Counter-Mapping as Assemblage

Reconfiguring Indigeneity

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Abstract. This paper explores the utility of assemblage theory for intergenerational counter-mapping and, through this, for reconfigurations of indigeneity. Counter-mapping is theorised as a kind of assemblage that, through intergenerational learning, is fundamentally memetic (composed of evolving units of information) in nature. Assemblage is theorised as having three aspects (relations of exteriority, meshworks and memes) for reconfiguring indigeneity in line with spatio-temporal aspects of memes. Counter-mapping assemblages are explored with examples of First Nations' (indigenous peoples residing in Canada) political and commemorative activity. *Kaachewaapechuu*, a long commemorative walk in the northern Quebec Cree village of Wemindji, acts as a case study for exploring how assemblages-as-memes can be used to theorise new kinds of counter-mapping that reconfigure indigenous commemoration precisely as political, and therefore as not separate from more media-driven aspects of Canadian politics, including those concerning its First Nations. Global positioning systems and Google Earth mapping platforms were used during the primary author's participation in *kaachewaapechuu*, providing for the exploration of new media platforms upon which such a re-theorised politics might be envisioned.

Keywords: counter-mapping, assemblage, meme, indigeneity, Cree, Canada.

1 Introduction

This paper about mapping and counter-mapping builds upon the current discourse on sociomateriality which centres on the relationship between information technology and organizational practices, where the social and the material are perceived as deeply imbricated [33, 40-42]. The material agency, or performativity, of artefacts have been long recognized and extensively theorized in the literature under the umbrella of actor-network theory [7, 30, 31] which is inherent to the sociomaterial approach. The socio-material perspective encourages us to resist "preoccupations of separation" and pay attention to "notions of distributed agencies, sociomaterial practices, and performative relations as these play out in organizational realities" [42, p. 466]. Drawing on Actor-Network Theory [32, 51], Orlikowski and Scott [42] call for a relational ontology of

materiality in organizational life, and use the term "sociomaterial assemblages" as opposed to a perception of "discrete entities of mutually dependent ensembles" [42, p. 467]. While the term has been taken up in various studies [e.g. 21, 53, 54], the concept of "assemblage" has often been taken as a given and rarely unpacked. Emphasis is often on the entanglement of human and material agency. Less examined are elements of temporality, spatiality, becoming, inherent tension and power contestation.

"Agencement" in French, the concept of assemblage originates from Deleuze and Guattari [18] and depicts a heterogeneous collectivity with multiple connects that is constantly in flux and becoming. The Deleuzian concept is then developed by various theorists across different fields, most notably by DeLanda [15, 17] into a social theory. An assemblage is not reducible to the properties of its component parts but emergent from the actual exercise of their capacities. In other words, an assemblage is "*both the provisional holding together of a group of entities across differences and a continuous pro-cess of movement and transformation as relations and terms change*" [1, p.178]. The concept of assemblage thus lends itself to explore "open ended collectives" [3] and how they achieve stabilisation and transformation. If we move beyond the locus of technical systems within organisations, which is often the topic of information systems research, we could consider the performativity of sociomaterial assemblages in broader, trans-local contexts [37].

In this paper, we mainly draw upon concepts from DeLanda's [15-17] assemblage theory to explore the performativity of mapping and counter-mapping. We examine counter-mapping in the context of an indigenous ritual, specifically in the northern Quebec village of Wemindji. Power and resistance lie at the heart of commemorative counter-mapping rituals such as the long walk in Wemindji. We conceptualize the long walk which involves creating a trail on Google Earth as an assemblage that produces alternative spatial-temporal relations to those which have become hegemonic through temporal sedimentation or powerful imposition. The aim of this article is to explore and apply concepts from Deleuzian assemblage thinking in order to advance previously underexplored perspectives of sociomaterial assemblage in relation to temporality, spatiality, identity, hegemony, contestation and transmission between knowledge regimes.

