

COUNTER-FICTIONAL FRONTIERS: A COUNTERMAPPING FRAMEWORK FOR ADVOCACY

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ABSTRACT

Cartography has historically been used as a weapon against marginalized communities through processes of colonization and extractive capitalist development; the cartographic data used to do so is innately embedded with authored positionality and is not neutral. Mapping, instead, should be situated within a framework where positionality and point of view are both given back to the agents being mapped, allowing for more authentic representation and productive advocacy. This paper expands on countermapping initiatives through the exploration of an approach to mapping where space and time are joined to uncover both the obvious and the underlying invisible forces within contested geographies as an act of advocacy for the marginalized and underrepresented, both human and non-human. The Inupiat, an Alaska Native people group, were the focus of this work, but the approach was designed to translate and scale for other communities. The framework utilized a community-based participatory research (CBPR) methodology leveraging local partnerships to record memories and imagine futures tied to place and mapping as a critical qualitative methodology to develop spatial narratives. Research objectives were focused on reframing data authorship and positionality through the reconstruction of mapped layers using critical points of view from both human and non-human actors, in addition to challenging predominant colonial power relations by fore-fronting Inupiat spatial practices engendered by Indigenous knowledge and deep connections with ecological systems. These methodologies resulted in cartographic explorations at local and regional scales that mapped how spatial practices have made, remade, and would remake space over time. They reconstructed the world in a particular way to fore-front spatial narratives that collectively serve as a storytelling platform to creatively advocate for these communities in governmental spheres where they are often misrepresented or unheard altogether, and to support future collaboration and co-management strategies.

Keywords

Cartographic Exploration, Narrative Mapping, Indigenous Communities, Community Engagement, Partnerships

1 INTRODUCTION

Mapping as a creative practice has progressed into a critical space that employs iteration, mediation, and selective filtering to engender the reshaping of the world we know. It is an active participant in the narration of place, an operation necessary for authentic representation and advocacy. Social scientist and geographer Doreen Massey notes that places aren't simply physical manifestations of space on a map but are "spatio-temporal events" (Massey, 2015) that integrate both space and time, comprised of complex ephemerality given the nature of time. Time doesn't only imply a change in place or position, but also a change from one state of reality to another as well as our perception of that reality (Paez, 2019). The inclusion of time in the mapping of place is what leads to propositions about new realities because of its innate ability to be both permanent and impermanent, long-lasting and momentary, global and intimate. Such dualities necessitate a shift in the way we view the geographies we map. The telling and reimagining of a narrative, a counter-fiction that reconstructs the world in a particular way from both memory and imagination, is dependent on the process of time.

This paper expands on countermapping initiatives and investigates an approach to mapping where space and time are joined to uncover both the obvious and the underlying invisible forces within contested geographies as an act of advocacy for the marginalized and underrepresented, both human and non-human. Indigenous communities were the focus of this work, but the approach was designed to translate and scale for other communities. The framework utilized a community-based participatory research (CBPR) methodology leveraging local partnerships to record memories and imagine futures tied to place and mapping as a critical qualitative methodology to develop spatial narratives. Cartography has historically been used as a weapon against Indigenous communities by Euro-American powers through the colonization of lands and the promotion of extractive capitalist development, leading to the erasure of Indigenous presence, traditions and culture. The cartographic data used to do so is innately embedded with authored positionality and is not neutral. Mapping, instead, should be situated within a framework where positionality and point of view are both given back to the agents being mapped, allowing for more authentic representation and productive advocacy.

Riverine landscapes within Arctic ecologies of Alaska served as mapping sites given their intersections of subsurface mineral resources, melting permafrost conditions, climatic flooding, migrating forests, and Indigenous people groups who call them home. Within these sites, water plays a crucial role in space; however, it also serves as an agent of change over time. Operating under the premise that water also has memory, the river's point of view was mapped in tandem with the memories and imagined futures recorded given the inextricable link between them. The process traced memory across these landscapes by making visible the invisible. It uncovered and imagined the ways in which water had made, remade, and would remake space over time and reconstructed the world in a particular way to forefront narratives of innumerable human and non-human protagonists. This approach to mapping resulted in cartographic explorations that collectively serve as a storytelling platform to creatively advocate for these protagonists in governmental spheres where they are often misrepresented or unheard altogether.

1.1 Background

Alaska Native peoples are indigenous to the land and water of Alaska, having lived there for over ten thousand years. Several major cultural groups comprise these peoples, with many different tribes and clans within those groups. Though each culture is distinct, with complex kinship structures, highly developed subsistence hunting and gathering practices and technologies, and unique and varied languages and belief systems, they also share key values including honoring the land and waters they depend on, having respect and reverence for fish and wildlife, and valuing community (Roderick, 2008). Subsistence practices of the Inupiat, the Alaska Native people group whose territories span across the Northwest Arctic and North Slope Boroughs of Alaska require extensive spatial relationships with marine mammals, land mammals and birds operating within seasonal migratory patterns. These migrations synchronize with natural systems that exist apart from invisible political boundaries and ownership claims; however, colonizing cartographic practices and policies have further misaligned these relationships. The focus of this work centered on two rivers – the Kobuk and the Noatak – and their associated watersheds, ecological systems and Inupiat spatial practices and histories within the Northwest Arctic Borough (Figure 1).

