PLACE CODES: NARRATIVE AND DIALOGICAL STRATEGIES FOR CARTOGRAPHY

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Abstract

Since the critique of cartography began with the deconstruction of the map in the 1980s, it has by now been established that Western cartographic language is dominated by the language of space, rather than place. The cumulative effect of the orthogonal pespective, use of the graticule and projected spheroid, the visual variables and the thematic map, has been the creation of a cartography of homogeneity, placelessness, and modernity. Whereas such a language is essential to a myriad of mapping tasks, by removing the qualities of experience, story, and memory which shape space into place, it has been less useful for cultural and historical cartographies.Traditionally, the strategy among cartographers to remedy this has been to incorporate artistic techniques from outside of digital cartographic language, including the use of antiquing, photographs, sound, sketching and painting, and other graphic techniques associated with placemaking.

Increasingly, however, geographers are discussing the need for expanded cartographic languages capable of recreating the multiplicity of experience, web of narratives, and epistemological and ontological diversity of historical and cultural geographies. These new digital strategies include the use of the dimensions of color to encode for emotion, the placement of stories directly in the map, the adjustment of viewing angle to remove the "view from nowhere" of the orthogonal perspective, and the expansion of the sound variables.

In this paper, I examine a sequence of strategies for encoding place, through the presentation of three very different historical map projects. In a map of an eighteenth century voyageur's experience in the North West Company, place is encoded through the use of narrative techniques including voice, scale, ambiguity, and intimate connection with the reader. In a map of Henry David Thoreau's travels through central Maine in the nineteenth century, place is encoded through the encoding of the Native geographies of Thoreau's Penobscot guides, both by representation of the Native place names through which Thoreau traveled, as well as the orthographies describing the correct means to pronounce such place names. In the third project, a map of the travels of Samuel de Champlain in Canada prior to 1617 examines the question of how to re-represent an explorer's route in terms of not only the emotional dimensions of his

journey, but also set in the context of the Indigenous geographies through which he traveled and upon which he depended for his work. In this final map, a cartographic dialogism is employed to render visible the interconnections of Champlain, other European travelers, Native people, and the cartographers themselves. In addition, emotional geographies are represented through the dimensions of color, scale, and a map structure evocative of the shape of Champlain's journeys over a thirteen year period.

Through these examples, I will demonstrate how each project utilizes narrativity to achieve an expression of place, although the interpretation of what constitutes narrativity has shifted depending on the nature of the project. I will also demonstrate that each project situates voices at the source of placemaking in the map, in particular, those voices typically silenced or marginalized in conventional historical or explorer cartography. In conclusion, I demonstrate the rich potential of digital techniques, that is, the digital symbols and visual grammar through which maps are conventionally composed, to evoke a sense of cultural or historical place in cartography.

Since the critique of cartography began with the deconstruction of the map in the 1980s, it has by now been established that Western cartographic language is dominated by the language of space, rather than place (Pickles 2004; Tunrbull 2000; Wood 1992). The cumulative effect of the orthogonal pespective, use of the graticule and projected spheroid, the visual variables and the thematic map, has been the creation of a cartography of homogeneity, placelessness, and modernity.

Whereas such a language is essential to a myriad of mapping tasks, it has been less useful for cultural and historical cartographies. By removing the qualities of experience, story, and memory which shape space into place, modern Anglo-European cartography and geovisualization has been unable to represent the place-based inquiries of human geographers. Traditionally, the strategy among geographers and cartographers to remedy this has been to supplement the map base with antiquing, photography, collage, ambient sound, sketching and painting, and other artistic techniques associated with placemaking.

Another strategy is to focus on expanding the visual dimension of cartographic language towards a capacity for recreating the multiplicity of experience, the web of narratives, and the epistemological and ontological diversity which characterize historical and cultural geographies. These new digital strategies include the use of the dimensions of color to encode for emotion (Kwan 2002), the placement of stories directly in the map (Krygier 2006), the adjustment of viewing angle to remove the "view from nowhere" of the orthogonal perspective (Kwan 2002), and the use of ambient sound (Lower East Side Tenement Museum 2006).