2   Mapping and Counter-Mapping

Maps are defined broadly as "graphic representations that facilitate a spatial understanding of things, concepts, conditions, processes or events in the human world" [25, p. xvi; quotation from 57, p. 1]. Mapping can be defined as the process of mapmaking, one that involves planning, data collection, production, and critique [52, p. 12]. The final product of mapping is a map, inscribed (written or printed) on paper or image file; stored in the brain as a mental map; performed as a journey; or scratched into the sand [5]. Cosgrove [11, p. 1] offers a theoretically sophisticated definition of mapping as "visualizing, conceptualizing, recording, representing, and creating spaces graphically…a graphic register of correspondence between two spaces, whose explicit outcome is a space of representation." This definition is both broad enough to encompass a range of media and mapping activities while avoiding limiting mapping

activities to those associated with the state, at the same time as confining itself to the graphical register.

Mapping is thus the process of producing and reproducing "a spatial understanding" of a part of the world. The political nature and performativity of maps and mapping have long been noted. For example, Wood [56, p. 7] characterises mapping as that which serves state interests (such as statistical profiles and territorial extents) through the production of maps. In relation, counter-mapping, classically defined, is always performed against state mapping. State mapping, since its advent in the 15th century (in Europe), has evolved to include multi-national corporations and global power with an interest in controlling territory through the production and deployment of maps [5]. Peluso [45] has examined this 'classic' kind of counter-mapping by looking at indigenous mapping efforts conducted in response to state and multinational industrial-scale logging in Indonesia. These efforts resulted in graphical depictions (i.e. maps) of indigenous territories that countered state and industrial maps by showing indigenous interests in the land, including resource areas. To use another example, the Gitksan (a northwest coast Canadian indigenous group) used countermapping to produce an alternative view of territory from that of a neighbouring First Nation, the Nisga'a. Ultimately this case went to the Canadian courts [50] and proceeded according to mapped (and counter-mapped) oral and inscribed evidentiary material.

We are concerned here, however, with a much broader conception of the idea of counter-mapping as that which produces, through mapping, an alternate space of representation to one which has become hegemonic for reasons that may include state power, but might also simply include inertia and stasis through time. Countermapping so defined would [cf. 55, p. 272] seek to challenge existing hegemony through the creation of an alternate space of representation instantiated by the counter-mapping. Many kinds of counter-mapping will suffice as examples here, including those not only from Indonesia [34, 45], but also from British Columbia [50] and Australia [9], to take two examples from countries whose indigenous inhabitants continue to try to counteract ongoing legacies of colonisation and resource extraction from outside.

The linear path of *kaachewaapechuu*, or going offshore, repeatedly (i.e. every year during an event called Cultural Awareness Week) cuts across territorial trapline blocks historically defined by both state and market (hierarchical) interests operating in Wemindji Cree territories over the course of three centuries [8, 38]. Because the resistance to state territorial blocks involves a kind of counter-work that uses maps and mapmaking, we theorise the Cree commemorative walk as a kind of countermapping [45, 55].

3   Counter-Mapping as Assemblage

Below, we explore two key concepts from assemblage using key texts form DeLanda [15-17] to analyse the case study of cultural awareness week in Wemindji, with special focus on *kaachewaapechuu*. We then argue that counter-mapping assemblages are memes of intergenerational knowledge transmission which reconfigures indigenous identities.

3.1   Meshwork, Relation of Exteriority, and Memes

Meshworks are non-hierarchical sets of connections. They resemble the networks common in information technologies, but reflect less linear movement between nodes and more non-linear wayfaring tracks, paths, and affordances closer to Cree and other indigenous worldviews [27, p. 80]. Delanda [15] notes that, while states often favour hierarchies, non-state actors favour meshworks, though in reality some kind of hybrid between meshwork and hierarchy results from interplays of power and resistance.

Counter-mapping, as a political activity caught up in global networks of counter-power, is necessarily outward-looking, engaged, and practical, resonating with similar struggles around the globe. This is referred to here as *relations of exteriority* [17]. DeLanda mentions that assemblages "should never be considered more than component parts entering into relations of exteriority with other component parts" [17, pp. 44-45). For example, Escobar's [23] work examines indigenous strategies of what he calls counter-work, or sub-altern strategies for producing alternate hegemonies. These strategies operate at several levels simultaneously, in non-hierarchical networks that increasingly make, re-make, or strengthen local-global, region-nation, and region-region connections and resonances. This is to say that counter-mapping often operates in opposition to national, multi-national, or global circuits of power, such as when indigenous peoples in Indonesia produce resource maps in the face of large scale logging operations and state power [34, 45].

