Archaeological ethnography of an indigenous movement: Revitalization and production in a Skolt Sámi community

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Abstract
Indigenous social movements contest histories of relocation, assimilation, and inequality. Archaeologists too have identified such processes in recent and deeper time. But what can ongoing sites of indigenous resistance tell us about those of the archaeological record, and what is the value in the present of linking such phenomena through time? The production of material culture embodies the motivations and constraints of these movements. Objects made and used promise to bridge temporalities, yet have been largely overlooked by anthropologists. To strengthen the ability to theorize such movements, we carry out an archaeological ethnography with the Skolt Sámi community of Arctic Finland. We focus our analysis on revitalization movements—a phenomena recognized at archaeological sites from the Pueblo homelands to western Europe—whereby communities intentionally direct cultural change in response to social stress. We bring anthropological conceptions of revitalization into dialogue with definitions of the term enacted by indigenous communities. The study analyzes the revival of technologies associated with Skolt lifeways: a boat made of planks sewn together with pine roots, and tools used to process inner pine bark.

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We establish the essential role that production of material culture plays in contemporary indigenous movements, and consider these new insights to critically evaluate and build on archaeological conceptions of revitalization.

**Keywords**
Archaeological ethnography, ethnoarchaeology, indigenous social movements, production, revitalization, Skolt Sámi

As for the young, regret or hope furrows their brows and they begin to search far back into the past or far ahead into the future, with an equally inexpressible longing.


Skolt Sámi stories recorded in *The Enchanted Forest* had been passed down for so many generations that nobody was entirely sure where or when they had begun; the Swiss author Robert Crottet (1949) speculated they originated with the earliest migrations across the Eurasian continent. As the Second World War moved toward Skolt territories in Arctic Petsamo, Kaisa Gauriloff recounted the oral narratives to Crottet to ensure their survival in post-war years. Even in these old stories, young people search the past and future for direction, reminding us of Wallace’s (1956) assertion that revitalization is a frequent phenomenon in the unfolding of human history.

Today indigenous peoples contest assimilation pressures through social action from the Arctic to Melanesia. Such processes are also of central importance to archaeologists who have identified their material remains across diverse temporal and spatial realms, ranging from deeper time (Fry, 1985) to historic periods (Liebmann, 2006). Archaeologists have suggested innovative changes in uses of
space and material culture that occur during social upheaval, typically caused by the appearance of more powerful groups, ranging from political elites in pre-Columbian New World states to European colonists (Fry, 1985; Liebmann, 2006).

Analyses of contemporary colonial interactions emphasize their social aspects, largely disregarding articulation with the material world in ways useful to explaining similar phenomena in the past. Without appreciation of how material culture is made, used, and considered today, it is difficult for archaeologists to determine how it may have functioned in the past. Overlooking the role of objects and their production is equally detrimental to understanding ongoing negotiations of colonial histories in indigenous communities, where they represent connections and disconnections with past social, political, and economic lives. Archaeological ethnography—here defined as engagement with living societies with concern for both past and present—is practically situated to theoretically bridge contemporary colonial entanglements and their material expressions with longer-term processes witnessed in the archaeological record.

In this study, we focus on an analytical category of social movements known as revitalization movements. This paper begins with a discussion of previously reported material culture associated with such movements, both ethnographic and archaeological, and demonstrates the benefit of anthropological engagement by both subfields. We contrast the anthropological definition of revitalization with the concept as used within indigenous communities. Archaeological ethnography is contextualized historically, and shown as a solution to explain the current role of material culture in indigenous movements in archaeologically meaningful terms. Using this approach, we present two case studies from the Skolt Sámi, an indigenous Arctic people, focusing on object production in an ongoing social movement. We first situate this movement within a history of marginalization and relocation in Northern Europe and pay particular attention to its impact on material culture.

Finally, we review the benefits of studying the production of material culture for both archaeologists and social anthropologists, as a critical but currently underdeveloped theoretical framework to interpret indigenous movements. We offer the potential this approach has for reassessing previously excavated archaeological material, indicating how such an approach perspective strengthens the position of anthropologists to identify social nuances witnessed in material culture. A concentration on production strengthens the revitalization model as a comparative tool, refocusing on everyday actors. In establishing the analytical importance of this approach, we conclude with a call to conduct further studies that explicitly deal with colonial relationships, to not only better understand the archaeological record, but to draw attention to the complexities of indigenous resistance to colonial histories today through their material manifestations.

Revitalization movements in perspective

Wallace (1956: 265) defines revitalization movements as “deliberate, organized, conscious efforts by members of a society to construct a more satisfying culture.” The movements have been implicated in cultural shifts, ranging from small changes in
material culture to broad-scale transformations in gender roles and subsistence prac-
tices (Wallace and Steen, 1970). According to the original model, cultures generally
exist in homeostatic states. When stress is placed on a culture—which can range from
population growth to environmental stress to colonialism—individuals become
dissatisfied with the existing system and seek to change it (Wallace, 1956, 2008).
A charismatic leader is often instrumental to the successful spread of a revitalization
movement. This leader gains followers by demonstrating the benefits of foregoing a
broken cultural system, and appropriate adjustments or coercions are made in order
to spread the mutually-agreed-upon, new ideologies (Liebmann, 2006; Wallace, 1956)
If a movement is successful, the associated behaviors become routinized as
equilibrium is re-established.

While Wallace’s outline was based on a systems-theory organismic analogy,
which has generally fallen out of use in anthropology (Harkin, 2004a; Liebmann,
2006; Wallace, 2004), those who apply revitalization today have modified the para-
digm to draw attention to individuals and their ability to influence historical circum-
stances. As Harkin further points out, “Although it would be naïve to assert that
‘revitalization movement’ unproblematically identifies something in the social world,
 apart from the concept itself, it is perfectly logical […] to suggest that revitalization
 successfully models recurrent bundles of behavior that appear in diverse times and
 places, under similar historical and cultural conditions” (Harkin, 2004a: xix). The
model now serves as an important heuristic tool to compare complex social
responses under analogous socio-political conditions (Harkin, 2004b).