In this paper, I examine a sequence of strategies for encoding place, through the presentation of three map projects: an eighteenth century voyageur's experience in the

North West Company in North America, the nineteenth century travels of a writer and his Native guides through central Maine, and the sixteenth century explorations of Samuel de Champlain in Canada. Although all three are examples of explorer cartography, they are very different in terms of their function and outcome, and as such represent three different place solutions. Nevertheless, I will demonstrate how each project utilizes narrativity to achieve that expression of place, though the interpretation of what constitutes narrativity shifted depending on the nature of the project. I will also demonstrate that each project situated voice at the center of placemaking in the map, with a focus on voices typically silenced or marginalized in conventional historical cartography. Through these examples, I hope to demonstrate the rich potential of digital techniques, that is, the digital symbols and visual grammar through which maps are conventionally composed, to evoke a sense of cultural or historical place in cartography.

Mapping the voyageur experience in North America

In 2004, I set out to produce a historical map of late eighteenth century canoe routes during the height of the North West Company fur trade. The project stemmed from a personal frustration with maps of fur trade geographies, traditionally represented in small scale maps which fail to convey adequate historical detail. Specifically, I wanted to map the 1797 journey of John Macdonell, making his first trip into the Interior at the age of 24 as a clerk for the North West Company. MacDonell kept a diary of his trip, with often evocative detail of his experiences. I wanted to understand more clearly where he traveled, and in so doing, gain a clear mental image of the geography of the voyageurs: the paddlers, guides, interpreters, and clerks that moved trade goods westward from Montreal into the Canadian Interior, and moved furs eastward back to Montreal.

This geography was already well documented. The main artery of this trade network was divided into two sections: the summer route, a series of rivers, swamps, and portages stitched together between Lachine Rapids and Grand Portage, and the winter route: west and north to Lake Athabasca by canoe and sledge with goods to trade for more furs. Like truckers today, voyageurs were in a hurry, and unable to deviate much from a path that was long in distance but narrow in width. Yet they were still able to remake this path with their own cultural geographies. They moved through a landscape already named and shaped before them by Anishinaabeg, Cree, Jesuits, and French explorers. To this shaped space the men proceeded to overlay an entire toponymic landscape of their own, referencing a location's mythic or tragic events with place names, or marking places for performance of particular songs and rites of passage (Podruchny 2001). Voyageur geography is thus characterized by two scale extremes: long distances of travel with very localized and memorable events along the way.

To map MacDonell's route and retain a space for daily experience, I had to push that scale back to 1:500,000, or almost eight miles to the inch, so that on the day with the shortest distance traveled, there could be at least some visible horizontal movement in

the map. Then I supplemented these with more detailed mapping from 1:24,000 topos when the landforms he mentioned (certain rocks, rapids, and points of land) were too small for portrayal at 1:500,000. By the time Macdonell and I had reached Grand Portage, the map was six feet long. This was an inconvient length, yet it began to open up an opportunity for contextualizing the story.

By merely marking locations, even named locations, however, I was still leaving behind most of the story. The intensity of experience in MacDonell's diary, and in my mind after reading the diary, was not making its way into the space of the map. I was converting to space what is essentially a story about place. The individual experiences of the voyageurs produced places and in turn were situated within the places produced by the fur trade economy of the Canadian Interior.

To bring place back into the map, I turned to narrative. For this project, I approached narrative as not merely the presence of story, but rather in the literal meaning of "narrative" in narrative discourse: the combination of story, the events which occur, and discourse, the way the story is told (Prince 1987). Approached in this way, I was able to apply narrative techniques to make cartographic language as expressive as other forms of storytelling in literature and film, such as focalization, scale, voice, ambiguity and closure to create the qualities of place: intimacy, identity, and connection with the reader.

For example, the scale of the map is a technique for creating intimacy. Although the size of the map was six feet, many of the features on the map remain tiny, however, because of the density of experience that Macdonell mentions during this long trip. This combination of large format and tiny detail has an effect: I am inviting the reader to look, because of the size, and I am inviting the reader to come close, because the story is depicted very small. In so doing, I am practicing what Edward Casey calls the "non-exclusive openness" that creates place: to include, rather than exclude, the reader, within the narrative, by being open to that reader (Casey 2002:250).

