

THE NORPAK REVIEW

BRIDGING RESEARCH, DIALOGUE, & DISCOVERY ACROSS THE NORTH



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The NORPAK Review

The NORPAK Review is published by the Northern Research, Policy, and Arctic Knowledge Hub (NORPAK) and the Department of Sociology at Northern Arizona University. NORPAK and the Department of Sociology hold membership in the University of the Arctic (UArctic), an international network of universities, research institutes, and organizations engaged in northern and Arctic research and education.

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Land Acknowledgment

Northern Arizona University sits at the base of the San Francisco Peaks, on homelands sacred to Native Americans throughout the region. We honor their past, present, and future generations, who have lived here for millennia and will forever call this place home.

[Read about the Importance of NAU's Land Acknowledgment](#)

Statement on Generative Artificial Intelligence

The NORPAK Review follows the principle that generative artificial intelligence may not replace substantive human authorship, scholarly analysis, interpretation, or knowledge production. The journal is committed to preserving scholarly integrity, original authorship, and genuine human intellectual contribution. Articles published in this issue reflect the analysis, argumentation, and scholarly voice of their authors, who remain fully responsible for the accuracy, originality, attribution, and intellectual integrity of their work.

THE NORPAK REVIEW

Call For Papers

The Northern Research, Policy, and Arctic Knowledge Hub (NORPAK) at Northern Arizona University invites submissions for Volume 2 of *The NORPAK Review*, to be published in Fall 2027.

The NORPAK Review is a cross-disciplinary, editor-reviewed, open-access journal dedicated to advancing research, dialogue, and knowledge exchange related to Arctic, Northern, rural, Indigenous, and circumpolar communities. The journal provides an accessible platform for scholarly, community-based, policy-oriented, and applied contributions that critically engage with the social, cultural, economic, political, and environmental realities shaping northern regions and communities. The journal seeks to bridge academic scholarship, community engagement, and applied policy development in support of sustainable, ethical, and community-centered futures.

The NORPAK Review welcomes diverse cross-disciplinary and community perspectives, including contributions grounded in Indigenous knowledges, lived experience, collaborative methodologies, and practitioner-based expertise. We invite submissions from faculty, researchers, students, policymakers, practitioners, and community members whose work contributes to conversations surrounding the Arctic, the Circumpolar North, rurality, sustainability, governance, climate security and resilience, and related issues affecting northern communities and regions.

Areas of Interest

- Climate change & resilience
- Green Transition & Environmental Policy
- Green colonialism & environmental justice
- Sustainable development & resource extraction
- Arctic governance & geopolitics
- Indigenous sovereignty & self-determination
- Traditional knowledges & Indigenous methodologies
- Arctic and Northern climate security & security studies
- Rural and remote community development
- Comparative Arctic, rural, & desert research

Submission Deadline: July 1st, 2027

Expected Publication Date: August 1st, 2027

Questions and manuscripts should be directed to NORPAK@NAU.edu

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Areas of Interest

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- Climate change and resilience
- Environmental policy and Green Transition
- Green colonialism and environmental justice
- Sustainable development and resource extraction
- Arctic governance, geopolitics, and international relations
- Indigenous sovereignty and self-determination
- Traditional knowledges and Indigenous methodologies
- Arctic and Northern climate security and security studies
- Rural and remote community development
- Comparative research connecting Arctic, rural, and desert regions

Submission Categories

The NORPAK Review welcomes a broad range of submission formats:

- | | |
|--|-------------------|
| • Research Articles | 5000 – 8000 words |
| • Research Notes/Summaries | 1000 – 2000 words |
| • Conceptual or Theoretical Papers | 5000 – 7000 words |
| • Policy Analyses, Briefs, Opinions | 3000 – 5000 words |
| • Traditional, Community, and Case Studies | 2500 – 4000 words |
| • Methodological Papers | 3000 – 5000 words |

Style Guide

Please follow APA 7th edition guidelines for formatting and referencing. Other major citation styles may also be accepted, provided authors maintain consistency throughout the manuscript.

- Include a unique and descriptive title (20 words)
- Any submissions over 2500 words require an abstract (200 words)

- Please provide up to five keywords to enhance the searchability of your research.
- Author(s) affiliation(s) and contact information
- Authors should include a brief bio of approximately 100 words per author.

Review Process

The NORPAK Review is an editor-reviewed journal. Submissions will undergo editorial screening and review based on originality, relevance, clarity, contribution to the field, and alignment with the journal's mission and scope. The editorial review process is intended to foster greater accessibility and inclusivity for community-based, cross-disciplinary, and non-traditional forms of scholarship and knowledge production. We also encourage submissions with diverse approaches to knowledge creation, dissemination, storytelling, and lived experience.

Open Access and Publication Platform

The NORPAK Review will be published as an open-access journal through Northern Arizona University's OpenKnowledge platform, collecting and preserving intellectual and creative output and expanding accessibility to a wider global audience.

GenAI Use Policy

- *The NORPAK Review* values originality, integrity, human knowledge production, and authentic scholarly voice. Generative artificial intelligence tools may not be used to produce substantive written content, analysis, arguments, findings, or source material for submissions. Manuscripts primarily generated through AI-assisted writing will not be considered for publication.
- Limited AI-assisted tools may be used for minor editorial support, including grammar correction, spelling, or formatting assistance, provided such use does not replace the author's original analysis, interpretation, argumentation, or voice.
- Authors remain fully responsible for the originality, accuracy, integrity, and intellectual content of their submissions.
- The editorial team reserves the right to reject submissions that demonstrate excessive reliance on generative AI systems, are overly generalist, lack evidentiary support or adequate citation usage, or that compromise scholarly integrity and authentic human authorship.

Submission Guidelines and Important Dates

All manuscripts should be sent to NORPAK@NAU.edu with the subject heading: "*The NORPAK Review* Manuscript Submission". All submissions must be original and should not be submitted elsewhere or be considered for other publications at the time of submission.

- Submission Deadline: July 1st, 2027
- Notification of Editorial Decisions: July 15th, 2027
- Expected Publication Date: August 1st, 2027

THE NORPAK REVIEW

Call For Papers: Special Issue

Student Voices

Emerging Scholarship on the North

The Northern Research, Policy, and Arctic Knowledge Hub (NORPAK) at Northern Arizona University invites submissions from undergraduate and graduate students whose work addresses Northern, Arctic, and Circumpolar issues for a special student issue of *The NORPAK Review*, to be published in May 2027.

The NORPAK Review is a cross-disciplinary, editor-reviewed, open-access journal dedicated to advancing research and dialogue related to Arctic, Northern, rural, Indigenous, and circumpolar communities. This special issue will feature student research, experiential learning, and reflective contributions engaging with the social, political, cultural, economic, and environmental realities shaping northern regions.

Submissions may draw from coursework, capstone projects, independent research, theses, fieldwork, internships, community-engaged work, and other scholarly or experiential activities, with contributions presented in a form appropriate for scholarly publication.

Areas of Interest

- Climate change & resilience
- Green Transition & Environmental Policy
- Green colonialism & environmental justice
- Sustainable development & resource extraction
- Arctic governance & geopolitics
- Indigenous sovereignty & self-determination
- Traditional knowledges & Indigenous methodologies
- Arctic and Northern climate security & security studies
- Rural and remote community development
- Comparative Arctic, rural, & desert research

Submission Deadline: April 15, 2027

Questions and manuscripts should be directed to NORPAK@NAU.edu

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THE NORPAK REVIEW

Rethinking the North:
An Introduction to The NORPAK Review

Editorial Introduction

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Rethinking the North: An Introduction to The NORPAK Review

Stefanie Kunze[‡] & Ibrahim Berrada[§]

Arctic regions are warming at approximately four times the global average, intensifying the effects of climate change across northern environments (Rantanen et al., 2022). Indigenous and rural populations who have called these Arctic landscapes home since time immemorial are often among the first to experience these changes and their most immediate consequences. Their warnings have gone unheeded for many decades. Today, global outlooks have shifted to climate impacts in the Arctic, fueled by extreme weather events and unprecedented heat waves. Alongside climate events, research funding has increased substantially, along with policy-driven investment in resource extraction, renewable energy development, and requests for consultation with Indigenous communities on projects proposed on Indigenous lands. The number of stakeholders, in addition to Indigenous rights holders, is staggering, as industry representatives, politicians from local to state and international levels, and academics show interest in Arctic development.

Similarly, desert regions, such as the American Southwest, have attracted increasing attention from policymakers, industry stakeholders, and developers. Rising demand for copper, lithium, and rare earth metals, specifically for battery production and micro- and semiconductors, have fueled the push for mining in sparsely populated lands. The American Southwest, with its vast landscapes, is often the focus of such projects. However, as in the High North, vast landscapes and sparse populations do not mean that they are uninhabited or insignificant. Beyond mining projects, large-scale solar and wind farms, data centers, and high-tech manufacturing are also seeking space in these deserts. To the economic observer, large undeveloped spaces may seem like ideal locations for such space-consuming, large-scale operations. On the ground, however, real communities are affected, livelihoods threatened, and environmental destruction is imminent.

Arctic and desert populations occupy a front-row seat to the effects of climate change. While some regions face the growing threat of rising water levels, others confront increasingly severe water scarcity and the disappearance of reliable water sources. In the North, thawing sea ice, lakes, and permafrost create significant economic challenges (Schoor et al., 2018; Welch, 2019); in desert regions, prolonged drought, extreme heat, and sandstorms generate a distinct but equally consequential set of pressures. At this juncture of rapid change, the Arctic and the desert meet. Indigenous and rural populations have lived in these spaces for centuries and are the most adept and resilient in facing unprecedented change. However, this change also brings heightened attention from outside stakeholders who increasingly seek

[‡]Stefanie Kunze, PhD, is an Assistant Professor in the Department of Sociology and founding Director of the Northern Research Policy, & Arctic Knowledge Hub (NORPAK) at Northern Arizona University. She specializes in perpetrators of genocide and ethnocide, Indigenous experiences with settler colonialism and assimilation in the United States and Nordic Region, respectively. She focuses on the impact of the green transition and related political, societal, and social challenges. Her previous work is focused on perpetrators of ethnocide in Native America, Covid-19 responses on tribal land, the US boarding school legacy, and colonialism in Europe's North.

[§]Ibrahim Berrada, PhD, worked as a parliamentary staffer for several Canadian Members of Parliament, handling various national and international portfolios, most recently supporting the Minister of Public Services and Procurement Canada. Ibrahim currently serves as an Assistant Teaching Professor in Sociology, Director of Northern Research at the Northern Research, Policy, & Arctic Knowledge Hub (NORPAK), and Associate Director of Applied Research at the Laboratory of Applied Social Research (LASR) at Northern Arizona University. His current research focuses on environmental populism in Northern and Arctic contexts.

Arctic and desert regions for development, contributing to the repeated marginalization and encroachment experienced by some of the populations who call these regions home.

At the Northern, Research, Policy, and Arctic Knowledge Hub (NORPAK), we focus on some of these topics that affect Indigenous and rural populations in the Arctic, as well as in desert environments. Our affiliates encompass a wide range of experts, scholars, and practitioners who examine the complex dynamics unfolding across Arctic and desert regions and collaborate to identify solutions to many of the pressing concerns facing these areas. Housed at Northern Arizona University, NORPAK is situated on traditional Indigenous homelands significant to many tribal nations in the region. NORPAK's mission and vision center on developing reciprocal partnerships with rural and Indigenous communities across the American Southwest and the Arctic through knowledge co-production, applied research, and experiential learning grounded in community-defined priorities.

The NORPAK Review is a cross-disciplinary, editor-reviewed, open-access journal dedicated to advancing research, dialogue, and knowledge exchange across the fields of circumpolar studies, critical Arctic studies, Arctic social sciences, and desert studies. The journal was launched as a platform to reduce barriers to knowledge sharing and expand opportunities for exchange beyond conventional disciplinary and academic boundaries. It highlights scholarly, practitioner, student, and community-based work, including research articles and notes, conference presentations, methodological papers, community studies, and applied research that connects knowledge to practice, policy, and lived experience. In doing so, *The NORPAK Review* provides space for diverse forms of knowledge production that engage with the social, cultural, political, environmental, and economic realities shaping northern, Arctic, and desert regions.

In this inaugural volume engages with several of these important concepts and areas of inquiry. The two featured research articles tackle settlement from relatively different angles. Jessica Louise Hall (2026), in "The Language of Conquest: The Role of Linguistic Weaponisation in the Establishment of Settler Colonial States" explores linguistic weaponization, specifically towards environments and Peoples, Indigenous and non-Indigenous, as well as settler colonialism. Hall introduces a three-step process that is separate from physical and violent colonialism but rather employs a quiet form of colonialism based in language, morality, and the creation of the settler colonial state.

Dilraba Anayatova and Arina Melkozernova (2026) shift our focus to other parts of the world. In their work "Cat's Cradle as a Relational Framework in Mapping Traditional Knowledge: Herders of Kazakhstan, Farmers of the Italian South, and Tribal Communities of the US Gulf Coast," they move Traditional Knowledges and reciprocal relationships from three different locations, rural Kazakhstan, the Italian South (Cilento region), and tribal communities in the U.S. Gulf Coast (MOWA Choctaw Tribal Band of Indians, Alabama), into focus. The three case studies highlight the depth and significance of Traditional Knowledges and their deep connection to land and people.

John W. Bessai's (2026) contribution, "Experiential Archives and Northern Policy: A Counter-Policy Method for Community-Centred Research," offers us a glimpse at how Northern policy is operationalized at the individual level. It can affect people in ordinary ways, from travel arrangements and institutional permissions to policies and processes, as macro-level policy designs are put into practice by individual families, researchers, and, more broadly, members of society. As Bessai writes, "The term experiential archives refers to a method of research that focuses on the experience of policy in scenes of institutional life" (p. 46). The archival process reserves guiding roles for Indigenous, Northern, and rural communities, among others.

In the featured student research article, “The Paradoxical Relationship Between NATO’s Operation Arctic Sentry Securitization Discourse and the Environmental Effects of Russian Shadow Fleets,” Evan Davis, Eric Hardwick, John Reznichuk, Baibhav Saraf, and Roderick Toms (2026) examine NATO’s Arctic Sentry program in relation to Russia’s shadow fleets. Davis et al. are graduate students in the MA in Applied Sociology program and researchers in the Laboratory for Applied Northern Research at Northern Arizona University. Specifically, they analyze official narratives from NATO member states used to justify the program, including concerns related to environmental degradation in the Arctic. They identify a central paradox: many of the surveillance and logistical tools associated with Arctic Sentry may themselves contribute to some of the environmental harm invoked in the discourse used to justify the program.

This volume also features three research notes, each engaging with a current area of inquiry through a distinct disciplinary and methodological lens. Laetitia Barbu and Yang Jiang’s (2026) “Digital Imaginaries, Lived Experiences, and Arctic Ocean Futures: Between Global Representations and Situated Knowledges,” examines how digital representations of the Arctic shape understandings of Arctic Ocean futures while considering the relationship between globally circulating imaginaries and locally situated forms of knowledge. Henri Keskinen’s (2026) “Frozen in Time: The Un-Sustainable Development of the Hawaiian Tourism Industry and its Effects on Indigenous Hawaiian Sovereignty” examines the historical development of Hawai‘i’s tourism industry and its relationship to economic stagnation, cultural commodification, and sovereignty. Michael Laiho’s (2026) “The Art of Writing Environmental Myths in the Arctic: Resilience and Meaning-Making at the UArctic Congress” considers the UArctic Congress as a site of Arctic meaning-making, examining how environmental narratives, institutional resilience, and competing forms of knowledge shape and reproduce understandings of the Arctic.

Together, these scholars share a critical analytical approach to examining how narratives surrounding nature, Indigeneity, development, and place are produced, represented, and contested. Their contributions foreground questions of who gets to define, describe, own, govern, and represent lands and oceanscapes, particularly when visitors, researchers, and institutions become narrators of places that are not their own. This creates a complicated relationship among visitation, extraction, support, and the rewriting of place-based narratives, dynamics that Indigenous and rural communities in regions such as the Arctic and Hawai‘i continue to navigate.

The inaugural issue of *The NORPAK Review* marks the beginning of an annual publication series, with occasional Special Issues appearing throughout the year. This issue also includes a Call for Papers for the forthcoming Special Issue, Student Voices: Emerging Scholarship on the North, as well as the Call for Papers for Volume 2 of *The NORPAK Review*, scheduled for publication in Fall 2027.

Stefanie Kunze & Ibrahim Berrada
Editors of *The NORPAK Review*

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THE NORPAK REVIEW

The Language of Conquest:
The Role of Linguistic Weaponisation in the Establishment of Settler Colonial States

Research Article

Authors

Jessica Louise Hall

Suggested Citation

Hall, J. L. (2026). The language of conquest: The role of linguistic weaponisation in the establishment of settler colonial states. *The NORPAK Review*, 1(1), 5–23.

Keywords

Linguistic Weaponisation, Settler Colonialism, Three-Step Process, Indigenous Sovereignty, Environmental Destruction

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The Language of Conquest: The Role of Linguistic Weaponisation in the Establishment of Settler Colonial States

Jessica Louise Hall*

Abstract

This paper explores the foundational role of linguistic weaponisation in the establishment of settler colonial states. Through an interdisciplinary lens that synthesises socio-linguistic and settler colonialism theories, this paper reveals a theoretical development of the existing two-step process of settler state establishment. An extensive literature review of both socio-linguistic and settler-colonial theories explores four forms of linguistic weaponisation: against Indigenous environments, Indigenous People, the parallel attack on environments and people, and the widely accepted two-step process in settler colonial establishment. From this, the paper acknowledges that whilst there is existing scholarly work on the role of language in colonialism broadly and a two-step process of forming settler states, there is an opportunity for mutual theoretical enrichment by establishing linguistic weaponisation as a prior, initial stage in the creation of settler states. Through identifying an addition to the existing theories on settler state formation, the paper concludes by highlighting other potential steps in the process. The developed theory is applicable beyond its current settler colonial context, as linguistic oppression and the creation of hegemonic imaginaries, to reinforce stereotypes and narratives, is seen throughout the world.

The Language of Conquest

When analysing the histories and continued atrocities inflicted on Indigenous People and their environment through the establishment of settler colonial states, the physical violence of these acts is often what commands the focus. This includes historical violence through imperial warfare and the continuation of this in modern day, through the toxic landscapes of extractive industries. Yet, settler colonialism is a process that begins with often quieter forms of violence, including linguistic, perceptual, cultural and social. The systematic violence of settler states did not begin with physical violence; the enactment of material destruction is the result of linguistic degradation, which led to a perceptual alteration of how people viewed Indigenous communities and their environments. Western legal and philosophical tradition enforced a severing of sacred bonds between Peoples and their land, cutting through Indigenous ontologies of 'Place-Thought' (Watts, 2013) and thus creating an immense ontological divide between Indigenous and settler realities.

Settler colonialism is a process of domination and violence where Indigenous Peoples of a colonised region are displaced by settlers who establish and nurture new versions of the European motherland (Spitzer & Selle, 2020, p. 7). This form of colonialism is differentiated by its permanence; it is a process where settler colonizers come to stay (Wolfe, 2006, p. 388),

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and it is the longevity of this displacement that disrupts human relationships with the environment (Whyte, 2018, p. 125). The establishment of settler-colonial states did not occur instantaneously or accidentally; instead, doctrines, concepts, and the deployment of specific language were used as weapons themselves, used to justify, encourage, and continue the expansion of colonialism.

This conceptual paper builds on existing theories that have established a two-step process in the creation of settler states. First, a perceptual change is enforced, which leads to moral justification; second, there is the reification of material destruction. This paper does not develop a new theory; instead, through connecting settler colonial and socio-linguistic schools of thought, it identifies an antecedent stage that precedes the existing two-step process by which settler-colonial states are established. This paper articulates a sequential three-step process that situates the foundational role of linguistic weaponisation as the catalyst for the necessary alteration of social perceptions required to morally justify the physical destruction of environments and the forced displacement of Indigenous communities. Through exploring quieter forms of violence, perceptual, linguistic and social, this paper will demonstrate how the colonial weaponisation of language was a foundational mechanism, a first step, in establishing settler states on Indigenous land. And indeed, in the continuation of global settler colonial states.

