THREE KILOMETRES & THREE CENTURIES:

Modernisation and the Cultural Landscape of Kulusuk Island, East Greenland

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Abstract

The cultural landscape of Kulusuk Island in East Greenland reflects the interaction/integration of the traditional and the modern on this arctic island that was isolated from the rest of Greenland and the outside world until the late 19th Century. The island had never been a significant hunting area for the region's Inuit and exhibited little trace of permanent habitation until 1909 when the Danes established a religious mission on the island and a village arose around it. This was the first of several external forces that would change the face of the island. Modernisation brought new technologies and new material culture and the cultural landscape of the island was transformed. This report describes the cultural landscape of the island today and discusses how it reflects the composite effects of traditional subsistence hunting and fishing, governmental programs, World War Two, the Cold War, the regional economy, and tourism. Possible future scenarios are also presented.

Keywords

Kulusuk, Greenland, modernisation, cultural landscape

Introduction

From the *mittarpik*[1] (airport) a partially graded gravel 3 kilometre road leads to the village of Kulusuk. Traversing this short distance one passes through a stark, but wondrous arctic landscape of mountain, snow, sea and ice. This physical setting is sprinkled with various artifacts and functioning structures that bridge several centuries. Some add little splashes of vivid color in marked contrast to the blacks, whites, blues, browns, and grays which dominate the land, water, and sky of East Greenland. Some scenes of this cultural landscape are aesthetically pleasing and quite picturesque, while others are mundane, and a few are dreary and derelict, but combined they reflect the co-existence and interaction/integration of the traditional and the modern on an arctic island that was isolated from the rest of Greenland and the outside world until the late 19th Century. The formerly semi-nomadic hunter-fisher Inuit[2] of Kulusuk Island and the Ammassalik[3] region have experienced alterations in their lifestyle and surroundings throughout 131

years of sustained interaction with Europeans and West Greenlanders and that is manifest in the cultural landscape of today.

The Inuit of Kulusuk Island and vicinity had lived in virtual isolation for several centuries until Danish naval captain Gustav Holm and his party using *umiaqs* (open sealskin-covered boats capable of carrying 10-15 people, but light enough to be carried over ice or land) sailed around Cape Farvel and then north along the East Greenland coastline. Eventually they wintered in the Ammassalik region in 1884-85. Prior to Holm's landing the only contact the people of the region had with outsiders may have been European whalers that had been blown off-course in the 1700s or perhaps Norwegian seal hunters around 1860 (Correspondence with Ole Lund, August 2015). The inaccessibility was due to the inland ice which prevented any 'overland' transport between the east and west coasts and to the fact that pack ice on the east coast is much greater than on the west coast where navigation can occur throughout most of the year (Banks, 1975: 13-14). Around 1885 Holm returned to develop a trading station and that activity set in motion the modernisation of the region. Subsequently, a number of events and programs brought about changes in the lifestyle, economy, and cultural landscape of Kulusuk Island. As time went on a number of anthropologists and ethnographers descended upon the area to analyse and document the changes and adaptations of the local population (Thablitzer, 1914; Rasmussen and Ostermann, 1939; Gessain, 1969; Robert-Lambin, 1986; Elixhauser, 2011). With the exception of Royle (2001), there appears to be a lack of cultural geographic investigation in *Tunu* (the Greenlandic term referring to East Greenland). Geographers, for example Hasholt and Mernild (2004), have been more apt to study aspects of the area's physical geography.

A cultural landscape is a living, breathing organism that has developed over time and reflects the composite influences of an area's physical, cultural, and technological environments (Koreleski, 2007; UNESCO, 2013). The cultural landscape is comprised of a physical area with natural features and elements modified by human activity that reflects "human relationships with and attachment to that landscape" (Lennon and Matthews, 1996: 4). Geographer Carl O. Sauer adroitly summarised the process of development with these words "Culture is the agent, the natural area is the medium, the cultural landscape is the result" (1925: 46). In the case of Kulusuk the agents are the local Inuit (hereinafter referred to as the *Tunumiit*), West Greenlanders, Danish officials and traders, the American military, and tourism service providers and this reflects, as Eriksen, stated that no society is wholly isolated, cultural boundaries are not absolute, and that networks of communication and trade tie societies together everywhere (1993: 133). This paper presents a descriptive analysis of the present day cultural landscape of Kulusuk Island and explains the associations between the physical landscape, human needs, and several cultures in a place that was once quite insular. As an East Greenland native might say, it has undergone *addanngerneq* (a transformation).

Materials and Methods

An extensive literature review of books, papers, and websites dealing with the settlement's history, culture, and physical geography was conducted to ascertain how Kulusuk's region evolved in a different manner than most other locations in Greenland. Once this was established, a theoretical framework was developed by examining some of what geographers have written regarding the components of cultural landscapes. Correspondence with several current and former residents began in January 2015. In

order to integrate theory and the reality of Kulusuk, the author undertook field work in the region during June 2015. Fieldwork consisted of several guided excursions with Arctic Wonderland Tours and Icelandic Mountain Guides and independent explorations of the village and the island. A brief helicopter trip to the regional capital Tasiilaq was also made. Numerous photographs were taken of a variety of natural settings and cultural scenes. A series of casual interviews were conducted with several local residents and tourist industry personnel to gain insight into their perceptions of the region's geography, history, and sociology. To gain further impressions, a short mail-in questionnaire was distributed to some locals. (The return rate of 16.7% was low, but the answers generally corroborated the information deduced from the casual interviews). Upon returning home the author continued correspondence with several current and former residents and continued to monitor news reports from the region, then commenced the fashioning of a descriptive analysis of the region. Because visual perception is a key process that connects people with ecological phenomena (Gobster et al, 2007; Fry et al, 2009) this report utilises photographs which in tandem with the text attempt to present, as Carl Ritter once wrote, "a living picture of the whole land" (Tatham, 1951: 43). All photographs in this paper, except where noted, were taken by the author.

