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Infrastructural Encounters in North Greenland

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CHAPTER 11

The Satellite at the End of the World: Infrastructural Encounters in North Greenland

Mette Simonsen Abildgaard

Introduction

Qaanaaq in North Greenland is the second-northernmost permanent settlement in the world. In this chapter, I look at how processes of place-making produce a Qaanaaq that is marginal on different scales, often expressed in proclamations such as my opening sentence. I am particularly interested in the production of marginality in relation to what I call 'infrastructural encounters', understood as the mutual co-shaping of local everyday practices and infrastructural systems, as they unfold in and with Qaanaaq.

I tell the story of how infrastructural encounters are shaping Qaanaaq by considering some of the town's key infrastructural sites of telecommunication. Although less clearly linked to formal infrastructures of telecommunication, I begin by considering the town's only official and consistent

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place of lodging: Hotel Qaanaaq, owned and operated by a local elderly couple and their children and grandchildren, as it creates a fundamental process of 'becoming-central-through-marginality' by hosting a steady stream of scientists, adventurers, celebrities and royals visiting *Ultima Thule*[1]—and leaving again. The hotel also serves as an opportunity to describe and reflect on what it means to do research in Qaanaaq. I then shift attention to the town's satellite ground station, which is both an instrument of marginality and a promise of links to elsewhere, and thereafter Qaanaaq's (most often) vacant telecommunication station, sometimes inhabited by telecommunication technicians but now in the process of being sold. Finally, I consider an immaterial place that is less geographically bound to the town but plays a no less important part in the making of Qaanaaq, namely the speech figure of 'down south' that points to the world below Qaanaaq, and the infrastructural absences it invokes.

My story of infrastructures in the production of marginality takes its point of departure with Qaanaaq, but it is based on fieldwork at different sites in Greenland—interviews in Nuuk at Tusass, Greenland's national postal and telecommunications company, in the winter of 2021, and in Qaanaaq and the Pituffik Space Base in the summer of 2022. In Qaanaaq, I stayed for about three weeks, participating in and observing life in town, spending time with and interviewing locals as well as representatives from the various functions in town; the school, the municipality, the police and the health care centre as well the visiting technicians who worked on upgrading the town's telecommunication station. Jobs and names of interviewees are pseudonymized, but, due to the town's small scale, it is difficult to fully obscure the identity of those in key functions (as will be illustrated by Hotel Qaanaaq later).

My understanding of how infrastructures co-shape Qaanaaq in this chapter is centred around the concept of 'infrastructural encounters', which I introduce to solve the difficult analytical task of addressing how infrastructures "are things, but also the relationship between things"

[1] The topology of Qaanaaq is confusing as Thule, whose etymology I will discuss later, is sometimes used in reference to the entire Avernasuaq region of North-West Greenland, sometimes in reference to Qaanaaq, and sometimes in reference to the nearby American air base formerly of that name. Here, I only use the term Thule as a present-day place name in reference to the air base, and the Greenlandic term Avernasuaq in reference to the region.

(Larkin 2013, 319). For instance, infrastructures are both large-scale technical systems and the practices related to these systems. With the concept 'sociotechnical imaginaries', defined as "collectively imagined forms of social life and social order reflected in the design and fulfilment of nation-specific scientific and/or technological projects" (2009, 20), Jasanoff and Kim made a significant link between infrastructure and imaginaries. However, the concept also framed infrastructure within a large-scale system of social structures that made it difficult to locate where, by whom and how infrastructural imaginaries are produced, an approach which risks severing the analytical link to the things and the relations that infrastructures are made up of. Rather than viewing infrastructure through the lens of social order, I, therefore, take a situated phenomenological approach, emphasizing through 'infrastructural encounters' that technical systems are co-produced in situated practices, emotions and dreams. This calls for careful attention to infrastructures as they are encountered from a first-person perspective at particular sites and on numerous scales beyond the national. I am inspired by Tsing's concept of 'friction' as a place or time "where the rubber meets the road" in global connections, a road metaphor of creating "pathways that make motion easier and more efficient, but in doing so they limit where we go" (Tsing 2011, 6). Infrastructural encounters conceptualize those sites and moments where the everyday is made faster or is slowed down through infrastructure, enabled or immobilized, transforming both historical trajectories and present-day practices. In this, I pay particular attention to the way infrastructural encounters often express the powerful presence of that which is *not* present, what Bille, Hastrup and Sørensen refer to as "the presence of absence" (Bille et al. 2010, 4).

In the following, I consider a number of infrastructural encounters as they take place around four central socio-material telecommunication 'sites' in Qaanaaq, the largest town in Avanersuaq, North-West Greenland: a hotel, a telecommunication station, a ground satellite and the figure 'down south'. I discuss how these encounters supplement and contest each other in the ongoing making of Qaanaaq. But first, I will address a few elements of the convoluted relationship between Qaanaaq and 'the margins' through the town's history and the ways it has been told.