Outline of the Paper

To develop the three-step theory, this paper is structured systematically to first situate the author's positionality in accordance with Bagele Chilisa's research paradigms (2019). Establishing the research and the researcher's approach within a research paradigm is done to show the lens of enquiry used. Following this, the methodology and theoretical underpinnings of the paper are demonstrated to justify the research design. Once the foundational groundwork of the paper has been explained, the existing literature on the topic will be analysed, beginning with an introduction of language in a colonial context, and then in accordance with four themes developed by the author. These themes are: linguistic weaponisation against the land, the dual attack on Indigenous Peoples and their environment, language used against Indigenous People specifically and then the widely accepted two-step process of settler state creation will be questioned and critiqued. This has been designed in such a way to demonstrate that, whilst scholars have acknowledged that language has played a vital role within colonialism broadly, its specific role as a step in creating settler colonies has remained largely unidentified. Rather than detecting a gap in the existing literature, this paper has identified an integrative opportunity to bridge settler colonial frameworks and sociolinguistic theory to justify a preceding linguistic step in the establishment of settler states. From this, the potential academic implications will be discussed to identify the impact of this theoretical development. The paper will conclude by addressing the importance of this theory, exploring its cross-contextual potential and briefly discussing further research directions.

Author Positionality and Research Paradigm

I am a female, English researcher residing in Norway. I am a white, non-Indigenous academic who has spent five years researching environmental, political, and social issues stemming from past and present colonial actions that impact Indigenous communities worldwide. I firmly and respectfully recognise that I am an outsider to these issues and do not place myself in the category of those affected by the topics I am exploring. Instead, my passion and reason for doing research in this field stems from conversations I had with Metis Elders many years ago. My research is dedicated to providing clarity and a deeper understanding of how language can play a decisive role in the environmental and cultural destruction of Indigenous land and communities globally. My learning has been delivered by institutions with long colonial histories, in Norway, Canada and the United Kingdom.

To situate myself most accurately, I have evaluated my positionality in accordance with Bagele Chilisa's research paradigms. After extensive assessment, I have situated myself in the interpretive paradigm, the transformative paradigm and in the Indigenous research paradigm (Chilisa, 2019). Situating myself in this tri-paradigmatic stance, a position Chilisa has described as the 'dance' (2019) of research, is intentional and a form of dialectical pluralism (Johnson and Sterfurak, 2013) that acknowledges multiple ontologies. From this positioning, I can purposefully engage with the tensions existing between differing ways of knowing, which I believe is necessary to analyse this complex and social theme.

Theoretical Approach

This paper utilises an interdisciplinary approach, mirroring my own interdisciplinary background in comparative literature, Indigenous governance and public policy. The theories used include environmental theory, critical discourse analysis, and critical geography, which is grounded in Indigenous ontologies and settler colonial critique. These theories are used in parallel to expose how weaponising language has allowed states to both devalue and dispossess Indigenous land and People simultaneously.

Methodology and Scope of Inquiry

This paper is a qualitative theoretical analysis that has a critical conceptual design. Through investigations and an extensive literature review, this paper examines two existing notions: the widely accepted two-step process of creating settler states, and the second is sociolinguistic theories of language as a weapon. The conceptual research design was required as this paper builds upon an existing theory, as opposed to empirical data or testing. This paper questions and explores the foundational logic of how settler colonial structures are socially justified and physically actualised.

Through purposeful sampling of existing literature, the identified core theoretical texts include Wolfe (2006), Voyles (2015) and Hurley (2020, 2022). The work of many other scholars has been utilised and is explored in the literature review. The core theoretical texts of settler colonialism have unintentionally focused on a North American and Pacific context, and although this theoretical paper does not focus on a specific geographical region, this can lead

to a specific geographical orientation of the argument. In terms of sociolinguistic literature, I have explored literature that refers to toponymic violence and linguistic relativity. Although this paper is not comparative in its methodological design, it has drawn from multiple theories to inform the development of a multi-step process in the establishment of settler states. Furthermore, this paper has not adhered to the Western research technique of finding a gap in the literature review, as this approach mirrors the colonial act of spatial expansion, suggesting that an 'emptiness' within the existing literature must be claimed and constructed through a Western approach (Tynan and Bishop, 2023). This has aligned the methodological design to the Indigenous research paradigm that the author has situated themselves in (Chilisa, 2019).

The analytical approach to developing the three-step process of establishing settler states was purposeful. In previous research, I had explored the role of specific concepts, such as 'Wasteland' and 'Sacrifice Zones' in terms of extractive colonisation. Through another research project on settler colonisation, I began to question why language was not included in the stipulated creation process of settler states. I felt that there was a lack of connection in identifying the role of linguistic weaponisation in settler colonial contexts. Thus, this resulted in me integrating linguistic weaponisation into Wolfe's two-step theory of settler states.

Literature Review

This literature review investigates the work of scholars who have addressed the role of language in a colonial context, specifically the colonial weaponisation of linguistics. First, this section shall explore how doctrines, such as *ferae bestiae*, are deployed to devalue Indigenous environments and ecological systems, identifying the scholarly debates around spatial designations. I will then go on to identify how language is used as a dual attack on Peoples and their environments, to purposefully alter the perception of said People and their environments. There will then be a review of literature discussing the impact of colonial language on people, specifically, focused on the 'savage' descriptor. The literature review will end with an investigation into the two-step process of creating settler colonial states. I will end with a conclusion on these investigations that highlights why I am adding a third step to the process of creating settler states.

Language as a Weapon in a Colonial Context

Language has been used as a weapon since the dawn of colonisation; there is a basic importance to the phenomenon of language, the use of which by colonisers matters an incredible amount, and its role in shaping a perception of otherness is implicit (Fanon, 1952/1982, p. 17). This socio-political observation is supported in modern cognitive linguistics, a school of thought arguing that our use of language forms a framework that shapes our ways of thinking as well as our epistemologies and ontologies (Whorf, 1956; Echterhoff, 2012). Through linguistically encoded biases, the coloniser can justify the division of their world into absolute good, the coloniser, and absolute evil, the Indigenous Peoples, an assertion also termed the 'Manichean' divide, where colonial invasions are portrayed as a righteous mission to further society as opposed to a colonial attack (Fanon, 1952/1982). Indeed, linguistic selections are a conscious decision that are used to convey collective cultural ideologies which can consequently reveal deep-rooted in-group biases and racialised

stereotypes (Collins & Christianson, 2024; Collins & Clément, 2012). Settler states are reliant upon linguistically sustained fictions, fictional imaginaries (Whyte, 2018, p. 136), such as the paradigm of the ‘industrious cultivator’ (Locke, 1689/1988), to establish Eurocentric cultural legitimacy that is purposefully contrasted with Indigenous collective continuance - a society’s capacity to self-determine (Whyte, 2018, p. 136). Thus, through the linguistic transformation of an environment, Indigenous places, land enriched with history and deep culture, are consequently transformed into colonial spaces, geographical areas void of any historical, spiritual, and cultural significance to the occupier (Briggs, 2017, p. 52).

Linguistic Weaponisation Against Environments

Ecological linguistic weaponisation is a colonial tool that operates through legal and philosophical vocabularies to structure colonial dispossession of Indigenous lands as a reasonable and just act (Herrera, 2025; Murray, 2022; Nichols, 2020; Otman & Shalhoub-Kevorkian, 2025; Trasowech, 2024). This linguistic weaponisation is a factor in the inaction of ‘slow violence,’ a form of violence that occurs gradually and often out of sight, where violence is a delayed destruction of an environment, spread across time and space (Nixon, 2011).

This is exemplified through the inter-imperial application of the Roman Law Doctrine, *ferae bestiae* (wild beasts), which was deployed in juxtaposing ways by Spanish and English empires, representative of the difference in legal language used by different colonisers (Benton & Straumann, 2010; Seed, 1995). This distinction highlights the axiological differences within Spanish and English imperial applications of natural law traditions. For English imperial structures heavily shaped by John Locke’s natural law tradition, the Doctrine of *Ferae Bestiae* stipulated that wild beasts and land were considered *res nullius*, nobody’s property (Fitzmaurice, 2007, p. 6) as they had not been tamed or utilised. This reframed land ownership as something wholly dependent upon Eurocentric definitions of cultivation and labour (Locke, 1689/1988). This perspective was reinforced by Lockean theory: as Indigenous communities had not ‘turned trees into chairs,’ English colonisers deemed that they had not sufficiently altered the land to establish ownership (Gentili, 1612/1933; de Tocqueville, 1835/2000) which consequently ‘justified’ the coloniser’s position as the rightful first takers (Fitzmaurice, 2007, p. 8). This linguistic framework is reminiscent of the later secular theology of Manifest Destiny, where geographic expansion is framed as a natural right and as a righteous mission (Stephanson, 1995).

Opposingly, grounded in Thomistic natural law, the theologians of Salamanca, famously de Vitoria, applied the concept of *Ferae Bestiae* to argue that the Spanish conquests were unjust as it was clear that the ‘barbarians possessed true public and private domain’ (de Vitoria, 1539/1991; Fitzmaurice, 2007, p. 6). For the School of Salamanca, a lack of Christianity and differing governing systems did not justify the linguistic or physical dispossession of Indigenous Peoples from their land – a philosophical position that laid early foundations for Indigenous sovereignty in international law (Vitoria, 1539/1991; Tierney, 1997).

Although there are strategic differences between the Spanish and English methods of valuing land through this doctrine, differences in axiological approach are far more evident between the colonial axiology of property and Indigenous axiology of relationality (Watts, 2013). Colonial perspectives try to establish troubling relationships with environments, deeming them as completely indecipherable to the rational mind, whereas Indigenous Peoples seek to establish holistic and respectful relationships with the land and accept that nature will always possess unfathomable mysteries (Kawagley, 1998, p. 4; Whyte, 2018, p. 136). Indeed, 'Place Thought' extends this axiological argument through its refusal to separate human thoughts and land; instead, the land is alive and conscious, and human thoughts and agency are merely extensions of the land (Watts, 2013), thus highlighting the chasm between Indigenous and Western ontologies further.

A Dual Attack on an Environment and Its People

While historical legal doctrines used concepts such as *terra nullius* and *ferae bestiae* to categorise environments, modern-day scholarship addresses the parallel designation of an environment and its Peoples. Socio-ecological labels, such as 'sacrifice zones' and 'wastelands,' are inherently a dual attack: enforced onto an environment and its Peoples to reduce Indigenous cosmologies and human worth down to 'waste' so that their physical removal or toxic poisoning causes no moral outrage within the settler public (Adamson, 2001; Bullard, 2011; Lerner, 2010).

A 'sacrifice zone' is defined not solely by toxic pollution, but also through a colonial syntax which ensures the perception of the residing community is also explicitly expendable (Bullard, 2011; Lerner, 2010). There is a parallel linguistic construction of an environment as a 'wasteland' or a 'sacrifice zone' that necessitates a simultaneous rhetorical reduction of those inhabiting the land. As I have noted in previous work, the coloniser cannot construct an ecosystem as destructible without first assigning this label to its caretakers, as being politically, culturally or racially inferior (Hall, 2024).

There are two opposing scholarly perspectives on the use of the concepts 'sacrifice zones' and 'wastelands' in this context. One, held by many scholars and Indigenous activists, views the terms as linguistic tools of resistance against colonialism that are an integral part of political activism (Skorstad, 2023; Hollifield and Day, 2017). Furthermore, these two concepts purport to emphasise the unjust transformation of land (Berger et al., 1990) and the moral cost of exploitative decisions (Endres, 2009). In addition, using the concepts can lead to a wider understanding of economic and political power (Fox, 1999) and can problematise loss by disrupting imaginaries portraying these environmental and socially destructive acts as frictionless (Reinert, 2018).

On the other hand, a critical caution in contemporary criticism warns against the unreflected use of the 'sacrifice zone' and 'wasteland' concepts, as scholars explain that the use of these labels can lead to the direct reification of these descriptors (Voyles, 2015; Endres, 2009, p. 930; de Souza, 2020). Furthermore, these concepts are used to highlight the transformation of a sacred space into a 'wasteland' (LaDuke, 1999), an uninhabitable area (Di Palma, 2014, p. 18); they are labels that are used by those who are responsible for the

environmental destruction (Lee, 2022). Using the concepts of ‘wasteland’ and ‘sacrifice zones’ to describe an environment renders it impossible to separate this bureaucratic syntax from those living there; this labelling designates the inhabitants as targets for racial degradation (Voyles, 2015); the people are viewed through a lens of depreciation (Pulido, 2000). It is through linguistic weaponisation, the colonially enforced assertion of labels, that a causal relationship is created: through narrating the land as a ‘wasteland’, it becomes a ‘wasteland’ as people accept the narrative as reality and act upon it (Gross, 2019, p. 94).

Linguistic Degradation of People

Whilst the previous section explored the dual attack on Peoples and their environment through the same concepts and labels, this section will discuss the existing literature analysing the linguistic attacks on Indigenous Peoples specifically through the concept of the ‘savage.’ The impact of this labelling is twofold: first is the denigration resulting from this designation, and second is this label's role in highlighting the presupposed fragility of Indigenous cultures (Behlmer, 2018). However, the concept itself has been critiqued by scholars as being vague and ambiguous (Behlmer, 2018; Denning, 1988). It has been viewed as a hydra of a word by scholars, due to its use as a noun gesturing towards early anthropology, signifying a preliterate culture and a condemnatory adjective meaning bestial (Sinclair, 1977). Whilst I can acknowledge its vagueness in certain contexts, I do believe that the settler colonial use of this word was intentional. This concept is a colonial weapon, used to portray Indigenous communities as both preliterate and less-than settler colonisers, as well as being used to reinforce the notion of Indigenous People as ‘other’ and as uncivilised.

The word ‘savage’ is a fluid linguistic tool, bendable, for different imperial expansions (Butler & Palmer, 2018), just as environmental law doctrines were interpreted opposingly (Seed, 1995). The depictions of ‘savages’ in the Pacific varied enormously depending upon the aims of the European intruders, meaning that the descriptions and portrayals of Pacific Islanders themselves were flexible (Butler & Palmer, 2018). Irrespective of differing empires and their specific goals, ‘savage talk’ was used universally to portray Indigenous communities as naturally temporary (2018), a colonially enforced fiction. This fictional imaginary (Whyte, 2018, p. 136) continually reinforced suppositions about Indigenous People, and through linguistically engineered attacks, colonial settlements and the destruction of Indigenous Peoples as inevitable and natural (O’Brien, 2010, xiii; McGregor, 1997). By framing Indigenous Peoples as ‘savages,’ imperial discourse effortlessly created the ‘doomed race’ theory: a fatalistic logic that asserts Indigenous communities were destined to disappear when touched by Western civilisation (Brantlinger, 2003).

The Two-Step Process of Establishing Settler Colonial States

It is widely acknowledged in scholarship that there are two steps in the process of creating settler colonial states (Voyles, 2015; Spitzer, 2019; Wolfe, 2006). A ‘logic of elimination’ has been developed, stipulating that settler colonialism is inherently driven to destroy, to insert itself and replace what was already in existence (Wolfe, 2006). Within this structural imperative, a ‘one-two punch’ has been conceptualised: first is the dissolution of Indigenous

sovereignty and the second is the consequent installation of settler states; this dual mechanism achieves the ultimate colonial goal of supplanting Indigenous jurisdictions with new, permanent versions of the motherland (Wolfe, 2006). This logic includes the elimination of Indigenous voting rights by settlers, done to attack Indigenous polities at their democratic foundations by accusing Indigenous Peoples of pursuing collective self-determination as racially discriminating against the liberalist individual voting rights of settlers (Spitzer, 2019). And whilst contemporary scholarship applies this two-step framework when mapping the geographical realities of settler state establishment, it has been argued that an over-reliance on this theory risks viewing elimination as structurally inevitable (Snelgrove et al., 2014). Through the lens of nuclear imperialism, the role of settler administrative networks is that of active ‘elimination infrastructures’ (Hurley & Insko, 2021) that enforce a state of ‘radical futurelessness’ on Indigenous populations (Hurley, 2020). This is done through the literal nuclear contamination of sovereign ecosystems to secure ocean and land spaces for permanent settler expansion (Hurley, 2022).

From the scholarship analysed in this literature review, a few things are clear. First, the manipulation of language as a colonial tool is an acknowledged and critiqued tactic. It is used to attack both an environment and its Peoples, and the perceptual consequences are vast and incredibly damaging. Second, scholars widely agree that there is a two-step process required to establish settler states in Indigenous environments. The following section of this paper shall go on to explore the hypothesis in detail, articulating the argument that there is, in fact, a minimum of three steps in this process.

The Three-Step Settler Colonial Framework: Introduction to the Framework

As explored in the previous section, many scholars have shown that language has an instrumental role within colonial structures: portraying environments and communities as destructible creates a logic that naturalises the reification of these descriptors. Furthermore, scholars have also shown that the creation of settler states is dependent upon two-steps: a perceptual shift and a consequent material destruction. These theories are very clearly laid out by scholars from across the globe, writing on different empires and geographical contexts.

Whilst the research on this is extensive, certainly far more extensive than this literature review has been able to capture, what I have not come across is an academic work that connects these two theories. I have not located a publication that introduces the role of language into the two-step process of settler state establishment, as an additional step, a prerequisite of the prior two steps. The conducted literature review has exposed an opportunity to connect the two theories of settler colonialism and sociolinguistics to demonstrate the logic of inserting an additional step into the current theories.

Indeed, this section does not suggest the development of an entirely new theory, as there is significant value in the existing ones. This section will show that the physical dissolution of Indigenous sovereignty and insertion of settler states is reliant upon a perceptual change in how Indigenous lands and people are viewed, and that this crucial step is done through the colonial weaponisation of language.

Step One: Linguistic Weaponisation

The colonial use of language as a tool is vast and varied, with different imperial powers using this weapon in a multitude of ways. Under exploitative colonialism, the enforcement of the colonists' language onto the Indigenous population was a deliberate tool of power, supremacy and economic subjugation that reshaped the consciousness of the population to view their utility through the lens of the coloniser's social structure and language (Fandiño-Parra, 2021). Further, in Algeria, France implemented a policy of extreme cultural assimilation as their language was portrayed as the epitome of civilisation and intelligence. This created a psychological paradox whereby the colonised people were conditioned to believe that a mastery of French would render them more human (Fanon, 1952/1986). In the context of Canadian settler colonialism, through the Canadian Indian Residential School (IRS) system, Indigenous languages were systematically suppressed to achieve total cultural erasure (Chief Moon-Riley et al., 2019). Linguistic erasure served as a tool for social control and the severing of intergenerational ties, a form of state-enforced trauma that continues to impact descendants today (Bombay et al., 2014).

Linguistic weaponisation is the process by which words, concepts, discourse and language in any form have been or are being used to inflict harm on others; it is a systematic process used by dominant groups to marginalise minority communities (Herrera & Bryan, 2022). It is the intentional manipulation of language as a 'loaded weapon' that is used by those in power to distort reality, control social behaviour and shape perceptions to their own agenda (Bolinger, 1980). As explored in the literature review, the weaponisation of language was a parallel attack on Indigenous Peoples and their environment. Settlers systematically portrayed Indigenous communities as 'savages', which constructed a racialised civilisational hierarchy of degrees of humanity (Leigh, 2023), thus depicting Indigenous Peoples as other. This 'savage' depiction was built into the 'wilderness' ideology, a fiction of colonial invention that held that for a landscape to be perceived as a 'wilderness'; it had to be separated from its Indigenous inhabitants (Cronon, 1995). The use of the concepts 'wilderness,' 'wild,' and 'untouched' was a discursive tool to remove Indigenous People from their ancestral land, so settlers could claim ownership of the land (Cronon, 1995). Parallel othering of land and bodies enforced the rhetorical frameworks of emptiness and chaos, exposing the colonial reliance on this dual strategy to reduce both to a 'passive background' (Plumwood, 2002).

The systematic linguistic 'othering' and semantic erasure of Indigenous lands and bodies catalysed the creation of a causal system: once people and environments had been labelled as such, the narrated reality transformed into the accepted reality, consequently informing societal perceptions and actions (Gross, 2019, p. 94). The holistic and ethical relationship between Indigenous Peoples and their land was purposefully redefined by the colonisers' possessive logic. Through the reduction of both bodies and land as something to be owned and categorised, the coloniser manipulates and removes the sacred connection (Moreton-Robinson, 2015). Colonial construction has placed people and the land into the same destructible category (Tuck & Yang, 2012).

The reductionist dichotomy, formed from colonial linguistic weaponisation, serves as the first step in the three-step process of settler colonial establishment. This reality, shaped by discursive weaponisation, created a rhetorical foundation that dictates the way in which the settler-colonial community perceives Indigenous environments and People (Veracini, 2010). The parallel othering of Peoples and environments created the conditions required for the perceptive reality necessitated to establish settler colonial states.

