

The Covid-19 app and the fire spirit

Receiving messages in Britain and Siberia

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Fig. 1. Blaze in the centre of a Nenets tent, beneath the smoke hole at the apex. Willow and birch shrubs are scarce in the tundra, as they grow mostly in gullies and regenerate very slowly. The tent is pitched on the surface of the ground, with moss, grass and lichen. A few centimetres below the surface, the ground is permanently frozen.

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1. The official name is 'test and trace', but this is misleading since for a long time tests were unavailable. 'Track and trace' is widely used colloquially and is a more accurate description of what the app actually does.

2. She sees this as equivalent to a 'little death', as if she were symbolically killed (Nerkagi 2021). This echoes a common motif in a Siberian shaman's initiation, in which a novice is dismembered by spirits while unconscious, before being reconstructed and brought back

The Covid-19 pandemic has set off a range of responses that defy some modernist assumptions of technocratic control. The UK National Health Service (NHS) Covid-19 app ('track and trace') was designed to protect us all as a fundamental public health technology.¹ So why has it been met with so much evasion and non-acceptance? We shall look for an answer in an unusual place by putting alerts on the phone app about exposure to Covid-19 infection alongside messages from a Siberian nomad's domestic fire, which sometimes crackles warnings of potential future illness or accident.

Writers such as Caduff (2015), Keck (2020) and Lynteris (2019) have taught us to see pandemic preparedness as a form of prophecy. Still, even with this understanding, some aspects of British public behaviour around Covid-19 remain hard to explain. We suggest that they may be better understood by comparison with a radically 'other' culture. Though these two prediction technologies may seem vastly different, they are both instruments for thinking about the future and for changing behaviour. We see them as forms of divination that differ, not so much in their logic or mechanics, as in their degree of embeddedness in wider cosmologies of person, fate and society.

The domestic fire of the Nenets

In the isolated village of Laborovaya near the Polar Ural Mountains, it seems the only person who had contracted the Covid-19 virus by early 2021 was Anna Nerkagi, a well-known Nenets (singular and plural both end in -s) writer. She does not remember how she was taken to the regional hospital but remembers that while unconscious, she heard a voice which told her that:

Life and Death live in the same tent. They have one fire. They love each other. But most of all they love people and they work to serve them. Life and Death are like two banks of the same river. That is why they are concerned that people should die when it is their time [i.e. not from disease, or violence, or because of drugs and alcohol when young] ... This voice told me that Life and Death are brothers. They have one mother. They have one fire. They have the same blood. And they do one job. They prepare people for death ... I must have been given this knowledge to tell people that Life and Death are brothers. They love humans. They want people to live beautifully and die when they are too old to live anymore. In the world of the dead, this person is loved. All their ancestors are waiting for them there. (Nerkagi 2021; emphases added)

For this Nenets person, on the brink of death, the most profound revelatory message she receives about death itself is cast in terms of traditional Nenets ideas about the shared family hearth.²

The Nenets are an Indigenous people numbering some 45,000 in the Russian Arctic who live on both the European and Asian sides of the Ural Mountains (Evladov [1929] 1992; Golovnev & Osherenko 1999; Khomich 1995; Laptander 2020a; Stammler 2005). Our examples come from the Yamal Peninsula, which lies on the Asian side, in the vast area of Siberia. Though some Nenets have moved, permanently or temporarily, to settlements and towns, many remain in their traditional occupation of reindeer herding, for which they migrate through the seasons around a large territory, each family repeatedly pitching and dismantling a sizeable conical tent (*chum*).³

Under a smoke hole at the apex of each tent is an open fire or iron stove. The members of a variably composed family group sit around the fire in a circle. Nenets call their relevant kin 'people of the same tent or family hearth'



ROZA LAPTANDER

(Laptander 2020b). The hearth is placed in the centre of the tent, over an entrance leading to the ancestors in the lower world. Each hearth has its own social identity, and one must not reuse someone else's old hearth site. Every time the tent is pitched, the fire is revived as a continuation of its previous existence. It has an intimate association, an identification, with the people it heats and to whom it occasionally speaks. For Nenets, the spirit of the domestic fire usually takes the form of an old woman. Other spirits across the landscape represent the various qualities of their location and are often dangerous, but the spirit of the fire resides inside the tent and is protective.