Histories of Qaanaaq

Situated close to the North Pole, 1600 kilometres north of Greenland's capital Nuuk and thus far from Greenland's populous 'open water' cities,[2] Qaanaaq easily lends itself to stories of extreme marginality. European historiography of polar expeditions in Avanersuaq offer a particular marginal position for Qaanaaq: the recently discovered, isolated place. In this version, the story goes that the Scot Captain John Ross was the first to report on the existence of humans in North-West Greenland in recent centuries, encountering what he called Arctic Highlanders on a quest to find the Northwest Passage in 1818 (Hastrup 2017). But until Polar explorer Robert Peary's repeated expeditions to Avanersuaq in the late nineteenth century, European connections with those living north, beyond the vast Melville Bay, were scarce and intermittent, with centuries of isolation where the Western world's knowledge of a people living in North-West Greenland diminished or was forgotten (Fig. 11.1).

Far closer than the Greenlandic capital is Ellesmere Island, Canada, at its narrowest point situated just 40 kilometres across the Baffin Bay, a fact accentuated by multiple recent spectacular efforts to ski, walk, or, as was the case during my visit, swim between the two (see Great Arctic Swim 2022). In this way, Qaanaaq has always been thoroughly connected, as the bay has always offered opportunities for dogsled and kayak travel to and from North America. Many of Qaanaaq's inhabitants are Inughuit, a minority indigenous group (referred to by Ross and Peary as Arctic Highlanders, also previously called Polar Eskimos [Hastrup 2015]) with a separate culture and language from Greenland's majority Kalaallisut-speaking West Greenlandic Inuit population (Kalaallisut is Greenland's official language, usually what is meant when referring to 'Greenlandic'). The Inughuit of modern-day Qaanaaq are descendants of the Thule people who spread to North Greenland, and later further to the rest of Greenland, from the North American Arctic around the thirteenth century AD (Friesen and Arnold 2008). In contrast to histories of nineteenth-century expeditions to the area, archaeologists thus produce an entirely different version of Avernasuaq as "the gateway to Greenland" (Arneborg and Gulløv 1998), an area with abundant resources that has attracted human settlement from the earliest Paleo-Inuit peoples and

[2] In the Danish 1950s and 1960s infrastructural planning, these were defined as Nuuk, Sisimiut, Paamiut and Maniitsoq, all situated further south on Greenland's west coast.

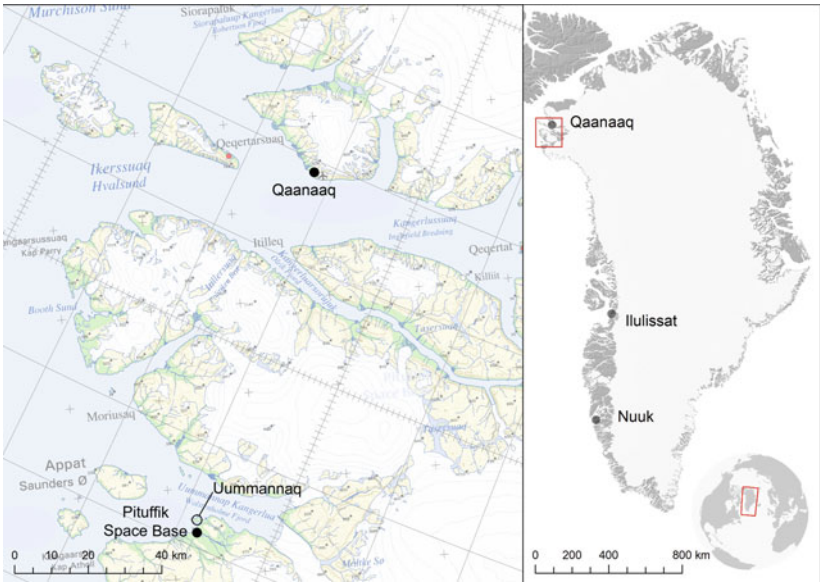

Fig. 11.1 Map of Qaanaaq and its immediate surroundings (left)/Map of Greenland with Qaanaaq, its municipal head office in Ilulissat, and capital Nuuk marked (right). Data: Arctic DEM; Grønlands Topografiske Kortværk; Natural Earth Data; QGrenland (Map by Michaël Virgil Bishop)

therefore holds the "key to the cultural history of the island" (Grønnow and Sørensen 2004).

In this, and many other respects, spatio-infrastructural categories like centre and periphery, connection and disconnection attach themselves uneasily to Qaanaaq. This instability is folded into Qaanaaq at its founding in 1953, as the town is the product of an unusual displacement. Most of Qaanaaq's population of around 650 people have lived in or descend from Uummannaq's[3] inhabitants, a settlement situated approximately 130 kilometres south of present-day Qaanaaq. To the area's hunters and the Danish colonial administration, Uummannaq had grown to be an important site with an abundance of wildlife such as the rare blue arctic fox,

[3] Meaning heart-shaped, named after its characteristic nearby mountain, also known as Dundas.

as well as the thriving Thule trading station established by Greenlandic/Danish explorers Knud Rasmussen and Peter Freuchen in 1909 (Flora et al. 2018). However, this order changed during the American militarization of Greenland under World War II, where new aspects of the site were drawn out. Uummannaq's neighbouring flat terrain Pituffik lent itself uniquely well to an airstrip, and while marginal in a Greenlandic or Danish perspective, in a global perspective the site suddenly became strategically positioned midway between Moscow and New York (Steenfos and Taagholt 2012). This was expressed strongly by the American consulate in Greenland in 1947: "We need Thule […]. Look at Thule on the map. It makes Alaska look sick. It is one of the very few places in Greenland where it is possible to construct a large airfield. It is also accessible to large ships" (DUPI 1997, 68 quoted in Pram Gad 2017a, 158) (Fig. 11.2).