First Nations, native, and aboriginal groups (to use three alternate ways of describing indigenous groups in Canada and elsewhere, with 'First Nations' exclusive to Canada) undertake commemorative counter-mapping activity in heterogeneous ways that nonetheless echo and resonate with each other. Part of the reason for this is an underlying similarity in indigenous conceptions of space [22], but in large part it is also mutual awareness across large distances of commonalities of concern in the face of homogenising tendencies of global capital and state forces [23]. Thus, different movements across the globe relate to each other in ways external to individual needs (relations of exteriority), and they do so precisely because the underlying spatial structures, philosophies, and topologies mesh at a very fundamental level (meshworks). Escobar [23, p. 286], paraphrasing DeLanda [16, p. 161], notes that "differences in intensity drive fluxes of matter and energy; individuals possess an openness and capacity to affect and be affected and to form assemblages with other individuals (organic or not), further differentiating differences through meshing."

Memes refer to evolving units of cultural information [15, p. 185]. Meshworks are meme-like structures. Memes evolve across statistically varying sets of probabilities that change in non-directional ways towards new tendencies based upon cultural (as opposed to natural) selection. The meme that is the long walk in Wemindji will evolve based upon environmental and cultural pressures that cause it to vary over time while retaining, for the time being, its identity as the long walk offshore, or *kaachewaapechuu*.

3.2   Indigenous Resistance and Counter-Mapping Assemblages

There are two option for resistance to inscriptions of power and to assertions of the controlling grids, lines, and frontiers of economic, cultural, and political change. First, by adopting the tools of the dominant culture, the subaltern may inscribe resistance from the peripheries and margins in the form of maps, diagrams, and art that challenge and counter messages from centres. Second, resisting practices might help ensure cultural continuity through the preservation and use of local and indigenous languages, life-worlds, and named places.

Indigenous resistance embodies *relations of exteriority*, namely, as self-organising, heterogeneous assemblage-memes [23, p. 286]. Wholes emerge from parts that remain differentiated, open, and fluid, maintaining the capacity to change the shape of the whole after its emergence. In Canada, a pan-indigenous movement and system of blockades emerged late in 2012 after Attawapiskat Chief Theresa Spence began a liquid hunger strike in reaction to the policies of Stephen Harper, Canada's Prime Minister. Sympathetic First Nations in areas of resource exploitation (primarily logging and mining) began undertaking symbolic shutdowns of access roads and coalesced into a movement called Idle No More. The concept of individual in Idle No More highlights what is meant by relations of exteriority and part/whole relationships. Chief Theresa Spence, an individual person, became part of a larger set of movements that, in large part, retained their individuality despite placing themselves firmly under the banner of Idle No More.

Relations of exteriority mean that parts do not de-differentiate themselves or homogenise with the emergence of a whole. Individuals (persons, collectives, or movements) do not lose their identities or become subsumed or subjugated to the power of the whole. Instead, these individuals maintain coherence and fluidity in time of political crisis and action. In Canada, earlier moments of blockade have played out in similar ways (i.e. before Idle No More). Blomley [6] describes how blockades became commonplace in British Columbia, Canada in the 1980s and 1990s, in response to lack of action around treaty rights by provincial governments, who were seen to be in the pockets of large multi-national resource extraction corporations. Individual First Nations in BC (of which there are nearly 200) began taking action in order to bring their grievances to the attention of BC leaders and politicians. News and word of blockades have the ability to move quickly across space, and to be replicated efficiently, in a way that could be described as a meme. These are memes that are long lasting in the sense of providing real knowledge of sets of conditions and locations for creating and maintaining effective blockades against powers destructive of indigenous interests.

To use another example, from the northwest coast of British Columbia, the Nisga'a were part of an historic land claims settlement achieved in large part through negotiation at several levels simultaneously, with severe modifications of their territorial claims by the neighbouring Gitksan, in part through an act of counter-mapping on the part of the latter. One of the first actions the Nisga'a took after the settlement of their land claim was the establishment of a set of trails and routes, which we would characterise here as assemblage-memes, commemorating their Tseax lava bed and volcanic cone. These two physical features are prominent in Nisga'a landscape, narrative,

myth, and everyday contemporary life and their commemoration through signposting and trail maintenance are part of a larger strategy to bring tourists and other interested parties to the area.

