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The Trail as Home: Inuit and Their Pan-Arctic Network of Routes

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Abstract This paper provides ethnographic and historical evidence for the existence, in time and space, of a network of well-established trails connecting most Inuit settlements and significant places across the Canadian Arctic. The geographic and environmental knowledge relating to trails (and place names associated with the trails) has been orally transmitted through many generations of Inuit. I use historical documents, ethnographic research, and new geographic tools such as GPS, GIS and Google Earth, to show the geographic extent of the network and its historical continuity. I particularly draw on a trip following Inuit along a traditional trail connecting the communities of Iglulik and Naujaat (Repulse Bay). Inuit have made systematic use of the Arctic environment as a whole and trails are, and have been, significant channels of communication and exchange across the Arctic. There are some types of oral history and knowledge that can be accurately transmitted through generations, and I propose that some aspects of Inuit culture are better understood in terms of moving as a way of living.

Keywords Inuit · Oral knowledge · Arctic Canada · Hunters and gatherers · Indigenous knowledge

Introduction

It was shortly after midday, the sun was high in the sky and there was a gentle breeze coming from the frozen ocean: a perfect day for spring travel in the Arctic. We had left the town of Naujaat (Repulse Bay) behind, and the three snowmobiles with their sleds were making good time over the sea ice off the shore of Ujarasugjulik, a small peninsula. Maurice Arnatsiaq, driving the first snowmobile, veered to the left aiming for the little hill of Qagitaliup Kingigaa, and landed on the beach at Qarkiaq. We were following a well-trodden trail to Iglulik, over 500 km away.

We were traveling the route that days before Abraham Tagunak had mapped for us. Tagunak, a well-known elder and traveler from Naujaat, had followed that same route for the first time when he was a little boy several decades ago. It was the same trail that members of the Fifth Thule expedition used in the 1920s. It had also been used by Captain Hall's Inuit guides in the 1860s. In fact, it seems certain that this trail and the place names around it were known to Iligliuk, the Inuit woman who acted as a guide for Captains Parry and Lyon in the 1820s[1]. What is remarkable about this is that trails in the Arctic are not permanent features of the landscape. On the contrary, they disappear when the sled tracks get covered after a blizzard, and as the snow and ice melt at the end of each spring. The spatial itinerary, however, remains in people's memory and materializes again when the next trailbreaker makes the trip.

Some 100 km after our landing in Qarkiaq, and after traveling over a frozen chain of lakes and creeks where Maurice and his wife Annie caught some caribou and arctic char, we met a traveler from Taluqjuaq (also known as Spence Bay), a community located in Boothia Peninsula, several hundred kilometres to the east. He was joining our trail from a merging route on his way to Iglulik, and when we met him he was running low on gas. Nonetheless, he was not overly concerned, as he knew that there was always

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[1] Parry and Lyon were the first non-Inuit to travel the Foxe Basin region in the Canadian Arctic in search of the Northwest Passage.

traffic on the trail between Naujaat and Iglulik at that time of the year. He was, indeed, happy to accept the ten gallons we offered him.

During that trip in 2006 it became obvious that, to Inuit, the Arctic was in fact a network of trails, connecting communities to their distant neighbours, and to fishing lakes and hunting grounds in between. Based on the data collected during that trip and after mapping over sixty trails in several communities of the territory of Nunavut, I argue here that this network extends across most of the Canadian Arctic, most likely including areas that were not the focus of this research. Since Inuit did not use maps to travel or to represent geographic information[2], this enormous corpus of data has been shared and transmitted orally and through the experience of travel since time immemorial. Although new trails or new segments of trails are sometimes created to accommodate new travel needs and transportation technologies, while a few others are abandoned, most of these trails are so old that they are part of Inuit's distant history, perhaps beyond oral memory and certainly beyond the limits of written documentation.

Inuit travelers do not usually teach and learn trails as isolated and discrete entities. The memory of the trail is entangled with individual and collective memory of previous trips, as well as with environmental information of different sorts and place names in the Inuktitut language. It is through the use of place names that the trails are often described, as each community is deeply knowledgeable of the place names of their region. The description of the trip usually takes place in the narrative of the journey (Aporta 2005).

In what follows I attempt to show that most of what we know today as the Canadian Arctic should be understood as a network of trails, interconnecting Inuit settlements and other significant places. In addition, I suggest that such trails should themselves be considered significant places, essential in the understanding of Inuit culture.

The implications of this premise are several: (1) it rejects the idea of the Arctic as a barren place, or an empty land inhabited by geographically remote and isolated communities (still present in the popular imagination); (2) it implies that Inuit have made systematic use of the Arctic environment as a whole; (3) it suggests that trails are, and have been, significant channels of communication and exchange across the Arctic; (4) it presumes that some types of oral history and knowledge can be accurately transmitted through generations, and (5) it proposes that an important part of Inuit cultural identities is better understood in terms of moving as a way of living.

[2] The use of ephemeral maps drawn on the snow has been reported, and the Inuit in Greenland used to carve maps in wood. The Inuit of the areas that are the focus of this study, however, employ oral descriptions as the main way to transmit geographic knowledge.

Rationale

Every time I give a talk about the mapping projects I undertake in Nunavut, someone from the audience asks whether I am not afraid that by putting place names and trails on maps I may be undermining the very nature of Inuit oral knowledge. Underlying that question is the assumption that written knowledge is static and unchanging while oral knowledge is dynamic and evolving. In that sense, it is assumed that the flexible and changing knowledge of Inuit would be forever frozen when documented on paper. It is not the objective of this paper to address this debate in its full complexity. It suffices to say that, in our societies, the written document has a weight that oral tradition lacks. It is assumed that oral knowledge is distorted as it is transmitted, and distant oral knowledge and oral history are often regarded as unreliable (Attwood 2005). The most clear and dramatic example of such a thesis is the struggle of Aboriginal peoples in Canada to demonstrate a long history of use over the land of a given territory (see Asch and Zlotkin 1997) through their oral history. The transmission of Inuit trails and place names shows that complex and intricate knowledge can be precisely described and accurately transmitted from generation to generation for centuries.

The importance of travel and movement among Inuit does not constitute a new topic of interest. It was early noted by explorers such as Parry and Lyon in the 1820s when they made use of Inuit guides and Inuit geographical knowledge in their search for a Northwest passage. It was perfectly summarized by Mathiassen, who observed, referring to Inuit of the Eastern Canadian Arctic (corresponding to the current communities of Northern Baffin Island and Foxe Basin), that "a movement between these areas is constantly going on, with the result that their population is constantly changing in number and composition" (Mathiassen 1928: 21). Furthermore, the work of a number researchers (particularly archaeologists studying Arctic migrations, such as McGhee (1969) and Morrison (1999)) has assumed the existence of ancient trading routes and networks throughout the Arctic to explain some of their findings. The Fifth Thule Expedition itself involved traveling through the network of traditional Inuit trails, and ethnographers such us Boas (1888) and Stefánsson (1912) described and mapped some Inuit traditional trails.