Fig. 11.2 Hypothetical plane route from USA to Russia crossing straight through the Thule Air Base, now Pituffik Space Base. Data: Natural Earth Data; Opendatasoft (Map by Michaël Virgil Bishop)

From 1943, Uummannaq, therefore, became neighbour to a weather station, which would later become the Thule Air Base, now Pituffik Space Base, a central Cold War military site for aviation and radar, with ballistic and weather monitoring. While Uummannaq and the air base coexisted for years, with the expansion of the base perimeter in 1953 the Danish administration forcibly relocated Uummannaq's population 130 km north with four days' notice, citing an American request to establish surface-to-air missiles close to the settlement, as well as the base's increasing disturbance to the surrounding hunting grounds (Hastrup 2017; Nielsen 2004) and promising, among other benefits, better quality housing. In 1957, Uummannaq was partially burned down by Danish authorities, making a return impossible (Nielsen 2004).

Ongoing tension and efforts to ameliorate the forced move and its consequences have shaped Qaanaaq's infrastructure in fundamental ways, for instance the establishment of Qaanaaq airport in 2001 to avoid the previous "undignified" (Pram Gad 2017b, my translation) transit conditions where locals had to travel through the American military base to leave their town. In a similar vein is the American renaming in 2023 of the Thule Air Base to Pituffik Space Base, a name that highlights the Greenlandic place name for the area the base sits on, rather than the etymologically Greek and Latin term 'Thule', discussed below, which is more closely associated with historically Western naming practices for the area. Qaanaaq's telecommunication infrastructures, however, have been most heavily shaped by the Danish modernization efforts in Greenland after World War II, as planned in a series of renowned reports from the 1950s and 1960s (e.g. Grønlandsudvalget 1964). These predominantly involved a 'concentration strategy' that added a significant temporal aspect to Qaanaaq's early telecommunication infrastructure, or the absence thereof, as Danish administrators sought to quickly "modernize" a vast territory, therefore focusing infrastructural development in the few year-long 'open water' cities along Greenland's South-West coast. In the context of Greenland's national telecommunication infrastructures, the concentration strategy thus produced Qaanaaq as infrastructurally marginal in a multitude of ways; that which is most costly and time-consuming, less important, less financially viable and most difficult to reach.

Today, the postal and telecommunications company Tusass is preparing to establish flat rate internet in Qaanaaq by upgrading the town's ground

satellite station. Currently, the sole access to telephony, radio, television and internet is through a 175 Mbit/s satellite connection shared with the Pituffik Space Base, the nearby settlements Savissivik, Siorapaluk and Qeqertat, as well as with the Nerlerit Inaat Airport in East Greenland. Another potential frame of marginality for Qaanaaq thus arises from its position within Greenland's telecommunication infrastructures. The telecommunication network in Greenland consists of three zones: the cable zone, the radio chain zone and lastly the satellite zone, with each step away from the cable zone implying decreased speed and affordability, as well as access to different types of subscriptions (Abildgaard et al. 2022). Differences are most apparent between the 'cable towns' (connection to internet through fiber-optic cable) further down Greenland's west coast and the less populated north and east, imbalances which date back to the same concentration strategy mentioned above and Danish efforts to quickly modernize Greenland in the mid-twentieth century when infrastructural development and growth was focused on the south-west coast. The roll-out of flat rate internet in the satellite zone in the thinly populated North and East Greenland is therefore marketed by Tusass as an exercise in democratization, an effort to even out the infrastructural imbalances that still characterize Greenland.

The Hotel

My focus here is primarily on infrastructures of telecommunication, but we begin at an infrastructure not typically considered part of the flow of information, the site that is also the first access point for most short-term visitors to Qaanaaq: its hotel. The hotel and its flows of people and information shape Qaanaaq in fundamental ways, and, as the starting point for much research in town, including my own, it is an opportunity to discuss the role of research in Qaanaaq as well as my own positionality and approach as a(nother) researcher in Qaanaaq.

Hotel Qaanaaq is housed in an orange-red wooden house that was built in the 1970s. When the hotel was built, the host couple had already housed visitors for a long time, cooked meals and baked bread out of their own house. The hotel was thus, in a way, just a formalization of the couple's established roles as town hosts, cooks, bakers and coordinators of visitors' stays in their own house as well as homes around Qaanaaq. Today, the host couple function as an informal tourist information resource for

both the actual tourists and for visiting researchers, journalists and filmmakers as well as visiting tradespeople, officials or other workers (Pram Gad 2017b).

The strong interest in Qaanaaq and its surroundings is made material in the long hallway connecting the hotel's rooms (Fig. 11.3). Its walls are lined top to bottom with both faded and vibrant posters, objects, photos and postcards from Hotel Qaanaaq's global lineup of former inhabitants, including photographs of the host couple posing with visiting royalty and other celebrities.