**Material indicators: Ethnographic**

Material culture associated with revitalization movements has been described in cases
of indigenous resistance to European expansion in the Americas. In response to the
severe cultural change and population displacement that resulted in the late 1600s and
early 1700s from increasing contact with settler populations, calumet ceremonialism
became widely adopted by tribes across the North Americas. Some tribes used calu-
mets and their associated ceremonial dances to draw individuals away from Christian
missions back to traditional lifeways. Calumet use spread rapidly through Native
American communities and took on new symbolic and spiritual power
(Turnbaugh, 1979). Later, prior to the massacre of Lakota at Wounded Knee in
the 1890s, groups inspired by the pacifist prophet Wovoka created shirts of cloth
decorated with pigments and feathers to wear during Ghost Dances. The edges of the
cloth were modified to represent the frills of hide garments. Originally, the shirts were
used in ceremonial dances meant to reestablish a new order of stability. In these
dances, the use of metal, presumably associated with Europeans, was banned.
Later, the shirts were repurposed for battle to stave off bullets (Mooney, 1965).

Other variants of the movements have been described after disruptive inter-
actions between American military forces and Pacific Islanders. These include
“cargo cults,” known best from Melanesia (Wallace, 1956). Islanders innovated
forms of material culture following WWII after allied forces reduced or halted
contact. Landing strips were cleared to await the return of Americans, and guns and radios were crafted from bamboo and rope (Raffaele, 2006; Worsley, 1959). Similar objects have been created in a number of events elsewhere, but their physical descriptions are poor. For example, in resistance to French taxation pressures, Hmong in Indochina fought under the prophet-like leadership of Pa Chay, hollowing out trees and using them as cannons (Fadiman, 1997). Such accounts of revitalization movements provide only cursory description of objects and their role in living societies, with no mention of production.

**Material indicators: Archaeological**

Archaeological studies have more thoroughly reviewed the material culture of revitalization. Liebmann draws on both historical sources and the archaeological record to achieve a nuanced reading of the 1680 Pueblo Revolt in the Southwest of the United States. Colonists were expelled, architecture came to reflect the resumption of moietyal organization, and pottery traditions, which had come to be associated with occupying colonialists, fell into disuse. These transformations were “innovative” reflections of cultural change within a community resisting colonial pressures (Liebmann, 2008).

Research conducted in the absence of historical records has also associated material culture with revitalization movements. Scott suggests that an increase in ritualistic infant and animal burials at villa sites in Roman-Britain reflected revitalization of “Celtic” traditions by women, in an attempt to maintain ideological influence over a society under control of the Roman Empire. These burial practices co-occurred with changes in space reflected by shifting architecture (Scott, 1991). In the Southwest, transformation in settlement patterns, ritual objects and architecture in the Mesa Verde area, harking back to earlier Chacoan traditions, suggested to Bradley “an effort to recapture past values and traditions” as a result of environmental stress (Bradley, 1996). In another case, Fry implicates oppression by ruling elites as impetus for revitalization at Terminal Classic and Postclassic Maya sites; polychrome temple surfaces were destroyed in favor of simple stone work and design, ritual spaces became more visible and ceremonies more inclusive. Finally, ritual objects were used in new ways and locations (Fry, 1985). These material changes arose from a rejection of the dominant culture by peoples who occupied the periphery of New World states.

**Summary of revitalization markers**

Drawing on ethnographic, historical and archaeological sources allows for a general sketch of revitalization movements. Some form of systemic stress, typically pressure from a more powerful external group, is usually identified as causal. This precipitates a rapid shift in material culture, which may appear anachronistic (Bradley, 1996; Scott, 1991; Webster, 1999). “Changes in multiple artifact classes” rapidly manifest through processes of innovation, lack any transitional forms, and actively demonstrate cultural resistance (Liebmann, 2006: 51; Liebmann, 2008). Entirely new objects are made, as
well as chimera objects, fashioned by using new or old techniques, tools, materials, or some combination. These artifacts are frequently used or deposited in unusual places (Fry, 1985; Scott, 1991). Transformations in material culture and its deposition are thought to index changes in social organization, gender roles, and subsistence practices. Liebmann goes on to propose that revitalization movements may be self-driven and demonstrate “signs of centralized leadership” (2006: 51). He suggests that most material culture produced may remain unchanged, and that new innovative objects may closely resemble those produced prior to the movement (Liebmann, 2006: 31).

**Indigenous revitalization**

Beyond anthropologically conceived definitions of revitalization, the term takes on unique meaning when used by indigenous communities to describe ongoing renewal of culture, expressed through the relearning of language to the production of art. Contemporary movements emphasize continuity and ongoing change, drawing on visions of the past to effect social and political change in the present and future (Willow, 2010). Production of indigenous material culture—from craft to literature to photography—enables disruption of political order through the material world, establishing “visual sovereignty” by asserting indigenous presence and continuity with indigenous homelands through aesthetic practice (McDougall, 2014; Martineau and Ritskes, 2014; Norman, 2014).

Reconstructions of cultural objects articulate these processes of continuity, change and reclamation, while associated engagement with the environment reinforces community connections to land (Pilgrim et al., 2010), acting as “environmental repossession” negotiating control of traditional lands, while improving health and building social relationships (Big-Canoe and Richmond, 2014). Community initiatives have focused particular attention on built structures such as wigwams (Willow, 2010), totem poles (Řeháčková, 2017; Stewart, 1993), and boats—sizeable items that may be constructed with large-scale community involvement and commemorated with public ceremony. Museums, education centers, private collections, and other non-traditional settings have become especially important sources of funding and commissioning of such objects (Johansen, 2012; Moore, 2010; Stewart, 1993).