The case of *kaachewaapechuu*, and similar commemorative activities, is a much less political affair, though various aspects of media play a large part in relaying important information about challenges brought about by histories of colonisation in Canada. The commemorative route is a primary way of pointing out how First Nations cultures survive, adapt, and thrive despite state and market pressures to conform to dominant (southern) society. We argue below that the activities of Cultural Awareness Week in Wemindji, including both *kaachewaapechuu* and an art contest, form an assemblage-meme with relations of exteriority linking up to wider concerns in indigenous communities in Canada and elsewhere through non-hierarchical meshworks. While on the surface less political in content than court- and state-driven counter-mapping efforts described above, cultural awareness week is part of larger indigenous efforts to maintain the integrity and continuity of local and traditional knowledge systems including language, history, and culture.

4   The Long Walk: An Assemblage through Time and Space

Methodologically, the case of Wemindji presented here is based on notes and data collected during the lead author's ethnographic research in Wemindji over two visits in 2008 and 2010. These visits, part of ongoing collaborations between Colin Scott's [49] team of McGill researchers and the Cree Nation of Wemindji, offered a chance for the primary author to write about Cree culture (i.e. ethnographically) and conduct participatory action research [29] by using global positioning system (GPS) as a drawing and narrative device in conjunction with the digital earth platform Google Earth [10, 35] as part of the counter-mapping endeavor. More information will be provided in section 4.2.

4.1   The Long Walk as an Assemblage

The long walk in Wemindji is called kaachewaapechuu in Cree, which means 'going offshore'. It is a performance that includes participants of all ages from young children to elders walking to an old dwelling site approximately 40 kilometres south of the current town site of Wemindji. The walkers roughly follow the shoreline during the course of this three-day journey, which takes place in winter, allowing them to cut across frozen expanses of bay, and to stay on top of what in summertime would be very soft muddy bog, swamp, and marsh lands. Kaachewaapechuu is part of cultural awareness week, a yearly set of events organised by the community centre staff in Wemindji, Quebec, Canada.

The assemblage of *kaachewaapechuu* is heterogeneous and complex, consisting of a wide range of representations of the communities and their history, e.g. books, maps, mass media, and multiple knowledge systems, indigenous people and white participants, the natural environment, and various technologies. The publication of the

book *Wemindji Turns 50* [12] was part of a larger communication strategy for disseminating information to Wemindji and surrounding Cree communities in the region of eastern James Bay. This important publication includes a map and three oblique or top-down aerial photo or satellite images of Wemindji and the surrounding region. These views from above provide context for and introduction to the bulk of non-map material that makes up *Wemindji Turns 50*. These maps serve as kinds of memes for drawing the reader into the story of Wemindji, and they serve to demonstrate how Wemindji is both evolving and growing. The overall story of Wemindji consists in turn of sets of stories told, for the most part, by elders. Thus, the book as a whole is a kind of intergenerational knowledge transmission effort and it is a commemorative journey of its own, an assemblage-meme for mapping Wemindji's past.

In addition to the single-run publication just described, the local radio station remains a powerful hub in Wemindji not only for advertising the various activities of Cultural Awareness Week, but also for coordinating unrelated social functions, from hockey games to bingo to organising search and rescue missions for lost hunters or explorers. *Kaachewaapechuu* itself, and Cultural Awareness Week as a whole, are very well advertised (and supervised) activities, well-known and with high participation rates showing a good turnout from year to year due in no small part to feasting and gaming activities that form part of the week. This is relevant because it demonstrates that assemblage-memes do not exist in isolation but are always implicated and imbricated, at various scales or levels, with other evolving assemblage-memes that variously form part or wholes as assemblages shift and adapt. Radio, paper publications and, as we will see below, digital earth platforms combine and re-combine, assembling elements for the memetic transmission of knowledge about Wemindji, its region, and the place of these in both Quebec and Canada.