Alaska was sold to the United States by Russia in 1867 which effectively transferred title to all public and open lands without individual ownership, without regard to the claims of Indigenous peoples who had been living on those lands for generations. In 1884, Congress then declared that Indigenous Americans should not be removed from lands in their use or occupation but that the terms under which they could gain title to those lands would be determined by future legislation by Congress (Jones, 1972). This laid the groundwork for the Alaska Native Claims Settlement Act (ANCSA) which was passed by Congress in 1971, nearly a century later. ANCSA served as the first settlement in the U.S. based on self-determination for Native groups and provided some economic and political power through the Alaska Native corporations that it created. However, Alaska Natives formerly occupying those territories as co-owners of shared land, had now become shareholders in corporate-owned land (Roderick, 2008). Furthermore, the Alaska National Interest Lands Conservation Act, passed in 1980, placed over 104 million acres into conservation units, providing a protective framework but one that again left Alaska Natives out of the equation. As a result, roughly 60% of the state is under federal control and 28% under state control, leaving approximately 10% for Alaska Native regional and village corporations. This imbalance has created a clashing dual system of ownership and operation that continues to impact the subsistence economies Alaska Natives depend on. Figure 1 exemplifies this imbalance at a localized scale of study given its traditional cartographic demarcation of boundaries and representation of land ownership, with no acknowledgement of Indigenous spatial practices.

1.2 Traditional Mapping to Countermapping

The need for the retooling of cartographic processes within contested geographies and on behalf of marginalized communities, specifically with Indigenous communities, stems from a long history of colonial practices that have perpetuated inequitable patterns of land acquisition and ownership. It has been framed for centuries by a Eurocentric vision that has invisibilized non-European cartographic traditions (Oslender, 2021) and engendered maps as mechanisms of power and control that produce hegemonic renderings of space through colonialism and capitalism. Such dominant understandings of space have upended the idea that space is somehow ahistorical or politically neutral (Bryan, 2018) when coloniality is inherently defined as a set of political, economic and sociocultural hierarchies, translated into racial/ethnic divisions of labor, between colonizers and colonized (Boatcă, 2021). These divisions marginalize Indigenous spatial knowledge and exclude the lived experiences embedded within that knowledge due to the absence of Indigenous agency and inclusion. How power, knowledge and the production of space intersect ultimately determine how issues of land ownership and occupation unfold for Indigenous communities (Hunt & Stevenson, 2017). Within the right framework, this intersection possesses the ability to enable communities to flourish; however, the prevalence of the Eurocentric vision and its outworkings emerging from the conquest of the New World has ultimately caused great harm to these communities, leaving behind an extensive trail of systemic consequences.

The notion of countermapping stems from the work by and on behalf of marginalized and Indigenous communities worldwide to counter earlier colonial attempts to cartographically dispossess them from their lands and resources (Louis, Johnson & Pramono, 2012). Indigenous-led or informed countermapping projects often include toponymic reclamation – the inclusion of Indigenous place names on existing colonialist-statist maps, the making of new maps altogether, or a combination thereof – and date back at least as far as a 1915 Blackfeet delegation requesting the re-establishment of Blackfeet names within Glacier National Park in Montana (Rose-Redwood, 2020). Warhus describes several of these types of efforts throughout the 1970s and 1980s, including the Historical Map of Temagami, the trilingual Inuit Place Name Maps Series of Nunavik, and the Zuni Land Taken since 1846 (Warhus, 1998). More recent projects such as website portals including The Decolonial Atlas and Native-Land.ca have also made substantial contributions to this effort.

The broader countermapping movement, however, expands on these efforts to include any endeavor that challenges the prevailing power effects of mapping, fundamentally questions the presumptions or biases of cartographic conventions, or uses mapping in ways that disrupt power relations (Hazen & Harris, 2006), and aims to do so through the production of new geographies rather than the reconfiguration of those preexisting. Given the inherent nature of maps to collate power and social relations, countermapping possesses the ability to shift the categories that form the intelligibility of contemporary power relations. This requires the prioritization of Indigenous efforts to transform their social and spatial relations in ways

that transcend the concepts of territory and property (Wainwright & Bryan, 2009). Countermapping focuses on the reclamation of Indigenous ontologies of place that predate their colonial cartographic framing, referring specifically to spatial practices and cartographic processes including spatial narratives, place ontologies, more-than-human relations, navigational guidance, and territorial demarcation (Rose-Redwood, 2020). It asserts that space is ordered by its stories – stories that make legible the connections between people, places and ideas – and that those stories must be thought of as “material ordering practices” intimately bound up with “the materials in which they are carried” (Cameron, 2011). It is a practice of decolonizing the geographical imagination by honoring Indigenous methods of world-making.

