

Notes from the Icehouse



Navigating Transformations and Transdisciplinarity in Northern Finland

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‘Maps are for tourists’, Juha pronounced, his mouth slowly turning up in his trademark wry smile. We had just splayed a brand-new Tyvek geological survey chart of Kilpisjärvi, Finland across the pine table in front of us. Juha stepped back from the map and gave it a quizzical look.

Juha had been a reindeer herder for his entire life, and had never needed a map to help navigate the tussocks and meadows of his homeland. He slowly scanned the smooth Tyvek. Within a minute, he pointed out two errors on it: one, the misnaming of a minor fell; another, the incorrect term used to signify a lake. As he recounted the history of the lake’s placenames, it struck me how foolish it would have been for us to think we could rely solely on our own documents, our own knowledge, and our own observations to critically understand this part of the world.

Figure 1. Juha questioning the wisdom of researchers' use of a printed map to understand the world



A year or so ago, as winter was beginning its perennial flirtation with the uplands of the High North, several university colleagues and I travelled to Kilpisjärvi, the area in northwestern Finland where the Finnish, Swedish and Norwegian frontiers meet unceremoniously at a shoulder-high mound of yellow-painted cement emerging out of the reeds of a small lake. The undulating landscapes of this traditionally Sami territory were popular with smugglers a century ago, and were first protected from development in the early 1900s, when Finland lay under Russian rule. Sami herders have grazed reindeer on these hillsides for years, but the area has become popular recently with Norwegian border-hoppers who enjoy hiking (and the cheap EU booze) and with European families driving north in gleaming white camper vans.

Laconic though people in this part of the world may be, the wilds of the North are not always spaces of quiet and remove. In the warmer months, helicopters break the silence as they carry provisions to research stations and heliskiiers to nearby Norwegian mountaintops. Tourists buzz about for provisions at the Kilpishalli general store, now owned by the Finnish chain K-Market. Swarms of mosquitoes descend to feed on anyone and anything that moves. Indeed, the sounds of the Arctic – rushing rivers, birdcalls in the wind, the rustle



Figure 2. Uneven grounds beside Juha's home and reindeer farm

of small animals through the brush – are everywhere. To say nothing of the stories.

Along with a dozen university colleagues, I had ventured north to understand and preserve – in the sense of ‘preservation by record’ (DoE 1991) – the remaining traces of twentieth-century reindeer herding around Lake Tsahkaljärvi. Juha Tornensis, a Sami herder, had invited us to help him record the material legacy of his family’s herding traditions before they disappeared.

Juha’s son and daughter have hesitated to commit to reindeer husbandry as a vocation, and he is worried that his grandchildren will never know the pasts of their forebears. ‘Family histories are crumbling’, he told us solemnly in the thicket one afternoon.

It is not uncommon these days for teenagers to get out of Dodge once they come of age. It is less uncommon still in Europe’s Arctic stretches, a region where youth, deterred by a lack of opportunities, are often lured south to urban centres and into lifeways quite different from those of their parents.

During our autumn week in Kilpisjärvi, we accompanied Juha on several day-long hikes. He would stop now and again to rest his legs, but he rarely stopped telling stories about Lapland’s past, present and sometimes its future. With a deep, raspy voice, Juha spoke slowly, in a Finnish peppered with Sami terms, recalling the histories of his family and the families of other herders. He discussed the ongoing conservation efforts of the village association and their recent heated arguments over land use planning. And he told of the ways of reindeer herding, of milking, earmarking and slaughtering, from the time of the so-called snowmobile revolution (Pelto 1973) in the 1960s to the present day.

We were a motley bunch, armed variously with Moleskines, spades, cameras and GPS-outfitted drones – anthropologists, archaeologists, environmental scientists, historically minded geographers, and a handful of Ph.D. students keen to get out into the world after many months of being locked down by COVID-19 restrictions (Norum and Herva 2021). We were also, in some small way, a harbinger of an emerging scholarly practice of participation and engagement that spurs introspection and reflection.

Figure 3. Roaming reindeer herds are a familiar (and not always welcome) site in downtown Kilpisjärvi



As I was finishing up graduate school a few years ago, I slowly came to terms with the fact that there were things called disciplines, and with the notion that jobbing academics were expected to write and publish things called articles, typically within the discipline in which they were trained. Having done my degree in a rather conservative social anthropology department, I was so strongly steeped in one disciplinary tradition that I came to assume that anthropology was the only field in the world worth its salt. It is difficult for me to comprehend this now, but I managed to spend the better part of a decade studying in a ravishing little English city barely aware that its fabled university also had departments of geography and sociology. I did once make an appearance at a history department event,

but all I recall of that encounter was that everyone had lovely accents and wore tweed from head to toe. Anthropology, I remember telling myself, dealt with the present, the past and, increasingly, the future. So why would anyone need to study anything else?

Only after exiting the safe, monodisciplinary bubble of grad school did I come to appreciate the present-day realities of real-world academia, among them the importance of collaboration and the need to broaden one's own field of view. While never finding a position in my own discipline, I was lucky enough to be offered postdocs in departments of English literature, geography and media studies, where I was introduced to a number of inspiring (and off-the-charts smart) scholars working in the then-emerging environmental humanities. There I met historians of media and science whose critical minds reminded me of my biggest academic crushes. I met literature scholars and poets who did participatory mapmaking, geographers who made innovative films, philosophers who knew the canon of my own field better than I did. Through them I came to experience the intellectual excitement, and epiphanies, of discussing ideas and doing research alongside people whose perspectives and knowledge were vastly different from my own.