Viewed through its hotel, a curious bifurcating process in Qaanaaq appears: On the one hand, the hotel acts as an engine for a process of 'becoming-central-through-marginality'. On a national scale, the town might be on the outskirts of populated Greenland, or Qaanaaq might on a global scale be the second-northernmost town in the world, but it is a lively hub for research and adventurous projects that take off towards the North Pole (another central point of passage for particular mobilities), delve into the surrounding shifting ice conditions, seal population, local hunting traditions, trauma after the displacement from Uummannaq and numerous other projects. To illustrate, at least three other research projects and three separate filming projects drew people to Qaanaaq during my three-week stay alone. This intense interest has led to a semi-professionalization of locals as actors, translators, aides, subjects and informants, activities that can be profitable side-jobs.

On the other hand, Qaanaaq's process of becoming-central-through-marginality cements the town's extreme marginal status as *Ultima Thule*—the Greek and Latin term for the island farthest north, or a place beyond the known world, named in the fourth century BC by Pytheas, who travelled further north than any other Greek before him and found a land where the sun never set in the summer (Hastrup 2015).[4] As it emerges through its visitors, Qaanaaq becomes central in relation to its traditional hunting practices, opportunities for polar expeditions and climatic measurements, but this is not necessarily the kind of becoming-central all its inhabitants seek. While some forms of becoming-central offer hope and opportunity, some lock locals in assistive roles as translators, research assistants or 'traditional Inuit hunters'. Adding to this is the complication that little research from Qaanaaq is translated into

[4] Scholars agree that Pytheas was never near Greenland, but discuss whether he in fact had visited Iceland, Norway or the Shetland Islands (Skriver Tillisch 2005).

Fig. 11.3 The hallway at Hotel Qaanaaq (Photo by Mette Simonsen Abildgaard)

Kalaallisut, not to speak of the local Inuktun language, and thus it does not circulate in Qaanaaq—in book-form at the school or as oral tales of local knowledge and pride. Becoming-central can thus be an extractive process, most pointedly exemplified by the concerns voiced by my translator 'Jakob', who does extensive volunteer work with Qaanaaq's youth. He remarked on the paradoxical lack of locally circulating stories about Qaanaaq's past and present when considering the amount of research and journalistic attention afforded to the area. Jakob particularly questioned the practices of researchers such as French anthropologist Jean Malaurie, who has worked and travelled extensively in North Greenland throughout his long career, and who has written powerfully about the Inughuit. Still, Malaurie's written works, perhaps most problematically the book *Lettre à un Inuit de 2022* (2015) or in the English translation *Letter to an Inuk in 2022* (2017), in which he urges the young generation in Greenland to preserve their cultural knowledge and develop a healthy relation between future and past sustainable living, has never been translated into any Greenlandic language.

If we consider Hotel Qaanaaq to be an infrastructural site that supports the circulation of humans and knowledge into and out of Qaanaaq, for locals it creates a particular kind of 'encounter' with visitors. I want to highlight this, as it has significant consequences for the kind of study this is: That Qaanaaq is a small town where a lot of research and film crews pass through, with resulting research fatigue but also established practices around paid participation in these projects. These professionalized practices around interacting with visitors made an awkward exercise out of my anthropological efforts to participate in the town's everyday life and its rhythms, especially considering that such opportunities were hard to come by without forcing my presence on inhabitants in a town without formal cafes or restaurants, and few official public meeting places. Before arriving, I posted on Qaanaaq's Facebook page about the study and hung posters about who I was during my stay, hung out at the only official store, the town's supermarket and participated in town events such as frequent bingo evenings in Qaanaaq's women's house. The primary openings that emerged, however, were through the town's institutions: the hotel, the school, the municipality, the police, the health care centre and the telecommunication station. At the public institutions, I could initiate conversations about life in Qaanaaq without barging in and found explicit interest in the town's infrastructure. The stories in the following sections are therefore primarily based on how Qaanaaq is produced and sustained

from the perspectives of those working to teach, administrate, build, treat illnesses, advise and uphold order in town. They form partial perspectives, to be sure, but they also supplement and allow for other stories than the existing anthropological studies of Avernasuaq, which often emphasize the area's hunters, their culture and its practices (De Vos 2013; Flora and Andersen 2017, 2018; Flora et al. 2018; Hastrup 2015, 2016, 2017) leaving the specificities of the modern welfare state and its infrastructures out of focus (Pram Gad 2016).

Returning to my conceptualization of Hotel Qaanaaq as a site that supports the circulation of humans and knowledge into—and particularly out of—Qaanaaq, we will therefore pursue this vein and consider, in the following, two other infrastructural sites that do the same, albeit with other means: Qaanaaq's telecommunication station and ground satellite station. However, while the hotel and the ongoing process of 'becoming-central-through-marginality' has been part of Qaanaaq for decades, the station and satellite are changing, and so we will consider what role each changing site plays in the ongoing shaping of Qaanaaq.

The Ground Satellite Station

The town of Qaanaaq is lodged between a sloping mountainside to the east and the sea to the west, facing the Baffin Bay. Its satellite station is placed on elevated territory towards the mountain, at the town's periphery. From a distance, the station's plate-formed satellite antennae give Qaanaaq the appearance of being crowned by two white round ears. To withstand snow and wind, the antennae have very deep anchors which are dug into the permafrost, and then secured with dirt and gravel on top (Fig. 11.4).

One 'ear' is the town's existing satellite dish, the other is a new model under installation which promises to provide a faster and more stable connection through its link with a Hispasat satellite, following a new deal with a Spanish satellite communications operator. After some delay, the new satellite dish is scheduled for inauguration in 2023.

