

The Implications of Climate Change on Community Ontological Security in the Arctic: A Review

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Climate change in the Arctic is impacting people's way of life through increasing current and potential vulnerabilities including food security and environmental hazards. As routines and lifestyles change accordingly, self-identity and routines can be affected, impacting people's ontological security. Ontological security (OS) refers to the links between identity, routines, and security to include identity factors such as gender, culture, and other forms of belonging which presuppose an individual's ability to both feel safe and actively engage in security paradigms. The role of human capital in the Arctic cannot be overestimated. Inhabited by more than 4 million people including Indigenous and local populations, the Arctic is being threatened by accelerating climate and climate-induced environmental changes. As a result, the Arctic region is a crucial arena for ontological security. This article provides a review of the impact of climate change on the ontological security from a broad Arctic community perspective with a specific focus on identity, attachment to place, and routines. The article highlights that ontological insecurity is not always the impact of climate change; rather, in some cases, ontological security may emerge. Further, communities such as Indigenous Peoples, who have historically relied on subsistence living, may be most susceptible to climate induced ontological insecurity. The authors of this paper propose that the ontological security of Arctic communities should be maintained through strong infrastructure, support of culture and the environment, and region building exercises highlighting the region as a "zone of peace". These mechanisms promote ontological cohesion by allowing communities to maintain poly-paradigmatic and volumetric identities in a way that supports social harmony and collective stability.

Introduction

Ontological security (OS) refers to a sense of a coherent identity that is sustained through a stable sense of self and routine. In this regard, ontology concerns the ability to understand oneself in relation to the world and the events surrounding the self (Giddens, 1991). This sense of self can be threatened by numerous factors, such as climate induced stochastic shocks, ultimately resulting in a 'less secure' psychological state (Laing, 1960; Giddens, 1991; Rumelili, 2015; Bolton, 2021). States and institutions play a role in producing a secure state of being through the construction of identity maintained through narratives and discourse (Rumelili, 2015). At a time of changing Arctic

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narratives due to the oscillations between the Arctic as a “*zone of peace*” and “*zone of war*,” it is of crucial significance to discuss how climate change may impact Arctic communities from a peace research perspective (Rumelili, 2015). Understanding that existential challenges are mediated within a state of ontological security or insecurity is an important contribution to this.

Without a unified definition of OS from a peace and wellbeing research perspective (due to the current theoretical background of OS containing multiple theoretical strands), we consider OS as the ability of a community to maintain coherent, poly-paradigmatic and volumetric identities despite multi-faceted threats. Poly-paradigmatic bases of identity reflect the different social roles and experiences that individuals obtain along their lifetime that can be traditional, authentic, cultural and adaptive (Shikova, 2008). Poly-paradigmatic bases of identity describe the application of several identity paradigms simultaneously, where the leading paradigm is complemented by others, rather than opposed to them, and working on the principle of synergy to achieve a holistic understanding of the identity – where one’s own paradigm enriches and fulfills others.

In the Arctic, the term “community” encompasses a broad group. The Arctic includes the eight Arctic States (Norway, Sweden, Finland, Denmark, Iceland, Canada, Russia and the United States) as well as the homelands of dozens of Indigenous communities, all of which encompass distinct sub-groups and communities in themselves (ACIA, 2004; AHDRII, 2015). Another important stipulation is that the population of the Arctic is diverse. Along with Indigenous groups there is a non-Indigenous population which have lived in the territory for several generations (Arctic Council, 2025). As communities are inherently unique, flexible, and connected to place, there are inevitable blind spots in using such a general perspective. This article should therefore be treated as a broad review to stimulate discussion on the principles of OS at an Arctic community level.

Fakhoury and Gricus (2024) examine the role of eco-anxiety in shaping the ontological security of Arctic communities, arguing that collective identities can form around shared environmental anxieties. These identity formations, in turn, have implications for international governance, as they may foster cooperative mechanisms rooted in a mutual recognition of climate-related threats (Rumelili, 2015; Lackenbauer and Depledge, 2021). This construction of identity paradigms also reflects the idea of ontological cohesion to community, territory, environment and their iterative transformations. Social cohesion in the Arctic is promoted in early region-building initiatives such as the Kirkenes Declaration (1993). The Kirkenes Declaration (1993) promotes pan-Arctic cooperation to enable regional economic growth and environmental safety through community-based measures. This era of region building marked an early development of the creation of a post-Cold War Arctic identity tied to community level initiatives. From this regard, the OS of these communities was tied to a sense of cohesiveness encouraging improved transportation between Arctic communities and cultural exchanges, solidifying the peace building process tied to routines and place.