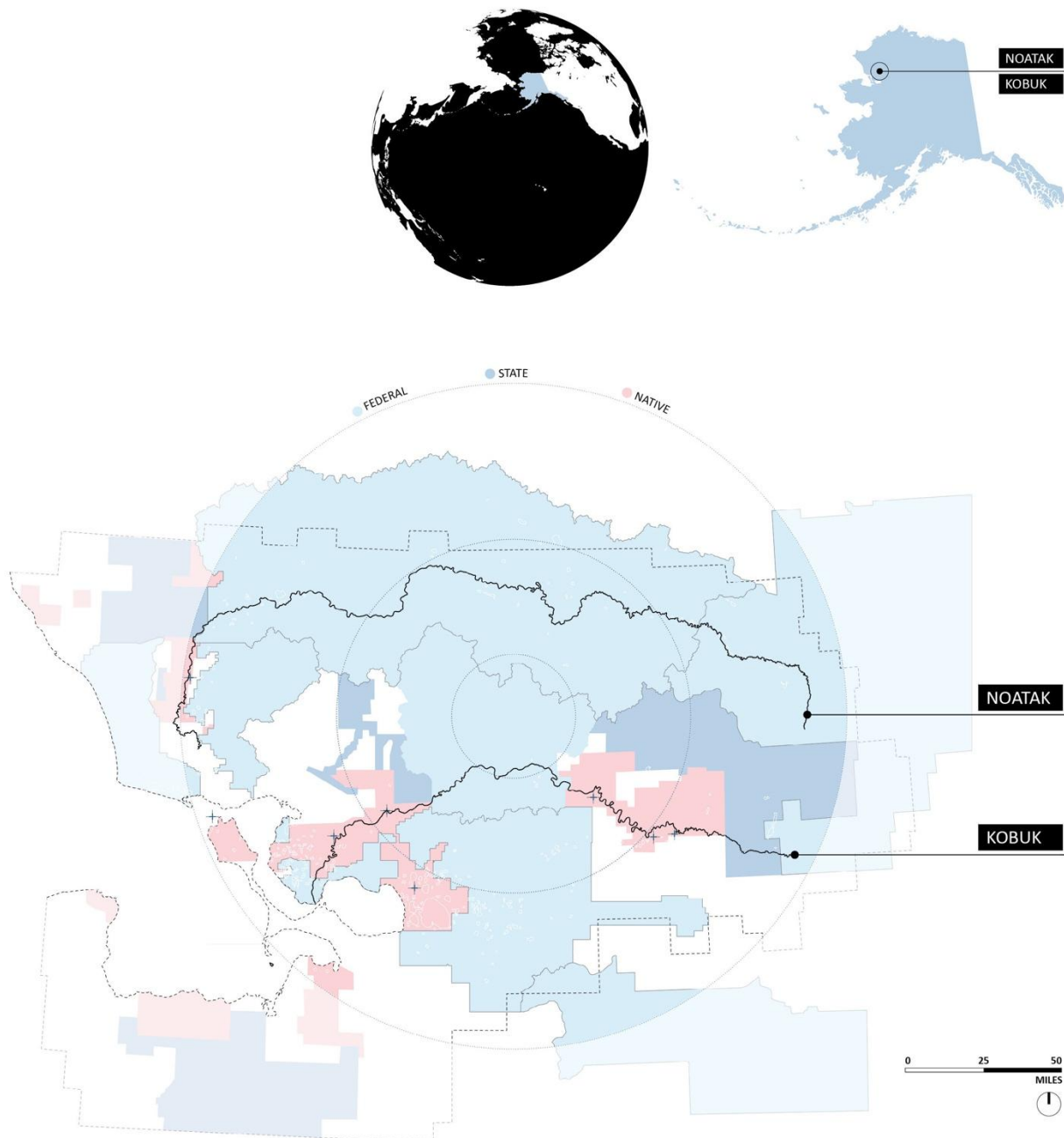


Figure 1. Key Map and Land Ownership Surrounding the Kobuk and Noatak Rivers (2024). Map by the author.

1.3 Research Objectives

This work expands on countermapping initiatives through the exploration of an approach to mapping that challenges traditional cartographic practices by joining space and time to uncover both the obvious and the underlying invisible forces behind land occupation and ownership processes, specifically within Inupiat territories, but representative of Alaska Native territories state-wide. This approach developed a framework for reimagining these processes to advocate for Inupiat communities navigating representational deficiencies regarding their needs and goals. First, the work utilized interdisciplinary partnerships and a community-based participatory research (CBPR) methodology to reframe data authorship and positionality. This included the reconstruction of mapped layers using critical points of view from both human and non-human actors. Next, the work utilized mapping as a critical qualitative methodology to decolonize geography. This involved challenging predominant power relations by removing colonial representations of spatial practices, as mentioned above, and instead fore-fronting Inupiat spatial practices engendered by Indigenous knowledge and deep connections with ecological systems. Finally, the resulting cartographic explorations were composed to communicate a greater narrative arc collating into a graphical essay with the agency to contend. In reference to Kidron and Segal's *The State of the World Atlas*, Wood notes that readers are encouraged to see the maps as links in a chain of argument, building on one another on a rhetorical basis, with the atlas ultimately declaring itself an essay (Wood, 2013). Similarly, while each exploration asserts its own arguments about the realities within its purview, together, they chronicle a narrative that spans space and time to recount a more authentic representation of Inupiat spatial practices within the land, one that challenges colonial representations dictated by invisible lines.

2 METHODS

This project was organized into two processes, utilizing a combination of methodologies. The first process included spatial and temporal data collection through interdisciplinary partnerships in addition to a community-based participatory research methodology (CBPR). This process occurred over the course of two years given the time required to build trust with partners and community members and to develop and implement engagement strategies suitable for the goals and needs of the communities involved. The second process utilized mapping as a critical qualitative methodology to explore and execute research objectives.

2.1 Process One: Interdisciplinary Partnerships

Developing partnerships with non-profits, non-governmental organizations (NGO) and governmental agencies, both state and federal, was critical in accessing and collecting data. The colonial positionality and historical power dynamics embedded within traditional spatial data were challenged through this process. It was important to prioritize data that had been field-collected by groups working directly with or in service of Indigenous communities to limit the insertion of outsider bias. These partnerships were interdisciplinary, allowing for data to cross reference between various fields given the complex nature of Indigenous spatial practices within the land over time. Project partners included spatial ecologists, linguists, geologists, geographers, anthropologists, planners and others. Two primary strategies were utilized for data collection with partners: triangulation and member checking. Triangulation enabled a more comprehensive and multifaceted understanding of spatial practices, histories and narratives using multiple data sources and perspectives, detailed below. Partner organizations often overlapped in both collected data and jurisdiction; given the varying points of view, types of experience, community relationships and various knowledge bases of the land and people, this method was critical. Member checking was also important as it ensured the dependability and trustworthiness of the data. Once data from this collection process had been interpreted and spatialized, partners were given the opportunity to review and validate during the mapping process, leading to editing that was critical to the accuracy of the narrative. These partnerships were essential for forming connections and relationships with Indigenous communities given their rightful reservation regarding outsiders and at every step, sensitivity to positionality and approach were prioritized.