Many Nenets myths and legends concern lost heroes who approach an inhabited tent with the refrain 'I am seeking a warm fire' (Laptander 2020b; Kupriyanova 1965: texts 16, 18). What these solitary orphan figures are also seeking through the fire is membership of a kin group. When the hearth becomes an 'extinct fire', this implies the end of the family line. 'Their fire has gone out' means their family line has ceased. The entreaty 'Let my fire not stop' is widely used in Nenets epic songs. During a battle, an enemy may plead with the hero: 'Please don't kill me, my family fire will die out. I will give you my entire reindeer herd. I will give you my daughter. Please leave my hot breath alive' (Kupriyanova 1965: 88). Enemies may kill all the inhabitants of a camp but leave at least a baby alive so that 'the hearth of this people does not go out' (Golovnev 2004: 38, 163). The fire's speech can sometimes be very explicit:

Mando's son came to his tent. He had been away for a long time and found that his father and mother had been killed and their reindeer were stolen. His sister was missing. His tent was snowbound. Mando's son dug up the ashes of the fire and saw only a tiny ember flickering. This little ember said, 'Your family was killed by the Evenki [Tungus]. Their chief's name is Myang Tungusewa'. Then Mando's son went to take revenge on the Evenki man. (condensed from Lar 2001: 86-87)

The model of domestic fire encompasses all humans. The dead also sit in groups around a fire, though this is an anti-fire, with small, blue flames that burn with icy cold. But even here, it keeps its function as the focal point of a group. In one story, a young man disobeys his father and is sent down to the lower world as a punishment. There, echoing the genre of the lost protagonist seeking a community hearth, he enters a tent and tries to speak to the dead people seated around the cold flames. They cannot see or hear him, but the fire can. Each time he speaks, it flares up, though they cannot understand what it is saying. So

to life with additional bones and shamanic powers.

3. There are similar ideas across the Indigenous Siberian peoples, such as the Evenki and the Eveny (singular Even, Vitebsky 2005) hundreds or thousands of miles to the east. Nomadism today is a complex system in which tent-dwelling herders migrate on an annual cycle with their reindeer while also having family links with sedentary villages or towns.

4. For a detailed account of how this works among the Eveny in eastern Siberia, see Vitebsky & Alekseyev (2015).

5. <https://Covid19.nhs.uk/risk-scoring-algorithm.html> (accessed 27 July 2021, updated 29 October 2020).

6. <https://goodlawproject.org/case/end-to-cronism/>. We plan to explore the dimensions of trust and suspicion, care and corruption in a separate article.

7. <https://www.Covid19.nhs.uk/venue-check-in-businesses.html> (accessed 2 August 2021).

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they summon a shaman, who understands that they have a visitor from the middle world. The shaman asks the fire to make the man visible so that he can remain with them in the world of the dead and thus become a member of a community again (Labanuskas 2002: 165-176).

The fire's protection extends beyond the heat of its flames to the purifying power of its smoke. After anyone has touched an 'impure' object or visited a dangerous place like a cemetery or town, Nenets women may take burning charcoal from the hearth. They add beaver fur and reindeer's inner fat and pass the smoke over each person and object to cleanse them from dangerous spirits and possible disasters. They sometimes also make deep throaty sounds (*khork, kyw-kyw*), echoing the fire spirit.

In this array of contexts, one listens out for messages when the fire crackles or burns in a way that seems significant or anomalous. If it makes a soft sound, with a big spark bouncing off, this means that hunting or fishing will be successful. When the fire makes certain other sounds, it warns of various dangers; if it 'cries' or 'squeaks', it predicts something terrible like a death (Lar & Vanuito 2011: 97). The fire can also pick up a traveller's intention from far away and anticipate their arrival a day or two in advance.⁴ The leading interpreters of the fire's message are women, who have the most intimate relationship with the fire as they prepare wood, cook, tend the fire and clear the ashes. But the message they hear may well concern others, such as the men who are more often further out on the landscape doing dangerous tasks. The response is for the person who may be affected to change their behaviour and plans – for example, by not going out on a specific day or avoiding the site of a possible avalanche or crack in the ice.

The UK's Covid-19 track and trace app

The Covid-19 pandemic began in early 2020, and the preliminary response by anthropologists is reflected in some earlier articles in ANTHROPOLOGY TODAY (Kim et al. 2020; Merli 2020; Trnka 2020) and elsewhere (Lynteris 2020). The novel realities of electronic communication allow a flow of written reflections, blogs and ethnographic vignettes to come closer to real-time or instant publication (e.g. Curare 2020-21; University College London 2020-21). However, a deeper anthropological analysis of the Covid-19 situation will necessarily require a longer time lag. We have not discovered any anthropological exploration of the UK's Covid-19 track and trace app, despite its prominence in the British press and in popular (and populist) discourse, which give a picture of concern about invasions of individual privacy by government and corporations. Our brief fieldwork in the UK echoes these concerns to the extent that several of our informants who previously installed the app have later deleted it.