For identity, I removed the placelessness of the line, and gave each day its own space with what I call a route frame. With frames, the reader would see each day uniquely but also in relationship to the other days, and the journey as a whole.
Route frames allowed me to focus on pace because the size of the frame for each day expands and contracts depending on the speed of the voyageurs progress, and the reader is forced to follow that pace. The hues of the frames symbolize Macdonell's physical and emotional landscapes, partially described by the voice of a quote from MacDonell, which serves as the frame's caption.

In this way, the frames also create an intimate connection through the use of ambiguity. The voice that supports the route frame is not a verbatim transcript of the entire journal entry, it is one or two sentences I selected to be evocative of the day. The hues of the route frames conflate physical and emotional landscapes but leave the relative

proportions of the physical and the emotional unspecified. They are loosely delineated by voice, but not completely; the reader must close the narrative and interpret the palette with his or her own experiences and ideas of what is happening at that moment in the story, or what is sometimes called "an unsolved problem" in the narrative (Ondaatje 2002:46). If I leave out that last piece, the exact meaning of the color, the connection between color and diary, you must close the narrative of what is happening in that day from your own experience.

Thus, in creating my map of Macdonell's journey, I was not just writing down his story as he told it, but developing techniques for creating the qualities of place (identity, betweenness, and intimate connection) through narrative techniques of scale, pacing, and ambiguity. By locating the reader in the map through these connections, place has come from the reader.

Resituating the geographies of Thoreau

My second example comes from a very different kind of map, a map for Maine tourists called the Thoreau-Wabanaki Trail Map. In 2007, cartographer Michael Hermann designed a map for Maine Woods Forever of the Thoreau-Wabanaki Trail, a contemporary trail which follows the routes of Thoreau's travels through northern Maine with his Native guides, Joseph Attean and Joe Polis (Maine Woods Forever 2007). The purpose of the map was to introduce the route of the Thoreau-Wabanaki Trail to present-day tourists and canoeists and give them a sense of the historical place of Thoreau's travels. This would thus be a contemporary road map with a historical route located within it. Although the title of the trail and map implied equal inclusion of the Indigenous (Wabanaki), and non-Indigenous (Thoreau), in fact the initial content focused exclusively on Thoreau's writings, with the Wabanaki geographies only implied through Thoreau's occasional references to his Native guides (Hermann 2007).

Hermann decided to address these shortcomings with regard to the representation of Indigenous people by teaming up with Penobscot tribal historian James Francis. Neither Attean nor Polis left journals of the trips, as Thoreau did. Because of that, half of the story was missing. If the non-Native traveler leaves a written record, and the Native traveler does not, Native geographies lose place and are reduced to the anonymity of space. Must we always only have the non-Native traveler's story in the map?

The landscape through which the three men traveled was well named and storied with Indigenous geographies, now reinscribed with their own experiences. To get to those layers of silenced stories, Hermann and Francis added the Wabanaki place names to the map through what they called a "tri-label approach." Each Wabanki place name was represented in its Penobscot spelling, alphabet, and diacritical marks, with the literal meaning of the word, and with the English interpretation of the sound. At the bottom of the map they included a pronunciation guide, to reinforce for the reader that the words

are specific, not vague, and there are correct and incorrect ways to say the words. Breaking the silence in the map has a protocol.

Through this tri-label approach, they created space in the map for multiple stories to share the same space: the stories of the three men traveling, the interpretations of Thoreau, the Wabanaki storied names for places, and the non-Native renamings of the same places. By making visible the tensions between Native and non-Native namings and re-namings of the same places, the reader has a glimpse of both the historical depth and political and cultural conflicts in the landscape of the journey. What had began as the story of one man had been transformed for the contemporary tourist into a landscape of intersecting and competing narratives, nineteenth century and twenty-first century, Native and non-Native.

Narrative dialogism for Champlain's travels

The third example of designing for place in the map began with the techniques from both of these first two examples, but then quickly developed them into new interpretations of narrative and how to encode for it in the map. In 2007, the Canadian-American Center of the University of Maine hired both Hermann and I to produce a new map of Samuel de Champlain's travels in observance of the 400th anniversary of Champlain's founding of Quebec City. The map would depict those travels undertaken between 1603-1616 when Champlain was traveling continuously, forging trade alliances with multiple tribes, accompanying them in war, building Quebec, and collecting geographic information, all the while dependent on the knowledge, skills, and technologies of the Native peoples of this region: the Anishinabec, Wendat, Abenaki, and Innu.