2.2 Process One: Community-Based Participatory Research (CBPR)

Much of the data field-collected with and through interdisciplinary partnerships was comprised of geo-located data in addition to quantitative datasets in numerous forms later translated into spatial data (i.e. spreadsheets, tagged tracking logs, etc.). However, qualitative data including community perspectives, memories and histories required a different process for collection. This process was based on an ethics of relationality given the importance of building relationships with the communities in which we work, defined by deep respect, humility and generosity (Luccesi, 2018). A community-based participatory research methodology – a collaborative research approach where researchers and community members partner as equals throughout the entire process – was implemented for this process, leveraging established partnerships and ongoing trust-building with communities. This collaborative approach brought all members of the project together to define the needs and goals of the community, the strategies and methodologies for data collection and the proposed next steps toward actionable response.

Two sequential engagement workshops were conducted in Anchorage, Alaska: the first was led by project partners in the fields of linguistics and anthropology and the second was led by placemaking and advocacy consultants. The first workshop was held in February of 2023 with 38 participants and focused on the Indigenous practice of place naming – the spatial documentation of Indigenous knowledge and ecological relationships. These names are often mnemonic devices that preserve navigational information, memory and historic bonds with the land and have played a critical role in establishing land claims. The workshop focused on the recording process of place naming and the spatial practice of place naming in land claim settlements utilizing local expertise and story maps. Sessions within the workshop included research that informed culturally responsive place-keeping strategies and contemporary mapping of local languages, the identification of key stakeholders for community projects and outlines of inclusive processes to guide future conversations, and presentations of projects that highlighted community values and meaningful connections to local and regional places serving as benchmarks for future projects. Community input resulted in an entire wall of written contributions detailing personal and collective experiences with local projects that either advocated for or ignored Indigenous spatial practices, histories, narratives and otherwise. Input also included ideas and proposals within a revised version of a SWOT analysis framework where members contributed to categories including successes, fears, and imaginings and visions. This input has been used to inform mapping and design projects within these communities and continues to influence the voice they have in advocating for their places.

The second workshop was held in February of 2025 with 53 participants and focused on memory mapping as a method for placemaking and advocacy efforts. Exercises within the workshop were categorized into three topics for engagement: Ancestry, Identity and Legacy. They were designed to help members across the project to better understand geographical, cultural and historical relationships of Indigenous communities to the land and how land patterns were shaped over time regarding spatial practices, migrations and other forces. Sessions focused on identifying key individuals, groups and organizations that have contributed to their identity as well as those actively shaping the future of it. They also worked to identify social initiatives and potential policy changes that would better advocate for the community's needs and goals. Community input resulted in a robust collection of stories, memories and personal narratives in addition to a collective of adjectives and phrases produced together that helped to define the primary elements of their identity and what they needed to advocate for most. This input is also being used to inform mapping and design projects within these communities as local designers, engineers and government representatives attended the workshop as well with the desire to be more inclusive and responsive.

2.3 Process Two: Mapping

The second process for the project utilized mapping as a critical qualitative methodology to explore and execute research objectives. The mapping process joined space and time to trace memory across Inupiat spatial practices by making visible the invisible. The resulting cartographic explorations then chronicled a reimagined narrative, or a counter-fiction having reconstructed the world in a particular way, that more authentically represented Inupiat worldviews than traditional methods of mapping. The methodology was designed around three objectives that were dependent on the spatial and temporal data collected through the first process described above: decolonizing geography, reframing data/actor authorship and positionality, and narrating for advocacy.

Data from the first process was first assessed through the lens of decolonization by prioritizing and foregrounding Indigenous spatial practices and worldviews. Datasets assessed included surficial geologic and glacial deposit records, biophysical settings and land cover surveys, ecological reports and spreadsheets, place naming ArcGIS story maps, Inupiat dictionaries, migration tracking data for caribou (multiple herds), fish (multiple species), and beluga, Inupiat navigational records and oral histories, camp migration records, Landsat aerial imagery, community input from workshops, among others. Geopolitical boundaries and colonial nomenclature, classifications, and representations were removed from spatial datasets given their assignment of fixed boundaries to unfixed systems which often results in an inequitable distribution of resources. Inupiat spatial practices were then forefronted; systems of data were expressed as a function of symbiotic relationships rather than as resources to be capitalized upon.

Data was then reconstructed and reframed using critical points of view from both human and non-human actors to remove positionality from the author/cartographer. In doing so, the objective was to allow Inupiat spatial practices and worldviews to *create* the map instead of creating a map about them with an outsider's positionality. Each layer of data was mapped and investigated through assemblage, critical interpretation, editing and distillation – invisible but critical processes – and through the calibration of a graphic language that communicated changing narratives from initially static datasets when investigated together as a system. These critical processes took place through both the strategies of triangulation and member checking during the data collection process, as well as the community input, as they helped to define which layers needed to be prioritized and how the system of layers ultimately worked together. Particularly, the community input revolving around identity and memory influenced the editing of the data to organize the system around what was most important to them and what played the most significant role when it came to their spatial practices over time.

Actors within the system react to and affect change in one another. Geological, ecological and anthropological events catalyze new events that then shift the operation of the system. Though this has always been true, the positionality embedded within traditional cartographic practices limits the agency of a map to communicate these relationships. This work, instead, prioritized these relationships by reframing points of view, beginning with water. Water is a critical actor and catalyst within Inupiat worldviews – biophysically, spiritually, and historically – and through the processes of glaciation and geological formation, it serves as an agent of change over time as it remembers space and continually makes and remakes space over time. The process mapped the lineage of water proliferating tundra landscapes that then sustain migrating caribou herds, on which, in part, the Inupiat subsistence economy depends (Figure 2). Indigenous place naming was inscribed along with this lineage as it provided a window into the patterns and practices of water from the Native perspective. Water also shifts its identity across the seasons catalyzing behavioral intricacies within the system; this finds expression in an elaborate Inupiat vocabulary about the formation and type of ice, once which also describes its sentience and its agency to be completely in tune with what is both seen and hidden. At this juncture, the work introduced a time scale inextricably linked to the spatial practices catalyzed by water that were being mapped and investigated. Subsistence economies are bound to seasonality, especially as it relates to water, given its innate ability to be both permanent and impermanent, long-lasting and momentary, global and intimate.