As an exterior, outward-looking, relation between interacting individuals at multiple scales, counter-mappings such as *kaachewaapechuu* represent not introspective events, but performances seeking (literally) outsides. The long walk journey takes participants out onto the land in order to dispel any easy notions of what life on the land must have entailed for ancestors of the distant and near past. Past times were not all of hardship, and relations between traders and Cree were most often both prosperous and amicable, generally speaking, for many decades and even centuries after initial contact between indigenous peoples and the outside world. This narrative of prosperity and peace does not always mesh with elders' stories found in the locally produced book *Wemindji Turns 50* [12] when forces playing out at multiple levels from the global down through the regional and local translated into hard times for Cree people in Canada in the early and middle parts of the 20th century. This, in turn, is due in large part to colonial and governmental legacies of residential schooling and transformation of the market relationship into one dominated by multi-national capital, hydroelectric development, and mining activities [8, 20, 26, 46, 48].
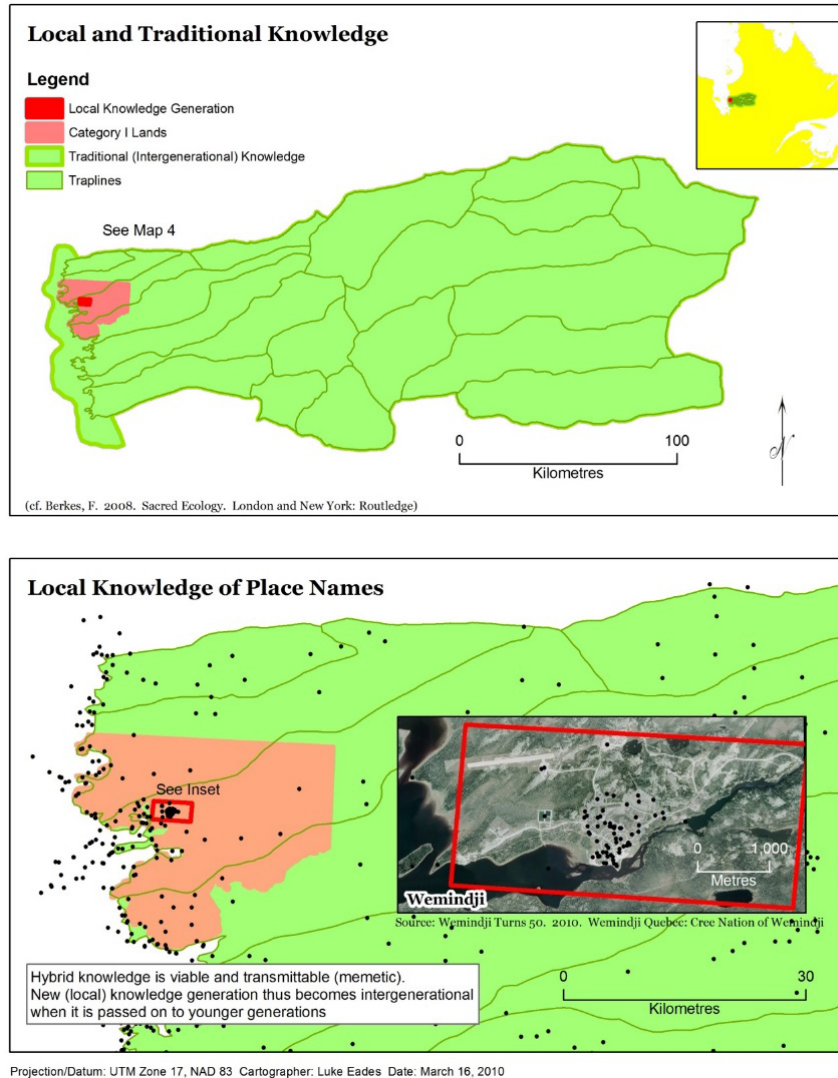
Fig. 1. Trapline territories and knowledge systems in Wemindji (Category I lands are those in which the Cree have exclusive hunting and trapping rights, as defined under the James Bay and Northern Quebec Agreement of 1975)

Figure 1 shows clearly two aspects of life in Wemindji, knowledge of which tends quite easily to become partitioned between town- and land-based systems. Local knowledge is thus not easily conflatable with traditional knowledge [4]: the former tends to be concentrated while the latter is more dispersed across the trapline territories. All of this makes for a very complex assemblage indeed, one involving tools and maps; elders, youth, and their parents; local and traditional knowledge systems; and the complex and entwined histories of commercial, colonial, and governmental interests.

