receive 85% of Sitka herring eggs shared by producers (Thornton 2019:110). Next, Elders, especially those no longer productive, are regarded as important to provide for through sharing. Most commonly, recipients are found in the same community. In villages on the Alaska Peninsula, researchers found that salmon, the most significant core resource in the region, "is most frequently shared and shared in greater amounts...with close family, followed by friends and extended family" (Hutchison-Scarborough et al. 2020: 372). Fifty-one percent of amount shared went to close family, 35% to friends and 14% to extended family (Hutchison-Scarborough et al. 2020:372). A resident of the Dena'ina village of Tyonek commented:

If they have too much for themselves for their own family, there is always sharing. They will either give it to another member of their family, or they will give it to someone else who is really in need. (Berger 1985: 57)

The next most frequent recipients are persons related to the harvester who live in another community in the region. Among the bowhead whaling communities, 354 interview respondents reported more than 90% sharing with other regional communities while only 6.5% reported within their own community only (ACS 1984:216). Figure 4 displays sharing of subsistence products from Kaktovik households to other communities in the region with Utqiagvik (Barrow) being the most frequent location to which subsistence resources were sent.

Research in the six Alutiiq villages on the Alaska Peninsula shows sharing of salmon with households in all of the other studied communities as well as other communities in their region (Hutchison-Scarborough et al. 2020:252).

Figure 4. Communities and Households with whom Subsistence Resources were shared by Kaktovik Households



Source: Kofinas et al. 2016:144

Herring eggs from Sitka Sound follow a similar pattern in that harvesters first share within the community to family and those in need. Sharing beyond the community shows the extraordinary interest of relatives, friends, and others of importance in Sitka herring eggs for complex cultural, nutritional, culinary, and social reasons. Between 2002 and 2018, herring eggs were shared with 41 other communities in Southeast Alaska and beyond (Thornton 2019:104). Recently, herring eggs have also been shared with institutions in Sitka and Juneau that provide food to Indigenous residents and others who might desire them. In Sitka, individual harvesters and designated harvesters deliver fish eggs to the Sitka Senior Center, Sitka Salvation Army, SEARHC hospital, and the Sitka Pioneer Home (Thornton 2019: 145-149). Herring eggs are distributed to institutions in Juneau as well through Sealaska Corporation. The Hoonah Indian Association provides financial assistance to a Hoonah harvester who travels to Sitka Sound every year to obtain herring eggs that are brought back to the community and shared without cost to up to 200 individuals (Thornton 2019:140).

The distribution of subsistence herring eggs harvested from Sitka Sound is prodigious, with 87% of the overall harvest volume given away, on average, rather than personally consumed by harvesters and their households. This level of sharing demonstrates the powerful incentives of the harvesters to fulfill expectations of literally thousands indicating the critical position of sharing in the maintenance of social ties and cultural values.

Over the last 25-30 years, many Indigenous Alaskans have moved from the villages or communities in which they were born and raised in subsistence practices to larger communities in Alaska. It is sometimes remarked that Anchorage is the largest "Native" village in Alaska and indeed its Indigenous Alaskan population comprises 20% of all Indigenous Alaskans, dwarfing all other locations. Fairbanks is next in the number of Indigenous Alaskan residents while Juneau has the third largest concentration of "urban" Indigenous Alaskans. Indigenous residents of these communities and other locations deemed

nonrural (federal designation) or found in nonsubsistence areas (state designation) are not legally permitted to engage in subsistence harvests but are the recipients of an enormous amount of subsistence food from their relatives in the villages from which they came.

Research findings show that sharing of core subsistence resources to those who have moved from their village to urban Alaska areas or outside of Alaska is critical to maintaining family ties, providing important foods to them and sustaining cultural participation. As Figure 4 shows, Kaktovik households share with 46 households in Fairbanks and 29 households in Anchorage. Wainwright households display a slightly different pattern of sharing with urban Alaska cities as Anchorage is the primary recipient with 51 linkages while Fairbanks had only five (Kofinas et al. 2016:176).

Sharing salmon out of the region to other communities within Alaska is also characteristic of the six Alutiiq villages on the Alaska Peninsula (Hutchison-Scarborough et al. 2020:252). Anchorage is the most frequent Alaska community receiving salmon from the six villages with a total of 151 sharing ties transferring 3,202 pounds of salmon there (Hutchison-Scarborough et al. 2020:253). Kodiak was far less with 10 sharing ties resulting in 417 pounds of salmon transferred (Hutchison-Scarborough et al. 2020:253).