The Inuit network of trails, however, has not been the object of academic research. One of the reasons for this may be that trails are physically ephemeral as snow tracks, and not permanent visual features of the landscape (as highways, roads and streets in other geographies). Since Inuit did not traditionally use maps, trails can only be shown through an exploration of people's memory (both individual and collective, present and past), or through the

mapping of actual travel. Furthermore, it is only with the use of new mapping technologies (GPS) and new cartographic tools (for instance, GIS and Google Earth) that this area of Inuit knowledge has become easier to document.

The geographic range of this paper includes original data from the communities of Arctic Bay, Iglulik, Hall Beach, Taluqjuaq, and Cape Dorset. I will show the existence of trails connecting these communities, and I will argue that each community possesses the knowledge of a large number of place names that cover the territory around their present and former communities, hunting and fishing grounds and trails. Individuals from one community also have the knowledge of place names of distant lands, used by Inuit in other communities. Traditional routes connecting two settlements or regions have overlapping sets of place names belonging to two or more communities. The concept of a network, therefore, will be extended to the entire Canadian Arctic. The time span of the trail network is difficult to demonstrate in the context of this research (how old are people's memories? and what does it exactly mean when elders say that such and such trail has been used "since time immemorial"?). I will use historical documents to compare present-day routes and place names with those mentioned and mapped in written accounts, paying particular attention to the trails between Naujaat and Iglulik, and Iglulik[3] and Northern Baffin Island.[4]

Methods

This paper is based on ethnographic research carried out in Iglulik between 2000 and 2007 and on mapping projects conducted in Arctic Bay, Repulse Bay and Taluqjuaq, as well as data from Pond Inlet and Cape Dorset. I particularly draw on a trip following a traditional route back and forth between Iglulik and Naujaat (Fig. 1) covering a total of approximately 1,200 km in the spring of 2006.

The purpose of the trip was to document a journey along a route that is currently used, occupies an important place in Inuit oral tradition, and can be compared with historical records from the journals and reports of Parry and Lyon (1820s), Hall (1860s), Mathiassen (1920s), and Rowley

Fig. 1 Travelers meet on the trail between Iglulik and Naujaat

(1930s). The whole journey (three days from Iglulik to Naujaat and four days back[5]) was tracked with two GPS units that remained activated while moving. During the trip I inquired about and took photographs of all significant segments of the trail, including visual aids (from rock cairns built by travelers to rocks and hills that seemed to play a role in wayfinding), named places, turning points, and landing and launching points. The main goal was to document things that helped travelers find their way or recognize a location or a crucial turning point. I was also interested in places that were significant for other reasons (spiritual, historical, hunting and fishing, and so on). Most of all, the trip was to provide the experience of an Inuit journey along a traditional Inuit trail.

Before, during and after the journey, interviews and mapping sessions were conducted with knowledgeable travelers who could also remember trips they had undertaken many years before, while Inuit still used dog sleds as their main means of transportation. The main sources for these interviews and maps were Herve Paniaq and Maurice Arnatsiaq in Iglulik, and Maliki and Abraham Tagunak in Repulse Bay. The interviews were recorded and videotaped, and the paper maps were digitized for inclusion in a GIS database that supplemented the GPS data. The photographs were georeferenced and integrated into the GIS database, which allows the identification of images of named places, turning points, and other places of importance.

GIS, GPS and Inuit Oral Knowledge

The new mapping technologies and mapping concepts seem to be the ideal instruments to document Inuit geographic knowledge (see Aporta 2003). The geographic information

[3] Many Canadian Arctic communities have reverted to using their original Inuktitut names instead of the English names given by explorers and governments. Since this paper presents evidence that is often based on written historical documents, and that could be compared with topographic maps, I have chosen to keep the English names in some cases (Pond Inlet, Hall Beach, Arctic Bay), and use the Inuktitut in others (Iglulik, Naujaat, Taluqjuaq).

[4] Archaeological sites and linguistic analyses of place names could eventually be used as evidence to prove the longevity of the trail network, but they are outside of the scope of this research.

[5] This included stops for fishing and hunting along the way.

collected during the journey was integrated into a database that at present contains over 60 trails and 2,000 place names[6]. This database allows the comparison, for example, of the trail we used in 2006 with the one followed by Hall in 1860s, and the place names used in Iglulik today with the ones recorded by Parry and Lyon in the 1820s.

Beyond the creation and use of the geographic database, the project involved several interview sessions where experienced travelers mapped all the routes and their variations connecting the two communities and recalled memories of their journeys. These interviews permitted the recreation of the experience of the journeys beyond the mere mapping of the route, both now and in the past[7]. Most of the informants were men, but at least five women were involved in mapping and interviewing, and two were part of the travel party.

The Trip

The trip Iglulik–Repulse Bay–Iglulik took place in the spring of 2006 (spring being the preferred travel season in the Arctic), between late April and early May, and it was led by Maurice Arnatsiaq, who brought along his wife and three children. The trip followed one of the two traditional routes to Repulse Bay, mostly inland across Melville Peninsula in continental Canada (see trail 2 of Fig. 3). The coastline route (trail 3 in Fig. 3) was frequently used when people traveled by dog sled, but it is not used today on a regular basis, as the inland route is considered more efficient and better suited to snowmobiles.

The first part of the route (from Iglulik) goes across the sea ice and then over tundra with very low features or no features at all on the horizon. It then goes through a large lake called Tasiujaq (Hall Lake), which is also a popular fishing and caribou hunting destination, and follows a meandering river named Ajagutalik. At a particular bend of the river (that the Inuit call Sanguraq), the trail leaves the river and heads into a long chain of interconnected creeks and lakes, which includes the highly important lake of Nagvaaq (a traditional meeting point for travelers). The trail then goes south until it reaches the sea ice, at which point it turns west towards the community of Repulse Bay. During our journey, Maurice Arnatsiaq followed tracks that were already laid out on the snow by previous travelers, but at times he broke the trail on fresh snow, as the tracks had been covered by recent blizzards. We spent several nights along the trail sleeping in tents or in small hunting shacks.

The trail presents a very efficient itinerary, following valleys, canyons, and, particularly, frozen water. Frozen water covered by snow is and has been the preferred travel surface for Inuit (see Aporta 2004). The trail goes through well-known hunting and fishing places, where my traveling companions hunted 12 caribou and fished approximately 60 Arctic char through the ice. The meat and fish were part of our diet while traveling, and the unused quantities (including the caribou skins and antlers) were brought back to Iglulik and shared with the community.