In particular, the building of watercraft has been the focus of revitalization initiatives across diverse indigenous communities—from First Nations of Northwest Territories (Andrews and Zoe, 1998), Coast Salish (Johansen, 2012), Anishinabe (Willow, 2010), and Polynesian groups (Finney, 1994; Linnekin, 1983). Stages of material collection, building, and final launching ceremony serve to commemorate continuity with land, people, and cultural practices, thus strengthening identity, social relations, and community. Among Anishinabe, the building of birchbark canoes has had diverse social, environmental, economic, and political effects (Frandy and Cederström, 2017; Willow, 2010), while reclaiming an intimate engagement with local environments and seasonal cycles involved in collection of raw materials (Price, 2000). In Coast Salish territories, resurgence of canoe building and canoe journeys has helped youth heal from substance abuse by strengthening social connections, especially intergenerationally (Johansen, 2012).
Bridging ethnography and archaeology

Archaeologists interested in explaining the effects of colonial pressures and their manifestations as revitalization movements must turn to historical and ethnographic records to generate hypotheses. This literature lacks detailed description of material culture, an understanding of which is essential to explaining the archaeological record. This leaves a large gap between archaeological observations (e.g. the spatial distribution of objects), and theoretical models such as revitalization. This gap may be filled through observation of behaviors in the present, through either experimental archaeology or ethnoarchaeology.

Ethnoarchaeology is the observation of and engagement with living peoples and the things they use, make, and leave behind to create analogical frameworks necessary to interpret archaeological patterns (see David and Kramer, 2001 for an extended discussion). Though most archaeological interpretations are predicated on implicit analogical reasoning, ethnoarchaeology entails the formal creation of analogies to evaluate traces left in the archaeological record. Popularized under a processual paradigm which sought generalizable laws about human behavior and site formation processes (Binford, 1977), ethnoarchaeology was equally foundational to post-processual archaeologies in the 1980s that stressed contextually-embedded archaeological interpretations (Hodder, 1982).

Today, the ethnoarchaeology practiced historically has diversified into a number of approaches. Some ethnoarchaeologists weigh and measure food consumption to generate explanations on an evolutionary scale. Others have utilized ethnoarchaeological datasets—incorporating interviews discussing subsistence tasks and associated technologies—to challenge commonly held conceptions of gender (Brumbach and Jarvenpa, 1997; Jarvenpa and Brumbach, 1995, 2006). Others still have established the value of the emergent practice of archaeological ethnography; a developed engagement with living populations and their material culture, or relation to archaeological heritage. In this paper, we draw on the strength of archaeological ethnography as a diverse practice (Hamilakis and Anagnostopoulos, 2009; Magnani et al., in press; Meskell, 2005; see also Castañeda and Matthews, 2008 for a discussion of closely related variants including ethnographic archaeology).

In our usage of the term archaeological ethnography, we establish the relevance of linking lived, contemporary histories of colonialism with those of the archaeological record. Our study shares overlapping scope with ethnography proper, in that we are interested in issues of practice, indigeneity, and sovereignty. Yet, we scaffold social observations on the production and use of material culture in a form intelligible to archaeologists. This approach complements traditional participant observation, by revealing perspectives that may remain opaque or hidden in the immaterial, social transcripts typically recorded by ethnographers. We explicitly construct a frame to interpret past colonial entanglements, in relation to living communities, whose ancestors created archaeological records of resistance. Simultaneously, we seek dialogue to determine what tangible benefits may be delivered to communities through such projects (in this case through...
the detailed filming and recording of a community-led revitalization project, but see also Magnani et al., in press for information on an archaeological ethnographic approach to museum-based heritage in the same region).

The current manuscript reflects a complex social movement that sits at the confluence of local, national and international histories. We recognize that there are points of similarity, and divergences between the anthropological revitalization model and the use of the same term by indigenous peoples themselves, who are best situated to explain the movements they lead. However, to inform comparison with the archaeological record, fitting the current cases to the anthropological revitalization model provides a foundation, and represents one way to connect local indigenous resistances today to broader narratives that resonate historically and in deeper time.

Skolt Sámi material history and social movements

Inhabiting regions of Finland, Norway, Sweden, and Russia, the indigenous Sámi have interacted with neighboring groups and states while simultaneously negotiating internal dynamics between different Sámi interests (Hansen and Olsen, 2014). Three Sámi groups, North Sámi, Inari Sámi, and Skolt Sámi occupy Finland. In the case of the Skolt Sámi—a fishing and reindeer herding population who number approximately 1000—the decline, innovation, and reemergence of certain forms of material culture articulate responses to colonization and displacement, subsequent social and political challenges, and the uncertainties of broader economic transformations.

The unusually rapid pace of cultural change after the Second World War set the stage for Skolt cultural revival. In 1920, Finland acquired the Skolt Sámi homeland of Petsamo from Soviet Russia under the Treaty of Tartu (Figure 1), entering a colonial period of ambivalent relations with the Skolt Sámi population (Nyyssönen, 2009). In the southeastern Skolt territories, the relative geographical and economic isolation of Suoŋŋje Skolts in relation to other Skolt groups closer to road infrastructure and Finnish settlement (i.e. Peäccam and Paččjokk Skolts) (Nickul, 1948; Nyyssönen, 2009), dictated that material culture changed more gradually despite longstanding interaction with Finns, Norwegians, and other Sámi (Pelto, 1962). After the Second World War, Finland ceded Petsamo to the Soviet Union, resulting in relocation of Skolt Sámi to the Finnish side of the redrawn border. While Peäccam and Paččjokk Skolts were sent to villages in Nellim and Keväjärvi, the Suoŋŋje Skolts were rehomed along a 60 kilometer stretch of lakes in the Sevettijärvi area. Fixed residence in households replaced seasonal family migration according to fishing and reindeer herding cycles. The winter village, where families would gather yearly and engage in social activities like games and dance, was left on the other side of the border. This contributed to loss of social practices including dance, language, and singing (Pelto and Mosnikoff, 1978). The transition was deeply felt in Sevettijärvi:

So much, in fact, had changed in Skolt Sámi culture that by 1958 it was customary for the Sevettijärvi Skolts to refer to the “Old Model” and the “New Model” of Skolt
The “New Model” lacked the traditional costume, the ceremonial events, traditional craft skills, and a large number of items of material culture. (Pelto and Mosnikoff, 1978: 195–196)

The relocation also introduced new relations with the Finnish state. While the Skolts retained the political structure of the sobbar village council from the original homeland, its function changed as the establishment of the Skolt Area placed management of lands under the Finnish Forest Service (Nickul, 1948; Pelto, 1962). The special situation of the Skolt Area encouraged direct communication regarding Skolt-related policies between Skolt leadership and the Finnish government (Ingold, 1976).