The Physical Geography of Kulusuk Island

Kulusuk Island is located at 65.5500° N, 37.1167° W in the East Greenland archipelago (Figure 1). It is a small landmass, approximately 8 km north to south and 11 km from west to east. Like other islands near the East Greenland mainland it has a granitic-gneissic-migamatic geologic basement complex largely of pre-Cambrian age (Humlum and Christiansen, 2008: 5). The generally alpine-like landscape and the fjords of the region exhibit the effects of continental glaciation and there are remnants of the Greenland ice sheet on nearby Ammassalik Island (Middivakkat glacier) and Apusiaajik Island (Apusiaajik glacier), but no icefield remains on Kulusuk. The terrain is generally rugged with elevations ranging from about 35 metres at the airport to the 676 metre summit of Qalorujoorneq Mountain (Figure 2a). Despite the northerly latitude and (tundra) climate, there is little permafrost on Kulusuk. What permafrost that exists because of modern climate conditions may be found sporadically on high elevation northerly slopes. There is also infrequent occurrence in sheltered lower elevations and this may be relict permafrost from the Little Ice Age from the years 1300 to 1870 A.D. (Humlum and Christiansen, 2008: 18). The ground under parts of Kulusuk village appears to have some discontinuous permafrost (author's observation, June 2015). Soils, where they exist, are primarily immature thin gelisols and entisols.

According to the Köppen-Geiger system, the climate of Kulusuk and its region is classified as ET, the tundra climate. Temperatures are very low all year-around. The January mean is -7°C and the July mean 6.9 °C. Summers are short and ephemeral with winter being the dominant season. However, summer daytime highs occasionally reach 16-17°C. Average annual precipitation is around 900 mm. Snow is part of the landscape for much of the year with a minimum ground cover of 150 mm for 260 days (Robert-Lamblin, 1986: 8). The island is windswept with average velocities ranging from 9-15 km/hr. However, powerful systems such as the *piteraq* and the *neqqajaaq* possess intense speeds. The piteraq is a cold katabatic wind from the west-northwest blowing down from the inland ice with hurricane-force velocities approaching 180 km/hr. (Ultima

Thule, 2013). The *piteraq* is mainly an autumn and winter phenomenon, but may occasionally develop in the summer as a cold sand storm. In late winter and springtime Kulusuk is often hit with a snow-filled northeasterly storm, the *neqqajaaq,* which also has fierce winds. When these systems bear down all human activity on the island is severely curtailed.

Figure. 1. Location of Kulusuk (Cartography by Ken Shonkwiler).

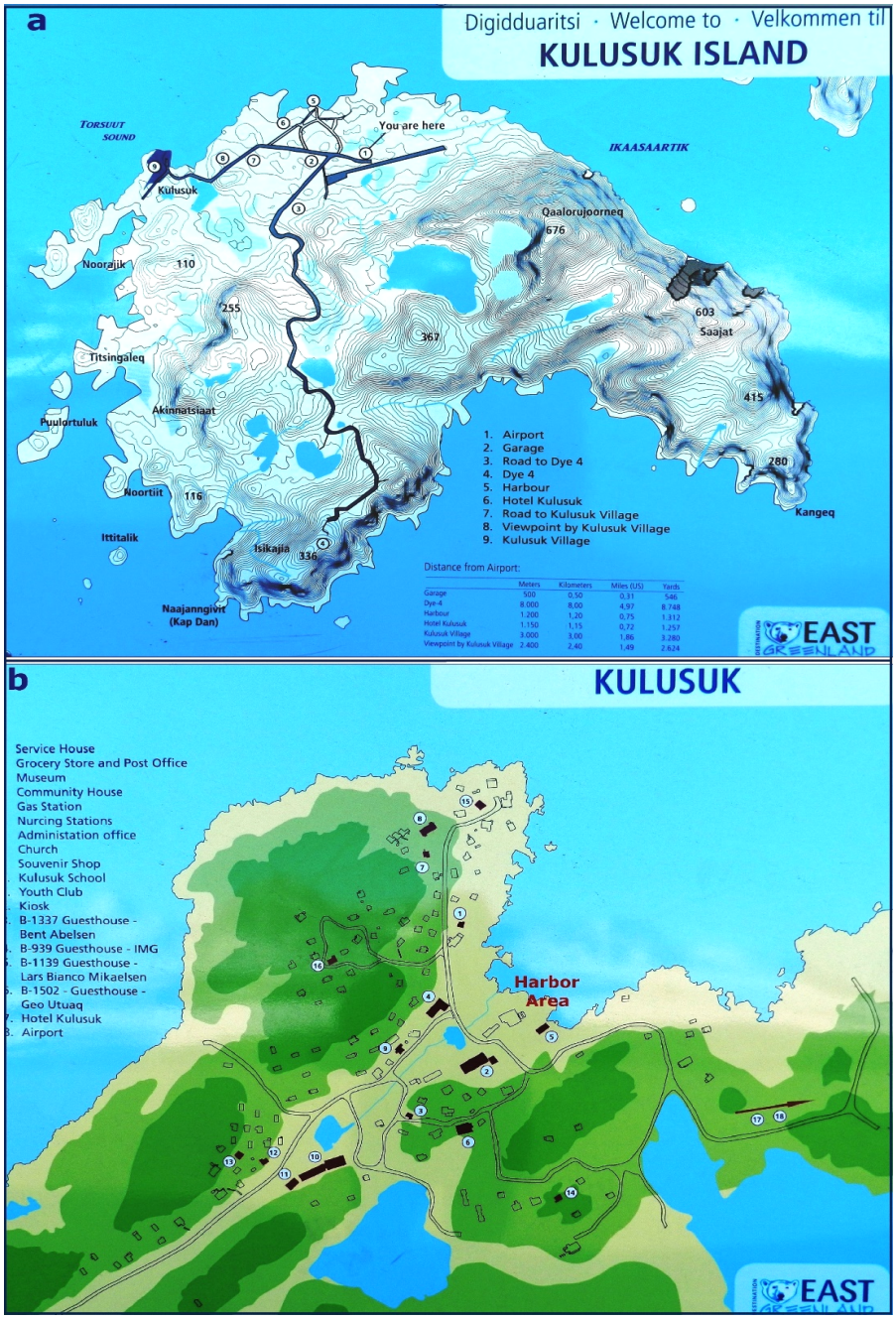

Figure 2. a) Topography of the island; b) Village tourist map (photographs of wallboards at the Kulusuk airport).