Step Two: Perceptual Degradation

The second stage of settler colonial establishment is the perceptual stage. It is throughout this stage that Indigenous environments and bodies are understood as destructible and replaceable, due to the linguistic framing of them as such in the previous step. This is a crucial part of the process, as prior to physical destruction occurring, there must be an accepted perception of Indigenous bodies and environments as pollutable and destructible. The colonial linguistic framework directly shapes the societal understanding of Indigenous communities and environments and thus 'justifies' the physical destruction of land and the erasure of native sovereignty.

In the second step of settler state establishment, the parallel attack on Indigenous Peoples and their environments is continued, and this form of attack has theological origins. British colonial views on environmental use were shaped by Lockean natural law, which defined land ownership through a Eurocentric lens of cultivation and labour (Locke, 1689/1988). As Indigenous communities were stewards as opposed to cultivators of the land, for British colonisers, they had no claim to ownership (Gentili, 1612/1933; de Tocqueville, 1835/2000), thus justifying the insertion of British colonisers as the rightful first takers (Fitzmaurice, 2007). Furthermore, Winstanley, the leader of a radical farming group in 1649, suggests that the cultivation of the 'wastelands' of England is a chance for spiritual redemption whereby immoral societal structures can be healed when the 'wast Land is fruitful' (Winstanley, 1649; Hall, 2024, p. 25). The exact identity of the 'wasteland' within a biblical context develops drastically, once a place that acts as a moral testing ground for humanity, becomes a place that represents humanities immorality (Hall, 2024, p. 27), a land wasted as a form of punishment for immoral actions (di Palma, 2014, p. 18). Thus, when coloniser place the 'wasteland' label onto Indigenous land they are not just describing an environment but they are asserting a historical system of moral punishment onto the People and and environment.

The theological perceptual portrayal of Indigenous Peoples mirrors the demeaning descriptions of environments. Throughout early settler colonial discourse, Old Testament covenant theology situated settler-colonisers as the rightful inhabitants while Indigenous Peoples were linguistically portrayed through biblical allegories of the 'Canaanite' or the 'heathen in the wilderness', which biblically entrenched them as displaceable (Akenson, 1992). Indigenous People were not depicted as the stewards of the land that they were, and instead, this holistic relationship was used as a perceptual weapon: because they had not cultivated the land, they were moral extensions of the wasteland and thus placed into a singular category of spiritual decay (Merchant, 2003), mirroring the linguistic framing in the previous stage.

The philosophical portrayal of Indigenous Peoples and environments has continued in modern-day discourse, shaped by its biblical history (Brown, 2003; Kapfhammer, 2012), as Christian settlers viewed their insertion on Indigenous land as a moral imperative. Thus, the settler colonial portrayal of Indigenous Peoples and environments as firmly separate from their own society is done to justify their consequent eradication and destruction. This process, within settler colonial contexts, is termed 'wastelanding.' First is the assumption that nonwhite lands and bodies are valueless, or only valued because of their resource potential, and second is the subsequent devastation of those environments and people by polluting industries (Voyles, 2015, p. 10). The causal relationship between linguistic weaponisation and a consequent perceptual shift is evident here. The next section will go on to explore the third subsequent stage of settler state establishment, that is, the physical manifestation of the linguistic and perceptual stages, where material destruction of environments and peoples occurs.

Step Three: Material Destruction

The third step of establishing settler states is the parallel displacement of Indigenous people and the physical, violent transformation of Indigenous places, rich in culture and history, into colonial spaces (Briggs, 2017). It is within this physical stage that the prior linguistic weaponisation and perceptual degradation actualise as forced displacement, legal erasure and destructive environmental transformation. This stage is the result of a systematic and purposeful attack by settlers who have deployed language to shape the societal perception of Indigenous communities and their land, which demonstrates how conceptualised space can be violently translated into a lived spatial reality (Lefebvre, 1991). As with the two previous stages, this phase is also a dual attack on Peoples and their land, attacking the legal and cultural sovereignty of communities alongside a destruction of the environment. The justification required to enact this phase is entirely dependent upon the prior two stages; this is a consequential process, thus proving that imaginative geographies precede and reify physical conquests (Said, 1978).

There are a multitude of ways in which both environmental destruction and the forced displacement of communities are enacted. One of these, separated by its permanence both for people and the environment itself, is nuclear settler colonialism, as this type of environmental violence can long outlive the presence of human settlers and their forms of government (Hurley, 2022, p. 972). This is defined as 'territorialisation of Indigenous space into property by nuclear testing within militarised settler epistemologies of productive use, and the permanent occupation of that space through irradiation' (Hurley, 2022, p. 972). This specific form of environmental destruction exemplifies the transition from asserting a label onto an environment and the reification of this descriptor.

The parallel attack on Indigenous Peoples can also be executed through varying means, and one of these is through political and legal erasure. Historically, foundational legal Doctrines, such as the Doctrine of *Terra Nullius* and the Doctrine of *Ferae Bestiae*, were used to remove and attack collective Indigenous self-determination. Settler states have continued

legal attacks on Indigenous legal and democratic sovereignty. However, enshrined as a core principle of international law is self-determination, which is protected by legal instruments such as the United Nations Declaration on the Rights of Indigenous Peoples (2007, Articles 3-4). Whilst this is a protected right, self-determination does not necessarily synonymise with secession (Dahl, 2012). Settler states such as Norway and Canada have asserted that Indigenous Peoples have localised forms of autonomy, but these are extremely constrained (Ravna & Bankes, 2017). Contested frontiers, geographical zones of transition where the sovereignty or cultural authority are actively disputed, lie directly between the Indigenous collective notion of self-determination and the individual liberalism of settler colonisation (Spitzer, 2022). The dichotomy of opposing political philosophies is a material barrier that fractures Indigenous forms of collective governance, legal systems and cultural sovereignty.

The existence of a three-step process in the establishment of settler states has been asserted in this section. Linguistic weaponisation is used as a tool to shape the perception of Indigenous Peoples and environments, which consequently leads to the justification of material destruction of these lands and communities. This is a sequential process. Throughout the three steps, there is a coordinated dual attack on community sovereignty and the environment. Having established the three-step process, this paper will go on to investigate the potential academic implications of this.

Discussion and Academic Implications

The theoretical contribution of this paper is seen through bridging the theories of linguistic scholarship, settler colonialism and legal and environmental scholarship. Although existing work does explore the role of language in shaping perceptions of people and environment, academic discourse has treated these two schools as isolated silos. This paper has established an intertwined and causal relationship developed by drawing from these two schools of thought in the context of creating settler states. This identification highlights the pivotal role of language in the establishment of the settler onto Indigenous land.

Although this paper has not been methodologically structured as a comparison, it has highlighted the value of approaching academic silos collectively. By including approaches from multiple colonial powers and through different geographical contexts, the impact of a universal colonial syntax has been established. By breaking down these isolated academic silos, this paper has identified linguistic weaponisation as a catalyst for settler establishment. Whilst the development of the three-step process has been conducted primarily in a North American and Pacific context, certainly through a settler colonial context, I argue that this theory can be applied broadly to other geographies and contexts.

The role of linguistic weaponisation in furthering the destruction of people and environments broadly extends far beyond what has been explored in this paper. For example, the cartographic labels of the 'East' and the 'West' do not exist in nature; they are artificial, cartographic imaginaries that define the world through a Eurocentric lens (Said, 1978). These labels are used to define lands legally and rhetorically for imperial purposes (Harley, 1989). In future research, I would explore the role of counter-mapping strategies in dismantling colonial cartographic violence, mirroring a similar exploration into quieter forms of resilience

that my previous work has explored through a poetical lens (Hall, 2024). I would also like to investigate the processes of ecological reclamation in colonially deemed ‘sacrifice zones’ and ‘wastelands’ and the rebuilding of Indigenous relations to the land.

The argument for including a prior step in the process of settler establishment does not limit the possibility that there are more. Instead, it is quite the opposite. There are undoubtedly more steps, and in future research, I would address this by exploring critical cartography, political ecology, Indigenous legal studies and restorative justice synergistically. I would continue to question the process with a specific focus on what happens after the establishment of settler states, indeed, what happens when these settlers leave?

From this, a theoretical paradox is evident: does the material phase of settler colonialism transform Indigenous diasporic nations into unwilling settlers themselves? The diaspora of Indigenous nations is weaponised, and the ‘arrivants’ are forced to facilitate the continued occupation of Indigenous lands (Byrd, 2011), which can permanently disrupt Indigenous solidarity and enforce land dispossession (Mamdani, 2020). The enforced facilitation of Indigenous diasporic nations to continue the cycle of settler displacement could be theorised as a fourth step, as an extension of the three-step process developed in this paper. It is this paradox and its role in continuing settler state violence that will be explored in further work.

Conclusion and Future Directions

This paper has shown that the establishment of settler states, the physical transformation of Indigenous land into colonies and the forced displacement of Indigenous Peoples are enacted through a three-step process. This sequential process begins with a linguistic attack as language is weaponised by colonial powers. The impact of which is a perceptual designation that ‘others’ Indigenous environments and bodies. Once the ‘othering’ has been accepted as reality by settler communities, there is a consequent reification of these views as Indigenous environments are destroyed and People are displaced to make way for the establishment of settler colonial states. Early colonial architects used language to linguistically empty land as well as enforcing a fictional portrayal of Indigenous communities as intellectually, socially and culturally less than their colonisers. The use of language to forcefully create colonial imaginaries altered the minds of the settler community, leading to an acceptance of these environments and people as destructible. This perceptual shift directly materialised into violence as Indigenous environments were stolen and recreated through destruction for the settlers, and Indigenous communities were forcefully removed from their ancestral land and morphed into diasporic nations.

In adding a prior linguistic step to the existing scholarly theory of a two-step process in establishing settler states, this paper has articulated the need to acknowledge the foundational role that language has had in creating settler states. Linguistic weaponisation is an essential tool for settlers as their power is asserted through the continual degradation and ‘othering’ of peoples and land. By establishing this trajectory, this paper has shown that settler colonialism is a self-perpetuating system. One that is not necessarily limited to these three articulated steps.

To continue this research, there will be a thematic and contextual broadening. The first of which is a focus on the consequential paradox created by settlers, forcing Indigenous communities into an involuntary form of settlers themselves. This will be explored as a potential fourth step of the process; albeit occurring after the establishment of settlements, it is nonetheless a direct consequence of the process. Furthermore, I would like to extend this research outside of a settler colonial context, highlighting the role of linguistic weaponisation in modern-day political speeches and portrayals of minorities, immigrants and other social groups.

In essence, language has a long history, one still in existence, of being used as a weapon to oppress environments, people and cultures. It is a form of control that reduces people and land to the fictional imaginaries of the hegemons. Conversely, language has a wealth of positive value; it is used as a form of resilience, strength and celebration, and these forms of linguistic use champion and consistently battle against their linguistic counterpart. Would it not be more valuable to focus on how language strengthens marginalised and minority resilience rather than on how it continues to denigrate?

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THE NORPAK REVIEW

Cat's Cradle as a Relational Framework in Mapping Traditional Knowledge:
Herders of Kazakhstan, Farmers of the Italian South, and Tribal Communities of the US Gulf Coast

Research Article

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Cat's Cradle as a Relational Framework in Mapping Traditional Knowledge: Herders of Kazakhstan, Farmers of the Italian South, and Tribal Communities of the US Gulf Coast

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Abstract

Traditional Knowledge (TK) encompassing Traditional Ecological Knowledge (TEK) and Local Ecological Knowledge (LEK) is alive, adaptive, and relational. It is a continuously generated reciprocal relationship with the communities and more-than-human worlds. This article examines three geographically distinct cases – nomadic herders of Kazakhstan, peasant farmers of the Italian South, and tribal communities in the U.S. Gulf Coast, through frameworks of relationality, which integrate relational research and critical attention to disciplinary boundaries. Drawing on Haraway's cat's cradle as both metaphor and method, the article argues that TK systems are shaped by historically entangled epistemologies that resist binary frameworks opposing Western and Indigenous, modern and traditional, global and local knowledge. Through comparative analysis, the article traces a recurring pattern: dominant narratives, including the barbaric nomad, the backward peasant, and the vanishing Indian, have systematically delegitimized 'subaltern' TK as a mechanism of dispossession, yet all three communities maintained the relational logic of their knowledge systems. Resilience, the article argues, is not the preservation of knowledge intact but the maintenance of the reciprocal relationships through which knowledge is continuously regenerated.

Cat's Cradle as a Relational Framework in Mapping Traditional Knowledge

Traditional knowledge is not a relic. It is not a romantic remnant of pre-modern life waiting to be catalogued, preserved in amber, or redeemed by Western science. It is alive, adaptive, and deeply entangled with the places, bodies, seasons, and relationships through which it is continually made and remade. This article begins from that premise and builds outward from it, arguing that Local Ecological Knowledge (LEK) and Traditional Ecological Knowledge

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†Arina Melkozernova holds a PhD in Comparative Culture and Language from Arizona State University. Her research ethics lean on the community participatory principles evolving from the interdisciplinary research fields. Arina collaborates with communities to restore their "place-embodied" narrative through mapping their traditional knowledges and community memories. Her multidisciplinary background in art, science, indigenous studies, digital humanities, educational technology, and instructional design contributes to building new research pathways within academia with criteria for inclusivity, data sovereignty, and epistemological flexibility. Arina is the recipient of the [2021 Future Steward Excellence Award](#) for her work in partnership with several Indigenous communities.

(TEK) referred to here collectively as Traditional Knowledge (TK), can only be understood through frameworks that honor their dynamic, relational, and non-linear character.

We examine TK systems maintained by communities and the stories of reciprocal relationships between humans and non-humans across three sites: rural Kazakhstan, the Italian South (Cilento region), and tribal communities in the U.S. Gulf Coast (MOWA Choctaw Tribal Band of Indians, Alabama). These cases are not presented as parallel illustrations of a single thesis. Rather, they are held together as a cat's cradle holds its strings in a configuration that reveals patterns without demanding uniformity. The Navajo version of the cat's cradle game, called *na'atl'o'*, is one of Haraway's central figures for thinking about multispecies entanglement and co-production of knowledge by playing string figures with companion species for cultivating multispecies response-ability" (Haraway, 2016, p. 10). We borrow this figure merely not as a metaphor but as a method – a way of tracing the connective tensions between knowledge systems without flattening them into sameness.

The distinction between LEK and TEK is meaningful and merits attention. TEK, as defined by Berkes (2008), refers to "a cumulative body of knowledge, practice, and belief, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment" (p. 3). It is associated primarily, though not exclusively, with Indigenous peoples and carries with it the weight of colonial erasure, ongoing sovereignty struggles, and epistemic violence. LEK, by contrast, has been applied more broadly to include non-Indigenous rural and farming communities whose intimate, place-based, intergenerational knowledge of local ecosystems similarly resists reduction to technical data (Albuquerque et al., 2024; Berkes et al., 2000). Both terms have been contested, appropriated, and misapplied. What they share — and what this article tracks — is a commitment to relationality: to knowledge generated through ongoing, embodied, reciprocal interaction with human and more-than-human worlds.

This article adopts two complementary theoretical frameworks: interdisciplinary relational research and spatial relationality. Relational research, as developed through feminist science studies and more-than-human geographies, attends to the co-constitutive nature of knowers and known, foregrounding entanglement over extraction (Haraway, 1988; Tuck & McKenzie, 2015). Interdisciplinarity is based on diverse scholarly approaches including indigenous ecology, ecofeminism, biosemiotics, applied history, and environmental humanities. Relationality, drawing from feminist geographers and scholars of place-based knowledge, resist the impulse to map knowledge as fixed territory and instead trace the living, contested, and shifting landscapes through which knowledge moves (Braidotti, 2011; Tsing, 2000). Together, these frameworks allow us to sit with the messiness that TK systems actually exhibit — messiness that Western science and colonial and modernist epistemologies have long tried to domesticate or dismiss.

One of the persistent errors in TK scholarship has been what Nygren (1999) identified as the twin traps of treating local knowledge either as "a scapegoat for underdevelopment or as a panacea for sustainability" (p. 268). Both moves otherize communities and reproduce the

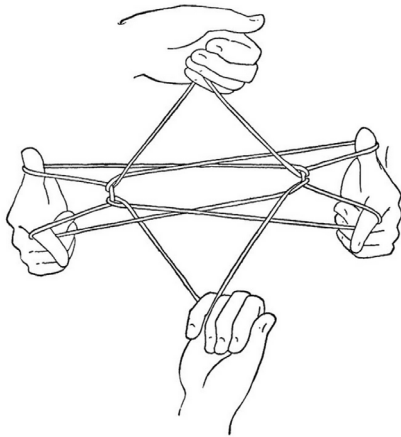
binary logic of Western/traditional, modern/archaic, global/local that this article actively resists. Following Tsing (2000) and Braidotti (2011), we insist that these binaries are historically constructed through colonial hierarchies and continue to distort our understanding of how knowledge actually works. Knowledge is not a possession; it is, as Barad (2007) argues, part of "the ongoing materialization of the world" (cited in Peach, 2024, p. 9). It changes. It is transmitted but also transformed through migration, sedentarization, disaster, resistance, and creativity.

The article proceeds as follows. We first outline the Relational Framework that guides our analysis, centering Haraway's cat's cradle as both figure and methodology. We then move through our cases: the more-than-human relationality embedded in Kazakh nomadic knowledge; the relational foodways of Cilento farmers in southern Italy; the land-based knowledge practices of the MOWA Choctaw tribal community in Alabama. In each case, we attend to the function of storytelling and embodied practice in transmission, and the ways communities have mobilized TK as a strategy of resilience and reciprocity in the face of ecological and political precarity. We conclude by arguing that TK systems that include reciprocal relationships between humans and non-humans are future-making, not bound by the past, and act in the present as the backbone of community resilience by shaping the conditions of survival, sovereignty, and care.

Relational Frameworks

The Cat's Cradle game inspired us to interpret string figures as visualizations of embodied relationality. In 1906, Caroline Furness Jayne published a book, "String Figures: A Study of Cat's-Cradle in Many Lands", republished by Dover in 1962 as *String Figures and How to Make Them* (Figure 1). She described this game as "widespread among primitive people, and played by weaving on the hands a single loop of string in order to produce patterns to represent certain familiar objects." (p. v). Because this work was written in 1906, its characterization of Native peoples reflects the perspectives and language of its time; we are not aware of the author's own position or intent, nor do we intend to draw any criticism. Jayne aimed to share her fascination with 'Indian' games with young and old alike. In this article, we apply the Cat's Cradle gamer mindset both as a metaphor and a method for a particular way of thinking that persists in pattern recognition, strategic adaptive futures, and complex systems thinking, to explain our Relational Framework.

Figure 1. *A cat's cradle string figure*



Note. From *String Figures and How to Make Them* (p. 334), by C. F. Jayne, 1962, Dover Publications (original work published 1906 as *String Figures: A Study of Cat's-Cradle in Many Lands*). Public domain.

https://commons.wikimedia.org/wiki/File:String_Figures_and_How_to_Make_Them.djvu?page=377

In 1994, Donna Haraway published “A Game of Cat's Cradle: Science Studies, Feminist Theory, Cultural Studies,” in which she proposed the cat's cradle not as a metaphor but as an epistemological practice. The game is played between at least two pairs of hands, producing figures that are neither the creation of one player nor the other, but of the relationship between them, which refuses the logic of singular authorship and linear causality. “*Cat's cradle is...*” Haraway writes, “*a mathematical game about complex, collaborative practices for making and passing on culturally interesting patterns. Cat's cradle belongs to no one, to no 'one' culture or self, to no frozen subject or object*” (Haraway, 1994, p. 70). The Navajo version, *na'atl'o'*, is more complex; it is a cosmological performance, a teaching practice, and a mode of connection between generations and species, a way of thinking with the world rather than about it (Haraway, 2016). We adopt this figure as the methodological spine of this article because it does what our subject matter demands – it holds multiple threads in tension without resolving them into a single pattern, and it requires more than one set of hands.

The communities whose knowledge systems we analyze, Kazakh nomadic herders, Cilento farmers, and MOWA Choctaw land stewards, have each maintained or at least remembered ways of knowing that are deeply relational. They produce knowledge without separating the observer from the observed, the human from the non-human, or the past from the present. Their holistic knowledge emerges from sustained, reciprocal, embodied engagement with specific places and the more-than-human beings that inhabit them. The Relational Framework offers a way to study these systems without assuming that knowledge is universal, transferable, or produced by a detached rational subject assumptions that reproduce the very epistemological violence that has historically been used to delegitimize TK. This adds another layer of recognition for human-constructed patterns that can have real

consequences, harming cultural narratives and exploiting sacred beliefs. The Relational Framework enables the cat's cradle gamer mindset and insists on a different posture: one of entanglement, response-ability, and what Haraway calls "staying with the trouble" (2016).