The Skolt resettlement also led to strained relations with existing Inari and North Sámi groups regarding reindeer herding and fishing lands, amid general discrimination against Skolts as settlers from the Soviet Union. These relations carried over to boarding schools where Skolt Sámi experienced bullying. During Finland’s nation-building years, Sámi populations faced “Finnicization” pressures in the form of negative attitudes toward markers of Sámi identity, including dress, craft, and language (Lehtola, 2004; Nyyssönen, 2011). In this socio-political context, Skolt material culture marked the identity of a minority within a stigmatized minority.
In addition to social pressures, emergent technological and commercial expansion had significant material consequences; for example, snowmobiles drastically altered the economic landscape of reindeer herding (Ingold, 1976; Pelto, 1973). The result was a rapid decline of equipment use and manufacture (i.e. sleds, harnesses, and boats), Skolt dress, weaving crafts, and the knowledge required for their production by 1970 (Pelto and Mosnikoff, 1978). In this way, a changing material world would come to embody the broader challenges facing the Skolt Sámi community.

In the 1970s, an “ethnic revival” gained momentum with the official entrance of the Sámi of Finland to the international indigenous movement (Nyysönen, 2008), and in the 1980s and 1990s national legislation strengthened protections and provided financial resources for preservation of language and culture for all Sámi groups (Tuulentie, 1999). While initiatives to revive Skolt Sámi culture are distinct within a wider Sámi movement, aiming to mark Skolt identity and traditions as unique from surrounding Sámi and Finnish groups, Skolt inclusion in wider Sámi legislation means that funding for linguistic and cultural programs from the Finnish government may come through avenues such as the Sámi Parliament. Furthermore, Skolt political interests may take a secondary position to pan-Sámi interests in order to unify political efforts vis-a-vis the Finnish state.

While Skolt identity grew alongside a larger Sámi movement, improved road infrastructure increased tourism and encouraged demand for Skolt Sámi craft. Government-sponsored schools provided handicraft courses to teach labor skills to the unemployed, among whom were many Sevettijärvi women (Pelto and Mosnikoff, 1978). At the same time, the roads took away younger generations south for jobs and education, further dispersing the Skolt Sámi community. In particular, women sought education outside the Skolt Sámi homeland as their participation in the subsistence economy dwindled with the cessation of seasonal family migration following relocation.

**Materials and methods**

This research is based on participant observatory fieldwork conducted between July 2014 and September 2015 and includes two case studies. It combines sub-disciplinary perspectives from archaeology (Matthew) and social anthropology (Natalia). The first case traces the production of a boat type from the early 20th-century, the planks of which were sewn together with pine roots; the second examines tools for the collection of pie’cc, the edible-inner bark of Scots pine (Pinus sylvestris). During a two-month boat course we participated in all stages of production—from raw material acquisition to final testing—alongside community members with whom we had informal discussions during the reconstruction process. Following dialogue with course leaders and participants determining community needs, we filmed all stages of production of the boat, and use of the pie’cc tools, to share the projects at the Skolt Heritage House in Sevettijärvi, and provide instructional and educational material for future reconstructions. Natalia conducted additional semi-structured interviews in English, Skolt Sámi, Finnish, and Russian, and translated media coverage surrounding the projects, including
interviews with institutional organizers, instructors, participants, and community members. The production and use of the boat were observed, while the bark tools discussed had already been produced, and were only observed in use.

Documentation of construction techniques follows a *chaîne opératoire* approach. This practice is often employed by Francophone prehistorians in consideration of lithic and ceramic archaeological remains, and more rarely by ethno-archaeologists working with ceramics and other materials (David and Kramer, 2001). The analytical framework certainly has its flaws (e.g. Bar-Yosef and Van Peer, 2009; Magnani et al., 2014), which we find less-pronounced in contexts where individuals can be observed and queried. We recorded raw material acquisition and stages of production, but were unable to take into consideration longer-term maintenance or discard patterns associated with the objects.

*Production of the root boat*

Boats that were fashioned from planks sewn together with roots form a long-standing tradition in regions inhabited by the Sámi, with records as early as 1138 A.D. detailing production of vessels constructed without nails for a Norse chief (Bayliss-Smith and

![Figure 2. The Skolt Sámi root boat in three orientations. Scale length is one meter.](image-url)
Each sub-region in Lapland was known for producing distinct variations of the root boat. The specific Skolt Sámi model discussed in this article, a lake boat predominantly used for fishing and consisting of a keel and four boards forming each side of the hull, was selected for reconstruction after consultation with village leaders (see Figure 2). To make the boat more impressive for museum display, builders planned the reconstruction at 3.7 meters, approximately one meter longer than documented by Paulaharju (Paulaharju, 1914).

The root-sewing technique was last documented in the early 20th-century in the territory of Suönnjel in Petsamo (Itkonen, 1948), from where Skolt Sámi in Sevettijärvi were relocated. Therefore, Sevettijärvi became both a symbolic and practical location for a boat advertised as distinctly Skolt Sámi and made according to a Skolt Sámi design. The project organizers sought to engage the community, including members who may have remembered such root boats from Petsamo. In this way, the attempted reclamation of the vessel form and its production techniques constituted an active response to the stresses of rapid economic and social transformations.

During a two-month long course run by SAKK and supported by the Siida Sámi Museum, members of the local community came to observe the construction, advising root work and sharing related boat building memories and experiences. While project organizers at the museum and SAKK were female, the instructor and key participants were entirely male. The boat building instructor, from south Finland, consulted ethnographic texts which both mentioned the root-sewing technique (Nickul, 1948) and documented it in detail (Itkonen 1948; Paulaharju, 1914). Visual examination of two boats—one complete and one partial—found at the National Museum archives in Helsinki informed aspects of construction not available from ethnographic texts. The complete boat, built in 1914, was the most important to informing the project. The builder emphasized the limited boatbuilding expertise of researchers who had recorded the boats historically, whose records did not reflect the specific details needed to construct an actual water craft. Key participants in the root boat project included a Finnish migrant to the community (who also played a vital role in the reconstruction of bark harvesting tools discussed later in this paper), and an older Skolt Sámi reindeer herder with expertise in woodworking and hand tools. Parallel to the root boat construction, the instructor taught other course participants to make lake boats with more modern techniques using electric tools and metal nails. Dominant male participation in the boat project marked a continuation in the historically documented male production of fishing boats and reindeer sledges (Itkonen, 1948; Nickul, 1948).