The fjords and the surrounding ocean are choked with pack ice that inhibits navigation except for a few short months in the summer. Icebergs and floes are part of the seascape year-around. Ice conditions and climate have never been stable in East Greenland since formal records commenced (Buijs, 2010: 41). For example, from 1930 to about 1960, sea-water temperatures were a bit warmer, but by the mid-1960s they had fallen. In the early 1980s Sermilik Fjord was generally frozen-over the entire winter, but in recent years there has been open water until February. The local *Tunumiit* (East Greenland natives) have noticed that sea ice in recent years appears later in winter and breaks up earlier in spring. (Buijs, 2010: 42). But winter in Kulusuk is capricious. During the last week of June 2015, there was still a large quantity of ice in Kulusuk harbor and in the surrounding waters (Figure 3). Movement of all but the largest watercraft was impeded and several local people say that no recent year has been 'normal' (author's personal observations, June 2015). The winter of 2014-2015 was also one of the snowiest in recent years.

Because of the climate and the paucity of adequate soils, vegetation on Kulusuk Island is quite sparse and patchy in occurrence. No comprehensive floral survey has been done on Kulusuk Island in recent decades, but a study near Tasiilaq (21 km west on Ammassalik Island) provides data that would largely be representative of Kulusuk. 161 native and 13 introduced species have been identified near Tasiilaq with 72% being arctic and low arctic varieties and 28% being boreal types (Daniels and de Molenaar, 2011: 653). All plants are of low stature and the types vary as to location. The vegetation of the coastal fringes consists of a few species adapted to long periods of snow cover while flatlands and sunny hills exhibit arctic willow bushes, grassy places with angelica and *poa arctica* (arctic bluegrass) and heathlands. Assorted lichens and clubmoss are common except on the high slopes that are essentially devoid of plants.

Terrestrial animals are few on Kulusuk Island. Only the arctic fox appears in appreciable numbers today. Reindeer formerly lived in the area, but were extirpated by the 1800s (Petersen, 2010: 343). The size of East Greenland's current *nanoq* (polar bear) population is not known (Koopsman, 2011: 13) but hunters suggest growing numbers in the region (Sandell et al, 2001) and there are reports of more frequent human-bear encounters on Kulusuk Island (Knickerbocker, 2000; author's conversation with Jesper Krogh of Hotel Kulusuk, June 2015). In 2009 a polar bear was spotted on the runway at Kulusuk airport. In recent years hunters in the Tasiilaq region have managed to approach or meet the government-assigned regional quota of 25 bears a year.[4] Sightings and kills vary year-to-year because of ice conditions and variations in the area's seal population. Birdlife on the island is not exceptional. There are a few permanent dwellers such as raven, snowy owl, and ptarmigan. Eagles and falcons are occasionally present. Most of the birds that frequent the island are migratory species such as eider, wild goose, tern, and gulls. Of course, there is also the black guillemot, a member of the auk family. (Kulusuk means "chest of the black guillemot".) What the island lacks in terrestrial and avian fauna is more than made up for by abundant sea life. The waters of the region are frequented by several kinds of marine mammals such as seals, narwhal, beluga, and minke whale. These mammals along with fish such as capelin, codfish, halibut, polar cod, and redfish form the basis for human subsistence in the region.

Human History of the Island

The region around Kulusuk Island has been discontinuously inhabited by human beings since 1885 B.C. (Robert-Lamblin, 1986: 10). The earliest were Arctic Small Tool Tradition people of the Saqqaq culture who seem to have disappeared from East Greenland around 800 B.C. (Apollonio, 2008: 3) and they were followed by members of the Greenlandic Dorset culture around 600 B.C. Recent findings based on DNA analysis have determined that the Saqqaq and Dorset are more closely akin to Siberian cultures and are not the ancestors of modern Inuit (Rasmussen, 2011; You, 2014). While it appears that the lands around Kulusuk were uninhabited during most of the Middle Ages until the Thule people arrived during the 14th and 15th centuries, there may have been a remnant of the late Dorset still present (Gulløv, 1997). At first the Thule were hunters of whale, but in time became seal hunters as local whale populations fell due to pressure from European whalers. The Inuit of Kulusuk are the descendants of the Thule. As stated earlier in this paper, the Inuit of the Ammassalik region were 'discovered' by Danish navigator Holm in 1884. At that time the population of the region numbered 413 (Apollinio, 2008: 6). Ten years later the population had diminished to 293 due to migration to Southwest Greenland and, perhaps, disease. In order to stem population loss in Ammassalik, Denmark set out to establish a trading post and a Lutheran mission at the site of present-day Tasiilaq in 1894. Within a few years some of the people who had left the district returned because of these developments.

Figure 3. Kulusuk harbor in late June, 2015. Season's first landing of the regional supply ship out of Tasiilaq.

The hunter-fishers of the region were seasonally nomadic but Kulusuk Island was only occasionally visited by hunters because the animal resources there were generally sparse and other locations in the archipelago were more productive (Robert-Lamblin, 1986: 91). As part of their efforts to consolidate a relatively far-flung population and to convert locals without having to move them to Iddimiit (near what is today the Tasiilaq heliport) on Ammassalik Island for several winters, the Danes in 1909 set up a small mission near the northwest corner of Kulusuk Island along Torsuut Sound. The Danes called the village Kap Dan. This site was selected for easy access and the potential for a harbor that could accommodate ships from Europe. The mission consisted of a single long building that served as the church, school, and parsonage. Such was the humble beginning of Kulusuk village. Soon families from along Ammassalik Fjord moved to Kulusuk and settled in proximity to the mission and by 1923 the village counted 108 persons. By 1930 Kulusuk had 165 residents, surpassing Tasiilaq's 112. The island's population then exceeded its potential carrying capacity as it was a mediocre hunting ground and the populace had all but abandoned summer hunting migrations because of a shortage of *umiak*s (Robert-Lamblin, 1986: 91).