This app warns of danger when users have been near someone, say in a pub or concert, who has subsequently turned out to be infected by the virus. Users will receive a text or email, saying 'The app has detected that you have been in contact with someone who has coronavirus. Please stay at home and self-isolate to keep yourself and others safe'. This kind of warning is based on a specific presumed scenario of human interaction, as interpreted by an algorithm:

The NHS COVID-19 app will calculate a risk score for an individual based on their recent contact with people who test positive for Coronavirus [using] Bluetooth Low Energy to assess the distance over time between people who have downloaded the app in a privacy-preserving manner. If a person tests positive for Coronavirus and agrees to share their app data, this algorithm calculates the risk to every app user they came into contact with in the previous few days ... Signal strength between two close devices is measured every 3.6 minutes (on average). Signal strength depends on a number of external factors, such as where the phone is on the body and the sur-

rounding environment. While a Bluetooth signal continues to be detected between two devices (an encounter), API Mode 2 gathers signal strength measurements that are transmitted by another user's device approximately 4 seconds every 3.6 minutes (on average).⁵

The message on the phone app screen is targeted at one specific receiver. Other people may receive the same warning in turn due to having been near them, and so on in an indefinite chain. The correct response to the warning is self-isolation and a Covid-19 test (though when the system began in 2020, this test, now commonplace, was almost impossible to obtain until one already had noticeable symptoms).

The procedure seems rational, and the message is technocratically designed to avoid the mysteries and ambiguities of Siberian fire interpretation. Yet the system has been controversial. Objections to the app have become an idiom of political resistance to the surveillance state and so-called elites. This is fuelled by numerous stories of technical incompetence (many of the system's operators are unqualified and inadequately trained and supervised) and corruption: the Good Law Project is preparing legal action against the UK government for allegedly awarding vast contracts to ministers' unqualified cronies. At £37 billion, with few credible results, the Covid-19 track and trace app is the most egregious and expensive of these scandals.⁶

However, aside from these political issues, we would argue that the app is subverted by the impersonal nature of that very rationality. Track and trace is not the only technology of information surrounding Covid-19. It is set within a broader context of apps and Internet sites that produce maps showing which areas are hotspots, or where Covid-19 cases are increasing, while neighbourhood WhatsApp groups exchange the latest local information. This is a national microcosm of a global information flow in which 'Countless apps offer hourly updates [and] various services bring animated maps to trace the live-progress of the virus' (Engelmann 2020).

Information about Covid-19 incidence comes in a statistically aggregated form which at first sight makes the UK's Covid-19 track and trace system seem unusually individualized. Yet it is not personalized or socialized like an ordinary message from a friend. It has a clear receiver, but no apparent sender and the mechanism and channels through which it has arrived are opaque. It has been provoked by users' supposed interaction with others. Still, it contains no information about those others because that would violate the culturally hyper-valued ideal of their privacy. It will not even tell users which of the pubs or gatherings they visited have exposed them to the risk, since organizers themselves are assured that: 'The app notification will not mention the name of your venue, it will just let app users know that they may have come into contact with coronavirus'.⁷

While users are in that pub or concert, this is what is going on: neighbouring phones 'shake hands' in a 'privacy first design' and exchange anonymous keys which rotate and cannot be traced back to any central list (Fraser & Pybus 2020). This is expressly designed to prevent any knowable connection with the infector – who, as we saw above, already had the option of whether to 'share their app data'. The quote above continues, 'The algorithm uses the date of symptom onset to calculate who they are most likely to have infected. The algorithm looks at the daily risk for every app user who they came into contact with', but 'The app does not look at interactions across multiple days as it uses new anonymous IDs every day to protect users' privacy'. The intimate engagement of two bodies, the sharing of deadly RNA (Ribonucleic acid) which may or may not have happened, is rendered entirely and intentionally unavailable for exploration.

Fig. 2. An open fire, with daylight streaming in through the entrance flap. The tent has been pitched for some time and the vegetation of the floor has been trodden away. Heat accumulates high in the tent, where clothing and furs are hung to dry.

Fig. 3. Tired herders wait for their tea, still wearing the warm felt inner linings of their boots.

Fig. 4. Two non-human members of the family circle by a metal stove.