Relationality and Traditional Knowledge in Research

In Indigenous cosmologies, relationality is a central principle of viewing the world. For example, in Cree, *wahkohtowin* translates as "we are all related" (Wilson, 2020), meaning not only individual, family, and community levels but also all other living beings - a "relational way of thinking, being, doing, and living at its center" (Wilson, 2020, p.59). Similarly, according to Cajete (2000, p. 41), "all relationships are related to other relationships," pointing to the interconnectedness inherent in Indigenous philosophies. Both Indigenous and Traditional Ecological Knowledge systems prioritize the enactment of relationships over the study of object-based studies (Tuck & McKenzie, 2015). TK shares many parallels with Indigenous principles of relationality through continuity defined by Burkhart as "a power in the land that creates knowledge through locality that arises in first-person experience in the act of 'seeing' through relational kinship" (Burkhart, 2019, p.119).

Relational research, as a methodological orientation, draws from feminist science studies, more-than-human geographies, and Indigenous research methodologies. Relational research also has practical implications for how we approach TK systems. Rather than extracting knowledge from communities as data to be analyzed elsewhere, relational research situates the researcher within the web of relationships that produce knowledge accountable to those relationships and changed by them (TallBear, 2014; Tuck & McKenzie, 2015). Frid described the proactive position of the conservation scientist in the Anthropocene that resonates with our position as researchers who follow principles of relational research. Frid (2019) writes:

Catastrophe can be our teacher, but it need not be the only one. Almost always, I stay away from dualistic perspectives. Good and evil. Heaven and hell. Us and them. I found these dichotomies limiting. I relate more to blurred edges, gradients, and non-liberalities that characterize many Indigenous worldviews, which differ only so much from how ecologists see the natural world. Yet Indigenous stories go deep into territories where ecologists cannot venture, invoking the spiritual and supernatural. As an empiricist, I interpret these as metaphor (p.149).

Frid's willingness to dwell in the blurred edges while holding empirical and relational ways of knowing in productive tension are models the epistemic posture this article adopts: not the detached observer who stands outside the web, but the responsive participant who recognizes that the knowledge produced is always shaped by the relationships through which it is sought. We play cat's cradles as well.

That posture is not ours alone; it is already at work in the knowledge systems we examine. Kaimuldinova and Abdimanapov (2014) note that in the Kazakh worldview, interaction with nature is structured not as subject-object but as "subject-subject" (p. 17). Our analysis of the stories of relational foodways among the MOWA Band of Choctaw Indians in Alabama, USA, and their long-term relationships with land demonstrates cultural resiliency and sustainable

land use. In each of these traditional lifestyles, relationality is not a philosophical add-on but the foundational logic through which knowledge is generated, transmitted, and renewed. The Cilento farmers' lifestyle linked to cycles of gardening seasons and their caring relationships with the surroundings demonstrate the connection between TK and traditional peasant knowledge preserved in their community.

The relational framework, which includes the whole system's approach to aligning research objectives with the complexity of the world and the diversity of worldviews (Alvarez, 2016; Salmón, 1999), honors this logic by crossing disciplinary boundaries between ecology and anthropology, feminist theory and Indigenous studies, environmental humanities and political science, food systems and cultural geography, holding the tensions between fields productively, as one holds the strings of a cat's cradle.

The Relational Framework: Question of Place

The relational framework addresses the question of place. Traditional knowledge is always situated; it emerges from, and refers back to, specific landscapes, seasons, species, and histories. It cannot be abstracted from its ground without significant distortion. As Anishinaabe scholar McGregor (2004) states, "[m]any stories and teachings are gained from animals, plants, the moon, the stars, water, wind, and the spirit world. Knowledge is also gained from vision, ceremony, prayer, intuitions, dreams, and personal experience" (p.388). Furthermore, McGregor adds that people, land, and knowledge are whole and single. In addition, according to Barad (2007), knowledge is not confined to the individual being; whether one possesses it or not, it is part of the "ongoing materialization of the world" (cited in Peach, 2024, p. 9). Yet the dominant tendency in TK scholarship has been precisely to abstract: to extract practices from places, to translate living knowledge into databases, to represent the "local" as a bounded, knowable object available to a global gaze.

This tendency to abstract is not neutral. Latour (2011) notes that scientific research in modern society serves the interests of capitalism. In this system, scientists are the science workers. They produce knowledge that is privatized, commercialized, and is becoming a product for sale. Scientific knowledge in Western society is a commodity. The Green Revolution is an example of Western science supporting political decisions that harm the environment and often inflict irreversible cultural damage to local communities. The Green Revolution brought an array of new challenges, from human-inflicted overuse of pesticides and fertilizers to the pollution of water and soil imposed by aggressive land management by agro-industry and extractive technologies. Biodiversity on the global scale is affected by the dominance of monocrops of rice, corn, and grains and their genetically modified varieties. Corporations control the reproduction of endemic plants. The fact that 96% of all seeds are accumulated in four private seed banks demonstrates the scale of the removal of traditional knowledge associated with seeds from communities. In contrast to technoscience, biosemiotics recognizes the interconnectedness between humans and non-humans and inflates discourse advocating for the relational representation of non-sentient beings in connection to alternative knowledge systems' values that can overpower placeless politics imposed by capitalism (Méndez Cota, 2016, p.132).

Capitalism exploits humans' ability to learn by reducing their experiences to meaningless mechanics and excluding their relationship to the place and their responsibilities to protect it. The disciplines like Biosemiotics, Indigenous Ecology, Environmental Humanities, Applied History, and Cultural Geography bridge a gap between colonial rational mentality and Indigenous relational worldview by educating people about Indigenous ways of teaching and implementing them within a university setting to advance the indigenization of academia (Adamson, 2017; Burkhart, 2019). The storytelling aspect of this approach elicits an emotional response, which in turn stimulates long-term memory of the place (i.e., the traditional homeland). The knowledge is constructed from the bottom up through self-led discovery learning, changing the meaning from literal to conceptual and metaphorical (Pete, 2023; Simpson, 2017). Pedagogy based on walking together outdoors, unlimited exchange of information between diverse participants, and investment of time and energy in communication with the community are innovative for Western teaching and learning processes. The TK and the Indigenous philosophies and perspectives bring deep, place-based understanding to the study of complex natural and human systems (Chief et al., 2019). A surge of innovation and creativity in adopting traditions signals resilient strategies for stabilizing the community's cultural-and-bio-diversity system.

The relational framework combines principles of interdisciplinarity and TK, including principles of locality, reflected in relationships to the land and in strong connections between place and experience. On the contrary, anthropocentric, descriptive, and rational methods of science produce delocalized knowledge (Burkhart, 2019). It also includes interdependent elements of biodiversity, cultural diversity, and the cycles of life. With this framework in place, the research results demonstrated temporal and spatial connections between the locality of knowledge and skills that sustain community survival. The Indigenous and non-Indigenous communities are diverse, but mapping their spatial relationships shows that they share common values: accountability (sovereignty and cultural integrity), respect (worldview and knowledge system), responsibilities to the community, and prioritization of relationships.

More-than-Human Relationality Case: Kazakh Nomads' Ecological Knowledge and Deep Connection with More-than-Human Worlds

In the cat's cradle of Traditional Knowledge systems, the Kazakh steppe offers one of the most intricate configurations. Here, knowledge was held not in texts or institutions but in bodies, seasons, animals, and the cyclical rhythms of migration. Cameron (2018) captures this succinctly: "the steppe¹ is synonymous with nomadism" (p. 46), where humans, animals, plants, and the environment are continuously interconnected and interdependent. It is an epistemological statement: knowledge of the steppe has been inseparable from living within it, moving with it, and attending to its signals across generations by creating a nuanced and

¹ The steppe (*dala* in Kazakh) refers to the vast Eurasian grassland belt stretching approximately 8,000 kilometers from Hungary in the west to Manchuria in the east. The Kazakh steppe, which covers much of present-day Kazakhstan, is one of the largest continuous grassland ecosystems on Earth.

interconnected relationship within their cyclical lifestyle (Ferret, 2021; Kaimuldinova & Abdimanapov, 2014).

Kazakh nomadic ecological knowledge emerged from centuries of direct observation, survival experience, and intimate interaction with nature across vast and climatically extreme territories. It was never abstract. Its unit of transmission was not the proposition but the practice the movement of an *aul*² between spring (*kökteu*), summer (*zhaylau*), fall (*küseu*), and winter (*qıstau*) pastures; the precise timing of lambing (April 1 to April 15, no earlier and no later); the reading of animal behavior to forecast weather (Abishev, 1949; Ferret, 2023). A herder who could identify every individual sheep in a flock of 500 to 700 and accurately match each lamb to its mother was not performing a feat of memorization; such herders were enacting a form of knowledge that is relational, embodied, and deeply place-specific (Abishev, 1949).

Time is considered cyclical since the pastoral nomad time is repeated yearly, coinciding with the seasonal changes and livestock breeding schedule (Ferret, 2021). This cyclicity is itself a form of knowledge. It structures observation, calibrates expectation, and orients community decision-making. When the vegetation in the summer pasture began to fade, movement to the fall pasture followed as a matter of deep ecological understanding. Environmental changes, including low precipitation and harsher winters, required adaptation: nomadic communities could move eight to twelve times yearly in search of better pasture (Kaimuldinova & Abdimanapov, 2014). These movements were not as messy as a colonizer would think. Far from being fixed or static, this knowledge system was continuously responsive to conditions on the ground.

Central to the Kazakh nomadic worldview is what we term, following Robertson (2018) and Whatmore (2017), a more-than-human relationality, a way of being in the world that radically decenters the human without excluding it. Nomads endowed their livestock with agency: animals were understood to choose the correct pasture, find the best path, seek pure water, and signal the opportune moment to move (Ferret, 2021; Kaimuldinova & Abdimanapov, 2014). It is a form of attentiveness, a recognition that the knowledge of when and where to move is distributed across species, not concentrated in the human herder alone.

Five key species – sheep, cattle, goats, horses, and camels were not merely resources. Each held a complementary nature, contributing to the community's ecological and social fabric. They were also given agency to choose the correct pasture, find the best path, seek pure water, and determine the opportune moment to move. Each also had a guardian spirit: sheep were protected by *Shopan-Ata*, camels by *Koysyl-Kara*, horses by *Kambar-Ata*, and cattle by *Zengi Baba* (Abishev, 1949). The world of spirits, *aruah*, was not separate from ecological practice but woven through it — shaping how ancestors were honored, how blessings (*bata*) were sought before migrations, and how the home was purified with *adyraspan* (peganum) before

² *Aul* (also spelled *ayyl*) is a distinctly Kazakh social and spatial unit that resists simple translation. In its traditional nomadic form, it referred to a kinship-based community of several families, typically between three and twelve households, who migrated together along shared seasonal routes, managed livestock collectively, and formed the primary social unit of Kazakh life. The *aul* was simultaneously a community, a territory, and a way of moving through the world: its boundaries were defined not by fixed geography but by relationships between families, between humans and animals, and between people and the landscapes they moved through.

major transitions (Penkala-Gawęcka, 2023; Dubuisson, 2017). Kaimuldinova and Abdimanapov (2014) describe this as an "archaic environmental consciousness" in which nature is perceived as a spiritual value and interaction is structured as "subject-subject" (p. 17) – contrast to Western modernity's positioning of nature as object and resource.

The forced sedentarization of Kazakh nomads under Soviet colonization represents one of the most devastating disruptions of TK transmission in Central Asian history (Anayatova, 2025). Soviet agricultural policy dismantled the mobile infrastructure through which ecological knowledge was generated and passed down, the seasonal migrations, the communal herding practices, the intergenerational apprenticeship of learning to read animals and land together (Elie & Ferret, 2017). The knowledge did not disappear, but it was transformed and enacted on a smaller scale, adapted to new constraints, carried forward through oral tradition, family practice, and rural community life even as formal education increasingly aligned with Soviet and then post-Soviet epistemological frameworks.

This survival is itself significant. It demonstrates that TK is not merely transmitted, it is generated anew in each encounter between community members and their environment. As Kaimuldinova et al. (2023) argue, Kazakh ecological knowledge continues to be knowledge emerged from living with and understanding nature and its adaptations remain deeply rooted in socio-political and environmental contexts. The knowledge of the steppe did not freeze when the migrations forcefully stopped. It found new strings to hold onto – new hands to pass the cradle between. This has direct implications for how we understand resilience. Resilience, in the Kazakh nomadic context, is not the capacity to return to a prior state. It is the capacity to maintain the relational logic of knowledge, the attentiveness to animals, seasons, spirits, and community under radically altered conditions. It is, in Haraway's terms, a form of response-ability: the ability to stay in relationship with the world even when the world has been violently rearranged (Haraway, 2016).

The Sense of Place and Collective Memories: Mapping Cilento Relational Foodways

If the Kazakh steppe shows a knowledge system holding its relational logic through forced sedentarization, Cilento shows the same logic under a different pressure: the global branding of the very foodways that sustain it. Any depiction of local farmers in Cilento, in Campania, Southern Italy, should start by discussing the challenges of mixing tradition with commercial enterprise. The history of Mediterranean Diet branding and its role in worldwide acculturation is increasing the risk of the disappearance of traditional foodways from their homeland territories (Vitullo & Melkozernova, 2024). The push towards a quest for a universal diet happening after WWII in our society's medical and wellness sectors explains the accelerating investment of industries in dietary research. Since 1950, when Keys developed his scientifically based notions of the Mediterranean diet, or what he called the "Mediterranean way," many institutions and organizations have championed it as one of the best food regimes to promote, if not the absolute winner of the endless rankings and a successful and universal solution for people living in the frenetic digital age with an industrialized food system (Vitullo & Melkozernova, 2024). The local people of the town of Pioppi in the territory known as

Cilento, where he experienced and learned the nutritional value of the Mediterranean Diet, were unaware of their unique Mediterranean lifestyle and continued living their lives in a poor, industrially underdeveloped country.

The true representation of Mediterranean identity of the Cilento farmers is in their response to climate change that exacerbates biodiversity loss worldwide. Communities are resisting the destruction by adopting sustainable practices rooted in traditional knowledge and by preserving their local foodways with heritage seeds. Antonello Di Gregorio comes from a dynasty of farmers dedicated to valorizing and relaunching ancient grains such as Senatore Cappelli Durum Wheat, Carosella Soft Wheat, and Gentil Rosso Soft Wheat in the Cilento region, southern Italy.³ These varieties, especially *Senatore Capelli Durum*, contain higher amounts of polyphenols and gluten than modern durum. Recent scientific research sheds light on the properties of the ancient grains that farmers preserved based on their TK, demonstrating the healthy cardiovascular benefits of consuming old durum wheat (bread, pasta) and a reduction in gastrointestinal and extra-intestinal symptoms in non-celiac gluten sensitivity subjects despite its high gluten content (Giacosa et al., 2022). Antonello's terraced farm is located on the slopes of Monte Stella, in the region famous for white figs, heritage grains, and ancient beans like the chickpeas of Cicerale. In the garden, the sunflowers bordered the terrace with a few rows of corn plants, vines of beans hugging their stocks, and melons scattered in between exactly like the three sisters' garden in the US Southwest. This traditional North American garden in southern Italy manifested the mission of seeds' travels in delivering the knowledge of coevolving relationships between plants, pollinators, soil, and people from Native American to Italian farmers successfully. Three sisters (corn, squash, and beans) garden offers a plant-based dietary model where beans are the source of protein but compared to Mediterranean Diet the three sisters model is understudied despite its commonality among the Native American communities (Vitullo in Kitch et al., 2021, p. 14). The farm itself, which integrates olive groves with livestock (goats), represents, on a smaller scale, the traditional Mediterranean silvopastoral system classified as "seminativo arborato" (arable land with trees) in these dry lands: "the orchard provided pasture for animals which, in turn, controlled weeds and provided fertilization for the orchards" (Paris et al., 2019, p. 2247). The recently analyzed data of landscape management in Italy by an international group of scientific researchers showed the benefits of the "historical rural landscapes" that use a combination of rotational grazing and shade from trees to prevent soil erosion, increase hardseededness of grass-legume cover crops, and improve the environment in general (Paris et al., 2019, pp. 2245–2247).

The scientific research obtained evidence of a significant offset of the greenhouse gas emissions "produced by livestock and shelter grazing animals from 'heat waves' in the Mediterranean arable land and other agroforestry landscapes in Italy (Paris et al., 2019, pp. 2019–2244). The research findings indirectly credited local peasants and the traditional knowledge of land management they preserved for their survival in the dry land. This food

³ See Pignataro (n.d.), Agriturismo Pier delle Vigne, San Mauro Cilento, <https://www.lucianopignataro.it/a/agriturismo-pier-delle-vigne-san-mauro-cilento/105084/>

scarcity drove the peasants' and fisher people's creativity in building reciprocal relationships with the sea, the land, its animals, and plants to survive. The post-Columbian history of the Rarámuri, Indigenous peoples in Mexico, shows a similar pattern of "make it their own" by adopting new practices to their lifestyle (Salmón, 2000, p. 1331). After the Spaniards introduced sheep and goats, the Rarámuri adjusted their methods by adding manure to their fields to increase productivity and controlling grazing by constantly moving the animals to avoid overgrazing. Their kincentric ecological practices protected and preserved the biodiversity of the Sierra area, a home for ancient and heritage seeds "along with black bear, ocelots, puma, eagles, hawks, and many other mammals and birds" (Salmón, 2000, p. 1331). The affinities in the land management among cultures of local peasant farmers in Italy and Indigenous tribes in the Americas show their shared beliefs that maintaining a balanced relationship with the land is crucial to "enhance and preserve the ecosystem" they are part of (p. 1331).

Following the path of their ancestors, Antonello and his mentor Giuseppe, full of energy, fast-walking, charismatic teacher in his eighties and one of the founders of the Cooperativa del Nuovo Cilento, are constantly experimenting by studying the co-evolving relationships between farm inhabitants to contribute to better protection of olive trees from diseases and to maintain attractive traditional landscapes (Vitullo & Melkozernova, 2024). During our farm tour, Giuseppe's hands were busy clipping olive branches while he shared his concerns about the white moths, or olive psyllids, that feed on the olive trees and damage the harvest. Pruning helps reduce the harm and provides forage for goats. Antonello tried another method – he planted a mix of basil, thyme, and fennel seeds under the olive trees to take advantage of their antimicrobial and insect-repellent properties to prevent olive psyllid infestation. The connections between scientists and the community are getting stronger. Recently, "the Cooperative signed an agreement with the University of Salerno for the implementation of the "Circular Models" project for the regenerative management of agricultural soil. In 2020, in collaboration with the "Fattoria del Gallo Rosso" and Bella Farnia, it activated earthworm farming in olive pomace and compost. Well-respected in the community, Antonello Di Gregorio was elected president of the Nuovo Cilento Cooperative in 2022. He is a lead collaborator on the "Models" project with scientists from the University of Salerno Laboratory, focusing on the use of wild plants in agriculture for the recognition and collection of spontaneous food plants. The exchanges between the place-based knowledge of traditional farmers and culturally embedded scientific research lead to innovative ways to develop more diverse and thus more resilient food systems (Vitullo & Melkozernova, 2024). The future story of the San Mauro landscapes is carefully guarded by over 400 Cooperativa del Nuovo Cilento farmers under the trusted leadership of Antonello, who represents the younger generation.

Farmers like Antonello and Giuseppe are shifting the narrative of the Italian South from a backward country with the *cucina povera* (food of the poor) to a place-based Mediterranean Diet country, a diet that has earned global celebrity status. Valerio Calabrese, director of the Living Museum of Mediterranean Diet in Pollicio, which opened its doors in 2005 to commemorate the American physiologist Ancel Keys' legacy and recognize his contribution

in spreading knowledge about the traditional values of the Mediterranean way of living, described the sustainable food systems approach as “extremely important for our future.”⁴

And therefore, beyond our differences, there is a common principle of respect for nature and greater awareness of our consumer practices, because the consumption of natural resources concerns everyone globally, whether poor or wealthy. Since we all live on the same planet, we don't have an alternative. The knowledge of specific ecosystems, like that of the Mediterranean (in Cilento), can help recognize other ecosystems that are different but just as important to protect, preserve, and appreciate” (Calabrese, interview, 2021, translated by Chloe Larson). The Living Museum of the Mediterranean Diet reclaims de-territorialized knowledge of the Mediterranean Diet by putting it back on a locally grounded path that promotes the ‘universal’ values of the TK to younger generations (Vitullo & Melkozernova, 2024). The TK accumulated by people living in the place over millennia includes their spatial relationships, serving as evidence of their survival and existence in this environment.

