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Please cite the final published version:

Veldhuis, D., Tejsner, P., Riede, F., Høye, T. T., & Willerslev, R. (2019). Arctic Disequilibrium: Shifting Human-Environmental Systems. *Cross-Cultural Research*, 53(3), 243-251.

<https://doi.org/10.1177/1069397118815132>

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Publication metadata

Title:	Arctic Disequilibrium: Shifting Human-Environmental Systems
Author(s):	Djuke Veldhuis, Pelle Tejsner, Felix Riede, Toke T. Høye & Rane Willerslev
Journal:	Cross-Cultural Research
DOI/Link:	10.1177/1069397118815132
Document version:	Accepted manuscript (post-print)

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Editorial

Title:

Arctic disequilibrium: shifting human-environmental systems
(Introduction to a special issue of the *Journal of Cross Cultural Research*)

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Abstract

This special issue of *Cross-Cultural Research* presents four papers each of which in their own way addresses the question of how Arctic populations tackle the high levels of unpredictability and risk associated with their environment. This special issue takes as its starting point the evidence for and against aspects of disequilibrium between humans, animals and their environment. The authors consider both contemporary and historical indigenous Arctic populations and the dynamics of human-animal relations in the context of an ever-changing socio-ecology of the Arctic. Three overarching sources of disequilibrium are identified: 1) disruption in existing ecological networks due to climate and environmental upheaval; 2) effects of socio-political change (including migration and disease), and finally; 3) changes to subsistence strategies. Based on contemporary field studies from across the Arctic, including the Ust'-Avam and Samoyed from the Taimyr Region in Russia, Sami in Finland, Yukagir and Chukchi from Siberia and the historic Thule community from Greenland, the authors illustrate how, despite apparent disequilibria, there is nevertheless notable resilience evident in the coupling of human-environmental systems. Documenting past and present changes in local livelihoods, land-use, subsistence patterns and sociocultural practices can help us understand not only the wider ecological context in which these cultures persist, but also to identify what factors are significant in terms of ensuring that indigenous communities can remain resilient to current disequilibrium. This special issue draws on a range of findings, which suggests that although people are adjusting to climatic transitions in demographic terms and drives towards so-called 'modernisation' in terms of subsistence and behaviour patterns, high levels of addiction, depression and suicide pose severe challenges for contemporary arctic societies.

Keywords: arctic, adaptation, disequilibrium, subsistence, migration

Introduction

Attendees at the “Forging of cultures in the circumpolar North” symposium hosted by Aarhus University’s Arctic Research Center in 2015 at Moesgård Museum in Denmark asked: “What key factors; past, present, and future, continue to shape the fabric of social life in Arctic communities?” Bringing together a diverse group of researchers from anthropology and genetics to politics and zoology, the aim was to improve our understanding of the ongoing mechanisms (natural, social and historical) shaping indigenous peoples stretching from Scandinavian Lapland and Siberia over the American and Canadian Arctic to Greenland.

The symposium was organised around four central themes, designed to encourage interdisciplinary inquiry: 1) arctic disequilibrium dynamics, 2) arctic resource strategies as adaptive and cosmological mechanisms, 3) arctic cultures: health and wellbeing, 4) global and long-distance connectors - ecological and cultural networks. Evidently, the thematic frameworks covered a wide range of topics ranging from prehistoric adaptive patterns to contemporary social anthropology, paleo-Inuit archaeology and ecological change studies.

The papers in this special issue of *Cross-Cultural Research* have been selected for their particular appeal to the overarching themes of natural and cultural disequilibria. In contrast to many papers on the Arctic, which focus on adaptation alone, we take as starting point evidence of disequilibrium between humans and their environment.

Each paper addresses the question from a different comparative perspective, encompassing the views of anthropology (Hastrup; Ziker and Fulk), ecology (Vestbo *et al.*) and archaeology (Walsh *et al.*) respectively. The resulting issue embraces a wide scope of methodological techniques ranging from cross-cultural comparative analysis and socio-ecological change studies to macro-level social economics, all of which, address challenges facing arctic communities today.