In Southeast Alaska, herring eggs harvested from Sitka Sound and Fish Egg Island near Craig are shared widely throughout the region to 13 communities and especially to the urban centers of Juneau and Ketchikan. A Juneau Tlingit respondent stated:

For the Tlingits who've moved away from home, it's our soul food, keeping us connected to one another and to place. If you receive herring eggs from someone, you know you are loved. (Thornton 2019:192)

Finally, certain subsistence resources are also shared with relatives who live in other states and even other countries. Residents in Kaktovik share their subsistence resources with others in eight states

Table 4. Geographic Extent of Sitka Herring Egg Sharing

	# of			# of			# of
Southeast	responses	%	Other	responses	%	Outside	responses
					44	Seattle/ WA	
Juneau	13	48%	Anchorage	12	%	State	3
					19		
Metlakatla	6	22%	Fairbanks	5	%	California	2
Kake	3	11%				Whitehorse	1
Haines	3	11%	YUKON/KUSKO				
Wrangell	2	7%	Mountain Village	1	4%	SOUTHWEST	
Ketchikan	2	7%	Saint Mary's	1	4%	Dillingham	1
Petersburg	2	7%	Kongiganak	1	4%	Dutch Harbor	1
Angoon	2	7%	Quinhagak	1	4%	Sand Point	1
Hoonah	2	7%	Tuntuntuliak	1	4%		
					19		
Yakutat	2	7%	Bethel	5	%		
Hydaburg	2	7%					
Sitka	13	48%	ARCTIC				
					15		
Kasaan	1	4%	Barrow	4	%		
Prince of Wales							
Island	1	4%	Kotzebue	2	7%		
Craig	1	4%	Gambell	1	4%		
			Nome	1	4%		

Source: Thornton 2019:104

and three foreign countries while those in Wainwright share with others in eight states as well (Kofinas et al. 2016: 144, 176). As shown in Table 4, Sitka herring egg producers ship to households throughout Alaska, in the continental United States, and in Canada. Households in the six Alutiiq villages on the Alaska Peninsula have 52 sharing ties that transfer 1,233 pounds of salmon to locations in other parts of the United States. Salmon from the six Alutiiq villages are sent to numerous communities in other states with 52 ties resulting in 1,233 pounds being transferred (Hutchison-Scarborough 2020 et al.:253).

While sharing from subsistence-producing communities to nonsubsistence communities is seen as extremely important by givers and recipients, the amounts that are shared are typically limited, providing more of a "taste" to recipients but hardly enough to satisfy demand.

Sharing in subsistence communities can be thought of as a continuous stream of reciprocal actions. Kofinas et al. (2016) found a high degree of similarity in the subsistence flows within the three communities examined. In Venetie, on average, households share subsistence food of all kinds with 7.4 other households and receive subsistence food from 6.5 households, some of which are the same ones to whom they have given (Kofinas et al. 2016). In Kaktovik, on average, households shared subsistence food with 6.2 other households and received from 7.1 households, and again some of those received from were those who had been given. In Wainwright, comparable figures show that households on average gave to 6.6 other households and received from 6.4, again with reciprocal flows being a part of the connection.

Patterns of sharing and receiving salmon among six Alaska Peninsula villages show much more limited flows in both directions (Hutchinson-Scarborough et al. 2020:249-251). On average, households in Chignik Bay shared with 1.7 households and received from .76 households. In Chignik Lagoon, households gave salmon on average to 2.5 households and received salmon from .33 households. In Chignik Lake, households shared to 2.7 households while receiving

from .33 households. In Perryville, households gave to 1.7 households while receiving from .79 households on average. In Port Heiden, households gave to 1.4 other households while receiving from 2.4 other households. Egegik households shared on average with only one other household while receiving from .41 households.

Sharing is often directed to those in need. Concerning sharing that occurs when food is given at ceremonial events, Central Yup'ik Elder Andy Paukan in the film *Uksuum Cauyai: Drums of Winter* (1989) states that food shared during the Messenger Feast and other ceremonies went primarily to widows, elderly, and those who were unable provide for themselves. He made this remark as counterpoint to early Christian missionaries who were critical of Yup'ik ceremonial practice, accusing them of excessive giving. This remark highlights the logic of the Yup'ik practice of giving to take care of others but implicit is also the premise of giving everything possible. The second point is premised on the belief that fish and animals monitor the well-being of humans and give themselves to those who have nothing or are otherwise in need.

It is important to note that sharing is often reciprocal between households and even those households with a low level of subsistence production share what they do produce. In some cases, low producing households may receive substantial amounts of food, which they in turn share with other households.

What amounts are shared?

The amount of subsistence resources shared varies a great deal. The abundance of the resource is a major variable in determining how much will be shared. Exceptionally abundant resources or excellent quantities of harvest in a season make possible the sharing of large quantities. On the opposite end of the continuum, limited amounts available or poor harvests results in small amounts that can be shared. Examples of amounts shared of different resources are provided in the following discussion.

Sharing can be examined as a portion of the total subsistence food production of a community. For Venetie, 23% of harvested resources

out of 92,034 pounds were shared (Kofinas et al. 2016: 184). In Kaktovik, sharing comprised 14.5% of 223,615 pounds with amounts provided for feasting constituting 4.3% additional sharing (Kofinas et al. 2016:121). In Wainwright, sharing amounted to 11% of 404,082 pounds with feasting providing an additional 6.4% in sharing (Kofinas et al. 2016:151).