As late as the 1930s the material culture and social situation of Kulusuk and its region had not been greatly changed because the Danish government tried to shield the native people from much contact with the outside world in order to protect them from introduced infectious disease and "the risks involved in abandoning its traditional way of life" (Robert-Lamblin, 2008: 56). Protection and isolation began to give way when the Second World War brought American military personnel to East Greenland. Their main installation was an airfield "Bluie East 2" at Ikkadeq (Ikateq) about 50 km northeast of Kulusuk. Because of mountains and strong winds the base did not participate much in aircraft ferrying to Europe and was mainly used for search-and-rescue operations. A weather station was also set up at Kulusuk. While neither facility had much direct impact on the Inuit life on Kulusuk Island at the time, the locals were exposed to a number of new technologies. After the war in 1947, the U.S. closed the base. The Danish government had no interest in the airfield and any useful abandoned equipment and articles were scavenged by the local population, introducing them to new pieces of material culture.

The Cold War between the U.S.A. and the Soviet Union brought significant changes to Kulusuk. In 1956-1958 construction began on the U.S. DEW (Defense Early Warning) Line radar facility DYE-4 (Figure 4), an airstrip, and a 9.5 km road from the airstrip to the radar installation on the south end of the island. This work brought American and Danish workers to the island who completed the work in November 1960 (Taagholt and Hansen, 2001). A small contingent of American servicemen were based at the station and airfield until the DEW Line was decommissioned in 1991. Although fraternisation with the local Inuit was discouraged, there was a lot of contact (author's conversations with local people, June 2015). Civilian flights began using the airstrip in the late 1950s and after the DYE-4 closure the airport was ceded to the Greenland Airport Authority. Infrequent tourist day excursions from Iceland to the island began in 1959 (Kaae, 2002: 43) and by the end of the 20th Century, an entire industry had developed to serve regular day-trips from Iceland during the summer months and longer tourist stays year-around. In recent years it is estimated that approximately 6000 visitors come to Kulusuk annually (Wolffsen et al, 2014: 15). For some Kulusuk is their ultimate destination, but for many Kulusuk is merely a connection point for visits to Tasiilaq or other locations in East

Greenland. Huebner (2012:.2) relates that approximately 1000 day trip visitors came to Kulusuk in 2011.

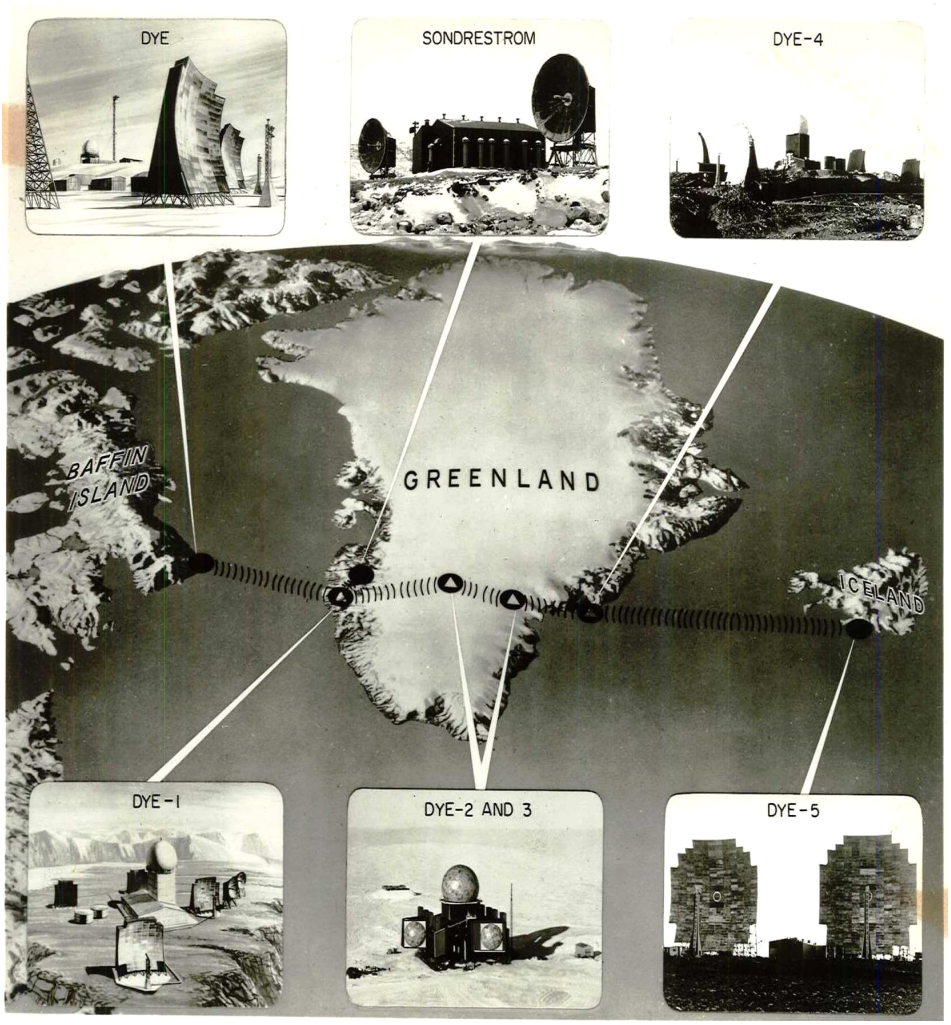

Figure 4. The Line in Greenland (Western Electric photograph from author's personal collection).

The population of Kulusuk peaked at 433 in 1979 and since then has declined 44% to 242 persons in 2015 (Statistics Greenland, 2015). A small part of the decline is due to attritional mortality, but the main factor in decline is the migration of people to the regional capital of Tasiilaq (population 2017), to Nuuk, and to Denmark for a greater array of services, employment opportunities, and education.

