

“I wish you could see through my eyes”: Exploring the potential of the Geoweb to evaluate place in the proposed Northern Gateway Pipeline project in Western Canada.

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Abstract

The Northern Gateway Pipeline project is a polarizing topic in contemporary Canadian politics. While there is considerable discussion regarding the positivist valuation of economic benefits and costs, it is difficult to factor in the subjective social valuation of place and experience. Using the Joint Review Panel hearings as a case study, the first stage of this research will evaluate using a geoweb application (Geolive), geonarratives, and geovisualization to develop a “cartographic language” (Pearce, 2008) that expresses a more subjective valuation. The second stage of the research is to open Geolive to the submission of volunteered geographic information (VGI), thus enabling the documentation and consequent sharing of social and political unrest created by an anticipated approval of the Northern Gateway project.

Background and Relevance

The inclusion of qualitative data in geographic information systems (GIS) and the Geoweb has been increasing steadily (Elwood, 2011). A number of researchers are investigating techniques for mapping the qualitative lived experiences of individuals and communities, and positioning these characteristics in Cartesian space (Knigge and Cope, 2006; Kwan and Ding, 2008; Pearce, 2008; Watts, 2010). Lived experiences are critical components of the process that turns space into the places that we become attached to, and often call our homes (Low and Altman, 1992; Relph, 1976; Steadman, 2003; Tuan, 1977). This paper explores these processes of transformation, and in particular how the expression of lived experiences can be leveraged to understand the social value of a sense of place within the (somewhat overly structured) Environmental Assessment process. Specifically, we explore how proposed industrial projects may disrupt the home places of local residents and trace this using the case study of the proposed Northern Gateway Pipeline in British Columbia.

The proposed Northern Gateway Pipeline is a controversial topic in contemporary Canadian politics. The federal government has stated that the project is in the best interest of the nation (McCarthy and Chase, 2012), while members of the public, First Nations, and grassroots organizations in Alberta and British Columbia oppose the project (Saxifrage, 2012). Joint Review Panel (JRP) hearings are a component of the federally mandated Environmental Assessment (EA) process that evaluates industrial

projects and allows local residents, industry, and interest groups an opportunity to formally state their opinions about the project. During the JRP hearings for the Northern Gateway project, many who objected to the pipeline presented subjective valuations that often referred to the physical attributes of landscapes and lived experiences within these places (Barton, 2013). The pro-pipeline argument was positioned in the positivist valuation of economic improvement and risk mitigation around these same places. Yet, the general public are disadvantaged by lacking the tools and media to fully comprehend and evaluate the significance of these locations. Thus, the public's ability to have their concerns effectively documented in the JRP testimony and for decision-makers to gain a deeper understanding of the landscape, people, and places along the proposed route, and weigh these points against pure numeric valuation, is lacking in the process. Understanding local cultural perspectives is a key aspect of an authentic consultation process, the importance of which was expressed by John Bertacco of the Lake Babine First Nation during his appearance before the JRP when he stated: "I wish you could see from our eyes" (JRP, 2012, para. 6952). We propose using the geoweb as a tool to fill this void and to "contribute to a broader understanding of complex social and inherently spatial phenomena" (Watts, 2010, p. 203).

Margaret Pearce (2008) speaks of the elusive "search for a cartographic language that is capable of evoking experience" (p.20); a language that may help us to see through the eyes of others. Through this research we use both textual narrative and thematic images to create windows into expressions of place, and social and cultural understanding. Using geonarratives and geovisualization we hope to communicate the interpreted sense of place and lived experiences of local residents to a broader population. The geoweb is not only a potential vehicle for the cartographic language of experience, it also provides a medium for activism, outreach, and the promotion of human rights (Elwood, 2011). To this end, once the existing research data is mapped, the geoweb application will be opened up for the submission of volunteered geographic information (VGI). It is anticipated that the controversy of the Northern Gateway project will continue into the future, and this web application will be a platform for recording events as they unfold. The geoweb tool used in this project is Geolive, a web-based mapping application created by the Centre for Social, Spatial and Economic Justice at the University of British Columbia's Okanagan Campus. It is designed as a participatory mapping tool that accepts text, photographs, videos, and audio, submitted from an online user community.

Methods

This project builds on existing multiple-method research carried out in 2012 (Barton, 2013). The research is framed in the geographic understanding of place and a phenomenological ontology. Using open coding methods, a qualitative analysis was carried out on selected statements given at the JRP hearings for the Northern Gateway Pipeline project. The text was coded based on expression of place, and cultural and social activities that illustrate lived experiences of place. Fieldwork was carried out by travelling the proposed route of the pipeline, making photographs of the surrounding landscape, and collecting personal narratives of space and place. Location data was

collected during the fieldwork through the use of a GPS logging app installed on an HTC smartphone. Photographs were made using a Nikon D300s and the internal time on the camera was manually synchronized to the smartphone. This enabled post-process geotagging of the images in Adobe Lightroom 4 using the GPS data. Using the narrative and visual data described above, a web-based mapping tool (Geolive) is being used to create a spatial interpretation of places and experience along the proposed pipeline route. Selected images are uploaded to Geolive and positioned spatially through the embedded coordinates. Quotes from the JRP hearings, and passages of fieldwork narrative, are also placed in geographically appropriate locations in the mapping tool.

The project could be complete at this point, simply providing the ground-truth component to validate, refute, or highlight various aspects of the EA and offer an interpretation of the local voices along the proposed route. However, we are looking into the tool's future application and considering possible uses for the Geoweb tool once the outcomes from the Gateway EA are made public in December, 2013. We intend to study how Geolive will function as both a medium to collect, and a repository of, volunteered geographic information (VGI) to document events after the decision is delivered by the federal government. If the pipeline were to be built, it is the wish of the authors that information would continue to be contributed over the construction, operational, and decommissioning phases of the project. This would provide a record of the EA process in addition to valuable data that could be used for a lifecycle analysis. If there are to be protests and social unrest, it is also our wish that this project will continue to collect data on these topical events.

Conclusion

The Northern Gateway proposal is a polarizing event in Canadian politics. The final report of the JRP is due by December 31st, 2013. Many observers, including the authors, are expecting the recommendation from the JRP to support the pipeline project, with some environmental stipulations. This is also expected to be the position of the federal government, who has the final decision-making authority. Based on the testimony before the JRP, what will come next is expected to be a time of public disobedience and legal action as First Nation and non-indigenous groups attempt to block construction of the project. After these announcements, the project outlined in this paper will focus on enabling the contribution of VGI to track and document relevant activism, legal action, and social and political change. Academics expect these events to fundamentally change how Environmental Assessments are viewed by Canadians (K. Hanna, pers comm, 2013), and we hope that our study will directly contribute to this discourse. The project is positioned to use the Geoweb as a central tool to monitor, document, and communicate these sea-change events to both the academy and the general public. This paper will report on the progress and status of the project at the SKI conference.

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