When I moved to Finland some time before the pandemic, I observed that the then-fashionable terms 'multidisciplinary', 'cross-disciplinary' and 'interdisciplinary' looked to be giving way to the notion of a *transdisciplinary* science. Acceptance of the importance of transdisciplinarity by many fields and institutions came late and slow, but it did arrive. Though it's hardly a methodological revelation, the basic idea behind transdisciplinarity is that scientific research should take place not merely across and between academic disciplines, but beyond and outside academic institutions. Etymologically, *trans-* suggests not just a movement across, but a traversing or a bridging of two distinct entities, and transdisciplinarity has been described as a practice that transgresses and transcends disciplinary boundaries as a means of responding to new societal imperatives. Rather more a framework of knowledge production than a research methodology per se, its objective is to understand the world holistically, in all of its biological, physical and socio-cultural complexities,

rather than to focus on one part of it, or to espouse a single point of view.

The practice of transdisciplinarity emerged from a growing worry that the hyper-specialisation and increasing fragmentation of science would threaten its ability to analyse wicked problems or explain emerging phenomena in the world. The differentiation of science into individualised and highly focused disciplines, fields and sub-fields has produced unprecedented scientific breakthroughs and progress, but it has also compartmentalised understanding into isolated analytical parts (silos, perhaps) that separate objects or phenomena from one another, from their contexts and from their histories.

Fully realised, transdisciplinarity integrates both scientific and non-scientific knowledge and practice; it employs new forms of learning and problem-solving (involving cooperation between different facets of society) in order to define and unravel particularly challenging problems. Transdisciplinary approaches to research engage people from beyond the halls of academe to define the objectives to be set and questions to be asked. Proponents insist that such an approach can promote systemic change in the ways that challenges are approached, dealt with and resolved. Enabling the flow of knowledge into, out of and across stakeholder communities builds the capacity to address such challenges.

This commitment to active engagement privileges multiple situated ways of knowing the world, and a commitment to effective public communication of scholarly research and its results allows stakeholders to better incorporate the results of research into their lives. The sense of urgency felt by researchers working closely with those bearing the brunt of local and global issues must be complemented by meaningful action. Such action can be facilitated through six core dispositions that Fam et al. (2017) have delineated for transdisciplinary researchers and practitioners: commitment, curiosity, connectedness, creativity, communication and critical awareness.

To these six, I would propose adding a seventh: colonial consciousness. A core function of transdisciplinarity is to comprehend and broker different knowledges, but it is just as important to show knowledge production itself as being inherently implanted within

e.g. geopolitical and imperial strategies. This is all the more important when transdisciplinary research seeks to collaborate with non-white or non-male actors, or in the Global South, permutations not uncommon to contemporary environmental interventions (KNOTS 2016). Indeed, the epistemological and methodological assumptions scientists make are part and parcel not just of social relations, but of the science we use to study them. A key challenge, then, is to negotiate, integrate and incorporate different knowledges and translations of ideas and concepts, which are necessarily always, already incomplete and which rarely end up as fully or cleanly translatable. Several decades ago a number of feminist scholars, not of them Chandra Mohanty (1984), Gloria Anzaldúa (1987), Donna Haraway (1988), Rosi Braidotti (1994) and Gillian Rose (1997) drew attention to some of these challenges. My suspicion, though, is that the Anzaldúas and the Mohantys of the world are still not read very far outside a few critical humanities and social sciences fields. Until scholars across disciplines are able to accept that all knowledges – including, and especially, their own – are socially, culturally and historically situated, transdisciplinarity risks becoming yet another thrown-around buzzword (cf. impact, sustainability, participatory research). Such terms may make proud appearances in funding proposals and keynote addresses, but often do little to contribute to real societal change. Indeed, at worst their use risks sedimenting the very practices, hierarchies and structures which we seek to challenge.

The seven qualities outlined above are particularly pertinent to studying and resolving environmental, or socio-ecological, questions. To engage with and resolve the challenges of an environmental and societal sustainable transition in the Anthropocene requires more than transformative science; we need radical changes in human attitudes and practices. Achieving these will depend on the support of multiple actors across science, government and civil society, and will require researchers to cooperate and engage with them all, and with other appropriate communities from the very getgo of the research process through to dissemination of results.

Figure 4. Scientists hiking through the undulating hills of Northern Finland



The tourist map that we placed on the table in front of Juha in Kilpisjärvi last autumn told a story. But it was a disembodied story, a narration from above, a technocratic perspective brought forth by an unmanned satellite and an army of anonymous technocrats, coders and machines. To flesh out the story told by the map — to make it more complete, useful and human — we needed historians, indigenous and environmental humanities scholars, and people good with maps to interpret what was there, and to consider what maybe wasn't. We also needed Juha himself. Guided, questioned and mobilised by Juha's experience and memories, our little group of researchers moved quickly to new appreciations of important issues and a sharper sense of priorities demanding attention. Circumnavigating the lake with Juha, away from the motion-sensitive fluorescent light-

ing and height-adjustable MDF desks of the modern university, was essential to this process.

Listening to Juha's stories and reflecting in situ on the process in which we were engaged was vital to merging perspectives and developing new insights. Together our distinct voices melded with what each of us had known in the past and allowed us to think more acutely about the present and future, in ways that were inclusive and engaged.

In bringing disciplines together to engage with the world in all its storied material complexity, transdisciplinary research holds the promise of truly transformative insight and action.

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