4.2   Participatory Mapping in the Cultural Awareness Week

Participatory mapping, part of a larger suite of qualitative methods called participatory action research [29], was used during cultural awareness week in order to generate a line drawing of *kaachewaapechuu*. This line was draped upon a Google Earth base map (Figure 2), printed as a strip map on paper, and entered into the art contest, which was also part of cultural awareness week. Visual and textual ethnographic methods (i.e. methods for writing about culture [cf. 47, 13]) were then used to document the reception of the map during the contest, the judging of which took place during a feast at the end of cultural awareness week. Mapping and ethnographic components blurred together and cannot be analytically separated, since during *kaachewaapechuu* while the GPS line was being generated, there was an ongoing ethnographic component, a writing of culture undertaken by the lead author in the form of notes, observations, and ongoing conversations with participants in the walk. The GPS line is considered to be an inscription or recording of a meme that is in turn part of an assemblage for performing the long walk.

Participatory mapping generated not just a line and a map, but a story/meme about how the walk went, how it was going (during the walk), sprinkled with references to how elders and ancestors would have walked the path in the past. For example it was mentioned many times within earshot of children that in the past a hunter or a trapper would make the 40 kilometre journey in one day, while pulling their own supplies (including food, cooking implements, clothing, and hunting gear) behind on a sled [8]. Thus, mapping blended into ethnography and vice-versa. During the final feast at which time judging of art entries took place, many participants in the feast (but not the art contest) approached the Google Earth strip map/meme inscription to make comments, offer observations, or check the route taken (out of interest in the choice of route, or to verify its fidelity to a mental map or previously performed route). The assembly of people was literally another assemblage that could scrutinise and comment upon the meme produced by the prior interlocking assemblage-meme that had performed the mapping on the land itself.

During both the long walk and the art contest/feast, many asked questions about either the GPS unit (with its own self-contained miniature map) or about the Google Earth map, less out of interest in technical points, than from a concern with the information contained in the maps. When an adjustment was made by the primary author to the GPS unit (for example, marking or verifying a place-name), it became a standing joke to ask 'how far?' But the joke was, of course, a serious question revolving around anxious concern about the distance both covered and remaining. It usually led to environmental observations about the state of the weather, snow conditions, different kinds of vegetation, or the quality of food to be had in the vicinity (in terms of species presence, or what we had for lunch). When feast participants asked about the Google Earth map in the art contest it was usually to point out an area where we had deviated from an expected route at a specific place, and this was tied to concern for well-being. To be lost on the territories belied inexperience, danger, and potential loss. Thus the exact replication of the meme *kaachewaapechuu* is performed by the self-similarity and checking capabilities of the assemblage of which it is formed and is a part.

Fig. 2. Google Earth with kaachewaapechuu GPS line (Community Centre, Wemindji)

4.3   Counter-Mapping, Materiality, and Memes: Travelling across Time and Space

One of the aspects of counter-mapping assemblages is that they could be memetic; that is, consisting of units of cultural information transmitted intergenerationally. The aspect of counter-mapping we theorise here is neither subversive nor upsetting of local traditions or expectations. Instead, the return to the old living site south of present day Wemindji represents a counter-mapping of the past. It is a chance to re-trace, in reverse, the path followed by elders and ancestors; to revisit the original site of the village they abandoned when they moved to higher ground in 1960. But it is not simply an act of looking back. It is a way of looking ahead, to the horizon of things to come, best represented by the physical presence of youth during the long walk.

As the group moves away from town and plenty into the vastness of the surrounding land and its traplines it becomes focused on particularities of the journey encountered in sequence. Traplines in Canada have a complex history whose development is entangled with both internal and overseas markets for furs. The trapline system is based upon discrete blocks of non-overlapping territorial units that to some extent map onto pre-contact structures. Extents were formalised with the onset of market relations between Cree and representatives from the Hudson's Bay Company (HBC) which dominated the fur trade in Quebec in the early 1900s [8, 24, 28, 38]. The relationship between the Cree and the HBC was long lasting and, for the most part, consisted in mutually beneficial interactions [24, 38, 39]. After the decline of HBC by the mid-1900s, for a number of years in the early to middle parts of the 20th century, starvation occurred amongst some Cree families. It was due to a very complex set of factors, including, but not limited to, fluctuations in the prices of furs, variability in species numbers from year to year, and the decline of HBC itself. There were periods of hardship, often alluded to or mentioned outright in elder stories and in *Wemindji Turns 50*.