The most abundant resource harvested by Indigenous Alaskans is the bowhead whale. These marine mammals range from 15 to 40 feet in length and weigh a ton a foot thus providing enormous amounts of food for the harvesters and those with whom they share. Prodigious quantities of bowhead whale meat and muktuk are shared near and far. Point Hope captains estimate that the equivalent of three or four whales out of 10 captured are shared outside of the community (Braund 2018:54). Captains from the whaling villages of Gambell and Wainwright estimated that approximately 25% of the whales they harvest leave the community (Braund 2018: 54). Savoonga whaling captains estimated that 30 to 50% was transferred outside their community (Braund 2018:54). An estimate from Utqiagvik, by far the village with the highest number of whales harvested, was not developed due to the complexity of the whaling practices that occur across three different times of the year.

Another example of large-scale quantity sharing is herring eggs from Sitka. On average between 2002 and 2018, 70 out of 80 tons (87%) of harvested herring eggs were shared (Thornton 2019:3).

Salmon are the most frequently shared subsistence resource by Indigenous Alaskans due to their widespread occurrence and the high valuation that is placed on consuming salmon whether fresh, frozen, dried, or strips (Fall and Kostik 2018: 2). Salmon comprise 31.2% of wild food harvest in rural Alaska and concomitantly are the largest amount shared (Fall and Kostik 2018:2). In Venetie, salmon are the third most important core resource. They are harvested by 27 households and shared with 78 others (Kofinas et al. 2016:182). Sixteen percent of 17,811 pounds are shared (Kofinas et al. 2016:182). For the six Alaska Peninsula Alutiiq villages the amount of salmon

harvested and shared in 2016 is as follows. Chignik Bay households harvested 7,637 pounds of salmon and shared 19% (Hutchison-Scarborough et al. 2020:65, 251). Households in Chignik Lagoon harvested 11,602 pounds of salmon of which 11.1% were shared. For Chignik Lake, 8,851 pounds of salmon were reported harvested with 24% shared (Hutchison-Scarborough et al. 2020:67, 251). Perryville households reported harvesting 13,560 pounds of salmon with 4% reported as shared (Hutchison-Scarborough et al. 2016:67, 251). In Port Heiden, households reported 18,812 pounds of harvested salmon of which 2% were reported as shared (Hutchison-Scarborough et al. 2020:68, 251). Egegik households reported harvesting 1,944 pounds of salmon of which 26% were reported being shared (Hutchison-Scarborough et al. 2020:69,251).

Significant amounts of moose and caribou are also shared where they are core resources. In Venetie, 19 households harvest moose that are shared with 150 households, many nonlocal (Kofinas et al. 2016:180). Eighteen percent of 28,319 pounds harvested are shared (Kofinas et al. 2016:180). For caribou, 25 households harvested and distributed to 107 other households, many nonlocal (Kofinas et al. 2016:180). Twenty-eight percent of 29,925 pounds was shared by Venetie households (Kofinas et al. 2016:180). Iñupiat hunters from Wainwright also harvest and share caribou. In Wainwright, caribou was the second highest subsistence resource harvested after bowhead whale. Approximately 15% of 198,067 pounds of harvested caribou was shared to others in the community and beyond (Kofinas et al. 2016:147).

The culturally significant herring eggs resource of Sitka Sound is perhaps unique in the amount and proportion shared of the total harvest. Thornton (2019:199) reports that approximately 100 harvesters in Sitka Sound annually collect "100-350,000 pounds of eggs and give 80-90% of them away within a week…through established modes of sharing, barter and trade…".

It is important to note that even households with low levels of production give small amounts to relatives. Such giving is an indicator of respect and continuing participation in the system. It is an expression of what is called "generalized reciprocity" or the understanding that those who receive should also give back when they can.

Amounts shared may be a function of a formula. For example, a hunter may always share 50%, which results in a smaller portion when the harvest is smaller. One Iñupiat whaler commented that he shares the same proportional amount (25%) whether the harvest is large or small thus the actual amount shared is different (Braund et al. 2018:56).

SHARING NETWORKS

In recent years, a methodology known as network analysis has been applied to the topic of subsistence distribution through sharing and exchange in Indigenous Alaskan communities (Hutchison-Scarborough et al. 2020, Kofinas et al. 2016, and Magdanz et al. 2002). "A network consists of entities of interest (nodes) and the intersections (edges) between nodes" (Baggio 2016:13708). Nodes, in this analysis of households, may have many types of interactions in the form of flows of various kinds—each type of interaction is termed a layer and networks with multiple layers are called "multiplex" (Baggio 2016:13708). Network connectivity—the number of linkages between the nodes—is an indicator of social-ecological system robustness that in turn is regarded as a measure of resilience, the ability of the system to respond or adapt to change. Higher connectivity scores indicate a higher number of ties between nodes while lower scores indicate fewer ties among households and more individual households.