The isolation of an island often makes it peripheral, especially when it is distant in absolute and social terms from major populated places and national capitals (Royle,

2001: 45). Prior to 1884 that was true for Kulusuk. In some respects the island is still peripheral, but developments in the 20th Century, especially the DYE-4 installation and airport, have lessened its insularity.

The story of Kulusuk's modernisation is therefore largely tied to the attitudes and programs of external forces. Danish control over Greenland had been set by the establishment of The Royal Greenland Trading Company in 1776, and until the Second World War, Denmark essentially had a state monopoly on trade and investment in their colony (Graugaard, 2008: 10). The Danes practiced a paternalistic colonial policy (Sørensen, 2007: 12), essentially one of "positive isolation" or "economic paternalism" (Nutall, 1992: 17; Loukacheva, 2007: 21). Extensive modernisation policies, formulated in Copenhagen, were implemented in Greenland in the 1950s and 1960s (Graugaard, 2008: 13). In many locales these efforts were stained by *"Danization"* strategies involving forced population concentration and resettlement. Many Inuit had to relocate to larger towns and this adversely impacted local hunting cultures. Modernisation probably made Greenland economically more dependent on Denmark than in earlier times (Petersen, 1995: 121) as traditional subsistence activity was diminished. Denmark granted Greenland Home Rule in 1979. In many respects the Home Rule and the 2009 Self Rule governments in Nuuk have, like the Danes, focused most of their attention and investment on the larger towns in West Greenland.

Over the course of 131 years, relations between Kulusuk (and Ammassalik in general) and the central government of Greenland (Copenhagen in the past and Nuuk in recent decades) have generally been inconsistent and usually have favored the purposes of the government rather than those of the local population (Source: interviews with current and former residents). In the early days Denmark was interested in Ammassalik primarily to have a little trade and Christianise the natives, but little other development ensued. Then in the 1920s as East Greenland became a possible flashpoint when Norway tried to rationalise their claims to part of the east coast and Danish interest was rekindled a bit, the colonists responded to Norwegian incursions by sending 70 Tunumiit from Ammassalik to reside in in a colony near Scoresby Sound some 1000 km up the coast. Pia Arke (2010), a descendant of one of the settlers contends that not all relocations were voluntary. After WWII, the Danes initiated some infrastructure development and social programs in the East that have been in some form or other continued by subsequent central governments; however, in many instances, the government focused attention and investment on the fishing industry in western coastal towns where housing and schooling were made available. Settlements elsewhere were neglected, forcing inhabitants to relocate from outlying districts and to send their children to schools in larger towns (Dahl, 2005). In the late 1970s and early 1980s Anders Andreasen, a politician from East Greenland, headed a ministry for settlement and remote district development whose programs led to some improvements in infrastructure and some industrial initiatives. But by the 1990s, Nuuk's efforts began to focus more on the growth poles on the west coast (Sørensen, 2007: 165). Many East Greenlanders today believe that their concerns and aspirations are not understood nor are being met by the central government or Sermersooq, the municipality that includes both the Ammassalik region and Nuuk (Source: author's correspondence with current and former residents). There have been a few meetings recently between members of the central government, Semersoog officials, and local officials in an attempt to solidify relations (Damkhaer, 2015).

The Cultural Landscape in 2015

Travel literature and tourism websites[5] often tell visitors to Kulusuk that they will be experiencing an authentic Greenlandic village where people are engaged in traditional pursuits, but in reality the tourists are coming to a 'manufactured' community that dates back only to 1909. Relics of the distant Inuit past are few on the island because this place was never a significant hunting ground. There are three abandoned settlement sites that probably date back to the early 1880s (correspondence with Ole Lund, July 2015). Two are on the island's west coast and one is in the south above Najaangivit (formerly Kap Dan). There seem to be a few rather indistinct turf house ruins, but no summer tent rings marking these sites (Correspondence with Carl-Erik Holm of the Tasiilaq Museum, July 2015). This indicates that these settlements were likely winter encampments.

Figure 5. Toppled remains of the reindeer fence on Kulusuk Island. Reindeer were extirpated sometime in the late 1700s to early 1800s. (Photograph by Helene Brochmann, 2012).

Another significant reminder of a temporary human presence in the past is the 'reindeer fence' remainder (Figure 5) from a time prior to the early 1800s when a small herd of reindeer were still living in the Ammassalik region. This stone fence was likely a metre or two high. Use of the fence was remembered in local legends as late as 1921 (Petersen, 2010: 353). The reindeer were herded together by a line of people and forced to move toward an opening in the wall where they became entrapped. Men with bows and arrows were concealed just beyond the wall and these hunters easily shot their prey (Thalbitzer, 1914: 405-406). The fence/wall ruins are just a short distance south of Kulusuk village and it is a shame that this site is not on the itinerary for day trip tourists who miss out on seeing old ruins and hearing the interesting stories.

The airport is the gateway to East Greenland. It is part of a rather utilitarian landscape consisting of the 1159m x 30m gravel runway, several helipads, the terminal, and several outbuildings. A short distance from the airport are dormitory buildings for workers and the Hotel Kulusuk (Figure 6). Near these facilities is a small, largely industrial, harbor and several fuel storage tanks (Figure 6) With the exception of the hotel which was built in 1999, most of the structures on this part of the island exhibit architectural styling from the 1960s and 1970s and therefore this area may be considered to be the most modern part of the island. The airport is about 3 km east of Kulusuk village. The site obviously was selected by the U.S. military because of open space, flat terrain, and suitable meteorological conditions, but its distance from the village may help lessen impacts on local lifestyles because most visitors, especially day trippers, take part in scripted excursions provided by tour operators and do not venture into the 'back' parts of the settlement (Royle, 2001: 206; Shackel, 2011: 87).