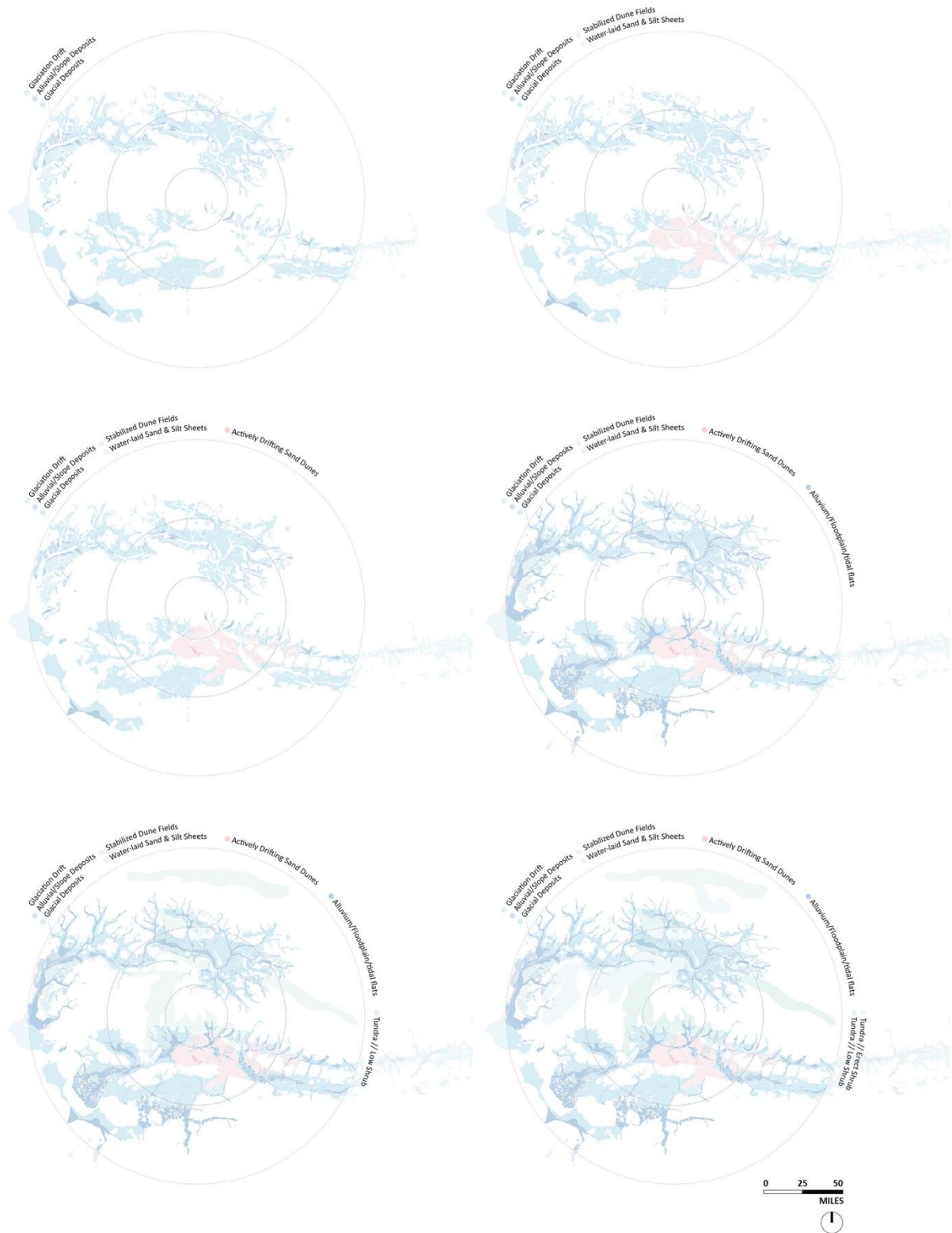


Figure 2. Water as an Agent of Change Over Time Diagram Series (2024). Diagram by the author.

3 RESULTS

This work led to two primary cartographic explorations. The first exploration prioritized the decolonized representation of Inupiat spatial practices as a system, utilizing perspectives from both human and non-human actors (Figure 3). This was predicated on shared conventions that bind actors to one another through the territory they mutually inhabit (Wood, 2010). It requires the use of the culture to construct the map rather than using the map to construct and represent the culture. The spatial practices within a given culture offer something akin to a set of instructions that orchestrate a reading of place that shifts and tempers with time. Allen utilizes the analogy of a musical score, stating that the score is not a work itself, but a set of instructions for performing a work; he adds that it coordinates the actions of multiple performers who collectively produce the work, marking a shift from the production of space to the performance of space (Allen, 2009). Worldviews emerge in the relationships found between actors as they simultaneously engender a more authentic representation of their places within the landscape. It is a powerful process that synthesizes existing and future worlds and evokes complex social-cultural meanings in the deepening of societal consciousness (Harley & Woodward, 1992) through narrative agency that argues for a more just world.