The spatial organization of the project reflected its explicit social agenda. To increase feedback and participation, building took place in a centralized location within the village, where visitors to the school, health center, and residential units frequently passed. The regular lake boats were constructed beneath a tent, while the root boat was built in the open. This setup was a reflection of how the boat was perceived to have been constructed in the past: in the open air instead of in a factory, with hand tools instead of power tools, and with pine roots instead of metal nails. Tools, space, and production methods thus represented an attempted
reassembly of social, economic, and technological conditions of early 20th-century Petsamo before colonial acquisition by Finland.

Compared to records from the early 20th-century, the root boat course differed both spatially and seasonally from documented production sites. Photographs from 1913 show the construction of boats directly on the water (Nickul in Itkonen, 1948: 469). The sequence and timing of manufacture may have also been more variable, with different components made at various times of the year. In the 1800s, logs were floated to areas that lacked the appropriate resources; ribs and other smaller components were sometimes collected after the rest of the boat was built, and often worked on the spot they were found. By contrast, for the reported project a bulk of the timber was collected during the winter months instead of the spring or fall, as was the case historically (Itkonen, 1948: 472).

The course instructor and participants expressed that modern engagement with wood differs from even recent historical periods, when trees ideal for specific components of a boat would have been mentally catalogued while passing through an area. For this project, trees were collected during a single trip based on the observations of one man. There was not enough time to take multiple trips to collect raw material, nor to draw on multiple individual’s knowledge. Because the most appropriate raw material could not be found (i.e. large enough pieces with the correct shape), smaller pieces were assembled to achieve desired dimensions. For example, the keel is ideally made from a single tree part curving at the root and connecting branch, but was instead constructed from three different sections. The boat ribs would have been fashioned from reaction wood (lylypuu) strengthened in response to the leaning trunk and limbs, but appropriate pieces were not available. In other cases, consistencies with material selection were noted; for example, nails were made from pine heartwood as documented by Itkonen (1948: 471).

Major departures in raw material acquisition and selection stem from time and material constraints. Chainsaws were used to fell trees and snowmobiles to drag logs out of the forest. The boards were cut using a large table saw. According to the builder, this compromised the strength of the wood, which ideally would be hand split along the grain. After being cut, the lumber was left to cure between 4 and 5 months. Wood availability was a limiting factor in production and experimentation of techniques. In addition, available species of trees dictated the form of the boat. In the Skolt Sámi homeland of Suōńjel, boats could often be constructed from spruce, which allowed for a steeper prow and stern. However, Sevettijärvi is situated above the spruce line and therefore the boat was constructed from pine wood, producing a gentler, curved keel.

To shape boards, participants used a large table saw and electric planes. They used hand planes and woodworking knives to finish the boards more precisely (Figure 3). In cases of error, commercial epoxy repaired sections of wood. A steambox served as the apparatus to bend the boards to shape. The steambox utilized here was fashioned from a 50-gallon oil drum fueled by wood. Previous documentation shows the boards were soaked in water and bent using heavy stones (Itkonen, 1948: 470), a process that today would take too long and produce unpredictable results. To create boards that articulated with one another correctly,
mockups were occasionally made using lighter particle board. This is unnecessary in cases where builders are familiar with the forms. Two kinds of clamps were used to hold boards tight against one another during shaping and sewing. In form and material some closely resembled clamps used historically (Itkonen, 1948: 471) and others were fashioned of aluminum and steel but achieved the same purpose.

The boat required tar and reindeer lichen to make a watertight seal between planks. Exact proportions of tar to moss were unknown, and trial and error revealed what was appropriate. In processing the roots for sewing, they were first boiled in warm water until soft and then stripped of their bark. First the root bark was stripped with a knife, a process both tedious and damaging. Noticing the struggle, an older Skolt Sámi introduced an antler tool used for basket making which caused less damage. Using another tool made of antler—this one known from historic documentation—the roots were pulled tight and a wooden nail driven through alongside to hold the roots in place. Roots were sewn through holes in adjoining planks, made with an electric drill and finished with a woodcarver’s knife. Since only photos of the process and museum examples of the vessels existed, trial and error became important in relearning how to use the antler tool. Builders wrapped roots around the tool in various ways and applied varying directions of force (Figure 4), frequently resulting in root breakage.

Figure 3. Hand tools used during the construction of the boat. From left to right: two wood working axes; three planes of various sizes. Scale length is 10 centimeters.
While the boat builder and course participants would have liked to produce the vessel using only period-appropriate hand tools, time constraints dictated the frequent use of motor tools. This left visible traces—a hand plane leaves a much different mark on boards than an electric plane, and high-powered sanders and table saws leave different marks than their historic counterparts. Some steps began with hand tools but finished with motor tools. More often the reverse occurred. Participants accommodated time constraints by using motor tools to make the general form of a boat part, and hand tools to finish the surface, since the end goal was display at the museum and cultural events. The notches on the prow, potentially used to secure the boat with rope, were carefully made asymmetrical to mimic rough axe work. Only tasks that have no modern analogues were done in the complete absence of motorized tools, such as plank sewing. The manufacturing process in this context copied the form of historical boats, but used a mixture of old and new techniques and tools (albeit with clear preference for the older).