Climate change is dramatically reshaping the Arctic, where temperatures are rising at more than twice the global average. This rapid warming leads to the accelerated melting of sea ice, thawing permafrost, and shifts in ecosystems (AMAP, 2021). These environmental changes have profound impacts on Arctic biodiversity, traditional livelihoods, and local communities, especially Indigenous peoples who depend on stable ice and predictable seasons (Pearce et al., 2015). Additionally, the retreat of ice opens new maritime routes and access to natural resources, intensifying geopolitical interest and competition among Arctic and non-Arctic states (Dodds,

2019). The combination of ecological disruption and emerging strategic tensions increases vulnerability on multiple levels and raises concerns about governance, security, and resilience (Keskitalo, 2019).

Climate change in the Arctic is framed as both a current threat and part of a cascading threat sequence. The communities that inhabit the region themselves are deemed most at risk. However, international attention surrounds Arctic climatic changes due to a climatic butterfly effect felt throughout the rest of the world (Grassl, 2022). Rapid environmental shifts and growing eco-anxiety undermine not only physical security but also the psychological foundations that communities depend on. However, the impact on Arctic communities is not uniform. For example, climate change has been found to disproportionately impact those engaged in subsistence living activities in climatically vulnerable regions due to the close relationship between people and the land. Vulnerabilities are further impacted by factors which aggravate inequality such as ethnicity, gender, income and class (Climate Change in Sápmi, 2023).

The concept of comprehensive security challenges traditional notions of security that focus primarily on military threats by encompassing a broader range of interrelated concerns, including civil, food, human, and environmental security. These dimensions extend beyond the interests of the nation-state to include the well-being of communities and individuals (Heininen, 2023; Kalliojärvi, 2019). In a broader sense, comprehensive security describes an integrated approach that encompasses physical environment, information, administrative, and human security that incorporates various security measures and strategies to holistically protect against a wide range of threats and vulnerabilities. As a result, no single disciplinary framework is sufficient to address the compounding and intersecting threats faced in the Arctic. Instead, holistic and interdisciplinary knowledge systems are required to meaningfully engage with these complexities. As Paci et al. (2004) emphasize, systematic research into climate change is relatively new, and its inherent complexity demands integrated approaches that combine scientific inquiry with Indigenous knowledge and community-based understandings.

This broader framing of security also intersects with the concept of OS, which refers to the need for individuals and communities to maintain a stable sense of identity, continuity, and meaning in the face of disruption. In the Arctic, climate change and other transformative forces not only threaten material conditions such as food or housing but also undermine cultural practices, traditional knowledge systems, and the narratives through which communities understand themselves. Thus, building on definitions of comprehensive security by Heininen (2023) and Kalliojärvi (2019), comprehensive security must account for both physical survival and existential resilience, recognizing that environmental change may destabilize the very foundations of identity and belonging.

Mechanisms to support Arctic communities in maintaining OS, defined as the sense of continuity, stability, and poly-paradigmatic place-based identity, can be broadly categorized into three interconnected elements: resilience, adaptability, and ontological cohesion. At the institutional level, the human dimensions of climate change in the Arctic have been explored through key projects and reports, notably the Arctic Climate Impact Assessment (ACIA) and the Arctic Human Development Report (2004, 2014), which highlight wide ranging social, cultural, and health related consequences. While many Arctic Council affiliated projects aimed at enhancing community

resilience and adaptability may not explicitly reference OS, they nonetheless contribute to physical, economic, social, and emotional well being which reduces potential vulnerabilities (NCM, 2025).

By expanding the comprehensive security conversation to include ontological dimensions, this paper examines resilience and adaptability not only as material or institutional capacity, but also as the ability of communities to maintain core identities, routines, and worldviews cohesively. The fragmentation of these foundations, through climate change, impacts not just community wellbeing, but also impacts the broader security landscape.