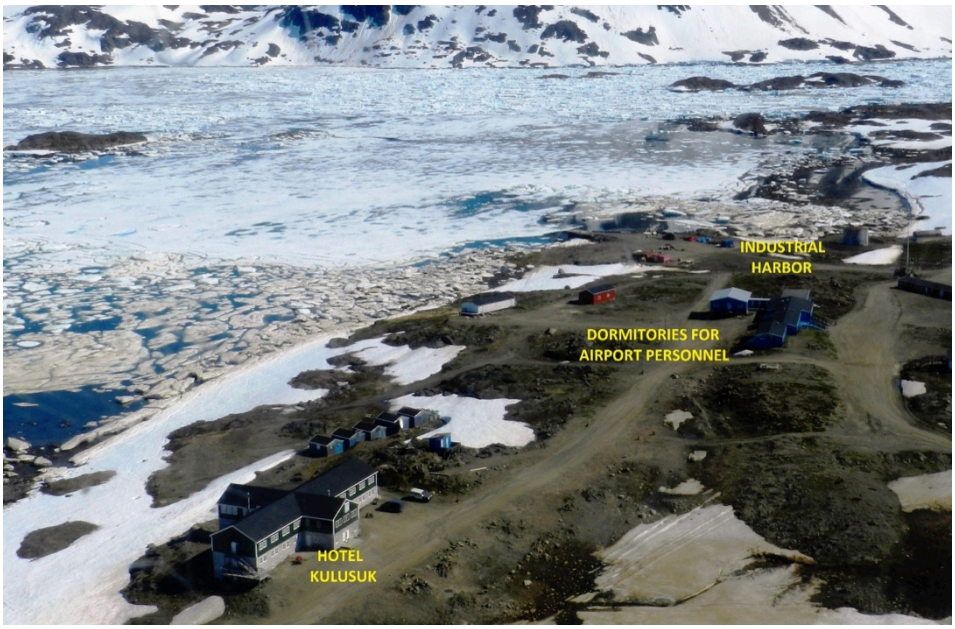

Figure 6. The area near the airport can be viewed as a functional settlement that services commercial interests and a transient population.

There are only two real roads on the island. One connects the airport area with the village and the other provides access southward (Figure 7a) to the former DYE-4 radar site which today is occupied by an air traffic control installation manned by the Greenland Airport Authority (Figure 7b). The road passes through a beautifully desolate natural landscape punctuated with just a few signs of intermittent or former human activity such as a stone crushing machine rusting away on the side of the road a few kilometres from the airport. Upon closure of DYE-4, most of the structures and equipment were dismantled, destroyed, taken elsewhere, or buried on-site. Very few relics remain visible today. The road from the hotel to the village passes by few notable human markers except for 'snow poles' that mark the edge of the thoroughfare and the course of a small stream nearby (Figure 8). A few hundred metres before entering the

village one arrives at the 'new' cemetery which illustrates the juxtaposition of the traditional and the modern (Figure 9). The crosses that mark the gravesites point to the fact that most Inuit in Kulusuk today are at least nominally Lutheran, the population having been Christianised by 1921 (Robert-Lamblin, 1986: 136). The European Christian practice of adorning graves with flowers is evident, albeit the ones here are plastic, a concession to Greenland's climate. Traditional Inuit practice is also evident as the crosses bear no names nor dates. The belief is that names should be passed on in death so that they may live on in the next generation (Elixhauser, 2011: 55). Automobiles and trucks are few on the island. There is only one personal private vehicle and there are several vans and SUVs owned by the hotel. All other cars and trucks belong to the airport authority or governmental agencies. For most Kulusuk residents overland transport options are limited to walking, small ATVs, and, in the snow seasons, snowmobiles and dog sledges (Figure 10).

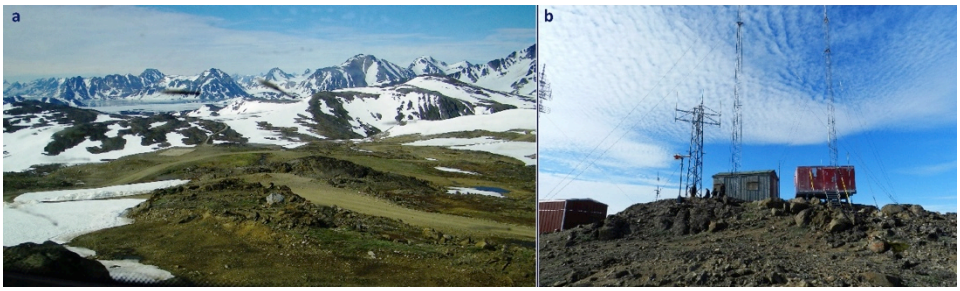

Figure 7. a) Road to the former DYE-4 installation; b) Air traffic control radar located on part of the DYE-4 site.

Figure 8. Snow poles along the road from the hotel to the village.

Figure 9. The ‘new”cemetery east of the village.

Figure 10. Local hunter on Kulusuk Island, February, 2013 (Photograph by Jonas Arnfred).

In any season the village with its colorfully painted wooden buildings when viewed from a distance evokes reminiscence of the quaint villages often depicted on Christmas cards (Figures 3 and 11). In the past, the colors had practical meaning and indicated the function of the edifice. For example, commercial and institutional buildings were red, telegraph offices were green, and fish processing plants were blue. Today color is a matter of individual or corporate preference. Most of the wooden homes in Kulusuk are prefabricated kits imported from Denmark.

Figure 11. Winter in Kulusuk, February, 2013 (Photograph by Jonas Arnfred).