Magdanz et al. (2002) applied the methodology to the study of subsistence distribution in several communities in northwest Alaska. Based on systematic surveys of all households in communities, patterns of subsistence food transfers between households can be identified, mapped and analyzed. Figure 5 is a depiction of those flows between households in Deering, Alaska (Magdanz et al. 2002). The figure shows:

DEERING A DEERING D X DEERING B DEERING G DEERING F DEERING H UNASSIGNED Household Household Household Instances of Direction of Kinship Structure Size Social Type Production Production Source HH (Producing) Active Single Household (heads of all ages) 3-4 Single Single Conjugal Developing Household Persons Persons Individual Pair (heads 20-39 yrs old) Mature Household (heads 40-59 yrs old) Elder Household 8-9 5-6 7 or More Persons Nuclear Stem Joint (heads 60 yrs +) Respondent (Receiving) 10+ Family Family Family Inactive

Figure 5. Subsistence Production & Distribution Networks in Deering

Figure 8-4. Wild food production and distribution networks in Deering, 1994. Each polygon represents a household. Lines between households represent harvesting, processing, and distribution of foods by one household for another household. This diagram was drawn from a dendrogram of Kendall's tau-B values (see text).

Source: Magdanz et al. (2002)

- Individual household depicted by geometric symbols that stand for the number of people in the household with six different sizes.
- Social characteristics indicating relations within the household are shown with slightly modified geometric symbols.
- Developmental stage of the household is shown by letters.
- Households organized into groups labeled with capital letters based on flows between them. They typically correspond with extended families of relatives.
- Occurrence of food flows to and from households shown by separate lines.
- The darker and thicker the line between the households the greater the amount of food has been given or received. The range has five levels between two and ten instances of movement during the year prior to the survey.
- The figure does not show the household of the harvesters.

The figure demonstrates how the community is organized into extended family groups among whom sharing occurs at a higher rate than with other households. Households that give large amounts can be identified and data provided elsewhere in the report indicate that a successful harvester or two reside in that household. Such households likely include two or three active harvesters consisting for example of a father and a son or two.

There are four identifiable clusters linked primarily through kinship ties. One can also identify at least one household that could be designated as a "superproducer" household—that household is the larger M figure in group B. This household can be seen as having the greatest outflows, connected by giving to not only the households in its extended family group but to numerous other households in other extended family groups. Households that do not give can also be identified and it can be assumed that residents don't participate in subsistence production. The reciprocal flow of subsistence food, often of different amounts, is also shown in the diagram.

Egegik Perryville Port Heiden

Figure 6. Local Household Salmon Sharing Networks in Alaska Peninsula Villages

Source: Hutchison-Scarborough 2020 et al.: 250

Research on sharing and exchange of salmon in six Alaska Peninsula Alutiiq villages (Chignik Bay, Chignik Lagoon, Chignik Lake, Perryville, Port Heiden, and Egegik), while not as sophisticated in analysis since only one resource was the subject of research, give a sense of the kind of variation that exists in sharing and exchange networks in different communities. Figure 6 shows the salmon sharing networks among six communities on the middle Alaska Peninsula. On one end of a continuum of connectedness, the Egegik data demonstrate that households have limited sharing ties with nine of 22 households having no ties to any other household and no household with ties to more than two other households. At the other end of the continuum of connectedness, Port Heiden has no households without a connection to another household and numerous households have three or more connections to other households. The communities of

Chignik Lagoon, Perryville, and Chignik Lake by contrast exhibit different patterns of connectedness intermediate between Egegik and Port Heiden.

Data from the research on sharing and cooperation by Kofinas et al. (2016) was used for further analysis. The robustness of networks of subsistence sharing in the communities of Kaktovik (Iñupiat), Wainwright (Iñupiat), and Venetie (Gwich'in) were tested by altering three variables—resource abundance, social relations of exchange and number of households in the community—and determining what impacts such deletions would have on sharing. Researchers determined that the most significant reduction in sharing resulted from removal of key social relations and not from resource decline or community household reduction of 20% (Baggio et al. 2016:13711). The removal of key social relations, meaning critical "superprovider" nodes, reduced sharing between households by 70-80% (Baggio et al. 2016:13711).

What are the benefits of sharing?

Sharing provides many benefits to individuals, households, and communities. Benefits accrue to both givers and receivers. The characteristics of human groups as a means of evaluating their condition has recently been defined in terms of "well-being." Here is a recent definition: "a way of being with others that arises when people and ecosystems are healthy, and when individuals, families, and communities equitably practice their chosen ways of life and enjoy a self-defined quality of life now and for future generations" (Donkersloot et al. 2019: 18). In Indigenous Alaskan communities where sharing is valued and practiced, well-being is enhanced.