Grasping the Indigenous way of knowing: the MOWA Band of Choctaw Indians of Alabama

Knowing represents the community's commons. The insider's theory of Shandin Pete (2022), who is the Seliš scholar trained as a hydrogeologist, explains the “know” or the human endeavor of understanding our world as a commons for all the people without linking to a particular race of people or a particular human society:

...our experiences everything has to be validated for us to correctly categorize and logically apply our emotion into the right place at the right time for the right reasons and it has to be validated. We can have ideas and observations but oftentimes we have to have those things checked in with our community, the people we feel that are in our social structure that can answer those questions (18:32).

Learning is drawn from comparison. The land is the place where knowledge is situated. Traditional knowledge is an open system; the way of knowing through observations and interactions with others is opposite to science, which operates through quantifiable facts and subjective experiments and seeks universal rules. Lynette Hunter (2009) describes the affinity between situated knowledge and Indigenous people's traditional knowledge: “Unlike scientific knowledge in which the effect of the observer is often a 'problem' and many experiments are devised in order to minimize it, in situated knowledge the whole point is that the observer is engaged” (Hunter, 2009, p.151). Indigenous knowledge comprises place-specific, embodied experiences in relation to the surroundings.

During a mapping excursion, Michael Orso, the representative of District 2, Washington County, showed us plants the MOWA Choctaw used to forage: American beautyberries for making jelly and a yaupon bush. A tea or coffee-like drink prepared from its baked leaves contains an amount of caffeine comparable to coffee beans. This so-called Black Drink is documented in the literature on the Southeastern tribes as a primary ceremonial emetic served

⁴ On the institutional promotion of the Mediterranean Diet, see U.S. Embassy & Consulates in Italy (n.d.), The Mediterranean diet, <https://it.usembassy.gov/mediterranean-diet/>

at the Busk or Green Corn ceremony (Taylor, 1940, p.38). Michael introduced up to 28 plants he knew as remedies for wounds, coughs, colds and flu, diarrhea, and allergies.

This experience of place-tracking with a knowledge holder, Michael Orso, demonstrated a way of thinking about plants still growing outside, yet entangled with their connections to seed personhood, community identity, and well-being as relational data. This practice of so-called 'two-eyed seeing' characterizes the Indigenous ways of knowing. Two-Eyed Seeing is an approach of inquiry and solutions in which people come together to view the world through an Indigenous lens with one eye (perspective), while the other eye sees through a Western lens (Michie, Hogue & Rioux, 2018). Jayne Caroline Furness' cat's cradle games study concluded:

While many of the methods must be the same the world over, some of them will exhibit, in every region sufficiently isolated, marked peculiarities which, if enough figures are available, will enable us with certainty to recognize their locality. Thus, the methods of Caroline Islands figures cannot be mistaken for those of the Navajo Indians, or the New Guinea methods for those of the other two (p. 4).

Like Cat's Cradle's string patterns, which can be done in the same way but with different intermediate movements, Indigenous ways of knowing rely on place-based connectedness and reciprocal relationships.

Subaltern Knowledges, Dominant Narratives, and the Cat's Cradle Web of Resilience

Across these three cases of partly or fully losing, altering, and maintaining TK, there is a recurring figure in the dominant cultural, political, and historical narratives. The Kazakh nomad is barbaric, rootless, resistant to civilization – a figure to be sedentarized, collectivized, modernized. The southern Italian peasant is backward, superstitious, trapped in magic and witchcraft – a figure to be industrialized and freed from the land. The Indigenous American is the "vanishing Indian" – a figure whose knowledge and territory belong to a past that modernity has already superseded. These are not incidental characterizations. They are, as de Martino (2017) argued, the ideological work that dominant systems perform on subaltern communities to justify their dispossession: rendering their knowledge illegitimate before extracting it, their territories empty before occupying them, their futures impossible before foreclosing them. They are, in Nixon's (2011) terms, a form of slow violence: gradual, dispersed, and systematically directed at the relational conditions through which people and land sustain one another.

The Soviet collectivization of Kazakhstan between 1929 and 1933 makes the lethal stakes of this ideological operation concrete. Forced sedentarization dismantled the seasonal migration infrastructure through which nomadic ecological knowledge was generated and transmitted across generations. Livestock – the living agents through which herders read weather, pasture, and seasonal timing were confiscated and slaughtered. Approximately 30% of the Kazakh population, between 1.5 and 2 million people, died of famine, disease, and violence during this period (Cameron, 2018; Elie & Ferret, 2017). The ideological narrative that enabled this destruction positioned nomadic knowledge not as a sophisticated ecological system but as a primitive obstacle to communism.

In the Italian South, the same subaltern operation took a different institutional form. The work of Ernesto de Martino, an Italian philosopher, historian of religions, and anthropologist provides the socio-political context for analyzing the role of women in preserving TK. In his “Towards a History of the Subaltern Popular World”, de Martino identified the reasons why the “ethnology and folklore have been tainted by naturalism” as a response of the dominant politics of modernization and exploitation of natural resources to the threat of the magical power of inexplicable (de Martino, 2017, p.65). De Martino’s Subaltern consider “colonial and semi-colonial peoples, as well as proletarians and peasants in the hegemonic nations” (p.63). His human-centered narrative excluded women, wolves and relationships between humans and non-humans which justified extermination of wolves in the Lucania mountain by the governing authority in the 1900s. Yet, this announcement masqueraded the rebels of mountaineers’ brigands against the capitalist economy. Industrialization of the Italian north forced farmers’ migration to the plains and coastal areas due to the large-scale redistribution of property rights favoring new landowning bourgeoisie, the bourgeoisie of *galantuomini* (Sereni, 1997, p.329). The de Martino erasing TK narrative was instrumental in manipulating the peasants when enforcing local economic development before it started to fade around the 1960s.

For the MOWA Band of Choctaw Indians of Alabama, the vanishing Indian narrative operated through cartographic as well as cultural erasure. Map-making is another way of constructing narratives silencing voices of marginalized communities. For more than 500 years, the maps of the United States supported the colonizer’s story, erasing the indigenous spaces for the purpose of their appropriation was a casual colonial practice. For example, Native communities were excluded from datasets collected by the U.S. Government about land management.

Soviet collectivisation of Kazakhs and subaltern representation of peasants in Italy echoes the stories of known colonial suppression traditional lifestyles of the MOWA Tribal Band of Choctaw Indians from Alabama, USA. The results of the inventory of the Choctaw-related archives and collections at the Smithsonian Institution brought to light documents and records of their existence as a tribal entity. The list of Choctaw clans produced by the Department of the Interior dated June 29, 1899 is among them. There are manuscripts of Choctaw Names of places, people, watercourses etc. in the old Choctaw country by Spratt and William and Choctaw legend of origin of corn by Swanton who worked with the Choctaw in 1928-1930, according to Bureau of American Ethnology-AR 46, page 3; and AR 47, page 2 (Manuscript, undated), Simpson Tubby, who is labeled as Choctaw and an informant in the archival record, drawn detailed river system of Choctaw Nation marked with villages for John Swanton (Manuscript, undated). Tubby’s ability to map the water sources characterizes his understanding of interdependence from his surroundings. In contrast, on the customized version the Choctaw territory has a note in French “il y a icy quantité de Sauvages and Villages don’t on ne scuit pas les noms” which means ‘there are a number of Savages and Villages whose names we don’t know’. The area on the 1722 historical map of Carolana and of the River Meschacebe was left blank despite the fact that it Cherokee, Choctaw, Chickasaw, Catawba, and Caddo occupied this territory. Swanton pointed to the knowledge of these inland

communities “after they came into contact with the whites,” specifically about their “adjustment to the environment,” which “was dependent in some measure upon the methods that have been evolved for exploiting it, notably the use of corn, beans, squashes, and a few other plants” (Swanton, 1946, p.21). The decline in Indigenous agricultural patterns after the development of reservations overlaps with the loss of biodiversity.

Indigenous farms became insufficient because of the impact of global warming and the change in food preferences and local skills due to the enforced removal of cultural values. Subsistence gardening practices among the MOWA Choctaw peoples who cultivated more than 50 varieties of crops, legumes, and fruits, as well as their foraging practices suffered from encroachment of the industrial agriculture sites: cotton and corn fields, Tung oil plantations, sweet potatoes, and pecan trees orchids, where parents or grandparents worked to make extra money. The intergenerational exchange of the TK preserved by elders was interrupted. However, Michael Orso reclaims the MOWA Choctaw identity by reconnecting to the land and traditions and owns his future by promoting the cultural values despite interruptions and erasures of their place-embedded narratives. Since 1960, Indigenous rights movements have accustomed maps for court cases to support their land claims (Castree, Kitchin, & Rogers, 2013). Map-making arguments can be useful to educate future generations, communicate with outsiders, and protect traditional knowledge.

The stories of Antonello Di Gregorio and the Three Sisters Garden highlight the role of local communities in preserving heritage seeds and traditional practices that have no political borders. The economic model of combined subsistence and commercial farming Indigenous communities developed to sustain their food sovereignty, promote resourcefulness and well-being, and then confront economic marginalization.

The cat's cradle mindset, held against this human-nature relationships history, reveals what the dominant narratives cannot account for: the strings did not break. In each case, communities subjected to inflicted epistemological violence sustained the relational logic of their knowledge systems under conditions designed to destroy it. Resilience, across all three cases, is not the capacity to preserve a traditional knowledge system intact. It is the capacity to maintain the web of reciprocal relationships with land, species, ancestors, and the more-than-human world through which knowledge is continuously regenerated. Reciprocity is not merely a cultural value added onto these knowledge practices. It is their epistemological structure; it is the condition under which knowledge is generated, the obligation through which it is transmitted, and the principle through which it remains adaptive, not static. What the dominant narratives called barbarism, backwardness, and vanishing was, in each case, a sophisticated system of reciprocal relationships that survived precisely because it was held not in institutions or archives but in the ongoing practice of attentive, embodied, communal life. The strings changed hands many times. The cradle held.

In Lieu with Conclusion

This article contributes to emerging interdisciplinary discursive and material approaches associated with mapping relational knowledge values. Epistemological, ontological, and axiological commitments afforded a holistic analysis of the narratives about Kazakh nomadic knowledge; the relational foodways of Cilento farmers in southern Italy; and the land-based knowledge practices of the MOWA Choctaw tribal community in Alabama, USA. The article introduced the Relational Framework, which depicts the relationships among the components of interdisciplinary and participatory research as dynamic: they interact with one another and form new connections. Using the relational framework, our analysis revealed that Italian farmers, Indigenous communities, and Kazakh nomads shared the cat's cradle mindset and the connections to the land that holds collective memories. The narratives of TK from three continents illustrated the gap between the Western nature-culture concept and the cosmological worldview of Indigenous peoples, as well as the place-based traditions of Italian farming communities and Kazakh nomads. This interconnectedness of the multispecies web of land, seasons, animals, spirits, and community is what the dominant narratives have always tried to sever, and what these communities have always, in different ways, refused to relinquish.

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A Counter-Policy Method for Community-Centred Research

Methodologies

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Experiential Archives and Northern Policy: A Counter-Policy Method for Community-Centred Research

John W. Bessai*

Abstract

Northern policy enters public life through service desks, travel approvals, funding portals, consultation records, school materials, environmental reports, and cultural archives. Experiential archives provide a method for reading those records together. The method gathers policy documents, administrative categories, public records, testimony, community memory, artistic work, environmental evidence, digital interfaces, and local accounts of institutional encounter. Counter-policy names the next movement: the translation of lived institutional pressure into revised obligation. Experiential archives support northern, rural, Indigenous, and remote policy research by combining crystallization, hybrid thematic analysis, public code analysis, and institutional evidence mapping. The method gives researchers a repeatable sequence: identify the institutional contradiction, locate rupture points, reconstruct public code, assemble the experiential archive, formulate a revised obligation, draft a counter-policy clause, and specify transfer pathways into administration, education, cultural institutions, public reporting, or infrastructure design. The method supports community-centred research while requiring careful attention to Indigenous data governance, local authority, consent, positionality, and the right to restrict circulation.

Experiential Archives and Northern Policy

Northern policy can best be studied as it becomes reality in the daily life of families and communities across the North. A family waits several months for medical travel approval. A community organization finishes a grant application. A school board where a community member sits as a trustee defines questions of language, land, and history through curriculum. A municipal or territorial government office records consultation information in minutes that outline the consultation and the government's plans for implementation. An environmental monitoring program collects information from land, water, animals, and sensors, then presents that information in technical reports, data display tools, and dashboards that establish a timeframe for decision-making. Each scenario contains one or more policy methods at work. A health care system classifies claims. A school system organizes the participation of students, teachers, and community members learning about language, land, and history. A municipal or territorial government authorizes knowledge and governs how consultation knowledge

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becomes a stored record. These scenes make policy visible at the level of forms, time, evidence, access, mobility, and responsibility.

The term experiential archives refers to a method of research that focuses on the experience of policy in scenes of institutional life. Here, experiential archives refer to a field of documents, forms, meeting notes, community testimony, public memory, environmental data, media, visual materials, and artistic practices that together comprise the records of public institutions in a particular field. An experiential archive collects evidence that suggests a problem or set of challenges for policy in a given context. The records in an experiential archive make visible the challenges that a policy problem presents within a given institutional field. Counter-policy begins after institutional pressure becomes visible. The archive then supports new institutional work. In the strongest case, the public institution develops a new obligation on the basis of the lived evidence in the archive. Such counter-policy analysis can produce clauses, administrative standards, training protocols, reporting requirements, partnership agreements, and new institutional interfaces. This approach fits Northern and Arctic policy because public institutions often translate programs and services through layered jurisdictions and through institutions governed at a distance from many Northern communities. The forms, procedures, and records attached to those programs assume circumstances regarding time, evidence, access, mobility, and responsibility that do not always correspond to the circumstances in which Northern peoples live. Community-centred research in the North therefore requires tools for uncovering institutional assumptions and translating lived policy records into revised obligations.

The methodology has four components: crystallization, hybrid thematic analysis, public code analysis, and institutional evidence mapping. By crystallization, the methodology means the practice of holding different types of evidence as stable enough to be studied in their interrelations, without reducing those records to one type of verification (Richardson, 2000; Richardson & St. Pierre, 2005). Hybrid thematic analysis combines a deductive codebook drawn from prior research, literature, and policy with inductive coding that lets unexpected themes emerge from the archive (Fereday & Muir-Cochrane, 2006). Public code analysis studies the rules, classifications, interfaces, and records through which institutions organize public experience. Institutional evidence mapping relates governing evidence, administrative evidence, public-facing evidence, experiential evidence, and cultural evidence.

The method for creating an experiential archive for counter-policy must also follow the ethical principles that enable community-centred research and prevent community knowledge from being taken into institutional products without community governance. Indigenous communities, Northern residents, community organizations, Elders and knowledge keepers, service users, and researchers all hold roles in this process. The First Nations Principles of OCAP®¹ (ownership, control, access, and possession) provide guidance specific to First Nations data governance, while the CARE Principles for Indigenous Data Governance (Collective Benefit, Authority to Control, Responsibility, and Ethics) provide a broader

¹ OCAP® is a registered trademark of the First Nations Information Governance Centre (FNIGC). For the First Nations Principles of OCAP®, see <https://fnigc.ca/ocap-training/>.

framework for Indigenous data governance (Carroll et al., 2020; First Nations Information Governance Centre [FNIGC], 2014; Global Indigenous Data Alliance [GIDA], 2019). Community-centred research has integrity only when the local community has governance over the creation, interpretation, storage, and use of the experiential archive.

Northern Policy as Institutional Encounter

Policy analysis of Northern policy typically commences with the statute, strategy, program, budget, or administrative design. Understanding policy from the perspective of individuals and families also requires examining the encounters through which people move in order to receive services from public programs. Those encounters take place in offices, clinics, classrooms, online funding portals, consultation processes, inspection regimes, digital dashboards, signs, maps, licences, permits, and the many forms that articulate the rules governing access to public programs and services. A public code analysis approaches policy through the rules, classifications, and interfaces that organizations use to govern how citizens experience public services and programs. Written policies, guidelines, forms, applications, funding agreements, and administrative instruments express the rules of the public code. To understand those rules, researchers must study how organizations administer them, who administers them, and how people governed by those rules experience them.

A public code analysis of health care would examine the rules that govern eligibility for services, the procedures followed when a referral to a specialist is required, the forms completed by patients who travel for medical treatment, the scheduling systems used to coordinate appointments, and the geographic boundaries within which services are delivered. Similarly, a public code analysis of culture and heritage would examine language credits, archive metadata, exhibition labels, image-use rules, and access policies for museums and cultural institutions. A public code analysis of environmental governance would examine species classifications, environmental monitoring categories, data-retention rules, thresholds of evidence required to trigger response, and the formats in which environmental information is reported to the public.

Distance from institutional centres shapes how Northern communities encounter public code. Health services may depend on specialists based in southern cities and towns. Funding programs may be administered by institutions that possess greater organizational capacity than many community-based organizations in the North. Environmental monitoring programs may gather data through sensors and technical systems, then treat land- and water-based knowledge held by Northern residents as additional evidence. Public institutions may conduct consultation within timeframes that do not accommodate local governance, seasonal activity, or structural circumstances. The methodology maps the experience of an institution in dealing with a problem through a sequence of questions. For a housing shortage, the researcher could ask: Who started the process to deal with this problem? What was the first institutional contact by the claimant? Who in the office deals with the claim? What criteria classify the claim? What documentation establishes delay or additional requirements? What language does the

institution use to obtain consent? What data standards decide whether local knowledge enters the official record?

Experiential Archives

Experiential archives gather many types of records and draw from a broad pool of sources, evidence, and information. Formal records include legislation, policy guidelines, memoranda, environmental assessments, consultation reports, health care records, funding announcements, meeting minutes, strategic plans, and organizational manuals. Other sources include oral histories, public testimony, newsletters, local radio, social media, photographs, maps, school programs, artworks, films, digital interfaces, and field notes. Each record has its own authority, limitations, conditions, and ethics. Pieces of evidence differ in weight, jurisdiction, scope, authority, and ethical conditions. Evidence created by an institution to frame a policy or program problem differs from evidence created by a community member recounting experience within that program. A photograph or digital interface representing public information differs from school materials or funding applications through which communities must translate needs into administrative structures. Temporary research evidence differs from land-based knowledge that creates obligations extending beyond the life of the research. Evidence created by a community therefore requires that community's governance before a researcher can record, analyze, or cite it.

Experiential archives are relational in nature. The strongest archives allow the researcher to understand how different records illuminate specific aspects of policy and practice. In analyzing a medical travel policy, the public record may spell out eligibility and the terms under which travel will take place. Community testimony may show how that policy operates in practice and how travel can produce serious consequences for families. Records from a conservation department may describe the tracking of species by using technical data. Accounts from land users may identify changes to animals and their behaviour, changes in access to lands and harvesting resources, and the effects of industrial activity on environments and ecosystems. School records may describe an inclusive teaching and learning environment, while classroom materials may show Indigenous languages and local histories appearing as supplementary material within the curriculum. Records of encounters with institutions can be powerful across many settings. They highlight challenges faced by communities and individuals seeking care, services, and recognition. Service delivery and institutional procedures can produce stronger pressure in the North because distance, travel, seasonal activity, broadband gaps, staff turnover, and jurisdictional boundaries already amplify time and access barriers.

Crystallization as a Method for Complex Policy Evidence

Crystallization provides a way to analyze policy and institutions through complex evidence. Richardson (2000) uses the term in "Writing: A method of inquiry" to describe qualitative research that works across multiple genres and forms. Richardson and St. Pierre (2005) extend that approach by treating writing and representation as part of inquiry. In research on institutionalized policy problems in remote Northern areas, crystallization can reveal how policy problems refract through written, visual, administrative, and experiential

records. Northern policy can be crystallized through research that understands how problems move across institutions at many levels. A housing problem can involve a federal funding program administered through a territorial government, a municipal government, a First Nations government, local housing providers, construction companies, supply chains, climate stress, and the resources of the household. A researcher who studies only one official policy record may miss the institutional sequence that a household must navigate.