Upon closer inspection, the picturesque village becomes a scene where traditional and modern co-exist with little regard to form and function and the aesthetically appealing and the ugly can be found just metres apart. Some exteriors of houses appear to be recently painted, but others are faded, peeled, and cracked, partly a testament to the harsh winters and partly an indicator of impoverishment. As mentioned earlier in this paper, Kulusuk has seen a population decline in recent years and in some quarters it can feel like a ghost town (Figure 12). Today there are 149 houses in the village and only 81 are occupied (conversations with local residents, June, 2015). Some abandonment may be due to the inhabitants leaving temporarily to seek opportunity in the regional capital Tasiilaq and they may return to Kulusuk. Some, however, have made Tasiilaq their permanent home. A local person told the author that a few abandonments may be due to a death in the household; a few *Tunumiit*, despite their Christian religion, still hold on to some superstitions and believe that when a person dies in a house the spirit remains, and, out of respect or fear, the surviving members of the household vacate the premises. However, that practice is far from common as there are several graves right next to houses and the deceased seem to continue to be part of the domiciliary scene. (Figure 13). Some abandoned structures have gained a new life such as the combination turf and wood house (Figure 14) that may have been constructed in

the 1940s and abandoned in the 1960s (correspondence with Ole Lund, July 2015). It may have been built on top of the foundation of an older turf house as had been the custom in the past. During the early 20th Century it was common in East Greenland to merge the old with the new, using wood and sod with glass windows replacing the traditional ones of seal intestine. Today this structure is one of the stops on the day trip excursions. Finally, there are several derelict industrial relics such as the saltfish storage facility that was set up by Royal Greenland Trading Company in the 1950s when local cod populations were viable. The facility closed around 1960 after changes in water temperatures forced the fish to leave the region.

Figure 12. Abandoned house, June, 2015.

Figure 13. A grave next to a home, one of many scenes of cultural juxtaposition in Kulusuk.

Figure 14. Combination turf and wood house, probably built in the 1940s.

Kulusuk, like many small Arctic towns and villages, possesses infrastructure that varies in complexity and is strongly influenced by climate and terrain (Figure 15). The unpaved streets and most buildings are situated mainly on flattish land. Most of the buildings in the village have electricity generated by the diesel-fueled power plant on the east side of the settlement but some households use kerosene for heating. In the past seal blubber was used for heating and lighting inside the home, but today its infrequent use is relegated to camping. The power plant is located near the main harbor facilities, which consist of several small storehouses and equipment sheds. Across the street is Pilersuisoq, the grocery and general store. The museum and school are located just southwest along this street, which may be considered the village's commercial and industrial zone.

Figure 15. Aerial view of Kulusuk showing the commercial/industrial corridor.

Three kilometres away, the airport and hotel have running water and modern porcelain flushing toilets. These luxuries are, for the most part, lacking in the village whose very basic water distribution system was begun in the 1950s. The water supply is a small lake/reservoir on the southeast edge of the settlement. A few buildings and houses have running water but most have storage tanks, which are filled up by a hose from several tap stations fed by piping from the lake. Most of the piping and distribution system is above ground because of permafrost. There are even a few homes where the residents go directly to the lake and collect their water in plastic jugs. Because the water provision system is so rudimentary, many residents utilise the communal service house for bathing and the laundering of clothes (Figure 16a). In the village there is no domestic sewage disposal system nor septic tanks. Most household toilets consist of a large black multi-ply plastic bag in bucket as the receptacle for human waste. These toilets are usually found in an alcove or cubicle on the porch. Three times a week the 'chocolate man' (Figure 16b) comes by to collect the bags, the contents of which are subsequently dumped out in the sea.

Throughout the village one comes upon scenes that depict that life here transects the centuries. The ancestral occupation of the region had been hunting (particularly of seals)

supplemented by fishing. Today there are few professional hunters. Robert-Lamblin (2008) mentions just 126 in all of the Ammassalik district (population approximately 3200) in 2007. Most professional hunters/whalers/fishermen such as Frede Kilime (Figure 17), from nearby Tasiilaq employ modern methods in pursuit and capture but also adhere to parts of the traditional sharing practices of the Tunumiit culture. Seal and fish are still a significant part of the village diet and most male residents hunt and fish to supplement their family pantry or income (Source: questionnaires distributed by author). The hunting of seals and other marine mammals takes place off the island but evidence of hunting and fishing are seen throughout the village with the butchering and preservation of seal carcasses (Figure 18), the hunks of seal meat provided to the sledge dogs and the fish-drying racks (Figure 19). The means of mobility for food acquisition and general transport had undergone big changes by the 1960s with sealskin-covered kayaks and traditional boats having given way to the motorised watercraft and store-bought fiberglass kayaks seen today throughout the settlement. For movement overland or over sea ice during the cold seasons, many residents travel on dog sledges and the canines are a very noticeable part of the cultural landscape. Motorised snowmobiles have been adopted by the few people that can afford them and the old and new means of mobilisation co-exist in some households. Modernisation has also impacted the children of Kulusuk and has provided them with access to many of the same playthings that their Danish and American contemporaries enjoy (Figure 20). While such toys and video games may have some erosive effect on the learning and comprehension of traditional culture, it seems that young children often gravitate to the drum dance demonstrations provided for tourists (Figure 21) and perhaps gain some appreciation of their heritage (Royle, 2001: 206).

The lifestyle of the islanders has undergone great changes in a span of just over 100 years and while modernisation has provided new technologies and comforts it has also created new social problems. The traditional subsistence economy has largely been replaced by one of wage-earning and welfare dependency. In the past, time on the island was measured by the seasons, the ice, and the movements of animal prey, but now most people are governed by the discipline of the clock and calendar which for some is difficult as discussed by Larsen (1997) in his description of Scoresbysund, a community located about 800 km north of Kulusuk. In terms of socio-economic status, the people of Kulusuk are much more heterogeneous than they were in the village's early days. Unemployment is high and many residents are only marginally employed. There appears to be a polarisation between the people with jobs and those living off the dole (Petersen et al, 2010: 38). This, combined with fewer cases or bartering and sharing in the prizes of the hunt which in days gone by protected the community against difficult times, has led to increase in social pathologies, (N. Petersen et al, 2010), particularly alcoholism (Figure 22).

Figure 16. a) The service house for baths and laundry; b) The "who collects human waste for disposal (Photograph b by local resident who requested anonymity).

Figure 17. Local hunter/whaler Frede Kilime from Tasiilaq butchering his first minke whale of the season, August 2015 (Photograph courtesy of Frede Kilime).