Recent research by Thornton (2019:159-192) on the distribution of subsistence herring eggs from Sitka Sound identified the following benefits:

- Food security Assists those in need
- First food Provides initial fresh food of new year of subsistence productivity
- Health and well-being Provides important nutrients and improves feelings

- Food diversity Provides desired variety and welcome taste and texture
- Status Recognizes status of those who are admired for their efforts and generosity
- Heritage and cultural identity Sharing and consuming herring eggs are an iconic expression of identity and the ability to provide them to others fulfills cultural values
- Ceremony and cultural events Herring eggs are important foods for various forms of celebration; they can be frozen and brought out on any meaningful occasion to underscore who the participants are
- Conviviality, communion and social capital Opportunity to eat together (commensalism) renews social ties and expresses connectedness and valuing of others
- Skills, values and the good life Acquisition requires learning special skills in order to nurture cultural flourishing

Herring roe-on-kelp has a special position in Sitka and in Southeast Alaska and the sharing and consumption of them are iconic expressions of Tlingit identity.

INDIGENOUS ALASKAN SPIRITUALITY & SHARING

Indigenous Alaskan spiritual beliefs provide clear guidance, obligation, and motivation for sharing of various kinds. Indigenous Alaskans consider themselves as co-occupiers of existence with other spiritual forms with essentially similar qualities to themselves. Existence is conceived of as cyclical as spirits of entities in the physical world pass upon death to another domain from which they are then reborn into the living world. Human rituals are critical to maintaining cycles, and human behavior toward living forms is crucial in determining continuing ability to harvest them.

For the Koyukon Dene (Athabascans), Richard Nelson (2001:lix) states that in their belief system nature comprises "an assemblage of

omniscient, spiritually empowered beings who should be treated with deference and restraint."

For the Tlingit, Julie Cruikshank (2005) observes they believed they were members of "a moral universe inhabited by a community of beings in constant communication and exchange." The beings referenced have spiritual forms that cycle between life and death and can be found in different domains. A charter/covenant between the Tlingit and salmon is laid out in the Salmon Boy story of a boy who is taken by salmon to their home under the ocean where he learns they are "people" and is taught how salmon must be treated in order for them to return and give themselves to people (Langdon 2019). Part of that lesson is to ensure that all of the salmon are consumed, which clearly implicates sharing as means to accomplish that objective. Langdon (2019) has given the name "relational sustainability" to the Tlingit system of beliefs and behaviors associated with spiritual return and the necessary Tlingit role in existential continuity.

For the Yupiit, Ann Fienup-Riordan (2001: 543) states that they "extended personhood beyond the human domain and attributed it to animals as well" and "viewed the relationship between humans and animals as collaborative reciprocity; the animals give themselves to the hunters in response to respectful treatment of them as persons ...in their own right." Among the central Yup'ik, the cycle of seals returning to give themselves to Yup'ik hunters in the future is made possible through the retention and return of the bladders of all seals harvested through the year to the ocean during the Nakaciuq ceremony each winter (Fienup Riordan 1983).

For the bowhead whalers, sharing of the bowhead harvest is believed to be apparent to the whales who act on that information. As one Iñupiat whaling captain told Bodenhorn, "The Animals Come to Me, They Know I Share" (Bodenhorn 1989). The implications of sharing—widely and generously—are evident in the position of interviewed Iñupiat bowhead whalers who stipulated that their reason for sharing was "to assure a good hunt" (ACS et al. 1984:209). By fulfilling the obligation to share what the whales have given, the

hunters expect to be successful in capturing a whale in the future. Kishigami (2013:14) observes:

According to the Iñupiat's world view, the whale gives itself to Iñupiat whalers and thus they should treat it respectfully and share it with other Iñupiat people. If it is satisfied with the whalers' attitudes and treatments toward it, the whales will come back to them to be harvested again.

Sharing is at the center of a spiritual belief system recognizing the joint nature of existence and the necessary interdependence of humans, fish, birds, and animals to continuity.

Sharing with other people is implicated in human relations with the other species that are central to the Yup'ik "system of mutual hospitality embodied in the relationship between men and the natural world" (Fienup-Riordan 1986a: 176). In these relations "What comes freely [i.e. volitionally given] must be given freely to ensure that it will return."

In Indigenous Alaskan thought harvests should and do occur when fish, wildlife, and birds volitionally choose to give themselves to the harvesters. The giving of self is a volitional act and the recipient of the "gift" has responsibilities resulting from the successful capture. These include respectful treatment of the offerant and full utilization. Koyukon Elder Joe Beatus in the film Passage of Gifts (1976) teaches his grandson, Wayne Attla, that sharing of harvests with others is a critical activity in showing respect by using all that has been given and thereby gaining "luck" with the animal. "Luck is an essential element in the spiritual interchange between humans and natural spirits" (Nelson 1983:232). The premise of "luck" is that the animal spirit is aware of the actions of the person and makes decisions on whether to make themselves available on the basis of whether ethical principles of acquisition and use including sharing are being followed by the hunter. Those with "luck" have the "favor of the animal" and will be able to get them in the future.