Research in the circumpolar North

The arctic research community has an enduring tradition of cross-cultural comparisons across the region commonly referred to as the circumpolar North (see e.g. Berkes and Jolly 2001; Willerslev 2009; Crate 2008; Krupnik 2000). Indeed, these comparisons often hint at close parallels across cultural identities in the circumpolar North. Examples include the respectful relations associated with prey and around the everyday conduct of subsistence-based economies and livelihoods, strong human-animal relationships, continued belief in reincarnation and rebirth, and an animistic view of the world. Nevertheless, notable socio-economic differences exist. For example, subsistence strategies range from the relatively egalitarian Inuit hunters to more hierarchical Evenki reindeer herders. Further connecting the various autonomous and non-autonomous states in the circumpolar North is the shared, - albeit manifested differently from place to place – experience of the decolonising trend in recent history instigated by former colonial rules in the area (Cameron 2012).

The author contributions for this special issue are organised in such a way as to better convey the message that contemporary arctic research and studies can and should perhaps, seek to address disciplinary gaps given the interconnected dynamics of natural and social forces in the region. More importantly, arctic socio-ecological research would benefit greatly from the incorporation and acceptance of knowledge and views held among indigenous groups. This is especially important when it is difficult to reconcile indigenous cosmologies with the demarcated confines of traditional academic disciplines (see for example, Huntington 2000).

Given the relatively rigorous distinctions between philosophy, history, biology and anthropology in modern academic circles, it is worth noting that early (and indeed some contemporary) arctic explorations were, by their very nature, interdisciplinary research endeavours. The disciplinary boundaries go well beyond being an academic shortcoming; they become a real problem on the ground, as it were, when individual academic disciplines conduct research in collaboration with indigenous stakeholders who hold an interconnected knowledge map. One result being that traditional disciplines, unlike traditional knowledge, will often be burdened by silo-thinking that is subsequently and perhaps somewhat inadvertently also being applied to the arctic as a field site. In assessing the merits of Traditional Ecological Knowledge (TEK), Pierotti and Wildcat (2000: 1335) emphasise the importance of a holistic approach to understanding cultural practices, one in which all things are connected and related, situated solidly within a single socio-ecological community. Arctic research is inherently multidisciplinary, linking the human and nonhuman. The earliest publications to come out of Greenland are part of a colonial enterprise, for example those by naturalist and explorer Otto Fabricius (1780), and consisted of works on intermingled subjects ranging from flora to fauna and from studies of animal migratory patterns to human settlement, hunting techniques and mobility practices. They did recognise that is insufficient to document human cultural practices or settlement patterns without simultaneously discussing the flora and fauna of the wider arctic environment. Similarly, the authors of this special issue offer a detailed examination of arctic life cycles that avoid polarisation towards generic adaptive patterns or selective historical mechanisms.

Does arctic connectivity improve livelihoods or put them at risk?

Sharing practices abound across the contemporary arctic, albeit in differing form from region to region. In Greenland, for example, the age-old proximity to whales, and role in the hunting of whales involves one boat and one corresponding sharing practice (Dahl 2000, Tejsner 2014). One of the central pillars of arctic micro-economies involves the role and maintenance of kinship relations in redistributive resource practices – and how these relate to the continued sustainability of arctic indigenous societies. Addressing the lack of research on the key adaptive instruments and the essence of connectivities which the symposium set out to explore (e.g. coping devices such as kin alliances), Ziker and Fulk's research demonstrates the value of redistributive resource sharing practices in terms of the evolution of cooperative behaviour, as well as what this looks like in cultural and practical terms today. Particularly of note in Ziker and Fulk's contribution is the observation of his informant's contemporary reference to the soul of possible sharing partners. This testifies to the enduring and continuing practices embedded in cosmologies of sharing and exchange. In line with Ziker and Fulk's review, Walsh et al. unpack the conditions by which community identities are transmitted across generations in the form of naming practices. Through their in-depth review of the soul-naming practices Walsh et al. reveal how the application of

rebirth concepts to the souls of animals expands the human-animal relationship as a network. These are used to navigate the moral and ecological implications of killing animals, as well as with a view to ensuring future hunting success.