As Sandvik (2025) recently noted, peace research is not defence research, a distinction that raises important questions about how academic inquiry is situated within an increasingly militarised Arctic context. From a peace research perspective, the goal of security is to protect individuals, communities, and nation states without relying on physical or psychological forms of violence. To support the distinction between OS for peace-building or war efforts, this article re-examines OS, adopting a comprehensive understanding of security, which includes not only military and regional dynamics but also the influence of climate change, energy, and environmental conditions (Heininen, 2023).

Based on understandings of OS which require a coherent sense of self – the ability of a community to hold a self-identity in a cohesive manner – we turn to scholarship on how poly-paradigmatic bases of identity reflects the different social roles and experiences that individuals obtain throughout their lifetime that can include traditional, authentic, cultural, adaptive and other levels (Shikova, 2008). We also turn to studies which reflect the ability of Arctic communities to adapt to the cascading impacts of climate change (e.g ACIA, 2004; Nutall, 2010; AHDR, 2015; Sellers, 2018; Perrin & Jolkowski, 2022; Climate Change in Sápmi, 2023). This article therefore provides a broad review of the impact of climate change on the OS of Arctic communities with a focus on identity, attachment to place, and routines. From this review, we argue that ontological cohesion, achieved through robust Arctic infrastructure, protection of culture and environment at the community level, and sustained international discourse framing the Arctic as a “*zone of peace*”, is essential for maintaining physically and ontologically secure Arctic communities.

Ontological Security

In an era marked by rising geopolitical tensions and cascading climatic threats, it is essential that communities build resilience to increasing militarisation and external pressure. Such existential threats compound existing vulnerabilities, impacting how individuals engage in the security paradigm. Identity must not be weaponized in these dynamics; rather, it should serve as a source of mutual understanding and cohesion. Ontological Security has become increasingly relevant within mainstream security discourse. It shapes not only individual perceptions of safety and continuity, but also the capacity of communities to participate meaningfully in broader security frameworks (Bolton, 2021).

Ontological security, a concept first developed at the intersection of psychology and sociology, refers to the sense of a coherent and continuous self (Laing, 1960) and; the stability of this self amid existential challenges (Giddens, 1991). In the context of climate change, ontological security becomes increasingly relevant, as environmental disruptions threaten not only material well-being but also the psychological and cultural continuity that individuals and communities rely on to maintain a stable sense of identity. For Arctic communities in particular, rapid ecological changes

such as melting permafrost, loss of sea ice, and shifting ecosystems can undermine traditional ways of life, creating a sense of dislocation and insecurity that extends beyond physical survival (Hovelsrud et al., 2012).

This ontological insecurity reflects not only a loss of environmental stability but also a deeper psychological challenge: the struggle to maintain identity and meaning in a world undergoing rapid and unpredictable change. This is well documented in the phenomenon of climate anxiety amongst children and young adults, and notions of eco-anxiety (Hickman et al., 2021; Fakhoury and Gricus, 2024).

From a peace research perspective, this has two key strands. Firstly, individuals and communities must be resilient to physiological manipulation from bad actors; and secondly, individuals and communities must be resilient against pressures to unnecessarily participate in conflict situations which may be detrimental to their peaceful way of life. This is particularly relevant when defensive mechanisms call for the integration of multiple actor sets in defensive strategies. For example, the Report of the Yukon Arctic Security Advisory Council (2024) highlights the need for Indigenous Peoples and local communities to be utilised as core actors in military tensions, highlighting their core role in defensive strategies in the Canadian Arctic.

Laing's concept of ontological security (1960), centred on the experience of the "whole self," is highly relevant to understanding the psychological impacts of climate change. Laing (1991) emphasized that ontological security involves maintaining a coherent, continuous, and authentic sense of self, which allows individuals to feel grounded and stable despite life's uncertainties. Climate change, however, poses a significant threat to this coherence by disrupting the physical environment and social conditions that support identity and belonging. As landscapes transform, traditional ways of life become unstable, and existential threats increase, individuals may experience fragmentation of the "whole self," leading to feelings of insecurity, alienation, and anxiety.