Public culture also belongs within crystallization. Artistic works, digital stories, films, photographs, exhibitions, and other public forms can contain knowledge about how people make sense of institutional problems. Such works become particularly important when formal testimony is limited or public records reduce experience to administrative categories. Public culture can preserve duration, atmosphere, grief, anger, humour, relation, and resilience in ways that formal records often compress (Bessai, 2025). Crystallization supports disciplined pluralism. The researcher gathers records to illuminate one policy problem from multiple angles. Each record must still answer a direct methodological question: What obligation does the record show? What form of access does it organize? What classification does it use? What authority does it establish or recognize? What timeframe does it establish? What kind of evidence does it value? What institutional revision does it make possible?

Hybrid Thematic Analysis

Hybrid thematic analysis provides a practical way to analyze material gathered through experiential archives. Fereday and Muir-Cochrane (2006) define the approach through deductive and inductive coding. The researcher begins with a codebook made from prior research, literature, and policy relevant to the research. The researcher then works through the material in the experiential archive using inductive coding to identify themes that have not yet been conceived by the researcher. The researcher also returns to the material to see how the initial codes fit within the data. This process allows the archive to speak through prior concepts and emergent evidence. For deductive coding, the researcher starts with a codebook organized around public code. Common codes could include eligibility, waiting, jurisdiction, consultation, language, evidence, access, data governance, consent, recognition, environmental risk, service distance, institutional explanation, and pathway for revision. The researcher then codes formal institutional documents to identify obligations, classifications, thresholds, and procedures already in place within the institution. Inductive coding allows the researcher to develop themes relevant to the community's questions and the archive's evidence. For example, consultation fatigue may emerge through repetitiveness, lack of trust in institutions, staff turnover, travel burdens, family coordination, and the responsibilities carried by people travelling for medical treatment. Inductive coding can also identify conflict between institutional requirements and seasonal land-based activities. It can make visible the strategies communities develop to deal with breakdowns in systems external to the community.

Hybrid thematic analysis guards against two risks. Deductive coding can impose the codebook on community experience and reduce lived reality to the public code. Inductive

coding can produce a rich description of a household's policy experience without identifying the institutional processes that create pressure. The hybrid approach keeps both risks in view. It connects lived experience to the public code of the formal institutions with which people interact. The coding process follows a set of steps. First, the researcher assembles an initial codebook from the literature review, public code, research questions, community questions, and prior knowledge of the specific setting. Second, the researcher codes formal institutional documents to identify obligations, classifications, thresholds, and procedures. Third, the researcher codes experiential documents to reveal lived sequences, strain, relationships, and local interpretations. Fourth, the researcher compares the formal and experiential codes to identify rupture points between what the institution promises and what takes place. Fifth, the researcher refines the codebook through community review, advisors, or participatory interpretation where the research design permits and the community authorizes the process.

Public Code and Institutional Evidence

Public code analysis identifies the site where institutions make people, claims, lands, languages, animals, risks, and histories legible. The small forms that make up larger public commitments appear in grant portals, consultation notices, environmental assessment maps, archival metadata, school curriculum categories, medical travel instructions, and interfaces used to access and display environmental data. State theory helps explain why public code has political force. Poulantzas (1978) characterized the state as a material condensation of social relations. Jessop (2016) treats institutions as selective fields that favour some strategies, actors, and forms of knowledge over others. Public code reveals those selectivities. A program timeline or application form may give an advantage to people with professional employment, high-speed internet, stable access to records, and organizational capacity. The same form may create barriers for households and community organizations that already carry service, travel, and administrative burdens. Public code also clarifies the Canadian aporetic condition (Bessai, 2025, 2026). Public institutions often operate through a language of care, inclusion, reconciliation, and service. The same institutions remain bounded by settler jurisdiction, colonial histories, unequal service distribution, and market-driven development. Indigenous peoples may be recognized within settler-based procedures, and the structures governing that recognition can reproduce colonial relations (Coulthard, 2014). Indigenous political life also exceeds recognition by the settler state in significant ways (Simpson, 2014). In the Northern context, public code becomes policy through consultation, resource extraction, language policy, land governance, health access, schooling, environmental monitoring, and infrastructure planning.

The second stage of public code analysis generates an Institutional Evidence Map for every program or policy under investigation. Governing evidence includes statutes, agreements, regulations, and policies that outline the terms of a program. Administrative evidence includes application forms, workflow diagrams, eligibility criteria, program manuals, budgets, and reporting templates. Public-facing evidence includes websites, community notices, program maps, dashboards, curriculum materials, meeting summaries, and other public documents. Experiential evidence includes testimony, personal stories, interviews, participant observation, community records, oral histories, public memory, and

personal accounts. Cultural evidence includes films, artworks, exhibitions, digital stories, photographs, and other media that describe how programs and services become lived experience. The evidence map asks how these sources relate. Governing records may promise access while administrative records reveal rigid eligibility criteria or irrelevant data categories. Consultation summaries may record participation while experiential accounts describe fatigue, frustration, and unmet obligations. Environmental dashboards may display data while local knowledge accounts question the categories that organize that data. School curricula may represent local environments while cultural expressions preserve memories, histories, and ecological relations that curriculum categories cannot hold. The map therefore links institutional operationalization, public representation, experiential accounts, and cultural knowledge within one field of analysis.

Indigenous Data Governance, Local Authority, and Methodological Limits

Experiential archives that contain Indigenous data or documents, community testimony, land-based knowledge, or sensitive local history must operate under strong ethical controls. The First Nations Principles of OCAP® apply specifically to First Nations data governance, while the CARE Principles provide a broader framework for Indigenous data governance (Carroll et al., 2020; FNIGC, 2014; GIDA, 2019). OCAP® emphasizes ownership, control, access, and possession; CARE emphasizes Collective Benefit, Authority to Control, Responsibility, and Ethics. The researcher must distinguish between information held in public institutional records and knowledge governed by rules specific to the community from which that knowledge was collected. A community member's story, a map to a harvesting site, a household account of harvesting practice, a language document, or a cultural protocol may require strict controls. Consent, local authority, and benefits sit at the centre of community-centred experiential archives. Community partners must shape the research questions, the methods used to gather evidence, the information accessible within the archive, the people who can access that information, the outputs, and the use of those outputs. Some records will remain open. Some records will require restriction and community review before they enter the archive. Some records will be denied to researchers. Where silence or restriction exists, the researcher should note the governance condition without disclosing protected information.

The researcher's position also shapes the archive. Relation to place, community, institution, and archive affects the questions and interpretations available to a researcher. This is especially true for non-Indigenous researchers working in Indigenous policy contexts. Community authority is a methodological requirement. A community can accept or reject the research question, limit the archive, require changes to interpretation, and determine whether particular items will be published. Recognizing community authority strengthens the method by preventing institutional translation from becoming another form of extraction. Potential harm must also be documented. Administrative records can expose vulnerable people. Testimony can retraumatize people who have experienced harm. Environmental data can identify sensitive harvesting places, cultural sites, or spiritual sites. Public-facing maps can cause harm when they circulate without governance. Researchers should minimize data where possible, hold archives under controlled access, anonymize records where appropriate, and

work with communities to review the archive. The community must see a clear benefit from translating its history and stories into another form of expression. Kovach (2021), Smith (2012), Wilson (2008), and Younging (2018) provide important Indigenous research methods and perspectives on relation, accountability, protocol, and representation. Tuck (2009) warns against damage-centred research that claims to challenge dominant culture while extracting and detailing pain. Experiential archives should contain records of harm and records of thriving. They should make community authority, desire, continuity, and futures visible.

Counter-Policy: From Archive to Revised Obligation

Building out the experiential archive to identify counter-policy points becomes the next step. The archive shows the contradiction between public policy and experiential evidence. In the case of health access for Northern citizens, a health program may promise access to all citizens. Travel procedures to receive necessary care may require considerable time, money, and family labour. The counter-policy sequence has seven stages. First, the researcher explains the problem by detailing the policy promise and the institutional pressure produced by that promise. A Northern health program may promise equal access to health services for all citizens of the North, while travel procedures create delay and require family members to carry costs and caregiving burdens. Second, the researcher identifies rupture points. These are the places where contradictions materialize within the institution: forms, deadlines, approvals, eligibility categories, staff decisions, data standards, public reports, or consultation timelines. Third, the researcher reconstructs public code. The public code organizes the case through eligibility categories, consultation rules, data standards, intake procedures, application forms, thresholds, and records. The researcher follows these rules and practices to understand the desired institutional outcome and the barriers produced by the process. Fourth, the researcher gathers the experiential archive. Testimonies, public memory, community documents, correspondence, meeting notes, artistic practices, local media, photographs, and administrative records document a person's or group's experience within an institution. Fifth, the researcher formulates the revised obligation. The obligation states what the institution must do to respond to the evidence.

Sixth, the researcher writes the counter-policy clause in adoptable language. A clause for medical travel could read: The institution shall record and publicly report the time, travel, financial, and caregiving burdens created by medical travel procedures, and shall revise approval processes when those burdens prevent access to care. Finally, the researcher specifies the transfer pathway. The clause may enter practice through policy change, administrative procedures, staff training, public reporting, procurement processes, partnership rules, curriculum standards, assessment processes, or institutional interface design. By transforming an archive into revised obligations that an institution can accept, reject, modify, or implement, community-centred research can produce a route to institutional change.

Application Area One: Health Access and Service Distance

Many Northern health access programs promise universality and access to specialized care for Northern residents. For many individuals and families, access to specialized care can create negative consequences because of service distance. Travel distance, waiting periods,

additional costs, weather, companion needs, child care, elder care, and income loss can all become part of access to care. An experiential archive for health access would include a public policy record and an experiential record. The public record might include health legislation, medical travel policies, referral guidelines, application forms, wait-time reports, and public health documents. The experiential record might include family accounts, community health worker perspectives, travel receipts, appointment schedules, correspondence, local radio discussions, and documents showing the consequences of accessing care.

Hybrid thematic analysis would begin with deductively derived codes from research into Northern health access policies and programs. Eligibility, referral, wait time, travel, companion support, cost, weather, and jurisdiction would guide the first coding stage. As the researcher moves through program procedures and case examples, inductive themes may expose how families manage health-related processes outside formal programs, how relatives become caregivers, and how fear and anxiety emerge from the health system itself. Public code analysis then shows how institutional procedures distribute the burden of access across individuals, families, community workers, and institutions.

The counter-policy clause would require the institution to record the full burden of access in every case and respond to those burdens. The record should include time, travel, money, companion needs, child care, elder care, weather disruption, and income loss. The transfer pathway would include medical travel forms, case-management procedures, staff training, public reporting, and service planning.

Application Area Two: Language, Place, and Cultural Governance

A second site for community-centred research in the North involves place, language presence, cultural memory, governance memory, and interpretation. Reconciliation policies and programs, school curricula, museum and archival practices, park and protected area programs, film and media programs, and municipal policies all organize public memory. Authorized public memory often appears through settler place names, English-language metadata, narrow crediting practices, and limited access to records and materials that would permit richer cultural interpretation. An experiential archive can show how a public institution organizes and records memory. The archive of public code for this application would include language policies, signage plans for public spaces, school curricula, exhibition labels, permissions documents for images and artworks, public art plans, protocols for collecting and using oral histories, community naming practices, and records of media works. The researcher would examine how institutions credit language, mark place, govern access, and support or restrict community authority.

This application also illustrates the limits of institutional translation. Certain records and forms of knowledge can circulate in public. Other forms of knowledge should remain within the control of the community from which they were learned. Some knowledge belongs under community governance, with institutional support defined by the community. The counter-policy clause could read: The institution shall preserve Indigenous language presence, community-approved place names, and protocol-based crediting across signage, metadata,

public programming, educational materials, and digital records, subject to community authority and restriction. The transfer pathway would include archive standards, exhibition procedures, curriculum review, public signage, partnership agreements, and staff training. In some instances, counter-policy must take the form of refusal, restriction, or an exercise of community authority.

Application Area Three: Environmental Monitoring and Data Publics

Conservation organizations, government departments, private industry, and Indigenous communities monitor environments and manage natural resources in Northern regions of Canada. These organizations track water, ice, fish and wildlife, permafrost, forest fires, contaminants, infrastructure risk, and land use. Data from these indicators appear through dashboards, maps, reports, and environmental assessments. Public code organizes that data into categories, indicators, sampling protocols, access rules, and visualizations. Whyte (2018) notes that many Indigenous perceptions of climate change are closely linked to colonial impacts on families, communities, lands, and relations with ancestors and descendants. Experiential archives created through community-based research can reveal the interface points between scientific data collected by Northern environmental governance institutions and community-based evidence of environmental change. Such an archive might include environmental assessments, scientific reports, Indigenous knowledge protocols, monitoring agreements, community observations, photographs, local maps, harvesting accounts, government and industrial emergency notices, and cultural forms that document ecological memory.

Hybrid thematic analysis would begin with deductive codes such as risk, species, monitoring, evidence, threshold, access, consent, public reporting, and decision timelines. Inductive coding may reveal altered travel routes, changes in species behaviour, grief or loss, intergenerational teaching, distrust of industry data, or the burdens of repeated reporting. Public code analysis would examine how an institution classifies ecological change and whose knowledge frames the evidence used for monitoring decisions. Institutions must make public the categories of evidence, data sources, limits of uncertainty, and community-governance rules used to make decisions based on environmental monitoring information. Transfer pathways include public dashboards, environmental assessment templates, public reporting rules, Indigenous data-governance agreements, consultation procedures with knowledge holders and communities, and staff training on accountable explanation.

Design for a Community-Centred Experiential Archive

A community-centred experiential archive research design can proceed through eight tasks. First, the researcher establishes governance for the research. This may include an advisory group, a partnership agreement, or a community review process before documents are collected. The governance process should address consent, access, storage, interpretation, benefits, and publication. Second, the researcher defines the policy scene. The project might focus on medical travel approval, environmental consultation with First Nations communities, language signage in public spaces, funding applications for programs and services, or school curriculum and teaching practices. Third, the researcher collects the relevant institutional

records or documents that have been determined to be available. These records may include policies, forms, guidelines, notices, reports, maps, dashboards, and correspondence. Fourth, the researcher gathers authorized experiential records. These records may include interviews, testimony, field notes, public memory, community media, artworks, photographs, and community-held documents. Fifth, the researcher codes the archive. Public code provides the deductive starting point. The researcher then turns to lived records and uses inductive coding to identify pressure felt by individuals or families, local interpretations of policy, and emerging patterns in policy practice. Sixth, the researcher identifies rupture points between the record of encounter and the institution's record of its own policies and practices. Seventh, the researcher identifies the obligations of the institution that follow from those findings and translates them into concrete duties. Finally, the researcher validates the resulting clause and transfers it to appropriate people or institutions through community review, institutional dialogue, public presentation, or a policy workshop..

The design supports methodological papers, applied policy papers, community reports, public administration studies, and organizational change work, especially in cultural policy and public management.

Conclusion

Experiential archives provide a method for reading institutional life in the North through the records that people encounter, produce, preserve, and contest. These records reveal the sequence of policy encounters that constitute a person's experience of an institution. Through paper forms, digital portals, maps, dashboards, tracking systems, reports, and public meetings, institutions organize access to services and resources, recognition of difference and entitlement, the distribution of authority, and the production of evidence. Crystallization keeps those different records in relation to one another in order to clarify the complex ways institutions are experienced. Hybrid thematic analysis provides a means of coding the diverse materials in an experiential archive. Public code analysis identifies the operational rules that underpin an institution's practices. Counter-policy then develops those insights into revised obligations for the institution.

Experiential archives open practical and democratic avenues of study for public institutions seeking legitimacy. They reveal the specific pressures that institutions place on people. Northern, rural, Indigenous, and remote communities hold extensive documentation of service distance, consultation fatigue, environmental change, cultural memory, language presence, and jurisdictional squeeze between levels of government. Experiential archives give these records their due and allow their accumulated evidence to be studied seriously. The method also requires responsibility to Indigenous data governance, local community authority, consent, and the right of individuals or communities to restrict or refuse dissemination. In community-centred research, the experiential archive can support institutional repair only when the people whose knowledge and lives generate the archive govern that archive. This form of research can move policy research from recognition to obligation.

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The Paradoxical Relationship Between NATO's Operation Arctic Sentry Securitization Discourse and the Environmental Effects of Russian Shadow Fleets

Student Research Article

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The Paradoxical Relationship Between NATO's Operation Arctic Sentry Securitization Discourse and the Environmental Effects of Russian Shadow Fleets

*Evan Davis, Eric Hardwick, John Reznichuk, Baibhav Saraf, & Roderick Toms**

Abstract

This article examines the paradox between NATO's Operation Arctic Sentry and its environmental-security justification in the High North. Using Copenhagen School securitization theory, it analyzes how NATO frames Russian shadow fleets, regional instability, and climate change as threats requiring expanded military surveillance and preparedness. The article argues that this securitization legitimizes increased Arctic militarization while obscuring the environmental costs of drones, AI-enabled surveillance, military exercises, data infrastructure, and resource extraction. Although NATO presents Arctic Sentry as advancing environmental protection and security, its operational footprint may intensify ecological degradation, revealing a contradiction between climate stewardship and military expansion and regional dominance.

NATO's Operation Arctic Sentry Securitization Discourse

The rapid melting of Arctic ice due to human-caused climate change has made the High North increasingly politically and economically important. As nation-states and transnational entities alike scramble to make logistical sense of the ramifications, political actors increasingly need to prepare for a range of potential outcomes. NATO's inaugural Operation Arctic Sentry marks a significant moment in this evolution, where regional security and military preparedness must align with climate adaptation. One justification for Arctic Sentry is the interception of Russian shadow fleets, a growing network of aging, uninsured tankers that support Russia's military-industrial complex and pose a substantial risk to the environment. This paper does not dispute the environmental threat posed by the Russian shadow fleet; it examines a paradox in NATO's militarization discourse of the Arctic. Using the Copenhagen School's Securitization Theory as an analytical framework, this paper investigates how NATO's securitization discourse necessitates its military presence in the region while obscuring potential negative ecological impacts. Through an exploratory analysis of NATO's Arctic Sentry and by centering climate adaptation as a desirable outcome, this paper highlights the potential environmental implications of militarized surveillance in achieving climate policy objectives. Specifically, this article argues that NATO's Operation Arctic Sentry shows how climate change, resource pressures, and environmental vulnerability are increasingly securitized in the High North,

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turning ecological disruption into a strategic justification for expanded military presence, surveillance infrastructure, and competition over Arctic space and resources.

Russian Encroachment

NATO has expressed concern about the Russian shadow fleet as its realized and potential environmental impacts are becoming increasingly pressing (North Atlantic Treaty Organization, 2026a). First, the oil tankers used in shadow fleet operations pose a danger: they are often degraded and discharge excess oil, chemicals, and pollutants into the water, violating environmental regulations (Knapp et al., 2026). These oil tankers pass through particularly sensitive sea areas where marine habitats are already at risk due to human intervention. Not only has their residue harmed the environment, but their dated, unregulated nature also increases the risk of failure. For instance, these breakdowns led to the Prestige oil spill off the coast of Spain and have raised further concern, as preventive measures have routinely prevented additional spills (Gözübenli, 2025). Continued use of these oil tankers increases pollution hazards; early risk assessments estimate a 0.7% annual global increase and higher risk in all regions affected by shadow fleet distribution (Knapp et al., 2026). The oil tankers used in shadow fleet operations are particularly dangerous to the environment and the marine life they operate near. Unregulated oil tankers pose a notable environmental threat as they emit pollutants and constantly risk large oil spills.

Following the 2022 invasion of Ukraine, many NATO member states imposed sweeping sanctions targeting the Russian government, economy, and key industries. The United States imposed measures restricting Russia's access to global financial markets, energy-related resources, and military technologies to increase economic pressure on the Russian government (Douch et al., 2025). These sanctions imposed high economic costs and increased Russia's incentive to develop mechanisms to circumvent restrictions and maintain access to international markets.

Before 2022, Russia supplied approximately 11% of global oil, with the sector accounting for an estimated 15–20% of national GDP and nearly half of annual export revenues. By 2024, however, declining prices for seaborne Urals crude were generating substantial revenue losses, intensifying the economic pressures facing the Russian energy sector. Oil sanctions have reduced production and revenue, costing Russia an estimated \$50 billion since the war began (Spiro et al., 2025). As a result, Russia has used a shadow fleet in the Arctic to offset economic losses (Polemis & Likas, 2026a). As of 2025, even with the sanctions in place, Russia made 37.3 trillion rubles, or \$446 billion USD, in fossil fuel alone (Yermakov, 2026).