In operating within certain global networks, other networks have to be “cut”. For example, when indigenous hunters switch from subsistence hunting towards fur trapping (Müller-Willie 2008). What are the implications when significant actors suddenly lose their importance in an otherwise all-pervading network, such as when the fashion in hats changed from beaver skin to silk in Europe, causing the entire network formed around the trade in beaver to collapse? (See Tapper & Reynolds 1996 for detailed discussion on furbearing species exploitation). Vestbo and colleagues take forward this perspective on Arctic connectivity, using a network approach. They illustrate how the common eider (*Somateria mollissima*) acts as a lens on large and complex ecological networks. Like whales and fur-bearing animals, which are or have been commodities of global networks linking peripheral areas of the Arctic to global centres of trade, so too the eider has a role as a key actor in the Arctic. Unlike simple, binary models of human-game interactions, which frame interactions as isolated, local entities (e.g. human-bison; human-whale), the authors extend their scope to wider food webs, economic booms and crashes, some precipitated by events thousands of miles away. Given the increasingly unstable ecology of the Arctic, threats to the eider have larger implication to both coastal ecological networks, where the eider feeds, as well as terrestrial ecological networks where it breeds.

Arctic cultures: health and wellbeing

Traditional Arctic child rearing practices continue to encourage children to ‘expect the unexpected’ (Briggs 1991; Nuttall 1992). Adults of subsistence-based households still encourage their children to pursue the traditional way of life in spite of the hardships so often heard of and faced by arctic communities today (Hansen and Tejsner 2016). To some extent, this is proving to be a viable strategy, although high levels of addiction, depression and suicide in combination with a new suite of health threats linked to climate change (see e.g. Parkison & Evengård 2009; Bjerregaard et al. 2004) continue to pose severe challenges for contemporary Arctic societies.

Identifying the key socio-ecological stressors faced by historic arctic cultures and their relevance to understanding present-day health and social patterns, forms the basis of Hastrup’s contribution. Taking the Thule community in north-western Greenland as starting point, Hastrup addresses social disequilibrium and global connections through the lens of epidemics, environmental change and pollution. Combining her extensive fieldwork experience in the region with historical data, she delves deep in a narrative that interweaves politics, disease, trade, technology and war. Settlements persist or disappear unpredictably and variably, whether through local environmental changes, population booms and crashes of prey or forced resettlement by external peoples. Hastrup’s account is particularly powerful in its ability to synthesise historical data and trace it to where the inhabitants of this region find themselves and their livelihoods in the 21st century. Hastrup’s papers illustrates, in particular, the role of disease as a unifying connector between centres of global trade and (seemingly) peripheral regions. Historical developments and contexts continue to shape the current health landscape in the Arctic and they remain relevant to any contemporary discussion of health disparities and health service deliveries in Greenland and elsewhere in the North.

Conclusion

By exploring new transdisciplinary pathways to finding answers to old questions about the key drivers forging Arctic cultures, this special issue reflects the complexities of untangling the effects of environmental and climatic change on human health and wellbeing. Common to all papers is the interconnected role of seasonality, animal migratory behaviours and environmental change in driving cultural norms and human behavioural flexibility. Rather than simple polarizing debates on the dominant role of culture, ecology or climate, analysing the dynamic web of interactions between these factors and actors is a more productive way to understand and prepare for future demographic shifts.

Acknowledgements

We would like to extend our thanks to the Arctic Research Centre as well as the director of the Aarhus Institute of Advanced Studies, Morten Kyndrup, for his generous financial assistance. We especially like to thank Mia and Mai Korsbæk for all of their invaluable assistance in helping to organise and deliver this special symposium. We would also like to thank all of the many unnamed people who participated in the countless ethnographic research projects referenced in this issue. Also, the presenters who gave papers and the participants who helped to make the symposium such a great success. Finally, we would like to thank all the reviewers at the *Cross-Cultural Research* for their patience, help and support throughout the editorial process.

Compliance with Ethical Statements

Conflict of interest: The authors declare that they have no conflict of interest. The authors alone are responsible for the content and writing of the paper.

Funding: Arctic Research Centre, Aarhus University and the Arctic Science Partnership

Informed consent: n/a

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