He wrote about these travels in a series of published journals (Biggar rep. 1971). Many of his entries express an ultimate yearning to travel to what was later renamed James Bay, to make a connection of a paddle route from the St Lawrence to the Northwest Passage for France. He was never successful in this goal, as no Native person was willing to make that connection for him and, in so doing, compromise both their military alliance as well as their place in the economic framework of the fur trade.

At one level, Champlain's explorations have been extensively documented and mapped by geographers and historians focusing on the locations and dates of Champlain's arrivals and departures. As with the first two examples, however, these existing cartographies are silent with regard to place, both the emotional experience evoked in his journals, and the Indigenous geographies through which Champlain moved and upon which he relied for the success of his own explorations and mappings.

To make this map, Hermann and I drew on our previous mappings of place as shown in the first examples. We found, however, that these existing solutions could only serve as point of departure, and learned quickly that the techniques for mapping place are as

unique as the places themselves: what works in one place does not necessarily work in another. We envisioned a map that would overcome these silences and resituate him in the Indigenous landscape with all the complexity that this concept implies. To address this particular shortcoming of the map, rather than taking apart and reassembling the epistemological and ontological assumptions, we focused on narrative.

Like the voyageur map, we had an issue of scale. Champlain's places were shaped by the blending of scales, as his awareness and understanding of geography and people changed over time, or a particularly intense set of events occurred in a small space. These changes in his perceptions of his surroundings were changes to be made in the physical scale of the map. Changes in the temporal texture or pace of his travels also indicated a blending of scales in places; sometimes he moved quickly, sometimes he stayed, and sometimes he was lost.

To account for this blending, we created three different scale levels in the map. From the top of the map, we gently set the reader into an opening narrative and sequence of small scale overview maps depicting Champlain's route for each year with a caption summarizing his actions during that year. Below these locators, the center of the map depicts the places of Champlain's travels as a whole, and within this main map, five insets are highlighted at each of five places where there is so much depth of experience that the map must shift to a larger scale.

A conventional inset presents a larger scale map of a focalized place, and if Champlain's travels included only one journey to each place, such an inset would be sufficient. To reflect the changes in both temporal and spatial scales fundamental to Champlain's geographies, we created sequential insets, a technique which allowed us to change the scale, orientation, and extent of the map from panel to panel to match the shifting scale of the story in Champlain's journal. They also allowed us to use emotive hues, previously developed for route frames, to underscore changes in Champlain's perceptions of place over time. Applied here, emotive hues could be used with more freedom because the action took place across multiple panels. Hues may change not only from season to season but from event to event, or to mark Champlain's interior transformations, such as a shift from irritation to fondness, or from optimism to pessimism. Sequential insets also allowed us to map the changing scales of Champlain's mental maps as he strategized to forge alliances with different Native groups. Each strategy has its own geography; the panels, and the way in which the panels are connected at Champlain's symbolic center at Quebec, allowed us to encode those mental geographies.

Lastly, the insets allowed us to map imagined places and dreams, those geographies not directly a part of the story, yet waiting in the peripheries, or informing the geographies of actual events. For example, we originally conceived that the map would include geographical context northward as far as James Bay, such that the bay would shine down from the top of the map like the sun. But Champlain never actually made it to James Bay, because no Native person was willing to make the connection for him. It

was always a dream. We needed to find a different way to include it in the map, especially because the significance of that region remains as politically charged today as it was in the 1600s, lying at the heart of both the historical and geographical identities of Quebec. To express this dream geography graphically, James Bay was introduced as a panel wherever relevant to the story.

More challenging than the sequential insets was the representation of Champlain's multiple journeys in the main map. Conventional historical cartography relies on directional arrows to indicate the direction of narrative. In our previous work, we relied on either directional arrows or route frames. Neither device would support this particular project, however. The story to be told had no single start or finish, nor even a single journey. In the course of his seven journeys to the Interior, Champlain often recorded the route in a specific way, allowing us to plot his course exactly, but sometimes he was unsure of his location. On some routes, he traveled back and forth so often that it would be misleading to map one particular path in the map, as his journey more nearly resembled a commute than an exploration. The map needed, in turn, to convey a sense of the quality of these routes, whether well-worn or barely perceived, as part of the representation of experience to the reader.