Among the Gwich'in of Venetie, Kofinas et al. (2016:82) found that

...community members expressed their obligation to share with other humans in respect to animals who have shared themselves with hunters. Fulfilling these obligations is seen as translating into a greater likelihood of hunting success in the future...[the] 'lucky' hunter...is one who freely shares his or her catch with others.

Sharing with Ancestors

In some Indigenous Alaskan societies, sharing of subsistence foods is also done with deceased ancestors.

In Tlingit thought deceased ancestors are also the recipients of shared subsistence foods. Deceased ancestors are mentioned as the intended recipients of food burned in fire bowls at ku.éex' (White and White 2001). Feasting with herring eggs among Tlingit is accompanied by speaking "to their deceased ancestors, who had taught them how to harvest and prepare herring eggs and other values" conceiving of their personal consumption as a communion where "all the ancestors ate with me" (Thornton 2019:206). Yakutat Tlingit Elder George Ramos appears in *The Glacier's Gift* (2011), a video documenting Yakutat Tlingit history and practice of seal hunting in Disenchantment Bay. Ramos is the Elder leading and overseeing the seal hunt in the vicinity of Hubbard Glacier. Prior to going ashore at the head of the bay near the seal hunting grounds, Ramos first speaks to the ancestors. He then directs his daughter to throw food into the water as she states that they are feeding the ancestors. Ramos then requests the ancestors to protect them. The feeding occurs before any camp set-up or seal hunting takes place in Disenchantment Bay.

Among the Ahtna, at the time of death, subsistence food is burned for the recently deceased person. It is done to ensure that the spirit will be comfortable in leaving this world and making it to its place in the other world (Simeone 2018).

Sharing with Nonhuman Persons

As noted earlier, Indigenous Alaskans' spiritual beliefs included obligations to respect other species and act in ritually prescribed ways to sustain their existence. In a number of Indigenous Alaskan societies, humans share a portion of their subsistence food harvests with other species with whom they live. Here are examples of humans sharing with other nonhuman persons (spirits) as expressions of respect and reciprocity.

Nelson (1983:159) reports that when Koyukon hunters found wolf kills, typically caribou or moose, that were left clean and unspoiled they would take the remains. The Koyukon believe the wolves left the kill for humans. On other occasions the hunters would leave some fat from one of their kills for the wolves to take. This act of sharing was seen as both respectful and grateful. The reciprocity is an acknowledgment of assistance provided the hunters by wolves and a necessary act for the continuation of the relationship.

Ahtna hunters typically left bits of harvest at the locations where butchering or processing occurred. The intent was a generalized, as opposed to species or individual, act of sharing as birds, wolves, fox, or other animals might be the ones to come and consume the food left by the human hunters.

Once I was invited to go trolling for king salmon with the Mayor of Klawock. As we approached the area known to be productive for king salmon, he observed a bald eagle perched at the top of a tall tree at least a mile away from us. The eagle was positioned to observe the pass we would be taking to catch king salmon. The Mayor became excited as he put his poles in the water. A beautiful king salmon soon struck the lure and the Mayor carefully played it, finally pulling it aboard in his landing net. As he cleaned the salmon, he put aside the intestines. After finishing the cleaning, the Mayor picked up the

intestines and stepped to the side of the boat. Turning toward the eagle, still in place, presumably observing us, he raised the intestines arm's length over his head in direct line of sight to the eagle. Then he brought his arm down and threw them underhanded out into the water by the boat. Almost immediately, the eagle left its perch and began flying toward us. Soon he was approaching the boat and, swooping down to water level, deftly picked up the intestines. As the eagle flew off, the Mayor loudly said, "Gunalchéesh (thank you), uncle!"

Among the bowhead whaling Iñupiat, the *umealik* role is a joint one requiring the skills and behaviors of husband and wife. In Iñupiat thought, it is believed that the woman's role is especially important in spiritual preparation, ritual engagement with the landed whale, and distribution of whale meat to others (Bodenhorn 1990). The wife's role is so significant that it is common for Iñupiat whaling captains to state "I'm Not the Great Hunter, My Wife Is" (Bodenhorn 1990). An act of sharing is central to the ritual Iñupiat reception of the landed whale that has given itself. As the whale is pulled out of water onto the ice, the wife of the whaling captain who struck the whale first gives the whale a drink of freshwater. The freshwater is given to quench the whale's thirst and therefore sharing in this case is an empathic act of assistance.

WHAT IS NOT SHARED

Indigenous Alaskans who participate in subsistence through production, distribution, and consumption of subsistence foods are all enmeshed in a larger society in which cash is a critical element to survival. In mixed-subsistence based communities, cash is critical to maintaining the equipment and materials necessary for subsistence production. But cash is not shared to nearly the extent that subsistence foods and materials necessary to their production are. Kofinas et al. (2016) collected data in three communities on the sharing of cash and developed networks and measurements of cash sharing. They found:

The sparse patterns of sharing money, which contrasts strongly with those found for subsistence resources, provides an interesting case of how the cash economy [in these communities] functions based on a set of parallel but potentially very different set of behavioral rules than does subsistence cooperation and sharing. Networks of cash relations are generally much less dense than those for food resources. ... Results here suggest that cash occupies a different meaning than food within the context of subsistence. (Kofinas et al. 2016:243)

There may be other avenues for persons or households who find money in short supply for keeping households functioning that are recognized and utilized. This finding demonstrates the significance of subsistence resource sharing to both maintaining communities and sustaining Indigenous Alaskan culture.