The Spatial Features of the Trail Network

I have described elsewhere the nature and characteristics of Inuit trails both over land and sea ice (Aporta 2004). Although the term "trail" is used here in a broad sense, it seems important to explain the terminology used in this paper. A *trail* is basically the visible tracks broken on the snow by a traveler driving a dog sled or a snowmobile. Many of these trails follow well-established *routes* or *itineraries* that Inuit use year after year, and that are widely recognized by the community. These routes follow precise geographic layouts, both on the land and on the sea ice. The trails that are of specific interest to this study are the ones that recreate well-established routes. *Journeys* constitute the experience of traveling such trails, both literally and figuratively (in narratives), as the trips are remembered and told (Aporta 2005). Because Inuit did not traditionally use maps, the journey (or the story of the journey) becomes one of the main instruments for transmitting geographic information. The narrative of a journey is not a mere literal description of the trail, but involves the story of the trip (and sometimes of different trips along the same route). Such narratives will include precise descriptions of the landscape and icescape, along with the memory of personal anecdotes. Place names, winds, and other spatial markers are constantly used to place the traveler within concrete horizons and to explain the direction of travel (to understand the use of wind directions in Inuit wayfinding see Aporta 2003; MacDonald 1998; Fortescue 1988). The physical description of a trail (including such things as when a particular rock is seen approaching from the trail in a particular direction) is intertwined with stories such as how the traveler almost got lost, the particular hauling of the traveler's father's dogs, the presence and hunting of caribou along the way, or the encountering of another traveler. Each anecdote may become a sub-narrative of its

[6] The data come from the following sources: original mapping conducted by the author in Iglulik, Repulse Bay, Arctic Bay, Hall Beach and Taluqjuaq. Some of the place names of Repulse Bay were collected by Ludger Muller-Willie (Project Nunatop) in the 1980s, and mapped by the author. The place names of Pond Inlet were collected by the Inuit Heritage Trust. Some trails were mapped in Iglulik by Kelly Karpala and in Cape Dorset by Karen Kelly.

[7] In order to recreate the journeys, the interviews were open, often with a single question, asking to remember a particular journey or to describe a route. The interviews were conducted in Inuktitut, with the help of interpreters. In some cases, younger hunters were asked to conduct the interviews themselves, and the author was not present. This helped create a more spontaneous setting for the narratives.

own, but the narrator will invariably go back to the description of the journey.

There is a significant difference between the mapping of a trail or route and the documenting of the narrative of the journey. Documenting a journey is highly difficult, because the narratives take place in the context of conversations, and the attempt to record such narratives is often altered by the artificial setting of an interview. Narratives of this type, however, take place all the time in everyday situations, including radio communications, when travelers out on the land report their journeys to listeners in town and in other camps and communities. A rare and excellent example of such a documented narrative is an interview conducted by George Qulaut with Mark Ijjangiaq (1990). Qulaut was himself getting ready to travel to Naujaat.

Ijjangiaq recalls the trail from the memory of the journey, as he describes what the landscape looks like from the trail:

> This Tasiraujaq is a long lake so that you can go through it for a long time. It has been many years now that I did not use the route but I still remember the route. This stream is very short but there is a bend, despite the fact that the lake Tasiraujaq is only some short distance away. So as you go through the stream you will come across a sharp bend that will lead you to the lake. (Ijjangiaq 1990)

It seems, in fact, that journeys are an integral part of the knowledge of routes and hence of the Inuit perception and representation of their territory. Before Inuit moved to permanent settlements in the late 1950s and early 1960s, and before they were constrained by schooling and formal jobs (and by the fuel capacity of their snowmobiles), the journey took precedence over the route, and the trail was, in a sense, *lived* rather than *traveled*. It was, in fact, rare to think of a traveler as "delayed", as trails were loosely measured in terms of sleeps. There was, to be sure, an awareness of timing related to the seasons, times of ice break-ups, caribou migrations, and other environmental phenomena, but without the constraints of having to arrive or depart at a particular date. This approach started to change with the arrival of European and American whalers and particularly with the arrival of trading posts, and the emergence of regular trading journeys to the posts. The most dramatic change was linked to sedentarization, and the appearance of such concepts as weekend trips.[8] It may have been because of this characteristic of the Inuit approach to travel that explorer Parry could not relate to the scale of some of the maps drawn by Inuit upon his request (see Bravo 1996). Such concepts as distance and time of travel must have been well understood by his informants, but the conception of scale as uniform, standardized units, unrelated to the actual experience of travel, may have been hard to comprehend.

The Spatial and Social Nature of the Trail Network

Inuit trails or routes are physically ephemeral, but have a distinctive and "permanent" character since they possess defined spatial layouts that are precisely recreated year after year and that belong to the individual and collective memory of Inuit. Such itineraries can, of course, be mapped. And it is through systematic mapping of the trails that the existence of a spatial and social network becomes evident.

Figure 2 shows trails recorded during different mapping sessions by elders in the communities of Iglulik and Arctic Bay. The network of trails is intricate as a main trail will branch out in some areas, a circumstance usually connected to hunting and fishing destinations. Variant 1 is the shortest route, and the most commonly used today. Variant 2, on the other hand, is mostly connected to the existence of old settlements in the area around Aggu, but the trails are still used today for caribou and polar bear hunting and fishing. The existence of current and former camps, hunting and fishing destinations, etc., reinforces the idea of trails as lived places rather than as mere transitional locations.[9]

Figure 3 shows a more complete snapshot of Inuit trails in Arctic Canada. While the trails to the west of Melville Peninsula were mapped from a historical source (Stefánsson 1912), the ones to the east are the result of mapping in several Inuit communities. The map shows a complex network of trails connecting significant places across the Arctic. Around the area of Aggu, a trail (Trail 1) branches off towards the Inuit community of Taluqjuaq in Boothia Peninsula. Inuit from that region use this trail on their way to Arctic Bay. There are also two trails (11 and 12) from the Boothia area to Repulse Bay and to Iglulik. From Arctic Bay, at least two main trails (6 and 7) join that community with the settlement of Pond Inlet. Pond Inlet is, in turn, linked to Iglulik (Trail 8). From Pond Inlet and Iglulik, trails 9 and 10 traverse the intricate topography of Baffin Island to the eastern community of Clyde River. From Clyde River, other trails go to more southern destinations, and so on. Inuit from Arctic Bay at times would also travel to Greenland (Ikummaq 2000; Mary-Rousselière 1980), and Inuit from Cape Dorset travel (mostly by boat) to Northern Quebec.

[8] For an in-depth look at Inuit sense of time, see MacDonald (1998).

[9] The use of new technologies such as GPS and, especially, the snowmobile, is creating the notion of trails as transitional places towards a final destination (Aporta and Higgs 2005). The oral history and place names, however, continue to reinforce the concept of lived trails.

Fig. 2 Trails between Arctic Bay and Iglulik

Figure 3 shows a clear picture of the network of trails that connect the communities included in this study, tracing the existence of a pan-Arctic net of trails across lands and seas of the Inuit-inhabited Arctic. Each community could be considered a connecting point or hub for several trails. It is, therefore, no wonder that during the Fifth Thule Expedition Mathiassen reported meeting Inuit who "knew the whole of the country between Chesterfield Inlet and Pond Inlet and had also traveled to Piling, North Devon, Cornwallis Island, North Somerset and Prince of Wales Island" (Mathiassen 1928: 97–98). Some of the Inuit encountered by Mathiassen were clearly used to travelling over an immense territory through familiar, interconnecting trails.