The new dish is part of an ongoing upgrade to Greenland's satellite areas, specifically focusing on providing enough data to offer flat rate subscriptions, in contrast to the current limited-data subscription where customers must pay extra if they exceed the available subscriptions of 10, 20 or 50 GB per month. It is important to emphasize that this upcoming shift to flat rate was talked about with interest and delight

Fig. 11.4 Qaanaaq seen from its eastern road that leads to a football field and the town cemetery. Towards the top, the white satellite dishes are visible against the sky (Photo by Mette Simonsen Abildgaard)

by most people I met in Qaanaaq. The town's residents are planning to subscribe to every streaming service, download films, their kids will be able to play online games (although this was also a cause for concern), and the school anticipates it will improve the students' English. The current wait for a flat rate upgrade is mostly a joyful and hopeful encounter with a telecommunication infrastructure that has rarely prioritized Qaanaaq.

However, the initiative to upgrade the satellite areas also draws attention towards pervasive differences in the infrastructure. It was presented by Tusass chief wholesale officer Drechsel in a Greenlandic newspaper in 2020 under the headline "Tele: Now we will spoil the satellite customers".[5]

[5] In this and other quotes, the text has been translated from Danish by the author.

> With large investments in sea cables and radio chains, we have in the last years secured a better internet experience for about 92 percent of the population. In the coming years, we will focus more on the eight percent of our customers who live in the satellite areas. […] Tele-Post is responsible for telecommunication in the whole country, and we therefore see it as our obligation to do what we can for the satellite customers, despite the fact that it cannot financially break even. (Rasmussen 2020)

The article, especially its headline, elicited strong responses from Tusass' satellite customers, with a reader tersely commenting: "Spoiled? – we will still pay much more for worse service than the rest of the country. Is that to be spoiled?" (Rasmussen 2020), before going on to point out that while other essential services like power, water and telephone rates are the same across Greenland, inexplicably, internet access is much more costly for some.

While Tusass thus imagines the transition to flat rate as a long-overdue enrolment of Qaanaaq and other 'satellite areas' into a digitally level online Greenlandic community, this slow-motion upgrade is so far overdue and out of sync with developments elsewhere that it exacerbates differences to locals, even within Qaanaaq's municipality Avannaata, whose centre of power is positioned over a thousand kilometres south, in Ilulissat. Accordingly, this imaginary of democratizing accessible internet is met with local disinterest or melancholy as inhabitants of Qaanaaq manage an everyday characterized by frequent infrastructural disturbance, delay, interruption and breakdown.

In the context of Greenland's national telecommunication infrastructures, Qaanaaq is thus produced, as I mentioned earlier, as infrastructurally marginal in a multitude of ways; as most costly and time-consuming, less important, less financially viable and most difficult to reach. This marginality is linked to the mid-twentieth century concentration strategy, but it is also, crucially, produced in current national pricing structures, infrastructural zones and prioritization, and it also takes place as a range of mundane infrastructural encounters. When I went by Qaanaaq's elementary school on a quiet Monday afternoon to meet up with the principal, I came across two women seated together at a desk in front of the principal's office, a younger woman and an older woman with short greying hair. When I explained that I was interested in Qaanaaq's internet, the older woman told me that I had come at just the right time—she was in town from Ilulissat, where Qaanaaq's central municipal

administration is placed, to teach the younger woman, a school administrator, how to use a new financial IT system. The system was two years old, and she had been taught in Ilulissat by "some skilled people from Nuuk", Greenland's capital. But the system, which ran well in Ilulissat and Nuuk, requires that users are logged on to the school's online system. The two women were therefore stuck in their training session in front of a frozen screen, because the internet connection in Qaanaaq—at least on that day—had too little capacity and too much latency to allow the consistent online access needed to use the financial system.

In conversation with other staff at the school, similar issues came up. Standards for internet access and connection speeds are established elsewhere, marginalizing internet users in Qaanaaq in a range of situations. When the school staff are asked by the municipality or a government office to fill out a questionnaire, and the expected time to do it is listed as fifteen minutes, "it can be something you have to do over three days, two hours here and there. And consequently, some employees don't finish it".[6] The problem, a staff member noted, is that Nuuk is 1600 kilometres away. In case of an issue, you can call IT support in Nuuk, who will tell you to press this, that and then this button—but when the first step takes twelve minutes in Qaanaaq, troubleshooting gets out of joint.

In an extreme example of this disjuncture, I was approached in the street by a local entrepreneur on one of my final days of fieldwork in Qaanaaq, because he wanted to make sure I understood the full scope of the digital problems facing private companies in town before I left. In order to fill out and send in digital information related to for instance taxes, using forms that are obligatory for businesses across Greenland, he would get up in the middle of the night when the internet is quickest and least used, otherwise he could spend his whole workday waiting for pages to load and files to send.

In anthropologist Melissa Gregg's affective analysis of online connectivity and its promises in rural Australia, she identifies how the "barrage of projections celebrating the benefits of broadband summons a form of defence akin to melancholy where the place one lives becomes the very factor preventing access to a vision of happiness" (2010, 162). To paraphrase Gregg, a "rural melancholia" is inherent in many of Qaanaaq's infrastructural encounters with the internet, an awareness that

[6] Similar issues at schools in the satellite zone in East Greenland is described in Rygaard (2017).

software, games, routines, equipment and online platforms are built for and assume a different infrastructure than Qaanaaq's. In other words, the town, through its telecommunication infrastructures, becomes a place that marginalizes those who live there.