Figure 18. Seal carcasses tethered to the shore. The cold water serves as a temporary refrigerator. 2013 (Photograph by Tim Davis, LuxeAdventureTraveler.com)

Figure 19. A modern hunter-fisher's home. Note the fish-drying rack, sledge dogs, harnesses, and the radio antenna.

Figure 20. Even the children of Kulusuk enjoy modern mobility.

Figure 21. Drum dance performance, 2011. The performers are standing in front of a monument depicting Milka Kuitse, a famous drum dancer of East Greenland. (Photograph by Søren Andersen).

Figure 22. a) Sign on the pilersuisoq forbidding alcohol consumption near the premises. b) Sunday morning--empty liquor bottle and beer can on the road to the hotel.

Conclusion

The character of Kulusuk Island and its population have been subjected to external influences (missionaries, the Danish government, the US military, the airport authority, the Home-Rule government and tourists) since the latter decades of the 20th Century and this is evident in the present-day cultural landscape. Modernisation (Westernisation?) has brought with it some positive alterations but at the expense of traditional activities. There has been a growing dependence on imported goods, both in terms of food and technology, and this has impacted the local culture. In the cold season one may see a hunter wearing a Canada Goose Chilliwack bomber parka and pants made of polar bear as he drives his dog sledge across the ice while listening to the latest songs on his iPhone. However, most of the men who hunt on a full or part-time basis are aging and many Greenlandic young people in this age of computer games show little interest in learning the rigors of the hunt (Lewis, 2015). At the same time many children express a sense of pride in being part of a hunter society. The youth of Kulusuk seem to be aware that there are limited local opportunities for them upon finishing school and that they will have to decide whether or not to move on to Tasiilaq, West Greenland, or Denmark. With that said, the youngsters are also conflicted because they have an attraction to their close-knit community and its beautiful natural setting (N. Petersen et al., 2010). The tourist industry is largely viewed by the locals as a necessary intrusion as it provides some opportunity for economic gain because a few serve as guides or sell handicrafts (sources: responses from questionnaires distributed by author; Correspondence with Søren Andersen and Hannah Olesen, April, 2015).

While the people of Kulusuk have managed to adapt to some degree to the changes brought by external forces of the past, three current situations may greatly test their resilience. The first of these is the prospect of mineral exploitation. A recent survey suggests the possibility of nickel-copper ores in the Ammassalik region and olivine deposits on Kulusuk (21st North, 2012). If these were to be found commercially viable

there likely would be increased employment opportunities as well as environmental and cultural disruption.

Of more immediate concern is apparent global warming. Sea ice in most recent years comes later in the autumn and its spring break-up happens earlier. In their study of narwhal sea-entrapments, Laidre et al. (2012) found strong statistically positive trends from 1979-2009 in later dates for the sea's autumn freeze-up around Ammassalik. Interviews with Kulusuk and other *Tunumiit* active and retired hunters suggest that they face growing uncertainty in this situation of warming seas as marine mammal and polar bear numbers will likely decline with increasing temperatures (Space Daily, 2005; Buijs, 2010). Changes in sea ice patterns will also limit access to prey off the island. Could what remains of the hunting society collapse?

A third potential threat to the island comes from discussions about closing the Kulusuk airport or greatly reducing its function. In 2011 the Transport Commission of Greenland recommended that a new airport be constructed at Tasiilaq because there would be significant savings by reducing helicopter transport from Kulusuk and it would improve tourist access to the region (Bendsen et al., 2011: 8). In its statement of objectives for 2014-2018, Greenland's coalition government also favors a new airport in Tasiilaq (Greenland Home Rule Government, 2014). It is true that many tourists, business people, and East Greenlanders have to be ferried by helicopter to Tasiilaq after landing at the Kulusuk airport, but the airport serves the day trippers as well. It is largely them who support the island's tourist enterprises.The closure of the airport could be catastrophic for this part of the island's economy. It might even lead to a further decline in the population as airport workers would likely relocate to Tasiilaq. This kind of scenario has been played out several times in West Greenland during the island's development as Danish traders and missionaries initially encouraged dispersed Inuit to come to isolated settlements, but then in the 1950s the government withdrew investment and services from some unprofitable settlements forcing the residents to relocate to larger towns (Porteous and Smith, 2001: 104-105). A similar closure occurred at Qullissat a coal mining town founded in 1924 on Disco Island where 500 people were coerced to relocate when the government closed the mine in 1972 (Tejsner, 2014).

In his 1986 monograph on Ammassalik Robert-Lamblin addressed the question "end or persistence of an isolate?" and seemed to conclude that the community was persisting to some degree. Now almost 30 years have passed and, as illustrated in this article, the people and cultural landscape of Kulusuk have adjusted further as waves of modernisation continued to sweep over the island. As the population continues to decline because of out-migration and in light of 'new' extrinsic forces that may impact the region in the near future, the question today may well be "Will Kulusuk adapt and survive in some way or succumb to domicide?"

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End Notes

[1] There are two main dialects in the Greenlandic language, Kalaallisut (West Greenlandic) which is the official language and Tunumiisut (East Greenlandic. As an example of the difference, the word for airport in West Greenlandic is *mittarfik* while in East Greenland people say *mittarpik*. Greenlandic terms used in this paper are Tunumiisut unless indicated.

[2] The terms Inuit and *Tunumiit* are used in this paper. Inuit refers to the modern "indigenous people" of Greenland irrespective of where they reside. Tunumiit refers to Inuit with ancestral roots in East Greenland.

[3] There are a number of names given to this particular region of East Greenland. Ammassalik had referred to a municipality covering 232,000 km² in Tunu, the former county of East Greenland. *Tunu* is the term that West Greenlanders often use in referring to East Greenland. It means "the backside" or "back country". To further complicate matters, the town known as Tasiilaq today was called Ammassalik or Angmagssalik "the place with *ammassat*" (capelin fish) by the Danish explorers back in 1894.

[4] Source: *Afdeligen for Fangst, Jagt og Landbrug*, Department of Fishing, Hunting, and Agriculture, contacted for author by Kirsten Trøst, August 2015.

[5] See, for instance, Air Greenland (2015) and Greenland.net: (2015).

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