Before the Canadian government encouraged Inuit to settle in permanent communities, the Inuit sense of identity (or some of the dimensions of it) was often connected to traveling. There are many terms in Inuktitut that refer to this connection between Inuit and moving. Some examples of this connection are *aullaaq* (translated as "he is gone to a long distance place with his family"), *utirjariaq* ("a traveler that goes and is due to return in the same trip"), *pagijjijut* ("people left behind when the hunter was away on a long trip"), and *Kivavaan* ("southbound", referring to people traveling toward the Naujaat area).

The network of trails was connected to people's sense of identity, as moving was for the Inuit part of life. It is, therefore, understandable that the trails of this network became known to the Fifth Thule expedition (see next section) as they traveled from Greenland to Alaska. It is also easy to assume that the Inuit the expedition met in each settlement or camp would provide them with geographic information in the form of trails and place names. It is, indeed, possible to speculate that this network of trails played a role in helping Inuit spread news, and share language, cosmologies, and material culture across the Arctic.

Place Names

Since the knowledge of trails is oral, language becomes crucial in order to describe the features of the trail, significant landmarks or icemarks and direction of travel[10]. In the narrative of a journey, the trail is described in terms of what can be seen (or what will appear) on the horizon. When traveling over a flat expanse of tundra or sea ice, for example, the appearance of a particularly shaped hill in a certain direction may determine a turning point of the trail.

[10] It should be noted that Inuit elders express concern related to the loss of Inuit knowledge (oral) due to the contemporary context of life in the settlement, formal schooling, etc. One of the main reasons for Inuit-supported oral history projects and mapping projects is to avoid the loss of oral knowledge with the passing of knowledgeable elders.

Fig. 3 Pan-Arctic network of trails

Most often, such a hill is associated with a place name. Directions are usually connected with the prevailing wind bearings, but also with other spatial referents such as the shores or the floe-edge (see Aporta 2003). In the context of the oral description of the territory place names become of great importance, as precise geographic locations are often identified with a toponym[11].

Ujarasugjuk, for instance, is a well-known place in Iglulik, and it refers to a submerged rock that constitutes a danger to boat travel off the western shore of the island; *Maniiruarjuk* is a rough area that Inuit try to avoid while traveling on the land; *Tammariaq* is a flat area around a trail where it is easy to make a mistake; *Kinngakatannak* is a small, rounded hill that can be seen from a distance while traveling the trail. Inuit place names are associated with a myriad of topographic features, including rivers, creeks, lakes, valleys, hills, rocks, bays, and even ice features such us polynyas and ice ridges (Aporta 2002).

The names of places were traditionally kept in people's memories and transmitted in narratives. Their rendering on topographic maps across the Canadian Arctic is a relatively recent event.[12] The mapping of place names is in itself a revealing process, as it becomes immediately obvious that the elders participating in the sessions are picturing the features from the perspective of a traveler or of someone who is actually *there* looking at the features described. Many place names are intimately connected to travel, and many of them are directly linked to trails. *Iglunnguaraaluuk*, for instance, implies "two hills resembling iglus that you can see from the mainland, as they are the most visible features of the horizon" (field notes, Iglulik, 2006); *Pusinngajuujaq* is a hill that from a distance resembles a bowl upside-down.

The importance of place names in Inuit culture has been pointed out by several authors (MacDonald 1998; Collignon 1996; Brody 1981; Arima 1976; Boas 1888). I have elsewhere shown the connection between trails and place names (Aporta 2004). The mapping of place names makes this connection evident to the point that often the existence of trails can be guessed just by knowing where the named

[11] The place names do not involve discrete renderings of geographic locations (comparable to a set of coordinates). The information is transmitted in the context of a larger narrative. In fact, names like Tasiujaq (big lake) are used to describe several features (lakes and in some cases other water features such as bays). What makes a particular Tasiujaq unique is the context provided by the narrative.

[12] Mapping projects are being conducted all across the Arctic, mainly because of the fear that some names will be forgotten when older people pass away and also for political reasons, as a way of reclaiming the land and recognizing the existence of Inuit names (see Müller-Wille 1983).

Fig. 4 Names suggesting a trail (part of the trail between Iglulik and Pond Inlet)

places are. In other words, the spatial layout of the names suggests the existence of a particular itinerary.

Figure 4 indicates the presence of a trail across the northern tip of Baffin Island. Through the use of these names, a narrator can describe a trail, identifying creeks, lakes, hills, portages, stone cairns, and landing spots. The oral description of the trail (or the narrative of the journey) will help a listener picture how the horizon will look from the trail, and what kind of features a traveler should expect.

Figure 5 shows a number of trails and a selection of place names from Naujaat, through Iglulik, to Arctic Bay and Pond Inlet. Trails and names were mapped in different mapping sessions over blank maps, but their relationship became obvious when they were integrated as layers of the same digital map. It is remarkable that every turning point, and every point where two or more trails merge or separate is named.

Not all Inuit place names are associated with trails, but it seems that the opposite is true: all Inuit trails are connected to a sequence of place names. Names are extensively used to designate hunting and fishing locations, the presence of plants and berries, supernatural events, etc. Densely named areas are indications of extensive use (see also Collignon 1996). The network of trails connects current settlements with these locations showing both the current use of the land and the old patterns of habitation (and a relationship between the two). Inuit usually identify a trail or a variation of a trail with a particular name (generally the name of a significant feature along the trail), and in some cases, trails are given a name of their own.

Figure 6 shows an interesting case in the vicinity of Iglulik. This trail connecting the shore with the interior of Melville Peninsula is known by two different names that are used according to the direction of travel. *Usuarjukkut Kivavvaq* is the name that people use for the trail as it is traveled from the shore towards Naujaat, and it is called *Usuarjukkut Pijuariaq* for the opposite direction.

Experienced Inuit travelers may possess the knowledge of several hundreds or even thousands of names, mostly around their settlements, hunting and fishing grounds and trails. The range of their knowledge sometimes includes names of distant places that are usually connected to long trails. Place names play an important role in the way Inuit talk about their activities. The lack of that common knowledge would certainly make travelers feel limited in their discourse. Toponyms, indeed, occupy a very important part in any narrative of journeys[13] and other events on the land.

Because traveling is such an important part of Inuit identity, and considering that in the past Inuit were nomadic or seminomadic, there are names virtually everywhere that Inuit have dwelt and traveled. In fact, if we were to make a map of the Inuit-occupied Arctic that includes all the names and trails, we would readily see how extensively used the

[13] The newly created maps with local place names are in fact helping new Inuit migrants (usually government workers coming from other Nunavut communities) to adapt to the new place and the new community faster, as they can learn names that otherwise would take a long process of personal connections.