The Telecommunication Station

Until now, I have focused on infrastructural sites of telecommunication primarily as places which offer experiences on a spectrum between connection and disconnection, but it is important to note that the way telecommunication infrastructures shape Qaanaaq is not only about linking to elsewhere, it is also about local absences, presences and representation. Who here can help with telecommunication issues, give advice and offer news about what is coming?

Today, Qaanaaq's telecommunication station, which is situated just below the satellite dishes, provides lodging for Tusass' visiting technicians and engineers who are working on the satellite ground station and a new station building that houses its accompanying equipment. Previously, the telecommunication station used to house a shop that sold and could advise on the purchase of telephony goods, phones, chargers and subscriptions. Today, this service is offered partly by the kiosk of the town's only store and supermarket Pilersuisoq, a local branch of Greenland's largest supermarket chain, whose offerings in small or remote settlements are subsidized. The store receives a shipment by boat twice a year, once in spring after the sea-ice has thawed, and once in fall before the sea freezes over. In my conversations with locals about the current situation, they pointed out that Pilersuisoq carries a much smaller selection of items than the telecommunication store used to, and while the supermarket kiosk sells prepaid phone cards, the staff cannot sell subscriptions or guide customers who need help. This requires an internet connection or a phone call to Tusass in Nuuk.

A few years ago, Qaanaaq had a resident telecommunication technician, but he moved to Ilulissat and is only in town if there is a larger issue. Otherwise the town's electrician can be contacted and remote-controlled via phone from Nuuk to handle the simpler network issues. However, throughout my stay, two Tusass telecommunication technicians were in town to install equipment in the ground station's new building, in anticipation of the new satellite, a task that kept them in Qaanaaq for a month without much to do because, due to earlier delays, construction on the

building they would be installing the equipment in was not finished. The two technicians were therefore stuck together in the former telecommunication station's small apartment, spending their days preparing meals and watching Danish daytime television, away from their families in Nuuk and Denmark, and were kind enough to share their stories and strategies on how to cope with long periods being stuck at a site. One afternoon I ran into the two technicians at the register at Pilersuisoq, and as we walked through the register together, I overheard the supermarket cashier saying something to them in Kalaallisut. Later, one of the technicians recounted to me that the cashier had remarked that it was so lovely to have them there; for Tusass to have people in town again. The technician considered that people probably missed the manned telecommunication station.

This mixed encounter encapsulates some of the tension related to the increasing remote control of infrastructures in places like Qaanaaq. Qaanaaq is in the satellite zone in telecommunication industry parlance because that is the infrastructure Qaanaaq depends on, but the figure of the satellite also describes how much of Qaanaaq's infrastructure increasingly is not just planned (this was always the case), but also how it is built and maintained. There is too little work for the telecommunication station or for that matter the small electrical plant to have local staff. In fact, when work on the satellite is finalized, the telecommunication station housing the living quarters will be sold off, as Tusass does not expect to need it often to house staff once the new system is in place (Fig. 11.5). Instead, they can stay at the hotel during visits. And so, the town becomes dependent on brief visits from technicians and other skilled labour—or on the internet, with its design around standards from elsewhere. The dependence on expertise from elsewhere in this way works to exacerbate data differences, while also eliminating one form of representation in infrastructural decision-making—company or industry insiders who love and might speak for Qaanaaq, or simply translate the way their industry works and thinks back to Qaanaaq. I knew from fieldwork at Tusass in Nuuk that the head office was baffled by the lack of complaints from towns and settlements in the satellite areas reporting issues on the mobile or landline phone network, as it meant that they would not always know the scope of a problem and, accordingly, they would not prioritize sending someone to fix it. But without representation in Qaanaaq, Tusass' logic about how to prioritize repair work was not always known in town, although one person I interviewed, 'Anette', mentioned it as a guilty conscience—that she knew she was supposed to call in case of an issue, although she did not always get around to do it.

Fig. 11.5 Sign in Greenlandic and Danish on the door to Qaanaaq's telecommunication station: "Message. The store is closed indefinitely. Customer service can be reached at telephone number 808080". Note that before it underwent a rebranding in 2022, Tusass was known as Tele-Post (Photo by Mette Simonsen Abildgaard)

In such a situation, even an anthropological researcher from Denmark becomes a form of industry insider: Several times during interviews, I found myself explaining what the ongoing work at the telecommunication station was about, which often made me the bearer of bad news, as the satellite update at the time of my visit had been delayed for at least half a year. This news was sometimes met with disappointment but most often the remark that it would be fine; they were used to delays in Qaanaaq—and after all, they had nature.

Phantom Pains of 'Down South'

Bille et al. (2010) discuss a paradox that they refer to as "the presence of absence"—the fact that phenomena may hold a powerful presence in people's lives precisely because of their absences. If we return to the term rural melancholia, within the frame of an anthropology of absences we might think of this melancholia as one emotional response to a number of infrastructural absences and their potent and paradoxical presences in Qaanaaq. In this way, absences play a key role in the way material sites such as the hotel, telecommunication station and satellite dishes shape everyday life, but as I emphasize in the following, *immaterial* sites and figures are also central in the making of Qaanaaq. I consider one such figure and its role as a place-making agent in Qaanaaq—'down south'.