To map these relationships as a system, this exploration first reframed points of view, beginning with water. Operating under the premise that water has memory, surficial geologic and glacial deposit records were studied to remap the point of view of water as it has made and remade space over time within the geographies of the Kobuk and Noatak watersheds. From the Pleistocene Epoch (characterized as the Ice Age) to the Holocene Epoch (characterized by a warmer and more stable climate in addition to the rise of human civilization), water shifted states of matter and shaped space through seasonal freeze and thaw cycles. Permafrost – permanently frozen ground – formed during the Pleistocene and became the foundation for arctic ecological systems. Glaciation drift in addition to alluvial and glacial deposit layers gave way to water-laid sand and silt sheets as well as stabilized dune fields around the shift between epochs. At the onset of the Holocene, sand dunes began to actively drift, catalyzing a change in ecological assemblages. With the presence of a more stable climate, floodplains and tidal flats formed in lower altitudes, while tundra landscapes proliferated in higher altitudes, formed by cold temperatures, short growing seasons and the presence of permafrost. Floodplains and tidal flats surround thriving river systems home to migrating fish species that flow through rich ecologies in valleys, canyons and sand dunes. Tundra landscapes are characterized by low-lying vegetation including mosses, lichens, grasses and dwarf shrubs, and serve as the primary food source for caribou. The Inupiat organize their lives around caribou migrations that are driven by food sources and calving/spawning locations throughout the year – all finding their genesis in the character of water.

The exploration then layered these relationships together, inscribed within a seasonal round. The map is read clockwise to register the spatial implications across freeze and thaw cycles as landscapes shift across seasons. In the spring, the tundra blooms with lichen that feeds the Western Arctic Caribou herd migrating north across the Kobuk and Noatak Rivers to calving and summer grounds north of the Brooks Range. At the onset of summer, fish including salmon, arctic char, grayling and whitefish migrate upriver to spawn. The Inupiat leave their villages and migrate to fishing camps along the Kobuk and Noatak for the summer to gillnet fish in deep eddies. The tundra turns bright pink with fireweed which then gives way to blueberries, cranberries and wild greens in late summer, gathered and harvested alongside the fishing season. Beluga also migrate south to the Kotzebue Sound from the Chukchi and Beaufort Seas and are hunted from fishing camps at the mouths of the rivers. In the fall, the caribou herd migrates south to their winter grounds, once again crossing both rivers and passing through Paatitaaq, or Onion Portage, along the Kobuk River. This crossing has been a primary hunting ground for the Inupiat for thousands of years, so much so that the process is always the same. The Inupiat camp on the south side of the river and as the caribou begin to cross, members of the team in boats hunt from the north side to keep them moving south.



Given their seasonal nomadic nature, memory and tradition have long been utilized to navigate these lands and waters and to remember important places, particularly those related to subsistence practices. Using traditional place names and their associated stories as a field within the round (Smith & Kari, 2024), the Inupiat point of view was remapped using memories, many of which center on water (Figure 4). These memories help to reconstruct historical patterns and practices, echoing other layers of data and reinforcing relationships between them. The actions of water over time and the ways in which it impacts their spatial practices is evidenced in documented memories as they further demonstrate an intimacy in relationship with water that holds permanency amongst continual fluctuation, because it too has its own memory within the same geography.