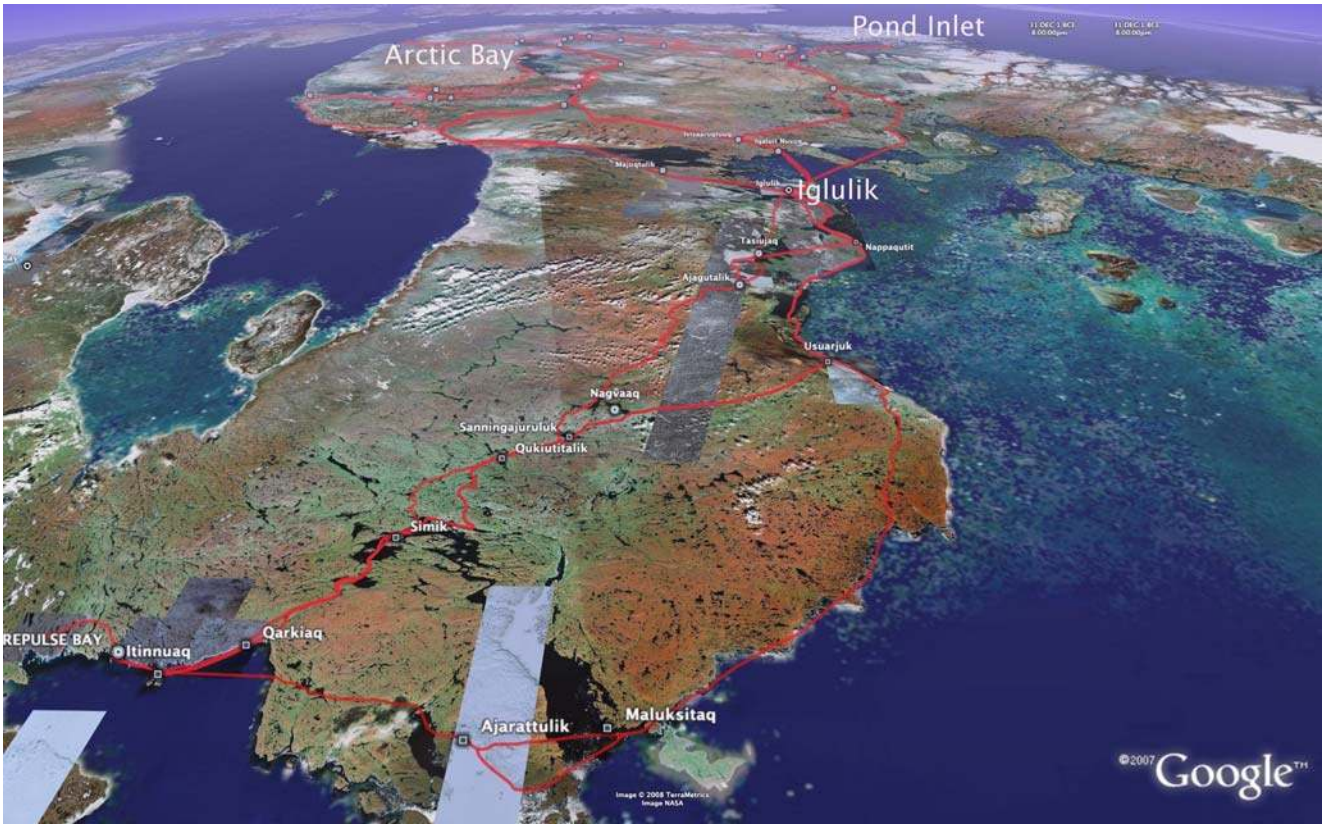
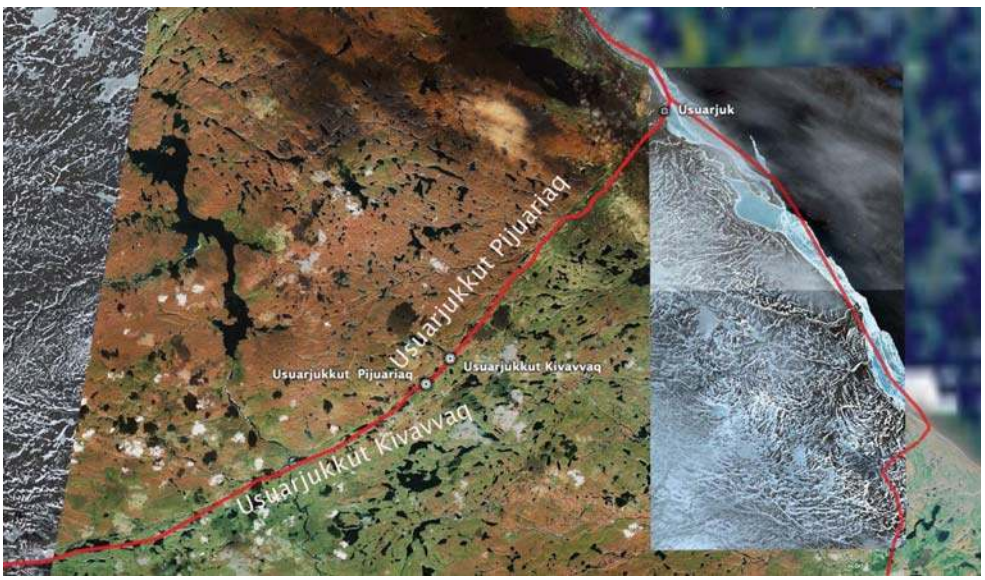


Fig. 5 Network of trails with named places

Arctic landscape is, as the traces of Inuit culture are ubiquitous. It is not surprising that along trails connecting two communities there are areas where names known to each of the settlements overlap.

Figure 7 shows a section of Baffin Island with trails between Iglulik and Arctic Bay. Square icons identified with number "1" represent place names mapped in Iglulik, while rounded icons identified with "3" are toponyms mapped in Arctic Bay. The map illustrates a situation common in areas used by two or more adjacent communities. Most named features are recognized in both communities and, in most cases, the features share the same names. There is, however, awareness of places that other communities would name differently.