The limited circulation of money in Indigenous Alaskan society is often juxtaposed to the sharing of subsistence foods as another cultural marker that Indigenous Alaskans identify as making their cultural way of life as significantly different from mainstream American society. Subsistence food sharing is viewed as the moral expression of fundamental human values of respecting and caring for others.

STRESSES ON SUBSISTENCE SHARING

The value and practice of subsistence sharing is of great significance in contemporary Indigenous Alaskan lives and culture. The present scale of sharing requires certain critical conditions to continue. There must be sufficient subsistence resources to harvest and share. There must be sufficient number of producers who can harvest quantities sufficient to share. There must be a legal and regulatory environment that allows for subsistence harvest levels and does not constrain sharing. Sharing must be a value that drives practices which enrich the lives of the producers and sharers. However, there are a number of stresses on the subsistence sharing that are presently being felt as well.

Availability of resources. Some highly valued and shared resources are presently at low levels that limit the ability of producers to share. King salmon runs on the Yukon and Kuskokwim Rivers, a primary subsistence food for village residents, have been at low levels for more than a decade. Similarly, sockeye salmon in many areas of Southeast Alaska have also been at low levels on a number of occasions in recent years. Herring eggs, traditionally an abundant and widely shared subsistence food, have been at much lower abundance levels in the last five years than previously. Throughout Southeast Alaska, the explosion of sea otter numbers has led to massive declines in clams and Dungeness crabs, traditionally widely shared subsistence foods. The inability to acquire and share these resources is viewed with concern by traditional producers and consumers of them.

Increasing road access to remote rural areas. Research in the 1980s demonstrated that rural Indigenous Alaskan communities located on the highway system produced 69% pounds per capita less subsistence foods than those away from the road system (Wolfe and Walker 1987:66). The primary reason for the difference is that the road system provided access to subsistence resources by urban residents whose harvests impacted the availability and success rate of Indigenous Alaskans in those communities (Wolfe and Walker 1987:66). Recent discussions of development in rural Alaska have included extension of roads to Ambler, Nome, and Bristol Bay. Based on research on the impact of roads on subsistence harvests reported above, "...building such roads risks tipping rural communities into a new regime of lower subsistence harvests without commensurate increases in personal incomes" (Magdanz et al. 2019:29).

Subsistence eligibility. State and federal regulations establishing eligibility to engage in subsistence food harvesting have a number of negative impacts on Indigenous Alaskans' traditional subsistence harvesting and sharing. State regulations define subsistence and nonsubsistence areas that allow subsistence status to particular areas outside major population centers. Indigenous Alaskans must travel to "subsistence areas" to qualify for state subsistence activities, imposing

substantial additional costs. Some Indigenous Alaskans who reside in Anchorage or Fairbanks are able to acquire salmon from personal use fisheries in Kenai and Chitina but the degree to which sharing of those relatively limited harvests occurs is unclear. Under federal law Indigenous Alaskans must be residents of communities in designated rural areas to be eligible for subsistence harvests. If they are not current residents of the rural area, they are ineligible and any participation is illegal and subject to arrest. Despite these regulations, some Indigenous Alaskans travel from nonrural places of residence to traditional rural communities from which they have moved to acquire resources to be consumed and shared.

Recent research indicates that as of 2018, more than 50% of Indigenous Alaskans identified by the US census reside in nonsubsistence or non-rural areas (Fall 2018). Thus less than 50% of Indigenous Alaskans are eligible to participate in subsistence harvests in proximity to their place of residence. This almost certainly means that the subsistence resources harvested must be shared more broadly, leading to difficult decisions and lower amounts being shared.

Increasing numbers of Indigenous Alaskans. Another component of this issue is the increase in the Indigenous Alaskan population. It took nearly 100 years for Indigenous Alaskan societies to recover from the enormous population losses due to epidemic and other diseases that affected them in the 19th century. Between 1995 and 2000 the Indigenous Alaskan population finally rose to the approximate numbers present at the time of sustained contact with Euroamericans. In 2000 the US census revised its procedure for enumerating persons of Indigenous Alaskan descent. A distinction was made between persons who identified solely as Alaska Natives and those who identified as Alaska Natives and "Other." In 2000, the Indigenous Alaskan population, combining the two categories, was 119,500. By 2010 it had reached 138,000 and the estimated population in 2020 is 152,000. The increasing number of Indigenous Alaskans who may wish to consume traditional foods is likely to result in shifts in sharing patterns.