During the first week of my fieldwork in Qaanaaq, in my ignorance, I was surprised at the number of people in town who had relatives or friends living in South Greenland, as a constant companion in conversations about life in Qaanaaq are references to how things are 'down south'. Having only previously lived in and done fieldwork in Greenland's West coast cities Nuuk and Sisimiut, I took this expression to signify a curious local interest in conditions in towns like Qaqortoq or Nanortalik at Greenland's southern tip.

In time, however, I realized that 'down south' relative to Qaanaaq is a broad and influential figure that can be invoked to point towards everywhere and anything below Qaanaaq and its immediate settlements Savissivik, Siorapaluk and Qeqertat.[7] 'Down south' in this way functions as a potent reversal of Qaanaaq's marginality. *Ultima Thule* strikes back, and from its position as 'the farthest north' regards an entire world below

[7] The speech figure is also mentioned in Hastrup (2015, 30) and Pram Gad (2017a, 162).

77° north as a Southern globe that easily lends itself to stories of extreme southern-ness, far away from Qaanaaq.

In the context of infrastructure, 'down south', despite not being physically present in Qaanaaq, nevertheless powerfully shapes Qaanaaq as a form of "phantom pain" (Bille et al. 2010) pointing to the potentials and materialities that are absent in Qaanaaq but are (or are imagined as) present everywhere else. The figure of 'down south' exists as a geographically unbounded place in an entrepreneur's utterances that "they are sitting there with some lightning-fast internet down south" or the school administrator's more specific reference to long waiting times on the phone when calling family living elsewhere on Greenland's West coast, "all the way down south". But 'down south' is also invoked in the school staff's explicit calling out of 'southern' places that have that which is absent from Qaanaaq: "And then they complain in Ilulissat about a teeny-tiny disturbance – when their connection is 100 times better than ours!".

I mentioned earlier the way pricing and subscription systems produce a form of marginality—in the context of an anthropology of absences, we may also say that in Qaanaaq, they accentuate an elsewhere whose standards are superior. During my 2022 fieldwork in Qaanaaq, a prominent box on Tusass' homepage encouraged internet customers to "see which speeds they can get". But when entering an address in Qaanaaq, you are met with the message that flat rate is not provided at your address, instead encouraging you to purchase a mobile subscription with data (see Fig. 11.6).

Finally, a material elsewhere that escapes the 'southern' preposition due to its geographical closeness to Qaanaaq is the Pituffik Space Base, although I include it as it is a curious place situated both inside (geographically) and outside (administratively) Avernasuaq. Qaanaaq residents have a unique arrangement with the base through which they can get an access card to the base as "civilians without relevant business" (Pram Gad 2017b, 223). However, contact between Qaanaaq and the base is limited to an estimated 60–70 yearly visits from about 15 hunters who use the base to resupply (Pram Gad 2017b). This is in stark contrast of course to the days before the forced move from Uummannaq in 1953, when locals freely moved between all settlements in the North. Older Qaanaaq residents also describe more contact in their youth, when they would be able to travel easily to the base and buy American goods and fresh produce, an opportunity that dwindled after the construction of Qaanaaq's airport,

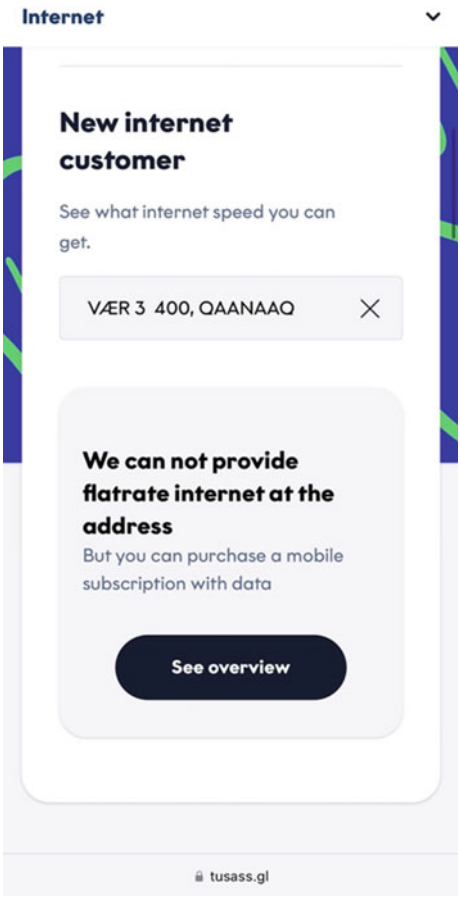

Fig. 11.6 Screenshot from Tusass' web-page when requesting flat rate in Qaanaaq (*Source* Tusass.gl)

which means that Qaanaaq's inhabitants no longer travel through the base to get to and from the south.