Fig. 6 A trail with two names



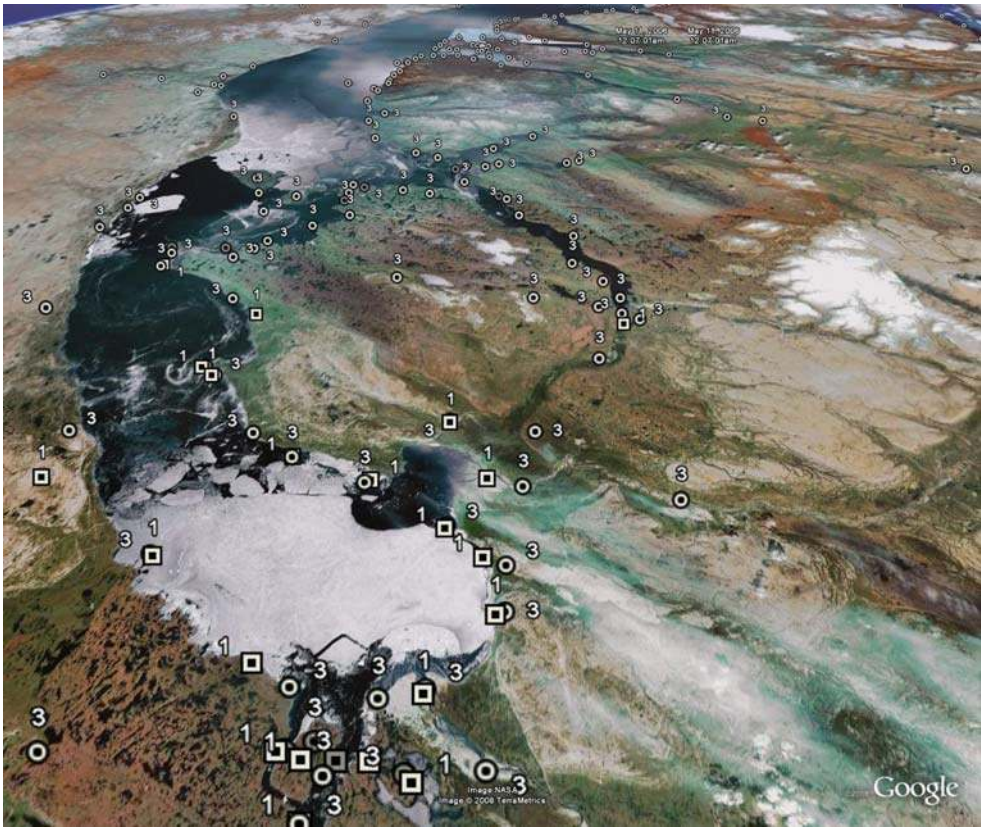


Fig. 7 Overlapping names from Iglulik and Arctic Bay

In a 1991 interview, the late Noah Piugaattuk narrated his trip with the Rev. John Turner as they traveled from the Iglulik region to Pelly Bay. Piugaattuk remembered that "once we were with the *Nattilik* [Pelly Bay area] people... they can explain their region very clearly. I also relied on the direction of the wind and from what I had heard, I had a pretty good idea about the area....I had no reservations to go to places where I have never been before" (Piugaattuk 1991)[14].

The sharing of names and knowledge of differences is essential, as a traveler arriving from another community will want to share the narrative of the trip with the locals.

Since there has been and continues to be considerable intermarriage and other forms of kinship among Inuit settlements, it is often the case that individuals living in one community (e.g. Iglulik) were in fact born in another (e.g. Arctic Bay or perhaps in a camp in between the two settlements). This fact only reinforces the idea of a solid spatial network across the Arctic. In fact, the main reason for present-day long-distance travel is visiting relatives.

Trails as Social Networks

Inuit trails do not merely constitute transportation routes or transitional spaces for travelers. They are not only an efficient way to travel from point A to point B. On the contrary, trails usually go through fertile places, across or around lakes, valleys or open water (on the sea ice) where fish, caribou and sea mammals can be procured. This was of critical importance in the past, as game was the 'fuel' that propelled sled dogs. The slower pace of travel, and a different sense of time related to a more nomadic type of life, made the trails and surrounding areas places of great significance. Even today, traveling the trail involves engaging in a series of social interactions in which all sorts of exchanges take place, from material goods to news. One of the most basic functions of the trail is the travelers' need to find help as they pass through the great Arctic territory. A traveler in trouble (for instance, lacking dog food in the past, or having mechanical problems in a snowmobile today) is certain to find, sooner or later, someone traveling the same trail. Figure 8 shows a fairly typical scene, in which a traveler's broken snowmobile is being carried on the sled of another traveler going in the same direction. Because traveling seasons are usually well defined, there is a good possibility of "traffic" on a particular trail. During the journeys between Iglulik and Repulse Bay, the sighting of a snowmobile coming from the opposite direction was always a welcomed event, whether the traveler was known or unknown. A short break permitted travelers to have a chat, share information, and, in some cases, share food, gas, cigarettes, and so on. News of travel and weather

[14] The interview was conducted by John MacDonald and Louis Tapardjuk.

Fig. 8 A snowmobiler gets help along the trail between Iglulik and Naujaat

conditions, and of game and fish along the way, was always exchanged. News about other travelers encountered on the way would also be passed on, and the trail becomes a channel where information flows back and forth as the people traveling it build and feel a sense of community.

The Network in Time: But How Old Are These Trails?

For this paper, interviews with Inuit elders and written documents and maps have been used to compare present-day trails and place names with those used by Inuit in the past. The most important sources to establish the historical permanence of this geographic knowledge and of this way of using the territory were the historical maps and journals produced by the first explorers and ethnographers that visited the area. They all used the help of Inuit guides, and they documented some of the traditional routes and toponyms.

It is through these historical references that the temporal continuity of this oral knowledge can be better shown, particularly as the locations of place names and trails from historical records are digitized and combined with place names and trails mapped through interviews and mapping sessions today.

A linguist might perhaps be able to determine the approximate age of some place names, and an archaeologist could date some of the trails (for example, through the analysis of artifacts found along the way, or through dating certain rock cairns along the route), but this is beyond the scope of this project. The purpose here is to show that a considerable number of trails and place names and their geographic locations have been used for a very long time. However, although a significant assumption of this paper is that many of the trails and place names are very old, it is important to point out the limits of such a statement. The Inuit knowledge of their territory is dynamic and evolving (not unlike other types of knowledge). New place names are sometimes created. Some new trails or segments of trails are tried and some old ones are abandoned, as the style of life and means of transportation change.

Trail 3 in Fig. 3 shows the shore-route connecting Naujaat and Iglulik, which is barely used today since, as previously mentioned, snowmobile drivers favor the inland route (Trail 2). In the past, the shore route was often preferred as it was easier to keep the icing of the sled runners in good shape. That route also took travelers through several camps and hunting grounds along the shore. On the other hand, it is also said that younger travelers using GPS units are sometimes coming up with straighter (and often less efficient and more solitary) routes (Aporta and Higgs 2005). However, there is general agreement among the Inuit I interviewed and traveled with that most of the routes and place names they use today were also used by their parents, grandparents, and as far back as they know.

Explorers, ethnographers, missionaries and traders that traveled the Canadian Arctic in the 19th and first half of the 20th centuries relied heavily on Inuit guides to obtain geographic information. Explorers Parry and Lyon, the first non-Inuit to visit the Foxe Basin area hoping to make a way to the Pacific, sought the help of Inuit to sketch what, to them, was terra incognita. Other visitors, such as Hall, Mathiassen, Tremblay, and Rowley, employed Inuit as guides in their sled journeys, and recorded (in a non-systematic way) Inuit place names and routes. Some of the Inuit who acted as guides or sources of information also turned into cartographers (see Spink and Moodie 1972), and produced a series of maps containing Inuit geographic knowledge and land use that can be compared with present-day data. Inuit guides grasped with different degrees of success the principles of western cartography (see Bravo 1996), but most drawings present recognizable features, and some are remarkable in their similarity with contemporary topographic maps. Inuit place names were also recorded by explorers and other travelers, but there was no systematic mapping of place names in the region that is the main focus of this study. Comprehensive documentation of place names was done by Boas in southern Baffin Island (Boas 1888; Müller-Wille and Barr 1998) and by Petitot in the western Canadian Arctic (Petitot 1889; Wonders 1987). The names were written phonetically and they are sometimes difficult to compare with today's standardized Inuktitut writing system. This was aggravated by the fact that some of these travelers had little or no knowledge of Inuktitut (and, in turn, Inuit did not have any knowledge of the explorer's language).[15] It is possible, however, to

[15] It should also be noted that Parry's journal was published (and perhaps edited) by the Admiralty, while Hall's work was edited and published by the US Government Printing Office in Washington, D.C., after his death.

