Understanding human cooperation in a changing world

July 22 2015, by Matthew Gwynfryn Thomas

Many hands make light reindeer herding. Credit: Matthew Gwynfryn Thomas, Author provided

Deep into the Arctic Circle in the far north of Norway, Finland, Sweden and north-west Russia, a few thousand indigenous minority people

known as the Saami continue to follow a lifestyle of reindeer husbandry. But their profession is increasingly under threat from a number of developments ranging from climate change to globalisation.

We travelled north to spend some time with this marginalised group to try to understand how they cooperate with each other, from an evolutionary standpoint. The results may help us understand how they can best protect their lifestyle from being crowded out in the future, like many other traditional cultures across the world.

A lifestyle under threat

The Saami are pastoralists who work in groups formed from a mixture of family and others sharing the burden of herding by keeping an eye on each other's reindeer, protecting them from predators and working the land.

Over the years, this traditional way of life has absorbed many non-traditional features, from snowmobiles to GPS and from smartphones to Game of Thrones (I watched it for the first time with my Saami field assistant).

The area where most Saami herders live is commonly known as Lapland. The landscape – full of roaming reindeer, emblematic of Christmas – becomes a verdant paradise during summer, when the sun never sets. You must sleep by your watch because the light outside cannot be trusted. Wandering at 2am, it feels like late afternoon. The area is covered with tree-lined mountains, snaking fjords strewn with fireweed and, to the very north, a rolling tundra that is both bleak and beautiful. And mosquitos. Lots of mosquitos.

This environment of extremes is where Saami people have tended reindeer for hundreds of years and hope to continue for many hundreds

more. The herders have had bad experiences with researchers in the past. Just three weeks before my visit, the Norwegian Institute for Nature Research released a report saying that the high reindeer mortality in Finnmark may be due to overcrowding and starvation.

Reindeer as far as the eye can see. Credit: Matthew Gwynfryn Thomas, Author provided

This caused something of an uproar, with some herders taking it to mean they were being blamed for their reindeer dying. Because of this, I found it difficult to convince people to take part in our study during my stay. The 30 we eventually interviewed were, however, generous with their time, thoughts and coffee.

But their profession faces challenges from climate change, extraction of natural resources, internal conflict and the high reindeer death rates. Indeed, reindeer husbandry itself may be in danger of being crowded out by relentless globalisation, despite nominal protection from the

International Labour Organisation in Norway.

The science of cooperation

Humans are weird. Unlike many other animals, we happily cooperate with people we are not related to. But if evolution is all about reproducing copies of your genes into the future, why should you spend time helping people you are not related to?

If we have evolved to be nice to some, but not all, non-relatives, would that behaviour shift if we were part of a marginalised population such as the Saami? To find out, we played games with herders from one particular district in the Norwegian county of Finnmark, where most Saami herders live. Anthropologists have become fond of experimental games as a quick and dirty method of gaining insights into how people cooperate.

Our study participants were given 15 litres of petrol each, split across three vouchers, to give as gifts to up to three other herders of their choosing. Reindeer herders can burn through a lot of petrol, especially during migration periods, so we thought their choices would reveal meaningful social relationships and hint at how people collaborate.

Father and son fixing a fence. Credit: Matthew Gwynfryn Thomas, Author provided

We found that the herders favoured members of their own herding group (known as a siida in the Saami language) over and above most relatives, but ultimately preferred giving gifts to close family within their siidas. People also gave gifts to newly established herders and to those they considered particularly skilled at reindeer husbandry. We argue that this flexible approach to cooperation has been and will continue to be a keystone of reindeer husbandry.

Evolutionary theory gives us a powerful set of tools for understanding human behaviour. Studies such as ours employ evolution as a lens through which we can understand how people respond to fluctuating environments, to encroaching globalisation and, not least, to one another.

Working in cooperative groups helps Saami people survive as reindeer

herders. Despite – or maybe because of – their marginalisation, our participants helped not just their family and others in their herding groups but also the skilled herders and the new herders who might reciprocate in future.

Government policies attempt to make this way of life sustainable by privatising pastures and enforcing quotas on the number of reindeer herders can own. But research has shown that keeping more reindeer can help herders weather harsh times in this changeable and competitive environment.

Other policies target individual herders by, for example, subsidising higher slaughter rates, but ignore the effects that working together can have on slaughtering practices. The reality of reindeer husbandry demands flexibility. If we try to understand their routes to cooperation, we may well find that the herders can manage perfectly well without outside interference.

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