The air base very forcefully invokes the loss related to the 'presence of absence' in Qaanaaq: it has weekly supplies of fresh produce from the United States, cheap liquor and links to an unavailable recent past. It is also thought by some Qaanaaq residents to have an incomparable telecommunication infrastructure, presumably based on large investments by the American military. Coming back to Qaanaaq after staying at the

base, I interviewed 'Thomas', a local who mentioned a possible submarine internet cable to the Pituffik Space Base. I replied that there was no cable to the best of my knowledge, but that I was only shown the Tusass infrastructure, not the military installations. I added that Danish and Greenlandic staff at the base complained that the satellite-based connection for civilians was spotty, slow and expensive, exactly as I had heard in Qaanaaq. Thomas was surprised, but then pondered that they probably had installed something over there that we don't know about. After all, they had "done that before". This was an understandable line of thought considering earlier secrets and lies related to the base, for instance, the discovery in 1995 of a secret 1957 agreement with Denmark allowing the United States to station nuclear weapons at the base (Dragsdahl 2005), not to mention the Cold War 'research station' Camp Century built into the ice sheet near the Thule Air Base. In reality, the latter was a cover for Project Ice Worm, involving plans for a missile tunnel system in the Greenlandic ice sheet, powered by a small portable nuclear reactor, clean-up from which has been an ongoing dispute between Denmark and Greenland (Nielsen 2020).

The base in this way is a complex neighbour, on the one hand closed off and secretive, but on the other with a geographical closeness and hope-inducing potential to entirely upend Qaanaaq's place in the telecommunication-infrastructural system. Because, as Thomas speculated, if the base has or gets a submarine cable, Qaanaaq will surely get one too, right? After all, they are only about 100 kilometres apart.

Perhaps more than most ways of thinking about place-making, my interest here in 'infrastructural encounters' accentuates absences because it inherently deals with the relationship between situated experience and the larger infrastructural system. In other words, when we position a site as part of an infrastructural system, we establish links to elsewhere that call for a number of comparisons through which similarities, presences and absences appear.

Conclusion

Through the concept of infrastructural encounters, I have followed the co-shaping of Qaanaaq through infrastructure. My approach has taken a phenomenological perspective, emphasizing the way infrastructures are co-produced through situated first-person infrastructural practices, emotions and imaginaries. Following four 'sites' in and outside

Qaanaaq—the hotel, the satellite ground station, the telecommunication station and 'down south', including the Pituffik Space Base (formerly the Thule Air Base)—we see how infrastructural practices and imaginaries in Qaanaaq shape the town, not just through its connections to the outside world, but also through their impact on local presences, absences and representation.

Hotel Qaanaaq acts as a hub for adventurers, researchers, journalists and filmmakers. It is both a site of centrality and marginality, as the intense interest in the town results in the semi-professionalization of locals as actors, translators and research assistants, but also reinforces their extreme marginal status as *Ultima Thule*. The Hotel also raises questions about the extractive nature of becoming-central, as little of the research and media attention afforded to Avernasuaq is translated into local languages and circulated within the community.

The installation of a new satellite dish as part of an upgrade to the town's infrastructure has generated excitement and hope in Qaanaaq, but also raises awareness of the unequal distribution of telecommunication services across Greenland. This inequality stems from the concentration strategy of Danish modernization plans after World War II, which prioritized development in a few cities along the West coast, and led to the marginalization of Qaanaaq in various ways, including cost, infrastructure and importance. However, this marginalization is most evident in people's mundane encounters with the internet, such as the difficulty of accessing online systems, filling out questionnaires and doing online work during the night to avoid congestion.

Qaanaaq's telecommunication station, once a hub for telephonic services, has been reduced to a place for technicians and engineers to stay during their visits. The town's dependence on technicians from elsewhere has led to a lack of representation in infrastructural decision-making, exacerbating data differences and erasing a form of representation in the process. The situation highlights the tension between the remote control of infrastructures and the need for local representation.

The figure of 'down south', although physically absent from the town, holds a powerful presence in the form of 'phantom pain'—often for that which never was in Qaanaaq—emphasizing the potentials and materialities that are absent in Qaanaaq but are present elsewhere. The pricing and subscription system also contribute to this marginality by emphasizing the differences in standards between Qaanaaq and the 'south'. The Pituffik Space Base, although close geographically, is a difficult presence

that invokes both a sense of loss and hope with its links to a recent past and its potentially superior telecommunication infrastructure.

Throughout the stories told in this chapter, a number of im/material satellites come into play. To address what becomes a triple articulation of the satellite in Qaanaaq, I point towards 'the satellite at the end of the world' in the chapter's title, by which I reference *Thule*'s European legacy as the place farthest north, as well as the technology that underpins the town's telecommunication infrastructure as a 'satellite town', which promises closer connections to elsewhere. Thirdly, the figure of the satellite illuminates the remote control that characterizes everyday life in Qaanaaq and exacerbates data differences because Qaanaaq is also on the margins within Greenland, from the perspective of Greenland's capital Nuuk or Qaanaaq's municipality centre in Illulisat.

In conclusion, this chapter sheds light on the interplay between infrastructure and the shaping of places through the lens of infrastructural encounters. The four sites of analysis in Qaanaaq, the hotel, the satellite ground station, the telecommunication station and 'down south', highlight how infrastructures not only connect the town to the world outside, but shape the way people in Qaanaaq experience and understand their world. This underscores the need for a careful examination of the concrete infrastructural practices and imaginaries at specific sites and on various scales, where the everyday is made faster or is slowed down, enabled or complicated, as these encounters play a crucial role in shaping life 'on the margins'.

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