Giddens' concept of ontological security (1991) focuses on the fundamental human need for a stable sense of self and continuity in everyday life, maintained through routines, identity, and the expectation of temporal continuity. Climate change disrupts these core elements by introducing rapid and unpredictable environmental transformations that undermine the familiar social and physical contexts people rely on. For communities, especially in vulnerable regions like the Arctic, these disruptions challenge established routines and social practices that provide predictability and a sense of control.

Rumelili (2015) advances OS theory by highlighting that both ontological security and insecurity are relational and socially produced rather than purely psychological conditions. Rumelili (2015) argues that states and institutions play a central role in constructing and sustaining the collective self-narratives that underpin ontological security. Through institutionalized routines, discourses, and practices, political actors reproduce stable understandings of identity and difference that provide continuity and predictability in social life. At the same time, Rumelili (2015) emphasizes that ontological insecurity can be a transformative force that causes the redefinition of identities and relationships.

Cognitive warfare builds from vulnerabilities in ontological insecurity to include strategic efforts to disrupt individuals' perception of reality, identity, and trust in social institutions (Bolton, 2021).

In an era of accelerating climate change, this form of warfare becomes increasingly relevant, as environmental disruption creates fertile ground for psychological and informational manipulation. Destabilising discourse can be seen in the Arctic. For example, Trump's stated desire to obtain Greenland led to noticeable fallout in the country including misinformation campaigns based on the political confusion taking place (Thorsson, 2025). This is particularly concerning for Arctic communities who may be at risk of their identities being weaponized to meet national defence parameters, or further, become targets of physiological disruption from bad actors.

The continued reliance on Artificial Intelligence and technology means that people may be less connected to material factors such as place and more vulnerable to strategic discourses and persuasion and other forms of immaterial detachment. Such increasing reliance on digital information systems risks moving communities from poly-paradigmatic, place-based identification towards communities attached to ideologically centred immaterial factors. The practice of creating insecurity through such technology can have direct impacts on community level decisions, as exemplified by the studied interference in Greenlandic political elections (Politiet Efterretningstjeneste, 2023). As Gricus (2023) writes, "if we embed insecurity in technologies, it also institutionalizes how we see the world and creates a certain vision of the political. This naturally dis-enfranchises some groups of people and empowers others" (P.325). Therefore, the creation of insecurity risks transforming identity and belonging into tools of manipulation, effectively weaponizing the sense of self at both personal and societal levels (Rumelili, 2015).

Despite its growing relevance, OS still lacks a unified definition from a peace and wellbeing research perspective, due to its current theoretical contribution occurring through multiple strands. As global narratives shift and international security and insecurity complexifies, it is vital to critically examine how OS manifests in specific community contexts and how this impacts the Arctic region as a whole. When security discourse extends beyond the physical to encompass psychological, cultural, and existential dimensions, understanding how the community's ontological security might be impacted from climate change, potential manipulation, and additionally the ontological security seeking efforts by communities themselves becomes paramount. In the Arctic, where environmental and geopolitical transformations intersect, the challenge lies not only in preserving physical safety, but also in safeguarding the stability of identity, belonging, and meaning in the face of accelerating change. This is why, we propose, a novel addition to the scholarship on OS, is to extend the OS definition to a community level definition. This definition considers OS as the ability to maintain coherent, poly-paradigmatic and volumetric identities despite multi-faceted threats. This allows for multifaceted threats to be understood within the context of dynamic and holistic community structures.

Identities and Attachment to Place

Northern peoples obtain poly-paradigmatic and volumetric identities throughout their lives and experiences rich in cultures and surrounded by different contexts. Attachment to the place, to the Arctic, plays an essential role in self-reflections and development of an 'own identity' (Zaika, 2019). As mentioned above, OS plays an important role especially in the regional realm of the Arctic and its people. The territory and its loss in the region are the keystones introducing the maintenance of culture practices and ground for routines and routine attachment. Loss of the territory refers to the reduction of land and native environment due to economic (e.g. forcibly moved communities due to resource extraction), political (war, treaties, demarcation, etc.), environmental (e.g.