Concern for well-being and healing can be identified as primary motivations for commemoration in Wemindji, as noted by the many stories of starvation, abuse, and hard-times weathered in the community during the past. Part of the impetus for the change of dwelling site, from the old village habitation 40 kilometres south to the new town site, was a desire for younger generations not to have to experience those hard times. There is a sense of improving life conditions concurrent with cultural loss and cultural colonisation that at times seems to offset the improvement. Cross-generational concerns about loss of traditional values are not confined to Cree alone, however, as the generational critique comes with the territory, going hand-in-hand with technological advancement and change beyond what older generations are able to incorporate into their worldview.

Elders in Wemindji are keen to tell stories about the land and about past times both of plenty and of the times when game and food were scarce. *Kaachewaapechuu* is a chance for elders to demonstrate to the younger generations what life was like in the old days, with a captive audience tied together by the track followed each year to the old village site. Its purpose is not to shock but to contextualise through the performance of the long walk what life on the land is like. An intergenerational assemblage of individuals of different ages and experiences and styles of learning come together to make the journey using various tools such as sleds, snowshoes, moccasins, walking

sticks, hats, coats, and wide range of other objects and implements. Each object and individual becomes, in the performance of *kaachewaapechuu*, a part of the assemblage for the production and enactment of powerful and long-lasting spatial memes.

Furthermore, indigenous individuals, in the DeLandean [17] sense of individual as multiplicity, use mapping platforms, devices, and tools to build trans-local resonances concurrent to the performance of local rituals of commemoration [23, 55]. This has potentially profound implications for re-configuring indigeneity in light of emerging and evolving mapping technologies such as Google Earth and GPS. The experience of using Google Earth, a free (but not open source) geo-browser for exploring, querying, and mapping the surface of the earth, provides an illustration of how *kaachewaapechuu* can be visualised in new ways that upset easy notions of scale and spatial hierarchy. The fluidity with which the user of this digital earth platform is able to zoom in and out to visit and examine high resolution images of locales, regions, countries, and continents, with rapid on-the-fly changes in direction, is quite different from using a paper map or aerial photograph. The abilities of contemporary digital earth platforms to perform such computationally demanding operations was in the realm of science fiction only a few years before Google's unveiling of the platform in 2005 [2]. The fluid nature of re-scaling using digital earth pan, zoom, and flight functions is posited as part of the ease with which counter-mappings as relations of exteriority may be both enacted and visualised, using interfaces that allow for spontaneous, branching, and non-hierarchical methods of interaction with depictions of (customary and traditional) meshwork spaces.

Scale is both an important, and a very fluid, conceptual tool for examining how the memetic nature of counter-mapping that is *kaachewaapechuu* works, from the level of intergenerational transmission of spatial knowledge performed on the land as elders and youth interact and learn from each other; to the level of the line traced by the walked path itself, generated by a GPS device and draped across a digital earth platform.. The GPS further focuses on the fact that this movement is sequential and thus ordered in a particular way. The ordering of the journey is achieved through rituals of preparation involving securing enough nourishment to provide the physical energy to make it at least to the first day's stopping point. As part of the assemblage for counter-mapping, the GPS played a somewhat literal part in the sense that it acted like a 'pencil' for drawing a line or trajectory that mapped the group [43]. In other words the GPS used its tracking function to sample points with a frequency such that the points formed a smooth line corresponding to the trajectory of the journey.

This line can be seen as part of a meshwork of already existing and previously performed routes and spatial narratives draped across the surface of the land. These previous performances can be re-lived through the telling of stories about previous journeys, linking up to the present at joining points, nodes or, more properly, meshpoints at junctions and named places [27]. The telling of such spatial stories often involves children and elders and is therefore posited to be *memetic* (with evolving units of place-based information) in nature [14, 19].

4.4   Counter-Mapping and Reconfiguring Indigeneity

Systematic and historical forces shape considerations of indigeneity in Canada, going back to a time well before contact between white and indigenous peoples in the

New World. Communication between Europeans and the original inhabitants of North America consisted, at first, of devastating smallpox and perhaps influenza epidemics. The colonizers' diseases got there before they did. The representation of a portion of space and colonial power structure inscribed on paper spread very quickly after colonial interests established themselves in North America.

