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ABSTRACT

In this paper, I discuss issues of the North related to climate change and sovereignty that are examined in my current artworks that use patterns and paths related to crossings of the Canadian North and its Oceans (Arctic and Atlantic) as well as cultural and political references to the North and myths of North.

Keywords

Climate Change, Arctic, North, Canada, SubArctic, Alberta, Inuit, indigenous, DEW line, PCB, environment, sovereignty, sculpture, interaction.

1. LINES ARE DRAWN

Recently I found myself in a library in Northern Alberta, Canada, reviewing notes taken on a study of the effects of Distant Early Warning (DEW) Line stations on the Canadian Arctic. (1) The DEW line is a series of sixty-two Cold-War era radar stations built in the late 1950s over 5000 km between Alaska to Greenland, with forty of these stations positioned around 70° N along the northern edge of the Canadian Arctic Mainland. Operated by the US Military, their purpose was to detect any hostile (Soviet) aircraft heading towards North America. Most of these sites were decommissioned in 1963, but 21 remained active up until the early 1990's, when they were replaced by a more updated radar system now operated by Canada.

In the mid-1980s, environmental studies were done at and near these sites by the Canadian military, and most sites were found to have high levels of PCBs (used in paints that were intended to 'survive' the harsh climate) as well as traces of several minerals and pesticides (e.g., lead, arsenic, chlordane, DDT). While some of these contaminants may have been air- or water-borne rather than as a result of the presence of the DEW line sites, the data showed that higher rates of toxins were present at the sites, and that they required cleanup. While many of these sites are remote, some are near northern communities, such as the Cambridge Bay station site, and any can be walked on if one can reach them, thus endangering any animal or human life that ventures there. Soaring costs of this remediation has stalled some of the cleanup — doubling to over \$583 million, of which the US paid \$100 million, with Canada paying the rest.

Environmentalists, indigenous activists and writers have pointed out that the Arctic and its inhabitants should be considered as the new "early warning" of climate change (see Marla Cone's book "Silent Snow: The Slow Poisoning of the Arctic" or Greenpeace's studies of Arctic wildlife and climate change). Sheila Watt-

Cloutier, a Canadian Inuit activist elected as International Chair of the Inuit Circumpolar Conference, has referred to indigenous peoples of the Amazon and the Arctic as the "world's environmental early-warning system." [2] Watts-Cloutier has stressed that the climate change issue is also a human rights issue:

"This is about people—the cultural survival of an entire people—, which, of course, are connected to the survival of the planet as a whole. What happens in the Arctic is important to all of us. The Arctic is indeed the health barometer—the early warning—for the rest of the world." [2]

"I think by putting the climate change in the arena of human rights, we have moved the focus from solely being that of a political, economic and technical issue to human impacts and consequences that do affect our children, our families and our communities. And we must remain vigilant in keeping climate change as a human and human rights issue." [3]

While the North (and its inhabitants) may be seen now as early warning and scar-bearers of environmental damage, it has long served as a domain for the desires of outsiders. For some, the North is seen as a place with no real inhabitants, with no 'life,' as a potential space to be conquered and shaped for passage, and for exploitation. To 'conquer' the North is seen not just as a colonial victory, but also as facing a mythic site that represents something wild and untamed within, a 'right of passage' and also a victory of human against nature.

Indeed, when you head north past the tree-line into the Arctic it can feel harsh and barren — and it has been so to many who have traveled or lived there, as demonstrated by the graves of Franklin's crew on Beechey Island in Nunavut, or in numerous passages in the tales of explorers who tried to find the route of the Northwest Passage before the 20th Century.

With global warming, the Northwest Passage is growing more likely as a route for passage and exploitation, from shipping to mineral and oil development to tourism, and the lines of who owns what northern territories are being drawn, as those countries that claim to have ownership ready themselves for another 'cold war.' What seems to be lost in much of the posturing is that there is habitation in the North, and that there has always been. Mikmak activists in Northern Canada have already drawn their own lines in this war, declaring the north theirs to protect from outside interests, and stating: "No one made a treaty of cession with us to enter our Arctic waters and territory." [5]

Beyond historical colonization and adventurer thrill lies another kind of Northern passage that recognizes no borders: the shifting of sea ice and of plant, animal and bird life that is resulting from climate change. Documented in such books as Marla Cone's *Silent Snow: The Slow Poisoning of the Arctic*, Ed Struzik's *The Big Thaw*, and Charles Wohlforth's *The Whale and the Supercomputer*, these shifts affect the people of the North and the identity of the North, and it is the confluence of these numerous shifts that I am addressing in my project "Northern Crossings."

2. NORTHERN CROSSINGS

"Location: 55° and Farther North. Snow no longer piles into massive drifts that linger until May and June. Global warming is melting ice that once blocked the Northern Passage. Many icebergs now melt before arriving at the point where one hit the Titanic. Discussion and desire about crossing the Northern Passage has renewed, but also about who governs this crossing and what are the political boundaries of the north. This debate appears to be fueled by commerce, particularly by potential ownership of minerals or shipping routes. It seems clear that the ice formed a protective border that maintained not only life forms and ecosystems, but also a way of life and sense of self for many people of the north." [6]

"Northern Crossings," is a sculpture-sound-video installation exploring issues related to the Canadian North where I grew up and now live several months of the year. The work uses audio and video I recorded in Northern Alberta and in the Canadian Arctic, as well as sculpted objects I am building that draw from life, culture, and histories of the Canadian Arctic and from Subarctic Alberta.