permafrost thawing), and other factors. Tight human-environment connection in the Arctic is of most importance especially when discussing Arctic identities and self-identification. Territorial identity and usage of land resources reveal personal identity on the basis of human-environment relations, which changes over time and with places during the consequent shift to other environments (Zaika, 2019). Territorial identity as a phenomenon is used by different disciplines within their own theoretical concepts and knowledge, and thus “impose various readings (spatial, regional, local identity, self-identification, and consciousness, etc.)” (Karlova, 2015, p. 5). The communications that occur within communities are based on emotional, cultural, historic, and social perceptions of the place and its population as a whole with a common identity. This identity is connected to informal local groups of people and their interpersonal and group interactions, which give way to the vernacular (mental) regions’ identity. Vernacular regions reflect a “sense of place”, but rarely coincide with established jurisdictional borders (Scheetz, 1991). Examples of such regions spread from a macroregional (e.g. Siberia), to microregional levels, such as the name of a particular district within a city. The Sampi Land can perfectly exemplify the vernacular region which spreads across the borders of Sweden, Norway, Finland and Russia.

Giuliani (2003) discusses the concept through the lens of environmental psychology and human-nature interactions where individuals develop affective bonds with their physical environment. Giuliani argues that the “very variety of terms used to refer to affective bonds with places – rootedness, sense of place, belongingness, insideness, embeddedness, attachment, affiliation, appropriation, commitment, investment, dependence, identity, etc. – seem to indicate not so much a diversity of concepts and reference models, but as a vagueness in the identification of the phenomenon” (Giuliani, 2003, p. 138). Rubinstein et al., (1992) define “attachment to place” as a set of feelings about a location that emotionally binds a person to that place as a function of its role as a setting for experience (Rubinstein, 1992). In this light, the concept of topophilia, developed by humanist geographer Yi-Fu Tuan in the 1960's, might help to uncover roots of mental attachment to the place. The term topophilia is defined as the affective bond with one’s environment: a person’s mental, emotional, and cognitive ties to a place (Heimer, 2005). All these constructive theories of connection between the physical environment and the self-identity highlights the central role of the Arctic in the development of regional domains of OS.

Routines and Identity

This section reviews four key areas which impact communities OS (identity and heritage, social conflict, food security, and resource extraction) to understand how climatic changes may impact routines and identity (reflecting two key factors in the maintenance of OS). The review includes a literature review of key articles and reports relating to the impact of climate change to communities in Greenland, the Calotte Region of Finland, the Russian Arctic, and the Yukon (Canada) in order to provide a broad analysis of the impact of climate change on community ontological security and insecurity.

A. Infrastructure & Heritage

The impacts of climate change on infrastructure are well documented. Thawing permafrost and flooding are disrupting transportation networks, buildings, and infrastructure affecting access to traditionally used lands and activities. Lack of continuity of historic cold-zones means that communities need to adapt. For example, where a local community might have traditionally used

the ice as a cold store for food, rising temperatures means this may no longer be possible. This means that ways of life need to be adapted, challenging historic routines and creating the need for new processes (ACIA, 2004).

Further, the reduction in infrastructure security due to climatic changes including permafrost thaw and wildfires not only presents challenges to emergency preparedness but also raises the risk of issues concerning human health (Climate Change in Sápmi, 2023). Additionally, culturally based heritage sites, particularly those located near coastal areas are at threat from climatic changes including thawing permafrost and sea-level rise. This further challenges cultural identity presenting potential for fragmenting OS (Xiao, 2021).

Although not standardised throughout the Arctic, rapid depopulation of the Northern and Arctic territories (for example in the Russian Arctic regions) influences the social infrastructure of these territories (Heleniak, 2025). The unique legacy and experience of several generations of people to adapt and settle in these conditions have been tied to reciprocity, community, and adaptation. As knowledge is lost through out-migration and a lack of interest from young people in traditional activities may avail, local communities may become less resilient to stochastic shocks and environmental change due to a reduction in adaptable, local knowledge (Stockholm Environment Institute & Stockholm Resilience Centre, 2013; Heleniak, 2025). This concern has been discussed by several authors (e.g. Lazhentsev, 2010; Dregalo & Ulyanowskiy, 2011) as a permanent population is the crucial element for the sustainable development of the North and the Arctic (Zaika, 2019).