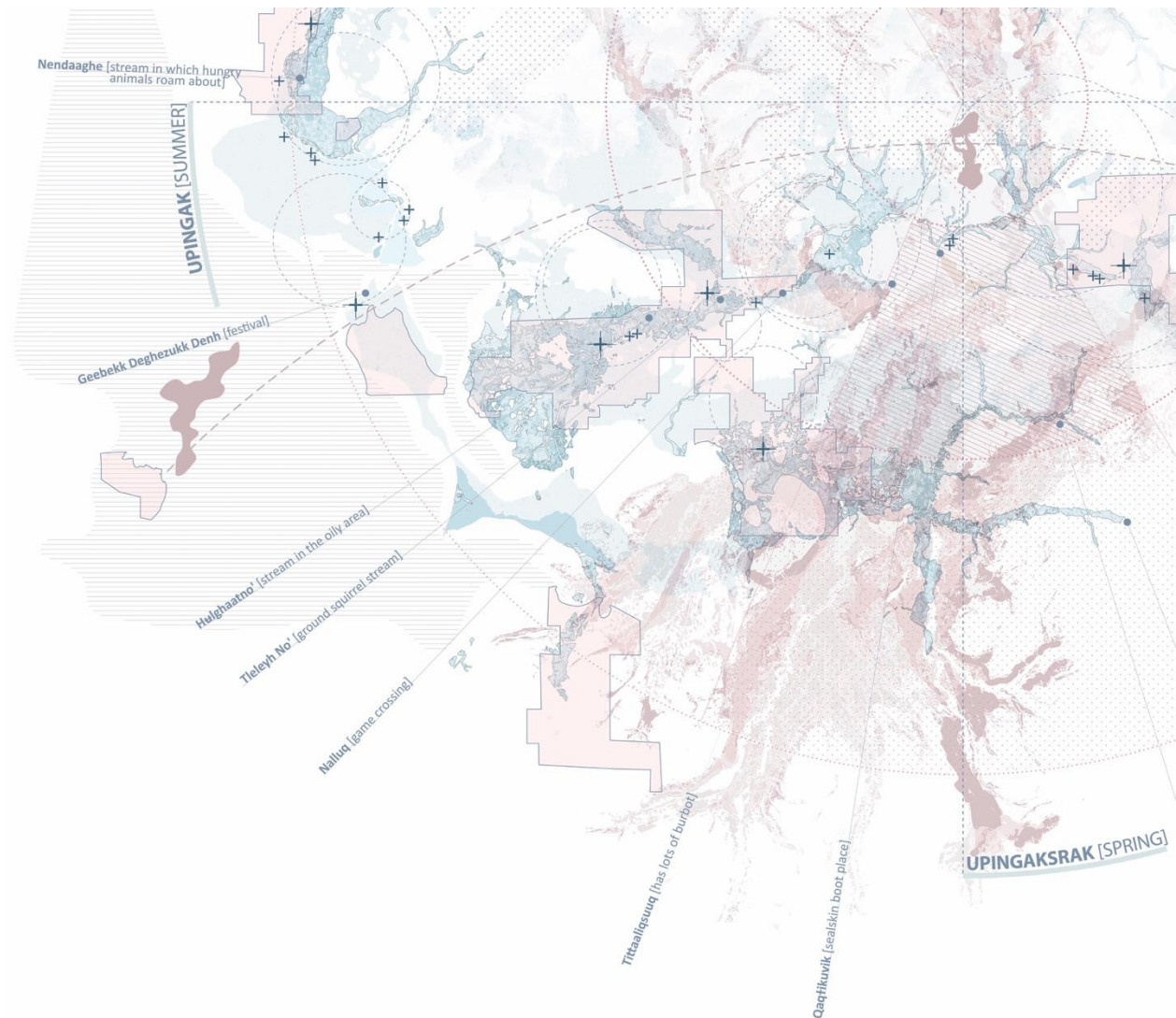


Figure 4. Inupiat Spatial Practices – Closer View of Place Names (2024). Map by the author.

The second exploration zooms into a piece of the first and frames the agency and scalability of seasonality in the practice of fishing through the ephemerality of tradition and changing seasons (Figure 5). The Inupiat depend on fish throughout the year to supplement land and marine mammal diets, filling in the gaps between their migration seasons. The time of year and the state of rivers drive the cyclical relocation of fish camps and the species of fish present. Over the course of the year, the Inupiat move from summer camps to winter camps at a more regional scale, following the migrations of animals and fish. At a more localized scale, fish camps encompass systems of practice that involve the entire family tracking, fishing (hooking, gillnetting, etc.), preparing, drying, storing, and cooking. These patterns simulate one another at both scales, tethering their cyclical traditions to the variability of the seasons. With each season and river state, varying fish species are made available; as a result, recipes made with fish change throughout the course of the year and track through families, communities, and villages (Jones, 2006). In early spring, trout are hooked upriver in tandem with land and marine mammal hunts. In June during the ice break up, trout and whitefish are gillnetted in estuaries. From summer into fall, salmon, herring, and trout are gillnetted or caught by fish and rod in lagoons while they're traveling north – the most plentiful fishing season. During the ice freeze up in October, tomcod and arctic cod are hooked in lagoons through hooking holes in the ice. During the winter months, trout and grayling are hooked in the deepest pools within the ice. This variance leads to cooking traditions that are intimately tied to the seasonality of the Alaskan arctic, further connecting the Inupiat people to their place. Though these fishing

patterns carry some degree of predictability, each year can still yield different results, given climatic changes and unsustainable human practices. The natural ephemerality of the process though exemplifies the Inupiat connection to the land through the lens of seasonality and the permutations of reality that affords.

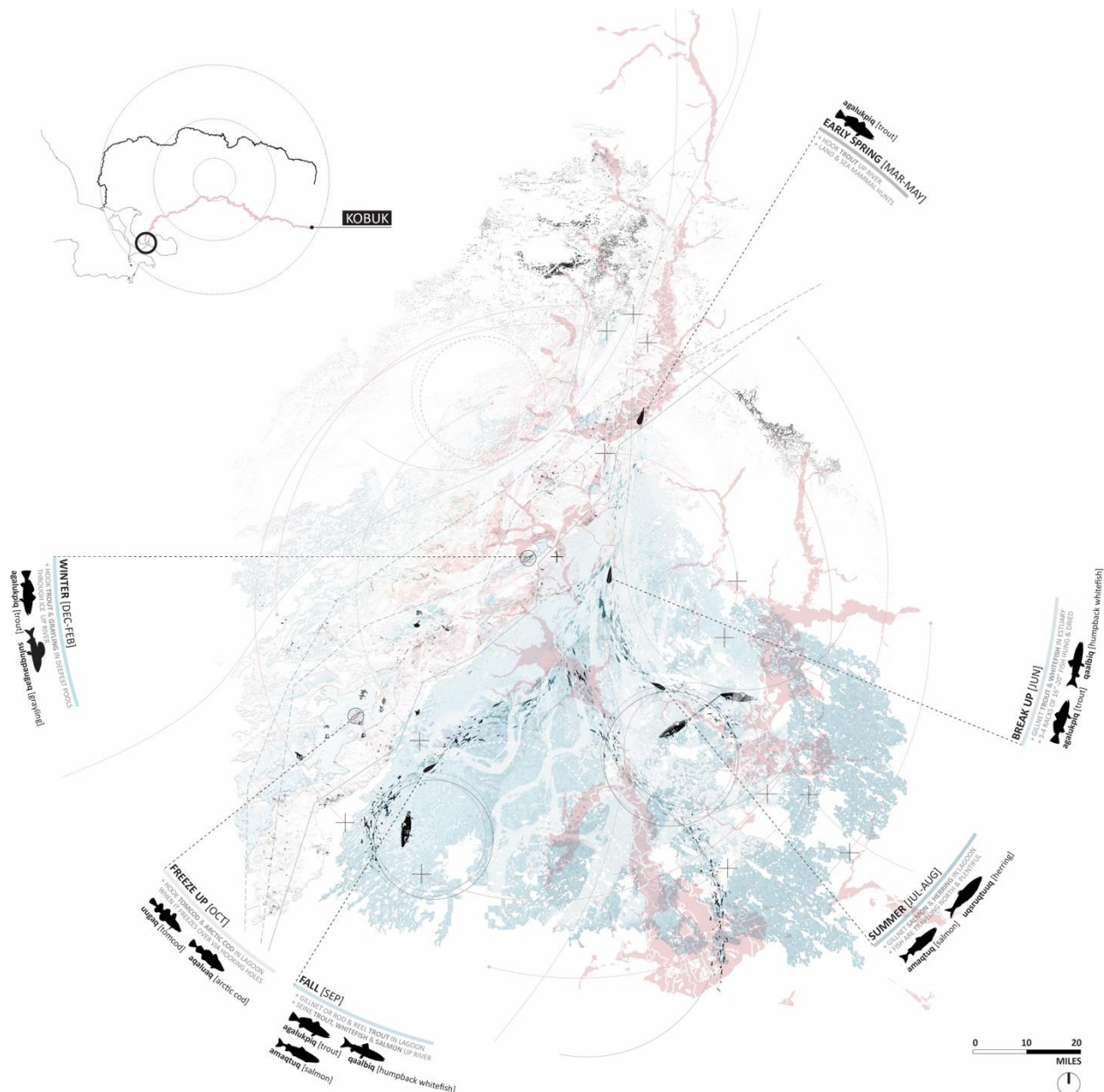


Figure 5. The Agency and Scalability in the Practice of Fishing (2024). Map by the author.