Figure 4. Reindeer antler tools used during boat production. From left to right: tool used to strip bark from pine roots; tool used to pull roots tight during plank sewing. Scale length is 5 centimeters.
Upon completion and a private testing, the boat was launched and consecrated in a public ceremony, highlighting continuity of Skolt Sámi traditions from the Petsamo homeland. The event was supported by SAKK and the Siida Sámi Museum, documented by Skolt Sámi and wider Sámi news media, and attended by a large audience of locals and visitors. A group of Eastern Orthodox priests consecrated the boat by sprinkling it with holy water, particularly important because of the centrality of Orthodox faith for Skolts, which they adopted from Russian missionaries in the Petsamo. The ceremony culminated in two builders rowing onto the lake, marking a resurgence and continuity of material culture and associated lifeways affected by relocation.

Production of pie’cc tools

The recreation of tools to harvest pine resources also provides the opportunity to consider material manifestations of revitalization. The inner bark of Scots pine (Pinus sylvestris) known locally as pettu (Finnish) or pie’cc (Skolt Sámi) is commonly represented in the region as a starvation food, because the surrounding Finnish populations used the bark for emergency purposes (Airaksinen et al., 1986). However, Skolt Sámi populations used pie’cc for porridge and soup thickener as a part of normal diet (Itkonen, 1948; Kytoälä, 1999; Paulaharju, 1921). Because of the role of pie’cc as a regular food among the Skolt Sámi, its use has become a key symbol of Skolt Sámi culture (Magnani, 2016). Like the root boat, the renewed production of tools for the harvest of pie’cc and its consumption represents efforts to reclaim ways of life affected by social and political encounters and economic transformations.

Most scars attributed to pie’cc collection are found on the north sides of trees; a small layer of cambium, about three fingers length, was used to keep the tree alive (Bergman et al., 2004; Itkonen, 1921). Today old growth forest scars typical of the collection are still common on the landscape. Photographs from the pre-relocation homeland in Petsamo depict pie’cc being collected from standing trees (Nickul, 1948). After displacement, laws banning the harvest of pie’cc from standing trees meant a shift to felling for collection. Testing reconstructed pie’cc tools on already felled trees represents a departure from practices in the Petsamo homeland. Pie’cc collection was historically done by individual households in close proximity to settlements where processing occurred (Bergman et al., 2004). In efforts to revive pie’cc use, the work is still done in close proximity to dwellings, but is conducted by unrelated community members brought together by shared interest.

The preparation of pie’cc has been documented as a female task (Itkonen, 1948: 288–292; Nickul, 1948). However, it is less clear who made the tools for pie’cc harvest. Women made objects for use in the home (Paulaharju, 1921: 109); this included birch bark containers and pine chests (Kytoälä, 1999: 25). While pie’cc tools may have been included among those implements made by women for household-related use, Skolt Sámi today consider the making of pie’cc tools a traditionally male domain. The reconstructions presented in the case study involved male
and female members of the Skolt community working together in social and economic contexts that differ from the recent past.

While demographics are changing, timing of pie’cc collection remains more stable. As done historically, pie’cc collection typically occurs during summer nila-aika when sap is running and bark peels easily. Historical records note up to 20–30 kg of prepared bark was stored, as well as unprocessed sheets. Surplus was traded or gifted depending on regional traditions and availability (Bergman et al., 2004; Tanner, 1929: 124). Bergman and colleagues further note that bark was taken from trees approximately 90 years old with a mean diameter of 200 mm. Current harvesters also prefer larger trees with thicker trunks not necessarily available on individual properties during time-constrained workshops, but do not store the bark in bulk.

Three types of pie’cc tools are used and produced today: the vue’tikem, a thick antler instrument for scraping off the outer bark; the ka˚llam, a thin, knife-like instrument made of antler for peeling away the inner bark, often with regional design; and the norddmõs, a club with antler protrusions for grinding the dried inner bark into flour (Kytölä, 1999; Nickul, 1948). Ethnographic accounts refer to the use of grindstones, mortars, and iron-tipped pestles, though no mention of these additional processing tools was made during the present documentation (Itkonen, 1921). For example, Inari Sámi used a wooden plank with iron nails to shred bark, but this was neither made nor discussed during the present project (Itkonen, 1987 in Bergman et al., 2004).

The reconstructions were based on SAKK teaching materials and discussion with other villagers. SAKK teaches a portion of the tools, the ka˚llam, during general courses focusing on antler work. This makes the ka˚llam perhaps the most persistent tool form related to pie’cc collection in the present. Due to its frequency of manufacture, especially in courses where beginners are learning to work with antler, we would expect the ka˚llam to be highly variable in production, form, and raw material.

The reconstruction of a wider set of tools occurred less commonly and by fewer individuals. Around 2009, a female Skolt Sámi handicrafts expert collaborated with a Finnish male SAKK instructor to recreate tools for museum display. Limited by available models but informed by personal experience with materials, improvization was key in initial reproductions. These models were copied in a second set of reconstructions made at a SAKK-sponsored antler course in Sevettijärvi. The main artisan was a Finnish man married to a Skolt Sámi woman. He consulted the instructor and referred to the museum models. Consequently, all pie’cc tools currently in use may be based on one set of initial reconstructions.

Using electrically-powered equipment in a modern workshop, makers focused on replication of the form of tools rather than the process of their production. Ideally hand tools would have been used. The instructor recounted that due to learning involved in first-time production, resulting models were made with improper antler material. Subsequent reconstructions were tested at a pie’cc harvesting and processing workshop attended by local men and women from the nearby Skolt village. The tools accomplished the primary aim of effective pie’cc harvest, and it was supposed but not certain that the tools worked effectively.
Results and discussion

We situate the reported projects as a part of the broader cultural and linguistic revitalization program driven by the Skolt. Numerous organizations and local actors seek explicitly to strengthen Skolt community through social and cultural initiatives. The Skolt Sámi Cultural Foundation in Sevettijärvi organizes community events around Skolt Sámi foodways, song, and dance (Magnani, 2016). The Orthodox church provides ceremonies and services emphasizing cultural ties to pre-relocation Petsamo. Various individuals have promoted linguistic revitalization, beginning with the publication of a Skolt grammar and orthography in the 1970s (when there were about 600 speakers), and continuing today with the maintenance of Skolt Sámi day cares, language lessons, and publication of Skolt Sámi books, songs, and magazines. In 2017, there are about 400 speakers of Skolt.