Table 1 Inuit place names from historical records (Sources: Lyon 1824, Parry 1824, Hall 1864, Hooper n.d., Rasmussen 1929, Mathiassen 1928, Rowley 1996)

Source	# Names	Date of collection
George Lyon and William Parry	83	1820s
William Hooper	27	1820s
Charles Hall	246	1860s
Therkel Mathiassen	98	1920s
Knud Rasmussen	186	1920s
Graham Rowley	36	1930s

identify most of the place names and, in cases where they were mapped, compare their locations with currently used names. Table 1 shows the number of Inuit place names collected by outsiders visiting the Foxe Basin region between 1821 (first contact) and 1936.

Preliminary analysis of this database shows a very close relationship between the names collected by the different sources and the ones that Inuit use today. For instance, over 90% of the toponyms collected by Parry and Lyon could be compared and coupled with present-day names. As stated above, the use of different spellings makes the identification challenging. For example, the island *Salliq* (standardized orthography) was documented by Mathiassen, Rasmussen and Rowley as Sadleq. The island of *Nirlirnaqtuuq* was documented by Mathiassen as Nerdlunartoq, by Rasmussen as NErLErnArtoq and by Parry and Lyon as Nērlĭ-nāk-tŏ. One name, particularly, shows the potential longevity of oral culture. *Qikiqtaarjuk* means "small island" but it is used to describe a peninsula located on the northeast corner of the island of Igloolik. It has been estimated that Qikiqtaarjuk made the transition from island to peninsula as the sea levels receded approximately 300 hundred years ago (the feature was in fact drawn as peninsula by the Parry expedition in 1820s). Inuit in Iglulik still tell stories and legends of the time when Qikiqtaarjuk was an island.

Figure 9 shows a map produced by Rasmussen, covering part of the land in Melville Peninsula between Iglulik and

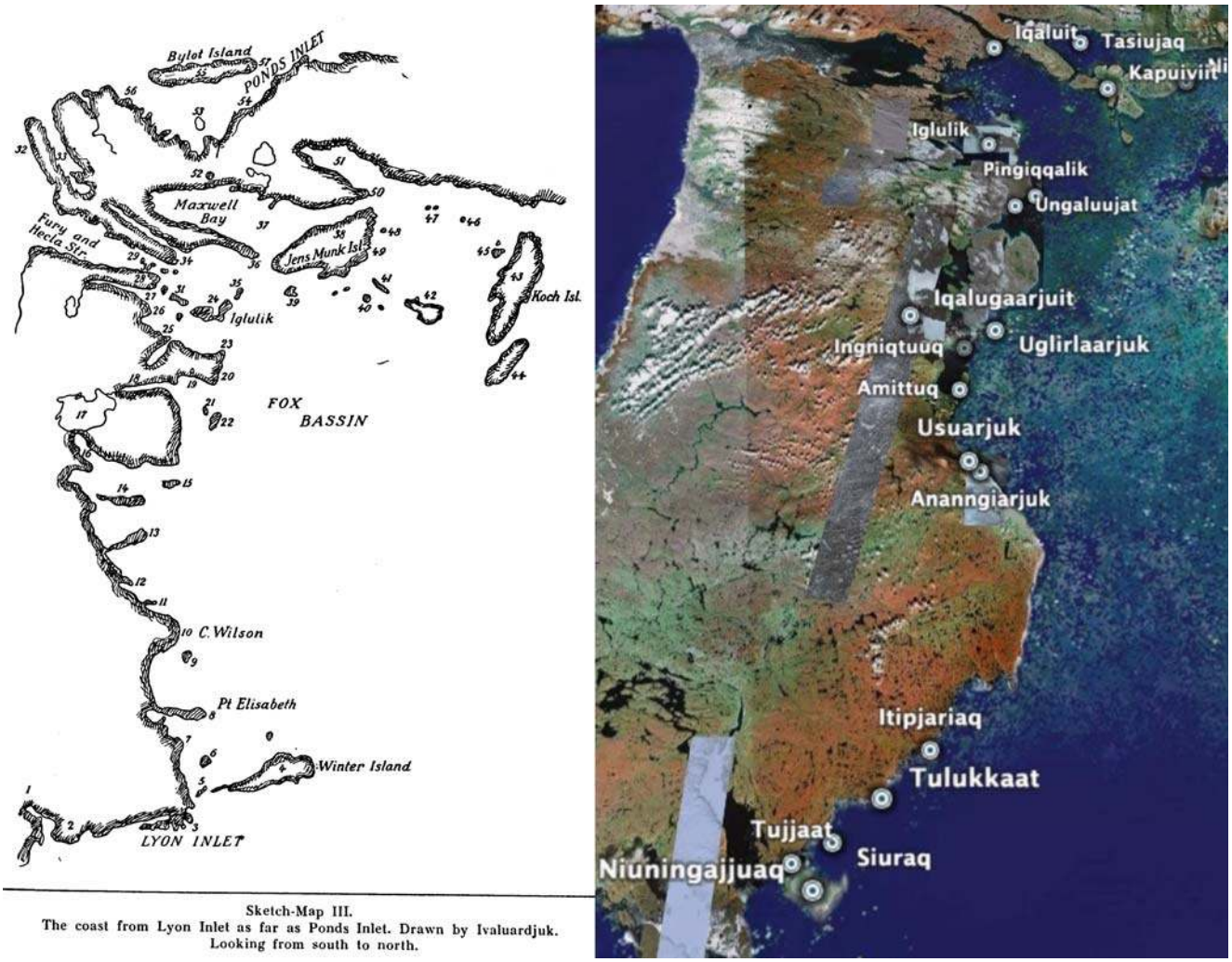


Fig. 9 Inuit place names on Rasmussen's map

Naujaat. Virtually all the place names shown on the map are still used today to refer to the same features. The explorers usually documented the routes over areas of personal interest, or around places where they actually traveled (in most cases following their Inuit guides). Remarkably, when Inuit were asked to draw the maps themselves they almost always included trails, as if they could not imagine or picture the territory without them. In the context of this research, these trails were digitized and incorporated as layers of a GIS database. Overlapping these trails with currently used routes and place names shows unmistakable continuity over time.

Figure 10 shows the route mapped by Iligliuk for Parry in 1821. This same route was mapped by Inuit elders in Iglulik and Naujaat (Trail 3 in Fig. 3). The GIS database reveals that this traditional route is clearly connected to place names currently used in both communities.