B. Social Conflict

Climate change may also exacerbate the risk of conflicts within communities or between the government and local communities. Studies have highlighted that there have been numerous disputes between the Canadian territorial government and the local population due to projects which aim to mediate climate needs such as watershed projects (The Arctic Institute, 2022). This tension can also extend within the local community. For example, in Greenland, tension can exist between those favoring resource extraction for economic growth and others prioritizing Green Justice (Bjørst, 2016).

Climate change in Greenland has been linked to a wide range of social problems such as alcoholism and suicide due to identity loss and routine change (Jones, 2020). Suicide and emotional stress in northern Indigenous communities are partly linked to disruptions in traditional lifestyle with males experiencing higher suicide mortality (Sellers, 2018). Further, climate change has been shown to exacerbate gender-based issues relating to anxiety, childbirth, and sexual assault (Sellers, 2018).

C. Food Security

Climate change has severe impacts on communities' food security. As temperatures rise, southern agriculture is expanding northwards, creating tensions between traditional land-use and new agricultural projects. The issue is further compounded by renewable energy projects seeking to address climate change that are conflicting with traditional land uses such as caribou herding zones (Climate Change in Sápmi, 2023).

Melting sea-ice and loss of multi-year ice have affected traditionally used sea-ice routes critical for cultural practices such as hunting and travel (Perrin & Jolkowski, 2022). Changes to species

distribution, rising treelines, and increased invasive species threaten the availability of culturally significant flora and fauna (Perrin & Jolkowski, 2022).

There has been a loss of traditional healthcare among Greenlanders due to a reported difficulty in finding traditional plants (Derry, 2011). Disruption to food systems has resulted in reduced consumption of traditional foods, impacting not just nutrition but cultural and social identity (Perrin & Jolkowski, 2022). High costs of hunting/fishing due to economic inequality further restrict access to traditional foods, reinforcing cultural disconnection (Perrin & Jolkowski, 2022).

Studies have highlighted that changes to traditional food systems, such as reindeer husbandry, due to climatic changes have knock on effects for culture. Bolshakova (2024) highlights that in Siberia, the loss of reindeer husbandry as a core way of life has had repercussions for the survival of the local language and community interactions based on the shared way of life.

The impact of climate change in regards to food security and OS is not static. For example, sheep farmers have reported longer grazing seasons whilst fishermen are insecure about the future of the industry (Nutall, 2010). Uncertainty and anticipation are natural elements of a Greenlandic hunter's external and internal dialogue and; lack of fixed meaning in this regard has been found to result in a damaging reduction of OS (Nutall, 2010). This includes changing social roles challenging identity due changes in success and failure rates of hunters based upon climate uncertainties (Nutall, 2010). Men have been found to be disproportionately affected by climate change in Greenland due to the gender-based role of hunting (Nutall, 2010; Derry, 2011). Further, injury risks from thinning sea ice disproportionately affect men, particularly Indigenous hunters, due to increased exposure during subsistence activities (Sellers, 2018).

D. Resource Extraction

Long-term routines have been impacted by a changing Arctic climate through the development of new living patterns. This has been both due to resource extraction opportunities based upon a changing environment and the need to migrate to new hunting and fishing grounds (Nutall, 2010; AHDR, 2015). Rural to urban migration patterns create new social structures and routines. For example, in Greenland, new forms of employment and housing have emerged as people traditionally occupied in hunting and fishing roles seek new accommodation and roles in urban areas (Nuttall, 1992).

The impacts of climate change on OS does not always result in insecurity but can also lead to elements of security. For example, the abundance of natural resources such as rare earth elements, zinc, lead, copper, gold, uranium, iron ore, oil and gas poses a specific dimension to ontological security as a balance emerges between human health, economic gain and uncertain futures in these regards (Dale et al., 2019). For Greenlanders, studies have highlighted that climate change may produce more security than insecurity due to the potential for infrastructure and extraction opportunities that may ultimately facilitate independence (Nutall, 2010).