NATO Securitization: Operation Arctic Sentry

Under Operation Arctic Sentry, NATO's securitization of the North shifted beyond traditional maritime patrols toward an increasingly algorithmic model of surveillance, detection, and military decision-making. By deploying a mesh network of autonomous underwater vehicles and high-altitude pseudo-satellites, NATO uses AI to process vast quantities of geospatial data in real time. This approach is designed to identify the distinctive

acoustic and thermal signatures of non-compliant vessels that disable their automatic identification systems in an effort to reduce their detectability. The goal is to create a common operational picture that is predictive rather than reactive, by using machine learning to map deviation patterns in merchant vessel behavior.

Operation Arctic Sentry has shifted NATO towards a multi-domain training posture that treats cold-weather combat proficiency as a foundational requirement for alliance deterrence. The initiative incorporates flagship NATO drills such as Denmark's Arctic Endurance and Norway's Cold Response, the most recent of which deployed 32,000 soldiers from 14 nations across Norway and Finland in March of 2026 (North Atlantic Treaty Organization, 2026b; Norwegian Armed Forces, 2026). These exercises depart from traditional military rehearsals and are designed to validate emerging operational concepts in conditions where logistics, communications, and human endurance are severely degraded.

NATO's Cold Weather Operations Center, hosted by Norway, has become the institutional hub through which Nordic nations train allied forces, including U.S. Marines, in the techniques of surviving, concealing, and fighting in the Arctic's extreme environment (NATO Allied Command Transformation, 2023). The alliance is also investing in force-posture infrastructure to make these deployments sustainable. NATO established and expanded northern command structure includes a land command and forward-deployed forces in Finland, an integrated Nordic air division, and a combined air operations center based in Bodø, Norway, improving time between threat detection and response (Borsari & Davis, 2025).

The Shadow Fleet

The shadow fleet has increasingly shifted from a sanctions-enforcement concern into a broader security issue involving critical infrastructure protection, maritime surveillance, and alliance preparedness (Polemis & Likas, 2026a). This evolving security framing provides important context for the Arctic Sentry, where shadow-fleet activity forms part of a wider concern with maritime security and strategic infrastructure in the High North. The shift was reinforced by a series of undersea cable disruptions in the Baltic Sea, including the December 25, 2024, Eagle S incident. Finnish authorities alleged that the vessel dragged its anchor across the seabed, damaging an electricity interconnector and several telecommunications cables between Finland and Estonia (Bryant, 2025; Sutherland, 2025). The Baltic Sea NATO allies declared that Russia's shadow fleet poses a threat to maritime and environmental security both regionally and globally and affirmed their right, in accordance with international law, to take action against suspected vessels circumventing sanctions and threatening security, critical infrastructure, or the environment (Joint Statement, 2025; Pawlak, 2026).

As this security framing extended northward into the Arctic context, it carried with it an inherent tension between surveillance capacity and enforcement authority. In the Baltic, NATO and regional states increasingly relied on selective surveillance, vessel monitoring, information sharing, and coordinated maritime presence, while intervention capacity remained contingent on jurisdiction, legal authority, and national enforcement capabilities (Sisodia & Manhas, 2026). The Baltic Sentry therefore focused on deterrence and critical infrastructure protection rather than serving as an independent sanctions-enforcement mechanism.

The shadow fleet frame has thus served a dual function: it constructs a difficult-to-attribute security threat that supports persistent maritime surveillance while simultaneously revealing the limits of collective action where legal authority remains constrained. In the Arctic, Russia's growing use of remote locations such as Teriberka to support sanctioned LNG shipping demonstrates how it has adapted northern maritime infrastructure to sustain energy exports beyond conventional port networks and complicate Western monitoring and enforcement efforts (Rao, 2026). These activities increasingly overlap with the geographic space in which Arctic Sentry seeks to strengthen NATO surveillance and regional presence.

The Arctic Sentry shows how NATO approaches the securitization of the High North. Environmental risks, critical infrastructure, evasion, and military competition are increasingly discussed together as part of a wider Arctic security problem. For instance, in February 2026, NATO Secretary General, who met with the Allied Defence Ministers, recognized the importance of doing more to ensure the securitization of the Arctic and the High North. By establishing the Arctic Sentry, they legitimized this new security framework as a collective response to increased Russian military activity and growing Chinese involvement in the region. Moreover, Russia's war in Ukraine has also changed the broader European security environment in which these Arctic issues are understood (North Atlantic Treaty Organization, 2026b).

NATO's Securitization Discourse

Securitization theory is rooted in the work of Barry Buzan, Ole Waever, and Jaap de Wilde (1998), whose seminal *Security: A New Framework* provides the theoretical grounding necessary for this investigation. Buzan et al., forward an important caveat: securitization cannot be understood as a rational response to an objective threat. Rather, as a rhetorical framing, securitization is instead a process of threat construction, in which a securitizing actor projects a threat onto an objective of political and strategic importance. Understood this way, NATO's Operation Arctic Sentry is not a measured response to a tangible threat, but a discursive construction that carries the weight of a reality requiring urgent political action.

Buzan et al. (1998) posit that, as a discursive framework, securitization practices comprise four components: the securitizing actor, the referent object, the audience, and the security sectors. This section will address each, using evidence from a content analysis of NATO actors' own communications about the launch of Operation Arctic Sentry.

Sperling and Webber (2017) consider the Copenhagen School framework through the concept of collective securitization, arguing that organizations like NATO can act as securitizing actors when member states validate and reinforce a shared understanding of threat. As a rhetorical framework, "securitisation is initiated by a speech act, a 'securitizing move' 'through which an intersubjective understanding is constructed within a political community to treat something as an existential threat to a valued referent object, and to enable a call for urgent and exceptional measures to deal with the threat'" (Buzan & Wæver, 2003, as cited in Sperling & Webber, 2017, p. 25). This process allows political actors to frame an issue as

requiring urgent action and to mobilize resources and institutional support toward a particular political response.

While NATO is the overall securitizing actor in this instance, it is important to break down the actions of specific state actors in constructing the threat to Arctic security. Major players include Denmark, Norway, Sweden, Germany, the United Kingdom, and the United States, each responding to perceived threats in its own way. For instance, Denmark and Norway have engaged in coordinated military exercises designed to bolster threat preparedness and protect key Arctic assets, with the Danish Defence stating that its work “ensures that NATO remains fit for the purpose to deter and defend every inch of Allied territory” (Danish Defence Command, 2026, para. 3). Sweden and Germany have made crucial infrastructural contributions to Arctic Sentry in the form of fighter aircraft, with the former positioning this move as an explicit attempt to safeguard assets against Russian arms and Russia-China cooperation in the region (North Atlantic Treaty Organization, 2026c). Finally, the United States and United Kingdom have taken on important command responsibilities through JFC Norfolk, which leads Arctic Sentry. In February 2026, NATO announced that the United Kingdom would assume command of JFC Norfolk from the United States as part of a broader redistribution of Alliance leadership responsibilities (North Atlantic Treaty Organization, 2026d).

In the context of securitization theory, these states are not simply reacting to an immediate threat. Rather, they help construct that threat through discourse, while military exercises, infrastructure investments, and joint operations become expressions of the legitimacy granted to that security framing. In collective securitization, the audience is not separate from the securitizing actor but helps constitute it. The relationship between the two therefore helps explain why some issues become securitized while others do not, and why particular policy responses follow. Within organizations such as NATO, “the member states serve as the validating audience of a securitisation move and provide an organisation with agency in responding to threat” (Sperling & Webber, 2017, p. 21). From this perspective, these states are not simply reacting to an immediate threat. They help construct that threat through discourse, while military exercises, infrastructure investments, and joint operations become material expressions of the legitimacy granted to that security framing.

Within securitization theory, the referent object becomes necessary to legitimize claims to urgent action by any political actor, and this referent object is readily apparent throughout the discourse of NATO's Arctic Sentry. In the context of Arctic Sentry, the Arctic itself becomes the intended object of political transformation, as NATO's official communications explain. Underlying these smaller referent objects is NATO's larger commitment to maintaining Ally sovereign hegemony in the region, which makes regional control the primary referent object. NATO's Arctic Sentry programming explicitly frames the Arctic and High North as “increasingly important for NATO's collective security. Seven of the eight Arctic states are NATO allies, the Alliance has a clear interest in preserving security, stability, and cooperation in the region” (North Atlantic Treaty Organization, 2026c, para. 1). This discourse reflects the efforts of NATO member states to assert and protect their sovereign interests in the region, a central objective of Arctic Sentry's implementation.

Interest in preserving regional security is complemented by specific regional projects, each constituting a separate security sector. In securitization theory, five such sectors exist, each conditioning how political actors define threats in relation to referent objects (Buzan et al., 1998). Arctic Sentry features three of these, with some more prominent than others. The most prominent is the military sector, which NATO engages with in its introductory paragraph. Here, NATO identifies the referent object as military infrastructure and transportation/communication routes, and introduces threat framing:

Russia has significantly increased its military activity in the region – setting up a new Arctic Command, opening new and former Soviet-era Arctic military sites (including airfields and deep-water ports), and testing novel weapons systems. China’s interest in the Arctic is also growing, as Beijing seeks to gain access to energy, critical minerals and sea lines of communication. Furthermore, increased Russia-China cooperation has strategic and operational implications for NATO’s deterrence and defence posture in the region. (NATO, 2026c, para. 3)

The economic and environmental sectors are mentioned briefly and implicitly, each viewed through the lens of referent objects and perceived threat. NATO mentions the impact of climate change on the Arctic, noting that melting sea ice opens new possibilities for mobility and complicates existing operational procedures. Here, the referent objects remain infrastructure and routes, but new threats are identified in the form of extreme environmental degradation and procedural difficulties. NATO makes clear that “its focus on the High North, ensuring that Allies in the Arctic are defended against all threats, and that sea routes of communication and reinforcement remain open” (NATO, 2026c, para. 5).

Through the framework of securitization theory elaborated above, NATO’s security paradox can begin to be resolved. By framing a specific political object in existential, urgent language, NATO has helped construct it as a credible security threat requiring collective action. This zero-sum framing of a specific political object creates the legitimacy needed for securitizing actors to take extraordinary actions that often defy the constraints of existing legal frameworks and institutional precedent (Buzan et al., 1998). Once securitization expands the range of politically legitimate action, organizations such as NATO may operate with fewer practical constraints, potentially creating conflict between security objectives and commitments to environmental protection and climate adaptation.

Ecological Paradox of NATO’s Operation Arctic Sentry Response

NATO’s response in the High North has taken on a multipronged approach, centralizing political immediacy into an argument for environmental concern. Its military response to the ecologically impactful Russian shadow fleets has reshaped an otherwise forward-facing security development into an act of global stewardship. However, the increased defensive infrastructure is not just a discursive plan constructed to discourage the continued use of the aging vessels, but also an integrated, resource-intensive operational force. NATO’s positional statement accepts that these security-based initiatives serve both global safety and environmental stewardship, but despite these directives, little evidence suggests that Arctic Sentry is presented as preventing the environmental consequences of its expanding military

and technological footprint. The environmental benefits associated with greater monitoring of shadow-fleet activity must therefore be weighed against the environmental costs of the military and technological infrastructure required to sustain Arctic Sentry. For instance, Arctic Sentry's Cold Response operation included 32,000 personnel, with over 11,500 as ground infantry (Norwegian Armed Forces, 2026). This operation required a significant number of personnel carriers, including an array of fighter and fueling jets (Crusher, 2026).

NATO's securitization of the High North through Operation Arctic Sentry reinforces sovereignty, territorial protection, sustained regional presence, access to strategic resources, and the defense of key Arctic routes. If Russian shadow fleets present both environmental and security risks, but the security threat is treated as more immediate, NATO may need to separate its environmental justifications from its security rationale. Doing so would reduce the paradoxical tension created by framing military expansion as environmental protection.

Conclusion

The dissipation of the Arctic ice cap has suddenly altered territorial, geopolitical, and ecological boundaries within the High North. With this new territorial access, NATO's Operation Arctic Sentry serves as a clear case study of how environmental and security discourse drives Arctic militarization. This securitization argues for ecological stewardship but requires intensive resource extraction for surveillance infrastructure and stresses the need for NATO's strategic dominance of the High North. This frames both Russia's need for resource imports and the climate crisis as logistical gateways for military expansion. Taken together, these dynamics reveal how environmental change and resource pressures can become strategic openings through which military presence, surveillance, and competition expand across the High North.

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THE NORPAK REVIEW

Digital Imaginaries, Lived Experiences, and Arctic Ocean Futures:
Between Global Representations and Situated Knowledges

Research Notes

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Digital Imaginaries, Lived Experiences, and Arctic Ocean Futures: Between Global Representations and Situated Knowledges

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Abstract

Digital environments increasingly shape how Arctic Ocean futures are imagined, represented, and discussed. Through social media, digital storytelling, video games, and immersive media such as virtual and augmented reality, representations of the Arctic circulate across diverse social, cultural, and geographical contexts, influencing understandings of environmental change, sustainability, governance, and development. Drawing on sociotechnical imaginaries (Jasanoff & Kim, 2015) and participatory culture (Jenkins, 2006), this research note examines how globally circulating digital representations of Arctic futures relate to situated forms of knowledge grounded in lived experiences, local ecologies, cultural practices, and long-term relationships with northern environments. Particular attention is given to the role of young people as participants in contemporary digital cultures who engage with both globally circulating imaginaries and locally grounded experiences. While digital environments can create opportunities for participation and alternative forms of representation, the visibility and influence of different perspectives remain shaped by unequal distributions of technological, economic, and cultural power. The paper argues that ethical collaboration and reciprocal engagement provide important frameworks for critically examining questions of representation, authority, and responsibility, and points toward practice-led, research-creation approaches as concrete sites for situated voices in discussions of Arctic Ocean futures.

Digital Imaginaries, Lived Experiences, and Arctic Ocean Futures

The Arctic and North Atlantic are imagined, discussed, and represented through a range of digital environments. Online platforms, social media, digital storytelling, video games, and

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immersive media such as Virtual Reality and Augmented Reality contribute to shaping how Arctic and North Atlantic places, peoples, and futures are understood. These representations matter because imaginaries – the collectively held visions, narratives, experiences, and assumptions through which people make sense of the world - influence public perceptions and engagement, decision-making, and future possibilities (Calogiuri et al., 2025; Weber et al., 2022). In this research note, digital imaginaries refer to visions of Arctic Ocean futures that emerge through the production, circulation, and interpretation of representations within digital environments and across different social, cultural, and geographical contexts, understood as a form of sociotechnical imaginaries shaped by digital media, participatory platforms, and networked communication. This perspective draws on Jasanoff and Kim's (2015) concept of sociotechnical imaginaries, defined as collectively imagined futures that shape understandings of technology, governance, and social change. “Representations” refers to the material and visual forms through which imaginaries are expressed in digital environments. Recent reviews demonstrate the continued relevance and expansion of this concept across diverse technological, environmental, and societal contexts (Hendriks et al., 2025).

As debates surrounding climate change, governance, resource development, and sustainability intensify, digital environments have become sites where Arctic Ocean futures are imagined as well. Digital media create opportunities for multiple representations of Arctic futures to circulate simultaneously, reflecting what Jenkins (2006) describes as a participatory media environment in which diverse actors contribute to cultural production and circulation. Yet participation does not necessarily translate into equal visibility or influence, and digital circulation remains shaped by asymmetries in access, visibility and communicative power (Mager & Katzenbach, 2021).

The growing influence of global digital representations raises important questions about visibility and knowledge production related to Arctic futures. The Arctic is frequently represented through narratives produced by governments, media organizations, corporations, cultural and creative industries, and research institutions located far beyond the region itself (Bravo & Sörlin, 2002; Young, 2017; Wilson Rowe, 2018). These representations circulate globally at a scale that local communities cannot easily match. As a result, dominant imaginaries of Arctic futures may become detached from the lived experiences, contextual understandings, and place-based knowledge of those most directly connected to Arctic Ocean and northern environments.

This research note examines how representations of Arctic futures circulating globally across digital environments relate to situated, place-based forms of knowledge and experience, with particular attention to the role of young people as participants in contemporary digital cultures. While focused on the Arctic Ocean, this paper also considers North Atlantic contexts, acknowledging the important role of North Atlantic communities and perspectives in broader discussions of northern futures. The ideas presented here were further developed during the authors' UArctic Congress session exploring digital imaginaries and Arctic Ocean futures (Jiang & Barbu, 2026).

This paper is informed by the authors' practice-led work in design research and immersive media, considering how research-creation and participatory approaches might support situated voices in these digital landscapes. Digital environments and experiences can create opportunities for alternative perspectives, community storytelling, and locally grounded forms of representation. However, the visibility and influence of such representations remain shaped by broader asymmetries of power, resources, and audience reach. Ethical collaboration and reciprocal engagement are therefore considered here not as solutions to these inequalities, but as critical frameworks for questioning whose knowledge becomes visible, whose futures are imagined, and whose voices shape discussions of Arctic Ocean futures.

Digital imaginaries and Arctic Ocean futures

Digital virtual environments play an important role in shaping public understandings of the Arctic. The Arctic is continuously represented and reconfigured through circulating visual and narrative forms, including images, videos, interactive and immersive media content (e.g. documentary films, streaming series, social media content, globally circulating video games such as Minecraft, used for participatory mapping and storytelling, or Genshin Impact, presenting Arctic-inspired regions, and immersive VR/XR experiences through installations in museum contexts such as the XR nature experience Fixing Our Broken Planet - Visions of Nature at the Natural History Museum in London). These digital media do not merely communicate information about the Arctic; they also contribute to shaping imaginaries of Arctic futures. Through these representations, global audiences encounter narratives about environmental change, sustainability, resource extraction, technological innovation, and geopolitical competition in the Arctic. Young people engage with these representations through everyday digital media and participatory online cultures, positioning them at the intersection of globally circulating imaginaries and locally grounded lived experiences, ranging from mediated to direct environmental engagement. This intersection is particularly significant for young people, who will be most directly affected by the long-term consequences of how the Arctic will be shaped in the future.

These imaginaries influence how Arctic futures are envisioned. They shape assumptions about what the region is, what it might become, and which forms of intervention are considered necessary or desirable. In this sense, imaginaries are not merely descriptive; they actively participate in the construction of future possibilities. However, the production of imaginaries is uneven. Large media organisations, technology firms, entertainment industries, governments, and international institutions possess significant resources for creating and disseminating narratives at global scales, shaping how Arctic issues are understood. Communities living within Arctic and North Atlantic regions may contribute alternative perspectives, yet these voices frequently circulate within far more limited networks (Wilson Rowe, 2018; Bravo & Sörlin, 2002).

This imbalance is particularly relevant in contemporary discussions surrounding sustainability and environmental transition. Emerging scholarship on green colonialism highlights how externally generated visions of environmental futures may be imposed on northern regions without fully engaging local priorities, histories, or understandings of place

(Wilson Rowe, 2018; Whyte, 2017). Narratives of progress, innovation, and sustainability can mask underlying questions of power and representation.

Digital technologies do not necessarily eliminate these inequalities. Rather, they frequently provide new mechanisms through which dominant narratives are amplified or even embodied through virtual immersion. Unlike traditional media, digital environments combine circulation, participation, interactivity, and immersion, and enable forms of cultural production that extend beyond traditional institutional gatekeepers (Jenkins, 2006; Murray, 1997), enabling users not only to consume representations of Arctic futures but also to engage with, reshape, and co-produce them through interactive and participatory practices. However, such participatory affordances do not necessarily translate into greater visibility, legitimacy, or influence. These processes remain shaped by existing economic, technological, and cultural power (Couldry & Mejias, 2019; Gillespie, 2018).

Lived Experiences and Situated Knowledges

If digital imaginaries contribute to shaping visions of the future, lived experiences provide insight into how environmental change is encountered in everyday life. Imaginaries are shaped not only by political and technological visions but also by emotions, attachments, hopes, and anxieties that influence how futures are experienced and understood (Hughes, 2024). Across Arctic and North Atlantic regions, knowledge emerges through long-term relationships with marine environments, local ecologies, cultural practices, and community histories. Such understandings are deeply contextual and tied to the places in which they are produced (Haraway, 1988; Smith, 1999; Degai et al., 2021).

Situated knowledges offer perspectives that challenge generalised representations of the Arctic. Recent work in Indigenous futures thinking similarly emphasises the importance of community-led approaches to imagining and shaping futures grounded in local knowledge systems, relationships, and responsibilities (Cheok et al., 2025). They illuminate how environmental transformations are experienced locally, how communities adapt to changing conditions, and how social and cultural relationships influence responses to uncertainty. Rather than presenting a singular Arctic reality, they reveal a diversity of experiences that often remain hidden within broader narratives.