Fig. 5. A sacred site, with offerings of reindeer antlers and coloured ribbons to thank local spirits for a successful crossing of the herd over the rivers, roads and gas pipelines that cut across migration routes on the Yamal Peninsula. Protests by Nenets saved this site from destruction by road and quarry works. Now they encourage Russian truck drivers to stop and offer the spirits cigarettes or money.

Fig. 6. Checking the NHS Covid-19 app.

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This hi-tech app deliberately blocks coherence of a sort that could be called narrative. That is, it stops any possibility of joining up with the individual stories of actual people who have been affected by the virus. The statistical idiom of risk dismantles the chain of direct causality, while the concern with privacy makes it a secret that must never be revealed. One consequence of this, as demonstrated in numerous public discussions, has been to encourage scepticism, exceptionalism or plain denial – just as one might dismiss an unfavourable horoscope in a magazine: it does not mean me, and even if it does, I will somehow dodge the statistical bullet. It is a mystery to which people are reluctant to seek an answer. As a system of divination, it is incomplete – or maybe it should be called an anti-divination.

As with the generalized risk in the pub, other preventive behaviour in the UK also reflects this difficulty of pinpointing a specific infection trajectory. The Covid-19 virus is believed to attack through moments and scenarios of heightened exposure: leaving the house, touching door handles, visiting the supermarket or hospital. These are ambivalent acts: you must open doors or go out for provisions or medical treatment, but in doing so, you are also exposing yourself to a risk of death. If one makes allowances for ontological differences between viruses and spirits, the logic in Covid-19 protection of avoidance and cleansing, through the systemic aerosol penetration of alcohol spray or the gels rubbed on doorknobs or supermarket trolleys, is like that of the Nenets fire's power of fumigation. Both kinds of procedure diffuse a cleansing emanation from a concentrated reservoir of benign chemical or spiritual power.

But there is a significant difference. Covid-19 instructions belong to a state of emergency and exception. But Nenets fumigation, like all their other fire behaviour, belongs to – even defines – a form of normality. Even when it is performed in response to contamination events like visiting an unhealthy place, these too are routine. Nenets fumigation is also done when new grass appears in the spring, when the reindeer shed their winter coats, after menstruating, after a birth or death and before long trips, especially to sacred sites. It thus has a broader resonance than the use of soap, gels, masks and all the paraphernalia of Covid-19 prevention.

Thus, when an outbreak of anthrax on the Yamal Peninsula in 2016 killed over 2,000 reindeer and two humans (Golovnev 2017: 46-47), soldiers evacuated the local herding families and burned the bodies of the dead animals. But in a very shocking move, they also burned their tents, clothes, family photos, sacred effigies and even the bodies of the two human victims (Nenets do not practise cremation). Little was spared except their state-authorized identity documents, which were somehow deemed to be virus-proof.

Rumours began to circulate: the anthrax spores were planted deliberately, Russian biologists and administrators were using the epidemic to reduce herd size, soldiers were fencing off parts of the tundra, Gazprom (a gas company) was using this to erect new gas extracting towers (Laptander 2020a: 113-117; Stammeler & Ivanova 2020). Nobody had any evidence: people had heard these things from other people, and they refused to talk into Laptander's recorder. Many herders have veterinary qualifications and understand that anthrax spores are chronically dormant in some soils of the Yamal Peninsula, where some areas, still littered with contaminated reindeer remains from the epidemic of 1941, are carefully avoided (Laptander & Stammeler 2017). But it was the official response that made this event suitable raw material for a conspiracy theory. This state-organized fire purifies, but unlike domestic fumigation, it does so at the cost of destruction, bringing together the imagery and forces of uncontrolled wildfire,



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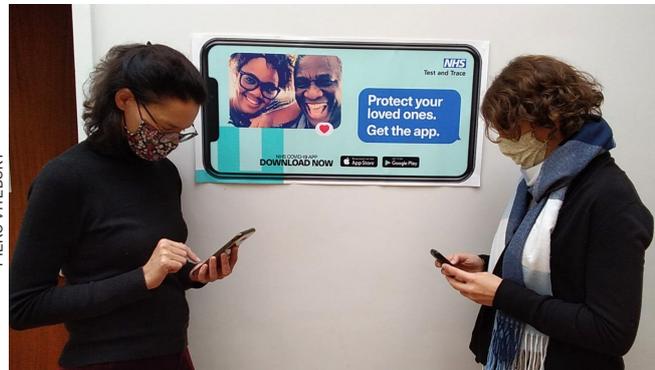
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ROZA LAPTANDER



FLORIAN STAMMLER



PIERS VITEBSKY



Fig. 7. The Covid-19 virus as evil spirit. Humorous Chinese mask, initially marketed for Halloween 2020 but later withdrawn from sale by Amazon as being in bad taste.