Considering the interplay of Skolt and wider Sámi institutions, it follows that they operate together to preserve, maintain, and revive Skolt Sámi culture. The Sámi Education Institute (SAKK) is a secondary degree school, funded by the Finnish state but governed by local Sámi organizations. SAKK arranges vocational degrees, programs, and courses to promote Sámi culture and the economic vitality of the Sámi regions, while the Sámi Museum in Inari commissions the construction of objects showcasing Sámi culture. These two institutions collaborated, in consultation with the Skolt Sámi Cultural Foundation, to support the reconstruction of a Skolt model root boat for Sevettijärvi’s Heritage House and community events. Similarly, bark harvesting tools discussed in this article were produced during a SAKK course. As such, Skolt Sámi and pan-Sámi institutions serve jointly to counter political, social, and economic stresses on Skolt Sámi life-ways. These organizations mobilize and provide the structure for individuals from diverse backgrounds—including Sámi, Finns, and others—to come together and contribute to Sámi community goals.

Reviewing established signs of revitalization

Approaching the production of the root boat and pie’cc tools via perspective gained through an archaeological ethnography, it is possible to review and expand material indicators used by archaeologists to identify revitalization movements.

The use of anachronism as an indicator of revitalization is mentioned in previous works. Here the word is used to describe objects that have fallen out of production for a substantial period of time and come back into production. With appropriate temporal resolution—as found at many historical archaeological sites—reintroduction of manufacture techniques might be apparent, emerging in novel social and production contexts. Pie’cc collection and processing, especially with the types of tools described in this paper, rapidly declined in the years following relocation. The last boats made with roots were created almost a century ago.
Innovation has been emphasized as a central component of revitalization movements (Liebmann, 2008). Here, material innovation (or creation of novel forms) is considered a result of an experimental process conducted to figure out how things were made and used in the past. While the builders were familiar with the forms of finished objects, they moved toward these goals by testing techniques in combination with different tools and raw materials. Through sewing planks together, mixing tar and moss for joint sealing, and fitting boards, fixes and improvisation in building techniques were frequent as builders attempted to figure out precise details of production. Innovation was equally visible in the production of pie’cc tools, where exact details of raw materials and shapes of tools were limited to memory and ethnographic texts. In both cases, experimentation involved determining the best way to use a tool, appropriate raw material, and in some cases proportions of ingredients.

The production and use of the boat and pie’cc tools are carried out in non-traditional spaces and venues selected to increase their public visibility and inclusivity. This corresponds with previously established archaeological markers of revitalization. For example, Fry has suggested that some ceremonial practices became accessible to a broader audience, evidenced by the use of utilitarian pottery types in ritual contexts and movement of stelae into more visible areas (1985). Here, we see an analogous process: the boat was produced centrally, visibly, and larger in size than known historical examples. Its construction engaged unrelated participants from diverse backgrounds. Upon completion it was displayed during a public ceremony. Historically such boats were made immediately near the water (Itkonen, 1948: 470) by smaller related groups or a single maker. Similarly, pie’cc collection occurred away from settlements, while processing was done nearer to settlements (Bergman et al., 2004). Today collection typically occurs by a group near the residence where it will be processed. Pie’cc tools are also frequently used or presented in public demonstrations at community cultural events, where they are emphasized as Skolt tradition (Magnani, 2016). Changes in space attest to efforts in making visible the use and production of the objects in public fora. This is achieved not only by expanding the number of participants involved in production and use, but also by producing and using them in central, highly-trafficked spaces.

Transformations in labor divisions have also been reported as facets of revitalization movements—amongst the Iroquois, for instance, men adopted agricultural tasks typically carried out by women (Wallace and Steen, 1970). Skolt Sámi today recount that men used to make pie’cc tools and boats while women processed the soft inner bark. By contrast, current pie’cc harvesting involves women and men collaborating on all steps of production, from making tools to final processing. Thus participation in pie’cc harvest shows that transformations in gender roles occur when practices are reproduced in novel social and economic circumstances. By contrast, in continuation of the male role in boat building, the boat reconstruction largely comprised male participants and represented a unique case of dominant male participation in heritage activities, although arranged by female leadership at Sámi museum and education institutions.
Novel material and social signs of revitalization

While most archaeologists addressing revitalization have dealt with object forms (e.g. changing pottery types), focusing on object production will provide further benefits to movement identification and analysis. In particular, mixed manufacture methods are a good indicator of revitalization. In earlier stages of boat production, electric tools were commonly used. Later stages of finishing work preferred hand tools. In both case studies, older technologies commingled with more recent tools and production sequences from other contemporary projects; the root boat was manufactured alongside lake boats secured with nails, and the kaålłam and other pie’cc tools in a modern workspace. Extending this to the archaeological record more broadly, revitalization events may be indicated by a mixture of production methods.

How tools were used may be equally informative. Even when an old tool was employed, there was no guarantee that it was used with the same techniques in the past. The last stages of manufacture may have been carried out using older tools handled with new techniques, whereas a bulk of the waste created in the reduction of raw material may have been produced with contemporary implements and gestures. These considerations may be particularly useful to apply to ceramic traditions discussed by Bradley (1996). For example, is the revival of Chaco-style vessels at Mesa Verde simply copying an earlier artefactual form, or were they also attempting to apply older manufacturing tools and techniques?

Further, lower-quality build associated with both the boat and pie’cc tools directly resulted from unfamiliarity with older techniques. This may reflect that object production had not reached a stage of routinization (as originally outlined by Wallace). While the craftspeople who made the objects in this case were well-versed in boat building and woodworking, they were unfamiliar with the production of the material culture detailed here. They did not always have the time to develop fluency with associated techniques and tools, or to find appropriate raw materials. This led to errors being corrected using various means, sometimes glue. Additional indicators point to a level of uncertainty or inexperience in production. For example, learning to sew the boat required some trial and error leading to roots snapping. Those working on the root boat stressed how a practiced shipwright can craft boards by eye when familiar with a specific boat form. In the reported case, mockup models of boards were made. This introduces an entirely different class of material remains, which would disappear through time as the builder became more proficient. The same can be said for the use of epoxy, which may become rarer as comfort with production techniques increases. If production of items becomes more routine, such material crutches may become less evident through time.