4 DISCUSSION

This work led to cartographic explorations that were composed to communicate a greater narrative arc that more authentically represented Inupiat worldviews and spatial practices within the land. While each exploration asserts its own arguments about the realities within its purviews as discussed, together they chronicle a narrative that spans space and time to recount a positionality that stands in stark contrast to the colonial representation of land occupation and ownership processes, specifically within Inupiat

territories. They were derived directly from data collected through partnerships and community input using strategies of triangulation, member checking and community-based participatory research. Using this data, the mapping process reframed data authorship and positionality through the reconstruction of mapped layers using critical points of view from both human and non-human actors. Additionally, predominant colonial power relations were challenged by forefronting Inupiat spatial practices engendered by Indigenous knowledge and deep connections with ecological systems. The collected data and community input were critical for these processes given the value of local knowledge and the identification of priorities, particularly as they related to identity and memory influencing spatial practices over time. As a result, the explorations are representative of their worldviews and of a methodology that possesses the ability to advocate for them in a way that traditional cartography does not.

Given the pervasive issues of land management, resource development and subsistence economy implementation, one of the primary venues where these explorations become tools for advocacy in representing the needs and goals of communities is in the development of Alaska Native cooperative agreements. These agreements stem from the Alaska Native Claims Settlement Act (ANCSA) and other legislation, and work to negotiate these issues between the federal government and Alaska Native organizations, fostering collaboration and co-management strategies that better serve Native communities. They help to fore-front Inupiat spatial practices not otherwise represented and to advocate for their use of and occupation within the land that has rightfully belonged to them from time immemorial, despite the narrative communicated through the legacies of colonial representation and the landscapes, practices, ecologies and social relations they continue to shape.

Within the frameworks of cooperative agreements, this work supports communities in their efforts to advocate for better representation regarding mitigating the impacts of land management, development and extractive practices. It serves as a storytelling device that raises awareness about the issues facing the Inupiat and challenges misconceptions deriving from colonial representation by forefronting Native narratives and spatial practices. It highlights the relationships these communities have with the land and water and maps their practices that extend across issues of stewardship, cultural preservation, land rights, and community empowerment and recognition. These explorations address critical links between the use of traditional knowledge, land and stewardship practices and resource management, dovetailing into visual texts and spatial imperatives that help to assert the existence and rights of Indigenous communities, particularly in places where they have been systemically misrepresented and marginalized.

Physical access to remote Inupiat territories in addition to the ability to engage with a critical mass of community members were the primary limitations for this work. To navigate these issues, partnerships were critical for data collection, as described above, and for access to representatives that attended engagement events on behalf of their communities. Through these partnerships, the work was able to traverse complex issues of positionality, sensitivity and authenticity that are of great importance when working with marginalized communities. This work models a process that is relevant and applicable beyond this study to marginalized communities in other contexts with a diversity of issues faced. It addresses a critical need within the profession and within the academy to advance advocacy work on behalf of these communities, both globally and locally, who need authentic representation to see change materialize.

5 CONCLUSION

Traditional cartographic practices, embedded with positionality and power dynamics, have historically perpetuated inequitable patterns of land acquisition and ownership through colonial representation absent of Indigenous spatial practices. This work explored an approach to mapping that challenges traditional cartographic practices by joining space and time to uncover both the obvious and the underlying invisible forces behind land occupation and ownership processes, specifically within Inupiat territories, but representative of Alaska Native territories state-wide. This process involved removing colonial representations of spatial practices and forefronting Inupiat spatial practices engendered by Indigenous knowledge and deep connections with ecological systems and included the reconstruction of mapped layers using critical points of view from both human and non-human actors. Its power lies in its conditioning of how one sees and acts within the world; though different people at different times see the same world in radically different ways, its ultimately not the world that has changed, but the ways and

means of seeing and acting (Corner & MacLean, 2000). As Kwagiulth scholar Sarah Hunt notes, “Acknowledging the role of the geographic imagination in this colonial history and creating new representational strategies has been of concern to critical geographers, in order that colonial and imperial projects overall (not just in geography) do not remain unchecked” (Hunt, 2014). The work showcased the importance of partnerships for the sake of positionality, sensitivity and authenticity and led to cartographic explorations that collectively serve as a storytelling platform to creatively advocate for these communities. It also demonstrated a process that harnesses the capability to produce opportunities for intervention and therefore agency that leads to advocacy and affirmative change, rather than just description. This work aims to encourage educators and designers of the built world to commit to the uncovering and imagining of realities that better communicate the narratives of places. It enables a greater understanding and empathy, and therefore generates a platform for advocacy, especially within marginalized and under-represented communities with worldviews that transcend physical boundaries. In the commitment to alter the way in which the world is viewed, the groundwork can then be positioned for critical changes in policy and regulation that can either enhance or hinder the livelihoods of the occupants of mappings, both human and non-human.

ACKNOWLEDGEMENTS

This work was made possible through several partnerships, all coordinated through the Anchorage Museum.

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