Number of subsistence producers compared to consumers.

Research in 2005-2006 reported earlier in this essay identified the characteristic of "superproducers" or "superproducing households" as a feature of subsistence communities (Wolfe 2010). At that time, the research showed an approximate ratio of 70% of subsistence food production accomplished by 30% of households across all communities. In the past 15 years there have been demographic changes that have affected that pattern. New research shows that in certain regions and communities, a greater proportion of the harvest is now being taken by a smaller proportion of the households. Former Alaska Department of Fish and Game Subsistence Research Director James Fall (personal communication) observes:

...specialization appears to be increasing beyond 30/70 to 20/80 or even more in many of the communities we have surveyed over the last decade or so. This is also the case I believe, for specific resources, such as salmon, as documented by annual post-season surveys. While we know that specialization itself is not new, the increasing trend is of concern if more and more households are depending on a smaller number of producers (Fall 2021).

The reason for this appears to be that some earlier producers are now too old to continue harvesting activities and have not been replaced by a similar number of younger producers.

Cost of transportation. Sharing of subsistence resources to family or others who do not reside in the same community as the subsistence producers entails additional costs to transport the resources, typically via airplanes. Money must be spent by either producers or recipients to cover the costs of movement. There is also the typically uncompensated cost of packing the product for shipping and getting it to the plane. There are clearly emotional as well as financial limits to this practice. Considering the weight and range of shipments of such widely shared resources as whale products and herring eggs, the

total amounts spent on transportation to share subsistence resources is enormous. It is not surprising that hesitancy and even reluctance to continue to share occurs when transportation costs paid by producers are not repaid by recipients (Thornton 2019:98-99).

Changing values. Values held by Indigenous Alaskans may change and impact subsistence sharing practices. Declining access to subsistence resources due to regulatory policies may impact the frequency of consumption and the preference for subsistence foods may weaken. Ties to family members living away from the villages where subsistence production occurs may weaken, especially as a result of reduced harvest levels. Culturally significant ceremonies and celebrations may be altered or occur with less frequency and the imperative to provide subsistence foods for these events may slide.

CONCLUSION

The subsistence way of life of Indigenous Alaskans has continued over the past 30 years producing at a similar level despite predictions of its demise. In fact, recent research demonstrates that despite threats, subsistence harvests have increased in recent years (Fall 2016:660). "Rural Alaska remains highly dependent on subsistence harvests of fish and wildlife resources for physical well-being as well as economic and cultural survival" (Fall 2016:660). Sharing is a critical necessity and central institution of resilience characteristic of Indigenous Alaskan societies providing essential and culturally significant foods and making possible a rich continuity of experience within Indigenous communities.

Sharing of subsistence foods:

- is a widely held moral value and ethical obligation in all traditional Indigenous Alaskans societies;
- contributes to the maintenance of persons and households who are not able to participate in subsistence production;
- provides high-value nutritional foods to many;

- is done for many subsistence foods from berries and clams to moose and walrus;
- occurs through feasts of various kinds including those that are part of formal ceremonial events;
- is provided to extended families and relatives locally, regionally, and beyond;
- is to elderly, indigent, and incapacitated;
- is an incentive to increased production;
- maintains moral, ethical, and spiritual obligations to humans and the others who give themselves to humans;
- creates pride, sense of self-worth, and identity and generates well-being;
- is an important marker distinguishing Indigenous Alaskan culture from that of mainstream American culture; and
- connects present generations with the activities of one's ancestors in action and in geography and provides a strong sense of continuity and identity with one's forebears.

The benefits of sharing subsistence resources can also be seen in the circumstances where harvests are insufficient to share. The sense of loss and deep dissatisfaction are palpable. For a Siberian Yupik bowhead whaling captain:

If ... you do not get a whale, then you do not feel like a total person and you are not happy. There is no happiness...[because] you are not feeding your family, crew and the whole community. (Braund 2018: 11)

For Southeast Indigenous Alaskans, not having herring eggs is enormously troubling and causes a deep feeling of malaise in Sitka as well as all the other communities of Southeast Alaska (Thornton 2019).

Often overlooked in policy debates and numerical valuations are the meaning of subsistence foods to the psychological well-being of Indigenous Alaskans. It is these deeply felt emotional ties to food and family that are critically enacted and constantly recreated by sharing. In that spirit, Lena Farkas, a recently deceased Tlingit woman from Yakutat, shared the following account several years ago concerning the significance of traditional foods:

My mother didn't eat for about three days before she died. She was 93 when she died. And ... she couldn't eat. I just gave her a piece of dry fish. She was holding on to it when she died. We buried her with it. Even though she couldn't eat any more, just a taste was enough for her. So, all these Fish and Game people, they don't really realize how important fish is to our people. It is our way of life—it is our food! I'll never forget—she held onto that piece of dry fish. Took it to the grave with her. So that's how important these things are to our people, you know. (Langdon 2012)

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