Working in a living context highlights the impacts of constraints in time, referential and experiential knowledge, and materials. Observing ongoing cases permits personal motivations to be linked to the material culture being produced. Such personal choices of production are largely absent in most historical documents and altogether absent in the archaeological record. To the builders, objects created in these case studies represented lower-grade materials and less “authentic” modes of production compared to the historical materials on which they were based. Given
enough time—limited here due to funding allocated by SAKK—participants would have searched for appropriate materials and used hand tools for all parts of the project. The primary boat builder insisted more time needed to be spent in the forest, searching for the correct trees to build in the traditional way. These intentions reflected motivations to reproduce technological conditions, as well as ways of engaging with materials, that preceded rapid social, economic, and political transformations after the Second World War in Finland. The time allotted by SAKK took into account the novelty of the learning process to produce a suitable museum object, but did not necessarily involve the practice needed to produce desired fluency with materials and tools.

Ideologies invisible in the archaeological record were shown to exert major influence over the reported projects. For one, motivations for object production differed significantly. In some cases, the form and uses of the object were emphasized, in others the production techniques were the focus. Pie’cc tools were constructed with minimal consideration of raw material, and were entirely machine-made disregarding older production techniques. These tools were created largely for use, and the collection of pie’cc was emphasized over the production of the tools used to these ends. By contrast, the boat was manufactured explicitly to ascertain the building process. It was never intended for regular use, but to be taken out of the museum occasionally for ceremonies and celebrations.

Object variability is another potential direction for archaeologists interested in revitalization to explore. We point out that this project observed the revival of specific technological forms, and emphasize that these elements are only one portion of a dynamic, contemporary material culture. However, compared to pie’cc tools and boats found historically, a significant loss of physical variation occurred. This is due to a bottleneck of sorts, which took place in multiple loci. The objects were reconstructed based on limited eyewitness accounts, or through consultation with museum collections and anthropological texts. The biases in this data are strong; the boats in the museum collections were either commissioned by anthropologists and not intended for use or collected at random. Pie’cc tools too were recreated based on examples held by one individual. Anthropological literature mentions more types, shapes, and decorative features of these tools than those used today. These observations specifically suggest that revived objects associated with movements may exhibit significantly less variation than the objects on which they are based, in form and potentially production techniques.

Conclusions

In a novel application of archaeological ethnography, this study emphasizes the benefits of approaching ongoing indigenous movements from an archaeological perspective. Such a perspective, emphasizing production, facilitates not only a more nuanced reading of the material culture left in the archaeological record, but also contributes to contemporary indigenous histories through the lens of material culture. For this project, research questions were framed on a preexisting
revitalization effort initiated by the Skolt. Study of the boat building furthered community goals to record knowledge reconstructed from archival texts, objects, memories, and present-day interaction with materials. Today, samples of edited film detailing the boat project greet visitors in Sevettijärvi’s Heritage House. Raw film footage of the pie’cc and boat projects may be consulted at the Skolt Sámi Cultural Foundation to inform similar initiatives.

Archaeologists interested in understanding colonial interactions—from revitalization to other forms of resistance by marginalized groups—lack tailor-made theories to interpret the remains they encounter. They rely on ethnographies and historical accounts that make limited mention of material culture, and rarely in ways that may be meaningfully used by archaeologists. By explicitly developing a suitable framework, a bridge between the archaeological record and larger anthropological questions will be strengthened. While focusing on revitalization movements, this project represents a call to establish datasets that improve ability to explain the impacts of colonial interactions on indigenous peoples more broadly.

Reassessing archaeological material associated with revitalization movements highlights an additional utility of archaeological ethnography. Through following the production of two types of objects, material markers of revitalization established by both ethnographers and archaeologists have been emphasized or elaborated, and new traces have been proposed. We have corroborated that processes of innovation drive change in material culture. These objects are often made and used in public spaces in ways that transform gender roles. However, working in a living context has allowed us to emphasize the motivations and ideological underpinnings of decisions that factor in their production. We have suggested further that lower-quality build, loss in variability, and mixture of reduction sequences may serve as additional indicators for archaeologists interested in revitalization.

We find that studying the material culture of revitalization overcomes shortcomings of the model. In particular, a methodology emphasizing production moves past issues associated with an organismic analogy by identifying who participates in and why they drive social movements. Through this approach, we have demonstrated the importance of revisiting gender, where colonial pressures have disturbed traditional subsistence and social patterns, but in this case offered opportunities for women to restore community life through cultural programs supported by the Finnish state. At the same time, focus on production removes emphasis from movement leadership, refocusing on the everyday decisions of those who produced the material culture of revitalization. Looking at motivations underlying production—namely dissatisfaction with current social, political, and economic conditions—allows us to understand why indigenous movements occur today at the confluence of individual decisions and historical circumstances.

How objects are made constitutes a critical dimension of revitalization movements, yet has thus far been overlooked. Moving beyond just object forms, efforts to reclaim modes of production suggest deeper attachment to lifeways associated with the reproduced objects. For example, preference for hand tools in the construction of a root boat, or specialized tools for processing pine bark reflects the underlying desire to relate to raw material and resources in a particular way.
Therefore, decisions made in the process of making contest colonial disruption of indigenous lifeways, and position steps of production as means to strengthen connections to a past perceived as more secure.

It is critical that similar studies are undertaken, not only to identify such movements archaeologically, but also to explore the key role of material culture in negotiations of colonial encounters by contemporary indigenous communities. As the Skolt Sámi and many other groups work to maintain elements of their culture threatened by continued assimilation pressures, it is important to keep in mind that while these events are products of unique histories, they reflect common indigenous experiences. Archaeological ethnography, and ethnoarchaeology more broadly conceived, are uniquely poised at the crossroads of ethnography and archaeology to link ongoing acts of indigenous resistance through time. What is certain is that marginalized groups leave behind a robust archaeological record attesting to these histories, maintaining vibrant (material) cultures while negotiating political and social relations. Creating a dialogue between the remains of the past and the present serves to strengthen the ability to identify such continuities.

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