Our solution was a visual conceptualization of the route as ribbon, without arrowheads or directionality. This ribbon narrowed or expanded with the contracting and widening of Champlain's travel experiences, then dissolved where he became lost or we became lost. Neither lines nor frames, the ribbons are fluid and open to interpretation. The reader must create her own understanding of the direction of the narrative and meaning of the ribbon by listening to the voices in the map: by reading the words and following the ribbon. Although the reader must work harder to interpret this directionality, the locators embedded in the title provided additional guidance by showing at a glimpse the extent of Champlain's travels on a yearly basis.

This loose and fluid route allowed the reader to choose a direction in the main map, and stands in contrast to the experience of reading the sequential insets, where strong directionality is deployed in the unfolding of stories in time across the panels. This change in directionality allowed us to change the pace of the map: outside the insets, the reader may freely wander at her own pace; inside the insets, the reader is stopped and rooted in place.

In addition to portraying the multiple scales of Champlain's geographies, this project also addressed the need to expand the presence of the people whose geographies are also interwoven to the story. Our goal was to replicate the larger community of Champlain's social geographies, bringing the same attention to individuals that we brought to place names. In particular, the goal was to address the absence of Indigenous voices in historical maps of explorers' routes. To achieve this required techniques to transcend the limitations which result when journal quotes are used as a device to create narrative, and discover instead a means to represent multiple historical voices in the

same space. Further, these multiple voices needed to be represented in a nominal relationship, side by side in the map. The solution for this project was found in the creation of imagined dialogue reconstructed from ethnohistorical research, and the creative use of type hierarchy to express positionality.

In both the main map and the insets, Champlain's words were symbolized by blue Garamond. In the insets, they shift in size or style to emphasize parts of the story or a change in the quality of his voice. They are also, at times, inscribed directly in the geography as an extension of his mind, to indicate that his experiences and perceptions actively shaped space into place.

Native voices were also represented in both the main map and insets, symbolized in green Garamond. Some of these voices were uncovered from journal passages in which Champlain quotes a Native person directly. Indigenous place names were also depicted in green Garamond throughout the map, with their translations in italic. The combination of place names and Champlain's quotes, however, left little for Native voice. A technique was needed to insert those voices in a way that would also frame the narrative in terms of both story and discourse.

Without extant journals to quote, we turned instead to the extensive ethnohistorical record which recreates the entire Indigenous landscape of Champlain's travels (e.g. Trigger 1976, Heidenreich 1976, Warrick 1990, Sioui 1999). Using these sources as a guide, we created imagined Native voices to either comment on events or to critique Champlain's actions, just as Champlain critiques their actions in his journals. This was done by imagining and then writing down what such Native words might be. These words either speak directly to Champlain or, like Champlain's words, speak to the reader. Through imagined Native voices, informed by ethnohistory, we created a place for Indigenous people within the spaces typically erased by a historical cartography focusing only on Champlain's words and actions.

For clarification and narration, we also encoded a cartographers' voice, set in Univers Light to indicate its residence in a different time period, and in black to give it additional visual separation from the stories. This encoding was preserved in the tri-label place names, where black indicates a contemporary renaming of a place. As the cartographers of this map, our voice was of course elsewhere, encompassing the work with our cartographic language derived from the conventions of postwar cartographic communication.

In sum, our solution for the representation of multiple voices was to construct an imaginary dialogue in which Champlain speaks to the reader, Indigenous voices speak to either the reader or Champlain, and the cartographers also speak to the reader, through words and graphics. Everyone wishes to tell their story to the reader; we all want to be heard. To support this, the map was adjusted through creative use of primary and secondary sources, creative application of conventional and unconventional

typography, and a commitment to the re-expression of both the text and images that together comprised Champlain's mode of reporting the stories of his travels.

Conclusion

To conclude, I have presented here a range of techniques for restoring place to the digital map, particularly for applications in historical cartographies of travel and exploration. These techniques range from invented forms such as route frames and sequential insets, to the creative application of existing strategies such as verbatim quotes of story places directly in the map, and the use of hue to convey emotions. Though cartographies of place are as unique as the places they represent, the underlying strategy across these three sample projects is a close attention to narrativity as a concept not merely expressive of story, but as a structure and series of techniques for conveying that structure.

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