Fig. 8. Tents in February, with the midday sun climbing above the horizon again after midwinter darkness.

Fig. 9. Benign fire spirit carved by a reindeer herder from the Eveny people, for whom this spirit is an old man rather than an old woman.



scientific infection theory and state biopower. By using it as an emergency instrument, the state had taken fire out of its context of normality and perverted its function of protection and purification.

Conclusion

Soviet technology in the 20th century strove to rationalize and scientize people's mentality and behaviour. The vast and thinly populated Siberian north overcame distance through radio, small aeroplanes (Smolka 1938) and later helicopters. By exploiting phenomenal reserves of minerals and siting Gulag prisons far from centres of population, it even managed to convert distance from an obstacle into a resource (Vitebsky 2000). Since there are few roads (except near mineral works), local mobility has become more difficult since the 1990s with the decline or disappearance of aviation to remote settlements. However, in 2020-21, as the Covid-19 virus has ravaged northern towns and cities, it has created a situation in which the isolation of small villages and nomadic camps suddenly features as an advantage. If Anna Nerkagi was the unique Covid-19 sufferer in her village, one can only wonder whether this was linked to her more cosmopolitan movements as a public figure.

If physical movement has become more restricted, virtual communication has become more accessible. With the region's extreme weather conditions, aviation and radio in recent times could still involve a delay of days or weeks for a passenger or message to reach a destination (Vitebsky 2005: 351-365; Vitebsky & Alekseyev 2020). Starting in 2005, messaging at least has become radically streamlined. People near a village with a signal have rapidly adopted mobile phones (Stammler 2009). They exchange messages via SMS and social media and from telephone apps. Out in the tundra or the forest, tens or hundreds of miles from a village, those who can afford it and have a functioning generator can use expensive satellite phones.

Since Laptander moved from Siberia to Western Europe, this has been the only way to contact her family during the pandemic. Each message has become precious, reassuring her that they are healthy and safe. Phone messages in the tundra cover gossip, personal and political news, and logistical arrangements for coordinating meetings, migrations and supplies. They introduce a new technology of chat that can fulfil part of the domestic fire's togetherness function and the predictive function of saying that visitors are on the way – but not that of prediction about danger or the link between this and more profound ideas of fate and destiny.

The potential for messaging in the Siberian domestic fire also helps us to see what the UK Covid-19 app is, by highlighting what it is not.

Both can give messages about exposure to a potential future life-threatening event. Like any kind of prediction, this may or may not later be perceived as fulfilled and is open in principle to procedures of blocking or evasion. But a message is not just a message. It is grounded in a hinterland of relationships, assumptions and shared values. In both cases, the medium's authority to predict is rooted in a broader range of associated forms and behaviours of causality, prevention and reaction. It is here that they turn out to be very different.

From fumigation to anthrax to the voice in Nerkagi's Covid-19 coma, the Siberian examples show how the domestic fire serves as a generative source of meaning because its messaging function is set as a focal point of coherence within many narrative strands. These are rooted in intimacy and entanglement between the fire as an entity (somehow conscious and motivated, and conceptualized as a spirit) and the humans to whom it is bound. Interpretation radiates out from the hearth into the circle of those who sit around it and derives especially from women and their knowledge of who is doing what or going where, who is likely to visit, who may face danger and how. In this understanding of fate and destiny, each person's future is made through relationships with other people, which are known, intimately and discursively explored, and long-term. The response to danger is not to self-isolate but to draw closer together.

The focus of the Covid-19 app is tighter and narrower. It concerns the individual as the specific person who is addressed by the message: as an entity who can have a fate, yes, but also as a bounded body which a virus can invade and as a person whose privacy would be violated by the revelation of their identity to others. All of this applies equally to the person who may have infected one and to those one may go on to infect. The entire episode is an unwelcome moment in one's biography, but does not concern anyone else's role in it, and far less *their* biography. If the test is negative, one will be able to dismiss the whole thing quickly and move on.

If it later shows that the prediction has been fulfilled and one has become infected, this has come about through a connection with another person. With the app, this 'encounter' (as the NHS website calls it, above) is physical without actual contact, interpersonal without being social, vital to know yet unknowable. The Siberian fire requires considerable labour and attention yet is essential, while the Covid-19 app requires no upkeep and can be deleted from one's life. The fire reveals connections and relations between persons, events, environments and meanings, but the Covid-19 app is inherently dedicated to concealing these. It is a device of dis-intimizing. ●

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