Importantly, situated knowledge should not be understood simply as local data that can be incorporated into pre-existing frameworks. It represents alternative ways of knowing and relating to environments. Their significance lies not only in the information they provide but also in the relationships, responsibilities, and histories through which knowledge is produced. Digital environments can support the visibility of such perspectives through collaborative storytelling initiatives, participatory media projects, and collaborative digital platforms. From the perspective of participatory culture (Jenkins, 2006), such practices create opportunities for communities and participants to become active contributors rather than passive subjects of representation. Yet visibility alone does not resolve deeper questions concerning authority and representation. Contributions of stories and experiences may not necessarily translate into

influence over how those narratives are interpreted, circulated, or mobilised within wider discussions.

Consequently, the challenge is not simply one of inclusion. It is also a question of how different forms of knowledge are valued and how relationships between knowledge holders are structured. Attention to situated knowledges therefore requires engagement with the ethical and political dimensions of knowledge production itself.

Ethical collaboration in unequal digital landscapes

Discussions of ethical collaboration and reciprocity have become increasingly prominent within Arctic research and community-engaged scholarship (e.g., co-design, participatory research, and knowledge co-production). Such approaches seek to move beyond extractive models of knowledge production by emphasising relationships, mutual learning, and engagement with community and participant-defined priorities. However, it is important to recognize the limits of these approaches within contemporary digital environments. Reciprocity does not eliminate structural inequalities. Communities, researchers, and cultural organisations continue to operate within systems shaped by uneven access to resources, technological infrastructures, institutional authority, and public visibility. The capacity to produce, legitimise and circulate representations remains profoundly uneven, reflecting enduring disparities in institutional authority, technological access, and cultural influence (Jasanoff & Kim, 2015; Couldry, 2012).

For this reason, ethical collaboration should be understood less as a solution than as a critical practice. Its value lies in creating opportunities to reflect on power, representation, and responsibility. Rather than promising balanced relationships, ethical collaboration encourages awareness of the asymmetries that shape knowledge production and dissemination. Creative and participatory methods can contribute to this process. Collaborative storytelling (e.g., oral history and co-created narratives), participatory media production (e.g., digital storytelling platforms), digital heritage projects, and research-creation initiatives (e.g., art–research collaborations, interactive gaming, immersive installations, virtual reality, XR) may provide spaces in which alternative perspectives can be articulated and shared. Such approaches cannot fully counterbalance the influence of dominant actors, but they can create opportunities for dialogue, reflection, and relationship-building across different communities and knowledge systems.

Young people occupy a particularly important position within these discussions. As active participants in digital culture, they engage with globally circulating representations while simultaneously drawing upon local experiences, identities, and relationships (boyd, 2014; Ito et al., 2010). Their perspectives highlight the intersections between digital imaginaries and everyday life, making youth engagement an important site for examining how future narratives are interpreted, negotiated, and contested (Appadurai, 1996).

Conclusion

The influence of these representations is uneven. Powerful institutions and media producers continue to shape dominant narratives, while many situated knowledges remain less visible within broader public discussions. Understanding Arctic futures therefore requires attention not only to what is represented but also to who has the power to represent. The tension between global representations and situated knowledges reveals the political dimensions of digital knowledge production and highlights the importance of critically examining how Arctic futures are imagined.

Ethical collaboration and reciprocal engagement cannot fully resolve these inequalities. Nevertheless, they remain important frameworks for questioning dominant narratives, supporting dialogue across knowledge systems, and foregrounding the lived experiences that too often remain at the margins of discussions about Arctic Ocean futures. Attention to digital imaginaries therefore requires attention to the power relations through which some futures become visible and actionable while others remain marginalised, but also to the participatory digital environments through which Arctic futures can be actively produced, circulated, and negotiated. This points toward practice-led, research-creation approaches to immersive and participatory media not as neutral tools, but as concrete sites where situated voices can begin to take part in shaping Arctic futures.

Future research should examine how digital environments, including participatory platforms, video games, digital storytelling initiatives, and immersive media (VR, AR, and XR), shape which Arctic Ocean futures become visible, credible, and actionable, and how these processes interact with situated forms of knowledge across northern contexts. This includes ongoing collaborative work in digital, immersive, and participatory research exploring how Arctic Ocean futures are represented, experienced, and negotiated.

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THE NORPAK REVIEW

Frozen in Time:

The Un-Sustainable Development of the Hawaiian Tourism Industry and its Effects on Indigenous Hawaiian Sovereignty

Research Notes

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Frozen in Time: The Un-Sustainable Development of the Hawaiian Tourism Industry and its Effects on Indigenous Hawaiian Sovereignty

Henri Keskinen *

In February of 2026, the Economic Research Organization at the University of Hawai‘i (UHERO), published their report on the economic decline of the Hawaiian Islands. Economists Steven Bond-Smith and Erich Schwartz (2026) base their analysis on the outmigration event, where more residents, especially the Indigenous Kānaka Maoli, move out of Hawai‘i than are born or move to the island group. According to Bond-Smith and Schwartz, this movement reflects not only Hawai‘i’s rising cost of living, but also nearly three decades of neglected economic development and weak per-capita growth that have contributed to the state’s economic stagnation. Their report finds that per-capita incomes in Hawai‘i in 2024 were 5% below the national average, compared with the 1970s, when they were 30% higher than average. Indeed, as Bond-Smith and Schwartz note, Hawai‘i has begun to resemble regions such as rural Mississippi, Alabama, and upstate New York. (Bond-Smith & Schwartz, 2026, pp. 1–2 & 10–12).

As someone studying the Hawaiian tourism industry and its effects on the Kānaka Maoli culture and the overall way of life in the island group, these findings in the 2026 report sadly present few surprises. I see this economic decline as part of the long history of the corporate tourism industry in Hawai‘i. In this short research summary, I aim to provide historical context as to why this unsustainable development has occurred in Hawai‘i, based on my ongoing PhD research. The UHERO report correctly points out that the economic decline started in the 1990s, but I see the seeds of cultural erosion starting much earlier (Bond-Smith & Schwartz, 2026).

Discussing economic decline and cultural erosion in the same sentence might seem odd to those unfamiliar with the history of the Hawaiian tourism industry. Even a discussion of tourism and the Hawaiian economy needs a brief explanation. Hawai‘i’s economy has largely depended on tourism since the decline of cane sugar production in the 1950s (MacLennan, 2014, pp. 275–279). Today, the tourism industry is the largest economic sector in Hawai‘i, accounting for around 16% of the island group’s overall GDP (DBEDT Research Division, 2026, p. 4). The important point here is how the tourism industry maintains its profits, which I argue rely heavily on the Kānaka Maoli. Their culture, heritage, and land drive the industry.

For example, the famous tourism sites near the Mauna Loa and Kīlauea volcanoes sit on Indigenous Hawaiian lands, now federal U.S. National Parks. Their histories are deeply

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intertwined with United States settler colonialism, apparent from the late 1800s onward (Saranillio, 2018, pp. 52–56). Meanwhile, other cultural products like the famous hula dance are likewise staples of the Hawaiian tourism industry, with an equally disquieting past (Imada, 2012, pp. 12–15). Thus, the island group's economics cannot be discussed without also considering Hawaiian culture.

Returning to Hawaiian economic distress and its relevance to the tourism industry, I see them as closely linked to Hawai'i's historical and cultural development. In other words, I feel the tourism industry has not been able to maintain economic well-being in Hawai'i because of how it was devised over its long history. Its purpose was never to cherish or develop Hawaiian culture; rather, it was built to control and sell the fantasy of American Hawai'i to visitors. How the tourism industry handles Kānaka Maoli cultural products is the key to understanding this phenomenon.

The corporate tourism industry in Hawai'i aims to freeze culture. Frozen culture, where everything stays the same, makes commercialization easier by turning it into a neat, stereotypical package that can be valued, sold, and resold repeatedly; take, for example, the hula dance. The image of the scantily clad woman dancing the hula hasn't changed much in advertisements and visitor performances since the 1800s (Trask, 1991). In comparison, the Kānaka Maoli have lived with the hula over time, introducing new dances and customs with many different meanings (Bacchilega, 2007, p. x).

Similarly, the volcanoes and their place in Kānaka Maoli religious customs have changed little under the tourism industry. Instead of an integral part of the ever-changing natural life on the islands, the volcanoes are still seen as spectacles marketed for the visitors. According to folklorist scholar Cristina Bacchilega, this is due to the industry's need to manufacture a sort of "legend" of Hawai'i, an easily digested and enticing narrative or picture of exoticism, as a marketing tool (Bacchilega 2007, pp. 1–2 & 16–18).

What does this have to do with the island groups' economic stagnation? Consider how this frozen atmosphere affects economic development. Tourism, as an industry, does little with development. By fabricating this carefully curated legendary Hawai'i, complete with exotic people and breathtaking views, one leaves little room for interpretation and change. In fact, there is little need to change a "working product". Tourists arrive, spend money, and then leave, establishing an industrial baseline that has evidently worked until recently. Change is detrimental to the industry in this case because it might disrupt profit plans and visitor statistics. Only planned transformations and trends are allowed, like changing an exhibition theme in a museum, because those can be accounted for. The motivations for investing or developing are thus nullified. Even more so, change is problematic for corporations, as it might facilitate increased self-determination for the Kānaka Maoli.

Here we can see the connection. While the tourism industry stays the same, the outside world inevitably evolves. This creates a paradox: the attempt to preserve Hawai'i's ever-sustainable legend becomes ultimately unsustainable. This effect is strengthened by what the UHERO report calls the "Dutch-disease conditions", which are conditions formed when a

booming economic sector, in this case the tourism industry, overshadows its competitors. As this dominant industry wanes, other sectors cannot survive on their own, worsening the economic downturn. As Bond-Smith and Schwartz point out, the tourism industry peaked in 1989, and no other industry has surpassed it since. This also suggests that the tourism industry itself has plateaued (Bond-Smith & Schwartz, 2026, p. 11).

These developments have obvious ramifications for the Kānaka Maoli and the islands at large. The point is that the tourism industry uses ownership of cultural products, such as the land itself, for profit. That profit rarely flows evenly among the inhabitants of the island group, as many scholars and members of the Hawaiian Sovereignty Movement point out (Trask, 1991; Williams & Gonzales, 2017). However, we can also see another important consequence of the economic downturn. The outmigration event threatens to disrupt not only the islands' economy, but also Hawaiian society and culture itself. As the UHERO report points out, as of 2026, more Kānaka Maoli live outside Hawai'i than within it. This outmigration physically threatens to break Indigenous Hawaiian relationships with their land and cultural heritage (Bond-Smith, Schwartz 2026, pp. 3–4).

Finally, the concept of stagnation presents interesting viewpoints for the historical approach. How can one sustain economic growth using cultural products? And does this mean that the commercialized legend of Hawai'i has finally reached its end? Enormously difficult and complex questions which deserve their own analysis in a different, larger format. I feel however, that these problems are symptoms of a systematic malfunction, which are not going to go away without much needed change. The obvious answer would be to do away with the corporate tourism industry altogether, but this is much easier said than done.

The UHERO report argues that tourism is here to stay, while also offering more stability than the previous industries, such as sugar. According to Bond-Smith and Schwartz, diversifying Hawaiian economy happens by not hindering tourism, but branching out from it (Bond-Smith, Schwartz 2026, pp. 40–42). I would like to add here that I believe that this solution would also require the tourism industry to acknowledge its past and change its stance to the frozen “legend” of Hawai'i. Increasing sustainability and self-determination of the Kānaka Maoli is tantamount with the wellbeing of Hawai'i, economic or otherwise.

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The Art of Writing Environmental Myths in the Arctic:
Resilience and Meaning-Making at the UArctic Congress

Research Notes

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The Art of Writing Environmental Myths in the Arctic: Resilience and Meaning-Making at the UArctic Congress

Michael Laiho *

Attending the UArctic Congress reinforced many of the ideas I have been developing in my doctoral research, particularly those concerning the relationships between Arctic governance, authorship, resilience, and environmental myth-making. I had previously given a talk to the Arctic Circle Assembly on what the “death of the Arctic” could mean by exploring how important authorship is when considering who is writing and who is written about (Laiho, 2025). My UArctic Congress contribution, meanwhile, focused on alternative ways of understanding resilience in the context of EU Arctic policy-making, concluding that resilience can involve institutional biases and forms of decision-making malaise. This research note brings these strands together by considering the UArctic Congress itself as a space in which Arctic narratives are produced, negotiated, reproduced, and oftentimes contested.

The congress provided an opportunity to observe the obscurities of public debate and what they might mean for institutional resilience. Rather than treating conferences simply as spaces for presenting research, I consider them as sites in which recurring tropes of academic and policy discussion become visible. What struck me was not simply the diversity of perspectives present at the conference, but the way participants from different cultural, institutional, disciplinary, and political backgrounds collectively reproduced narratives about the Arctic while reaching, or failing to reach, consensus on their meaning. The UArctic Congress itself became an arena of what I call “myth-making:” a process through which existing meanings are reproduced, adapted, and made available for collective discussion.

For Roland Barthes (1957), myth transformed historically produced meanings into something that appears natural. It therefore provides a useful starting point for examining how particular understandings of the Arctic become familiar enough to structure political and academic discussion. I extend this concern by drawing tentatively on the Frankfurt School’s account of cultural production. Adorno and Horkheimer’s (1947) concept of the “culture industry” was developed to describe the standardisation and reproduction of cultural forms under modern capitalism. I do not suggest that an academic conference constitutes a culture industry in this strict sense. Rather, their work raises a related question: how are meanings produced, circulated, and reproduced through institutions that organise cultural and intellectual life? This question is particularly relevant to Arctic governance, where concepts such as sustainability, stewardship, security, and resilience circulate between academic, political, scientific, and civil-society communities.

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From a resilience perspective, conferences function as spaces of adaptation and coordination. Researchers, policymakers, indigenous representatives, NGOs, and institutional actors approach Arctic issues through different forms of expertise, values, and political priorities. Yet academic and institutional exchange also creates shared vocabularies. Concepts such as “Arctic stewardship,” “security,” and “resilience” allow participants to communicate across boundaries without necessarily resolving underlying tensions. In this sense, such concepts resemble the “boundary objects” described by Star and Griesemer (1989): flexible objects that can be interpreted differently by different social worlds while retaining enough common meaning to facilitate cooperation.

Several conversations during the conference highlighted this dynamic. Over coffee, one discussion about Faroese whaling practices led to a fascinating historical account connecting the Arctic Ocean to the Azores through seventeenth-century shipping and whaling routes. A colleague from the humanities presented this history through an international relations perspective, translating it into a language that could engage a wider audience. Another colleague reflected on how Norwegian and Greenlandic whaling traditions have increasingly become stigmatised through environmental and animal-rights discourses. Where he grew up, he explained, fishermen shared their catch as the Faroese have done for centuries, but political tensions now exist between Arctic communities, European institutions, and environmental NGOs because, in his words, “people don’t get it.”

The conversation demonstrated that environmental narratives are never simply scientific or objective. They are historical, cultural, and political because participants approach the same issues from different perspectives and institutional positions. Moving between conversations during panels and coffee breaks, I became particularly interested in the extent to which participants appeared to speak primarily within familiar disciplinary and institutional languages. Many also expressed frustration with Arctic governance institutions, which they perceived as reproducing an artificial “business as usual” framework. One colleague from Germany lamented how science-cooperation frameworks, such as the International Polar Year and even the Arctic Council, have succeeded more in managing access to Arctic affairs than in producing meaningful political exchange. Others suggested that Arctic events are, for better or worse, spaces where participants speak primarily to their own audiences, further reproducing familiar institutional languages rather than fundamentally transforming their worldviews.

This observation resonates with Carl Folke’s (2016) understanding of resilience as involving persistence, adaptation, and transformability. Arctic institutions clearly demonstrate adaptive capacity: policies are revised, concepts evolve, and governance frameworks are continually reframed in response to criticism or geopolitical change. However, adaptation does not necessarily lead to transformation. Resilience can instead function as a mechanism through which institutions maintain legitimacy and continuity under changing conditions. The persistence of familiar narratives may therefore itself be understood as a form of resilience, particularly when institutions can incorporate criticism without fundamentally altering the assumptions upon which governance is based. Kevin Grove (2018) argues that systems of

governance assemble frameworks around resilience, which changes its meaning and application to suit the needs of policy experts who design policies for complex, changing environments like the Arctic.

This perspective has implications for my own doctoral research. First-hand accounts from interviews with EU policymakers have taught me that Arctic events like UArctic can function as boundary objects in their own right, providing spaces where participants negotiate key facts about the region while navigating their own institutional roles, biases, and responsibilities. Resilience thinking has consequently encouraged me to pay greater attention to moments of contradiction, uncertainty, or criticism, which may reveal more about how institutions adapt and preserve themselves than apparently successful policy outcomes.

This is particularly important when considering whose knowledge is produced through Arctic research. At the FRONT Autumn School, Sámi scholar Siggá-Marja Magga described an old saying that “a Sami family consists of mother, father, children and one researcher because they were so researched” (Magga, 2025). She explained that research conducted on Sámi communities had often benefited researchers more than the communities themselves, contributing to a desire among Sámi communities to conduct research themselves. This observation complicates the apparently progressive function of knowledge production. Conferences and research projects may create opportunities for new perspectives, but they can also reproduce established relationships between those who produce knowledge and those who become its subjects.

My doctoral project, *Writing the Arctic: Resilience, Territoriality, and Environmental Myths in EU Arctic Policy*, approaches policy documents not merely as administrative texts but as sites where governance is negotiated and stabilised. Environmental narratives such as the Anthropocene, peak oil, and the concept of the global commons provide institutions with linguistic frameworks through which changing political and environmental conditions can be interpreted and incorporated into policy. These narratives do not necessarily determine policy outcomes. Rather, they make particular forms of governance available as reasonable, necessary, or natural.

The connection between conference discourse and EU policymaking is therefore not that one directly causes the other. Rather, both participate in wider processes of knowledge production. Ideas circulate between scientific reports, academic conferences, policy consultations, institutional communications, and political documents. Their meanings can change as they move between these contexts, while certain recurring formulations remain recognisable. This is where the concept of myth becomes useful: it draws attention to the process through which historically contingent interpretations can become sufficiently familiar to appear self-evident.

The UArctic Congress consequently provided a useful empirical setting for reconsidering resilience as a discursive process. Its participants did not reach consensus on what the Arctic is, which it should become, or how it should be governed. Yet the congress nevertheless produced forms of continuity through recurring concepts, narratives, and institutional languages. In this respect, resilience may involve not only responding to environmental or

geopolitical change, but sustaining the meanings through which institutions understand that change.

This also points towards a future research agenda. Rather than treating discourse analysis and literary theory as separate approaches, further research could examine the cultural production of environmental narratives across the spaces through which they circulate. Barthes' account of myth could be brought into dialogue with contemporary work on environmental discourse and the production of environmental "myths" (E.g. Benjaminsen, 2021), while research on Arctic cultural and sustainability discourse demonstrates how conferences themselves can become sites for organising competing narratives about the region (Huhmarniemi and Jokela, 2020). Recent work explicitly conceptualising the Arctic as a boundary object also suggests that the production of shared but contested meanings may be central to how Arctic governance is negotiated (Hansen-Magnusson and Gehrke, 2025). A more sustained engagement with cultural production, meanwhile, could test whether insights from Adorno and Horkheimer can illuminate the institutional reproduction and standardisation of environmental narratives beyond their original context. Such an approach would allow my doctoral research to examine not only how EU policy texts construct the Arctic, but how the narratives contained within them are produced, circulated, adapted, and made resilient across wider communities of knowledge.

Ultimately, resilience in Arctic governance may not simply concern the ability to respond to environmental or social challenges brought about by shifting geopolitics. It may also concern the ability of institutions to sustain meaning, legitimacy, and authority through discourse itself. What the UArctic Congress revealed to me is that Arctic governance is shaped not only through formal policymaking, but through ongoing negotiations among experts, institutions, activists, indigenous communities, and scientific narratives. These negotiations rarely produce full consensus. Instead, they produce adaptable myths: varying perspectives on the same issues that allow different actors to communicate while making particular forms of governance appear natural, necessary, and resilient.

My experiences at UArctic therefore raise a broader question for my doctoral research: if resilience allows institutions to adapt without fundamentally transforming, then whose voices, interests, and futures are ultimately being stabilised through Arctic policy discourse – and whose are left outside of it?

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