Today, satellite TV, cellular telephones, the internet, and GPS (among other technologies) are reconfiguring the lives and aspirations of youth through rapidly evolving memes that often have nothing to do with life on the land. The passing of just two generations has been enough to see a move from hunting and gathering through seasonal movements to a sedentary pattern characterized by insecure affluence. Youth, often driven by boredom, run towards southern attractions against the advice of elders, who now place a great deal of stress upon education. There is a perceived lack of relevance of educational content among youth to elder despair over cultural directions in which mainstream media is taking the community, especially the younger people. Wemindji has a regional school-board structure that is, in many ways, a model of what indigenous-led educational systems can achieve. But according to youth at a public-speaking event held yearly in Wemindji, the curriculum doesn't include enough about the traditional ways of the Cree such as building dwellings, travelling, and developing a relationship with local landscapes.

In distinction to and often in rebellion against expectations of older generations, many northern and indigenous youth are (re)claiming their identities by making renewed efforts to interact with traditional territories. Local efforts in Wemindji have resulted in youth-driven efforts to foster heightened awareness of local space and traditional activities. Sometimes aboriginal youth despair of connecting to their culture and to the land around them. Some even kill themselves and suicide clusters are widely, if sporadically, known in northern Aboriginal communities. There is some evidence that changes in the brain resulting from lack of interaction with place can lead to depressive states. There is also evidence that suicidal ideation among teenagers can become contagious. This etiology suggests that a richer connection to the land might be especially important for the health and happiness of young people in the north. Wemindji is seen as an example of a community that has often successfully evaded negative repercussions of colonization, due in no small part to activities exemplified in the commemoration of *kaachewaapechuu* [22].

There is no better way to achieve engagement than by interacting with the land itself, noting first that for indigenous peoples, sometimes the territory precedes the map. The territory is in turn preceded by the land before cartographic inscription. This is potentially no better appreciated than by intelligent and energetic but often deeply ironic youth seeking meaning in a rapidly changing world. In the case of *Kaachewaapechuu*, the Google Earth map was entered into the Wemindji art contest and was incorporated into that larger performance, enveloped by local artists and community members whose individual and collective gazes consumed maps and map-like objects spread out against the walls of Wemindji's community hall. Therapeutic use of maps leads, then, from inscription to performance. Performance and embodied activity lead to strengthened identity in and through participation in community life in interaction with the territories inscribed on maps or drawings. Seeing such full circles, youth can regain a sense of wholeness.

5   Concluding Remarks

This paper uses the concept of assemblage to explore the heterogeneous, situated and contested nature of mapping. This move serves to politicise and open up the previous thinking in mapping and counter-mapping, allowing for cross-scale linkages across multiple levels and landscapes [36]. The study echoes and extends the call of the sociomaterial discourse to consider materiality as relational, entangled and performed in sociomaterial assemblages. Moreover, it is an attempt to broaden the scope of sociomaterial research as represented in the IS literature which often investigate information systems in a business context. Counter-mapping of indigenous groups is a response to global assemblages of post-colonial legacy and discourse, capital power of multi-national corporations and marketization, as well as dis-embedding modernity engrained with trans-local technologies. Conceptualised as sociomaterial assemblages, the long walk of *kaachewaapechuu* embodies aspects of meshwork, relation of exteriority and memes, mapping routes and junctions of the past and present. Moving across time and space, counter-mapping assemblages form dynamic connections among trans-local knowledge systems as well as older and younger generations, reconnecting the lifeworlds of modernized indigenous groups and their history, tradition and natural territories, thereby reconfiguring their identities [22]. This is significant not only to indigenous populations, but to all societies experiencing the tension, disjuncture and replacement between tradition and modernity, local and global, and those between individual and collective.

The materiality in the counter-mapping assemblage of the long walk are not only enacted in the drawing on Google Earth, featuring accessible and detailed satellite imagery of customary lands [cf. 44], tools used in the journey such as sleds, snowshoes, moccasins, walking sticks, etc., weather conditions such as rain and snow, but also in reconnecting with the land, old village sites and territories which embody memories and knowledge of the tribe that older generations are keen to pass on the younger ones. While this version of the narrative does not go into great detail to show how mapping technologies, tools and other material elements are "performed", we try to stick to the Deleuzian notion of assemblage as heterogeneous and "open-ended collectives" [3] in which artefacts form an integral part. Moreover, we argue that it is the *becoming* of the assemblage, namely, the ritual practice of the long walk across time and space, which constitutes a resistance to the post-colonial legacy, often stabilised and represented in the artifact of maps, and a reconfiguration of the indigenous identity of the Cree people.

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