Research for this work has ranged so far from library research (scientific work on climate, politics, animal, bird and human migration, historical and recent exploration) to informal dialogue, winter photographic journeys in Northern Alberta and Yellowknife, Northwest Territories, and a trip along the Northwest Passage during a brief (and eerie) ice-free period in August and September, 2008. Additionally, living and traveling in Alberta has allowed me the opportunity to follow the rising popular and political debate about sovereignty, climate change, indigenous rights, and development in the North. This research has helped me to form a basic structure as well as some of the content for this work, which is currently in progress. The photographic and audio elements gathered in the field research will be sampled and mixed with early Inuit songs from the Coppermine River, and generated as the audience attempts to traverse the sculpture's parts, or pass over some parts with RFID-embedded objects (such as mittens).

The sculptures and RFID objects are in the design stage and will be produced this winter, taking advantage of snow for some hand casting, with other sections being rapid-prototyped or constructed with Arduino electronics using Wave Shields and proximity sensors, as well as some live interactive sound- and video mixing. Jack Chang, a graduate student at Indiana University Bloomington, and I have been experimenting with using Arduino with Flash for this piece as an alternative to Max/MSP/Jitter.

The sculpted objects take shape from data of various *paths* and *artifacts* of the Canadian North: 1) *Paths*: shifting snow and ice and animals and bird migration patterns (changing with global warming); human, sea, and land passages (including historic

exploration routes); Distant Early Warning station locations (DEWlines) from the Cold War era; forced migrations of Canadian Inuit peoples; summer provision delivery routes to remote communities; tourist routes; satellite paths; locations of oil development and tailing ponds; maps of aboriginal communities whose health is affected by living near the Alberta Tar Sands; maps of expanding wireless service to remote communities; 2) *Artifacts*: ancient Thule huts; caribou horns; reindeer lichen and other plant life of the tundra and delicate Northern ecosystems; new modes of transport (ATVs, snowmobiles) as well as the aforementioned paths.

Small details of the sculpture will include references to plant and animal life affected by ingredients seeping toxically into the fragile Northern ecosystem or by the reduction of sea ice: shrinking Polar Bear testicles; birds coated with oil from uncovered tailing ponds; reduced fat of polar bears; etc.

When assembled, these sculpted objects resemble nests of bones and islands of ice that the audience must try to cross — as they do so, embedded sensors will trigger sounds extracted from the video or flickering imagery of historic and contemporary life in the north.

In this and my other recent work, I am trying to merge the data I gather with knowledge that already exists in the experience of the sites themselves (e.g., historical 'inscriptions,' traces and artifacts in the land used in "Fever" and in Northern Crossings") and from local populations (e.g., first-hand indigenous knowledge of the effects of climate change, first-hand knowledge of communities who are suffering the effects of pollutants streaming south of the Alberta Tar Sands, first-hand knowledge of the effects of sour-gas leaks from oil wells—used in "Northern Crossings and Speculations at the Remote"), and finally our own experiences with these sites, whether from long-term engagement, or through the temporary observations of the outsider. I cannot speak for another, but I can bring their voices in, or respond to them as I merge these inputs.

This merging is taking place through juxtaposition, experiential aspects of the work, and through metaphors, but I am hoping in Northern Crossings to subvert or disrupt some of the myths of North that continue a colonial, romantic and expansionist attitude towards 'remote' and 'other' places such as the 'North' — places which are populated primarily by indigenous peoples and are seen by those in the 'first-world' as (therefore) ripe for exploitation, or 'experimentation.' The North is scattered with the remains of non-indigenous people who have ventured there for personal, political, or corporate exploits — whether dismantled DEW line stations covered in rusted oil drums and toxins, or countless disused sites that have been dug into and exploded for oil and mineral exploration, former trading buildings of the Hudson's Bay Company, or remains of explorers and the tin cans that killed them. These are seen by some as the only histories of the North, with indigenous history delivered to us in carved representations of a former lifestyle that is growing more difficult to sustain as its supporting ecosystem is destroyed. As expressed by Inupiat whaler Oliver Leavitt in Charles Wohlforth's "The Whale and the Supercomputer," in a frustrated hunt for whales as it starts to rain: "They've probably gone by. We're not seeing them in numbers. ... Terrible Year" ... "Here's your global warming. It never rains this time of year. It melts the snow real fast." [7]

3. CONCLUSION

[This section to be finished: I would like to add a short conclusion about the piece as more of the material for it is produced this fall, as well as a short discussion of some inspiring recent art practice that attempts a noninvasive and critical or social approach towards our relationships with land, from the following examples: CLUI, Canary Project, Jane Marsching, Andrea Polli, Simon Pope.

Images will be available to illustrate the article this September.

4. ACKNOWLEDGMENTS

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