Conclusion

This review highlights that the Arctic presents a particularly valuable case study for the analysis of ontological security, given the mechanisms established before, during, and after the Cold War to cultivate community cohesion, or, at times, disruption, in the service of either war or peace. Climate change in the Arctic does not purely produce ontological *in*security – it may also produce

ontological security, promising better employment opportunities due to resource extraction opportunities; however this is variable across the region depending upon the local community. Current mechanisms to facilitate the strengthening of OS in the Arctic are maintained through approaches centred on community resilience and adaptability which have been orchestrated through key regional governance mechanisms such as the Kirkenes Declaration (1993) and institutions such as the Arctic Council.

Understanding ontological security in the Arctic requires recognising the relevance of both poly-paradigmatic and volumetric identities as foundations of community resilience. Arctic identities are not singular but layered, shaped by knowledge systems, adaptive practices, cultural belonging, and lived experiences individually and across interconnected social and environmental spheres. These volumetric identities, grounded in place, routine, and multigenerational continuity, enable communities to navigate the existential pressures of climate change, geopolitical tension, and shifting security narratives. As the region continues to transform, safeguarding ontological security depends on supporting this multidimensional identity base: enabling communities to draw simultaneously on traditional, contemporary, and emerging paradigms of self-understanding which support both peace and well-being. In proposing a community-level definition of ontological security grounded in poly-paradigmatic and volumetric identities, this article offers a framework better suited to the realities of Arctic life. Such a definition recognises the holistic nature of Arctic identity systems, the importance of place-based knowledge and knowledge systems, and the need for continuity across social, cultural, and environmental dimensions of existence in order to maintain peaceful cohesion on both the community and regional level.

Climatic changes that unsettle traditional routines, livelihoods, and cultural practices increase vulnerability to identity loss and routine disruption, which are core concerns for OS. Cascading psychological stressors linked to these losses may heighten risks of community violence, suicide, and internal fragmentation. Infrastructure instability and food insecurity further erode a coherent sense of self and place, while threats to cultural and linguistic heritage intensify existential uncertainty. While such stressors have detrimental impacts, these elements of insecurity also open pathways for the revitalisation and reinterpretation of existing narratives and practices. This is evident, for example, in the emergence of new opportunities for economic development in the Arctic. In times of both war and peace, the interplay of security and insecurity (particularly in relation to climatic change) becomes paramount. The blank canvas created by insecurity provides space for new narratives to take shape, ultimately contributing to either the militarisation or demilitarisation of the region.

This research highlights that OS is particularly at risk for Arctic Indigenous Peoples who have historically relied on subsistence living and have experienced historic fragmentation due to colonialism further compounded by climate change. When traditional ways of life are upended and future predictability erodes, individuals and communities become more vulnerable to narratives that exploit uncertainty and fear. This should be considered when highlighting the need for Indigenous Peoples to meaningfully engage within the security paradigm. These vulnerabilities also intersect with newer forms of informational and cognitive threats, given the increasing reliance on digital infrastructures and the demonstrated potential for identity manipulation, misinformation, and external influence campaigns in Arctic contexts. Strengthening OS therefore also means building resilience to these immaterial disruptions and ensuring that identities are not

weaponised within shifting security paradigms.

The Kirkenes Declaration (1993) explicitly links expanded cross-border Arctic cooperation to stability, progress, and international peace and security, and establishes institutional frameworks for cooperation on environment, infrastructure, culture and education at the community level. These forms of practical, cross-border collaboration help reinforce poly-paradigmatic and volumetric identities by anchoring local communities in meaningful projects, routines, and relationships that also extend across state boundaries. In doing so, they support ontological cohesion: the ability of Arctic communities to maintain a coherent sense of self, place, and future orientation despite climatic, geopolitical, and socio-economic disruptions on a pan-Arctic level.

We therefore offer the following recommendations for strengthening the ontological security of Arctic communities. First, reliable and climate-resilient infrastructure is essential for sustaining daily routines and securing identity-related practices, including those linked to food, mobility, and health. Second, cultural and environmental heritage must be protected at local and regional levels to maintain the integrity of place-based identities. Third, international actors must exercise caution in framing the Arctic as a “zone of war,” as such narratives risk amplifying vulnerabilities, facilitating cognitive manipulation, and undermining the foundations of Arctic governance.

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