Figure 11 shows the routes used by Hall in the 1860s and by members of the Fifth Thule Expedition in the 1920s. These routes are represented as light green lines on the map. Most of the segments of the routes used by Hall and the Fifth Thule expedition are the same, and they also coincide with routes currently used and mapped by the author (represented as white lines on the map). When incorporated in the database, they both connect closely to present-day routes and place names, showing historic continuity since the mid nineteenth century.

The map on the left of Fig. 12 shows the route between Iglulik and Pond Inlet drawn for Claude Vigneau by an Inuk identified as Nookudla (Speck 1924). The drawing was made in 1923, but Nookudla was remembering a trip he had undertaken with Tremblay in 1913. The map to the right shows two variations of the present-day trail drawn by Theo Ikummaq in Iglulik in 2006. The easternmost variation is virtually identical to Nookudla's trail.

The examples shown in Figs. 9, 10, 11 and 12 are only a small sample of the data compiled in this research. All seem to indicate the unmistakable historical continuity of routes and names. If we consider that the names and routes were already traditional at the time of the explorers' visits to Foxe Basin, the longevity of such knowledge can be assumed to be greater than the first records. This shows that the precise locations of

Fig. 10 Iligliuk's route (1821) and currently used place names

Fig. 11 Routes and place names mapped in 1860s, 1920s and today

routes and names, and the knowledge associated with them (e.g. the existence of hunting and fishing grounds, survival skills, weather patterns, snow and ice patterns, winds) has been accurately transmitted orally for centuries. Each Inuit community, it seems, has acted as repository of an enormous amount of geographic knowledge. Such knowledge has not simply been stored in people's memories in the sense that a database stores discrete data. Learned through the experience of travel, or through the figurative journey of a narrative, this knowledge requires a command of the local discourse (much beyond the knowledge of Inuktitut) and an engagement with the surrounding territory.

Inuit have managed to transfer this oral geography through centuries with remarkable precision. To travel the Arctic along Inuit trails, therefore, is to be traveling a land of ancient history, replete with old and new stories that still unfold today. To a non-Inuit traveling this land, however, the Arctic will still seem to be the desolate, barren, empty place described in so many chronicles of Arctic ordeals.

Conclusion

During his travels in the Eastern Canadian Arctic, Knud Rasmussen documented a ritual just before a newborn child undertook her first journey. After describing the ritual and the prayer, Rasmussen noted that "this was the child's first journey, and the little girl ... had to be introduced to life by means of [a] magic formula" (Rasmussen 1930: 47). Being introduced to the first journey was, in a way, being introduced to life, as if both living and moving were part of the same journey. The trail was a place where life unfolded. Life on the trail involved the learning from an early age of an immense amount of geographic and environmental information, as the individuals experienced the land through actual or figurative travel. Through that process, a sense of community was also developed.

The oral and experiential knowledge learned on the trails is, in fact, intertwined with information on and understanding of topographic features, environmental dynamics, and ecology of the familiar region. As Inuit travel to less familiar or more distant regions, this knowledge needs to be acquired from neighboring communities, which suggests a system of tenure in which knowledge equals survival (social and physical). It is through accessing this corpus of knowledge that Inuit travelers from distant communities would be able to find the good trails and the resources necessary to live in other regions. Before the introduction of new communication and transportation technologies, it was exclusively through this network of trails that people and knowledge could circulate, maintaining a certain cohesiveness in the whole Canadian Arctic.

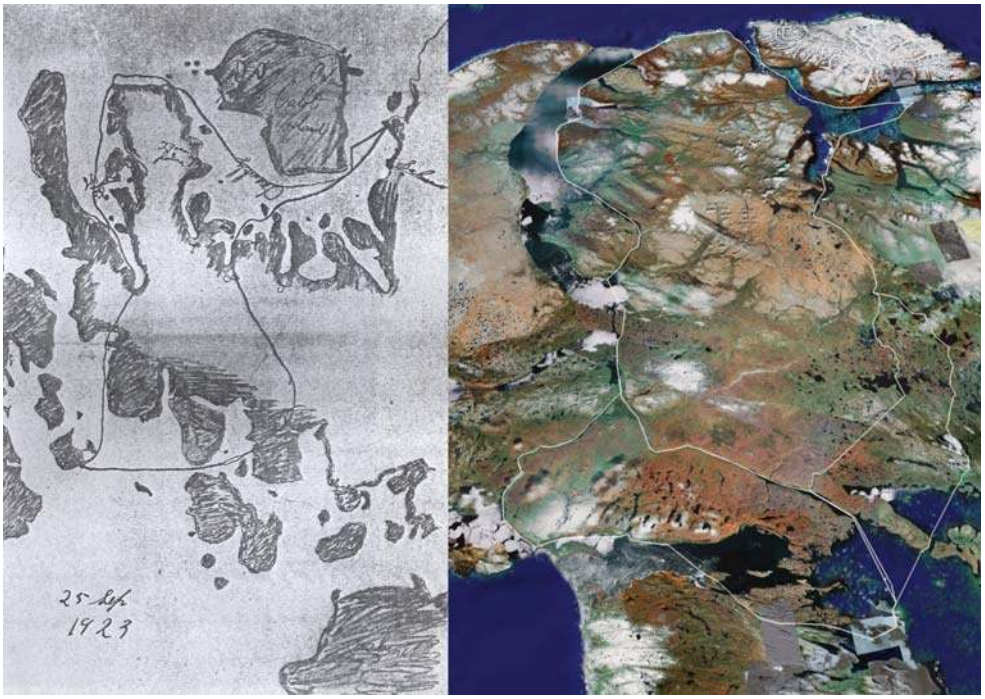


Fig. 12 Route between Iglulik and Pond Inlet used in 1913 and today

The access or sharing of this knowledge takes place in narratives. Such narratives will involve the description of visual features, often named, the availability of animals, the conditions of snow and ice, the shape of snowdrifts and the direction of prevailing winds. The layout of such information is given within a geographic framework constituted by the wind compass and other spatial referents. This sharing was critical in the past, but it is still present today. Iglulik's Theo Ikummaq, for example, relied on information provided by Arctic Bay elders in order to make a trip to the northern part of Greenland. The elders were able to describe the landscape and the ice and snow conditions in minute detail, even though they had made the trip many years earlier (Ikummaq 2000). While today Inuit can learn from written sources and from maps, the social dimensions of travel and life in the Arctic still require such learning experiences. After returning from the long dog-sled trip between Iglulik and Greenland, Ikummaq was invited to narrate his trip on the local radio station, which he did over the course of three days.

It seems clear that the spoken word can be a reliable means of knowledge sharing, and that oral history should not be a priori dismissed as unreliable and inaccurate. The geographic knowledge of trails and names that Inuit have transmitted without significant changes over the centuries offers evidence of the power of oral communication that may perhaps be extended to other realisms of Inuit knowledge, and even to other cultures that rely on oral traditions. For the Inuit, trails were and are a distinctive aspect of their own cultural identity. The dramatic social and cultural consequences that sedentarization brought to the Inuit (Rasing 1994) could perhaps be better understood when the differences between life in town and life on the trail are acknowledged.

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