The Reciprocal Research Network: The Development Process[*]

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Abstract: In this paper I explore some of the challenges, opportunities, and transformations that occurred during the development of the Reciprocal Research Network (RRN). Due to the nature of the project—creation of a research infrastructure—and the methods of development—collaborative and agile—issues of interest to communities and museums working together and/or involved in digital projects occurred during development. Some of the creative tensions and frictions within this project are described along with the RRN specific resolutions that were reached. Process, dialogue, transparency, and letting go of control were all key to establishing the trust relationships necessary for the development of the network.

[Keywords: Collaboration*, Information Technology, Museums,* Museum Community Relationships, *Technology*. Keywords in italics are derived from the American Folklore Society Ethnographic Thesaurus, a standard nomenclature for the ethnographic disciplines.]

Recognizing that collections and work space was a serious problem, recognizing that collections were being moved to and fro on a daily basis to create working space, recognizing that accommodating community visits was becoming difficult, and agreeing that this compromised the museum's mission, the staff of the Museum of Anthropology at the University of British Columbia (MOA) decided to take action. Following consultation and discussion with Indigenous communities exploring how to improve and further their relationships with the museum, the MOA submitted a major grant application to the Canada Foundation for Innovation (CFI). Founded in 1997, this organization funds research infrastructure creation to facilitate Canada's "capacity to undertake world-class research and technology development that benefits Canadians and the global community" (CFI 2013). MOA submitted *A Partnership of Peoples: A New Infrastructure for Collaborative Research at UBC's Museum of Anthropology* in 2001. Engaging with notions of power realignment (Ames 1999), MOA extended previous practice in moving beyond academics to include three Indigenous communities as named researchers on the application. In addition, 12 cultural organizations submitted letters indicating an interest in contributing data to one component of the project, the digital research infrastructure, tentatively called the Reciprocal Research Network (RRN).

Part of MOA's successful CFI application boldly proclaimed:

Collaborative museum research is grounded in the belief that originating communities should have a major voice in shaping research questions and should benefit from the new knowledge that is produced. There is no doubt that collaborative research with communities will be the dominant model for museums in the future. As yet, however, no existing museum facility adequately supports this research model. The design of current buildings resists community participation and impedes the kind of critical research on cultural heritage that First Nations and other communities need and want. Furthermore, until now museums have used new electronic technologies largely to computerize museum inventories and create virtual exhibits. The enormous potential of technologies to support interactive research partnerships among geographically dispersed researchers and across culturally distinct knowledge systems has yet to be realized.

The RECIPROCAL RESEARCH NETWORK will be the first of its kind in the world for collaborative museum research. It will link all participating researchers and collections and provide an innovative, dynamic tool for interdisciplinary research of regional, national, and international significance. For community researchers, the RRN will revolutionize access to artifacts, images, and knowledge. It will overcome a major existing barrier to cross-cultural research by adapting electronic tools to culturally diverse traditions of knowledge management and by accommodating indigenous rights to traditional knowledge. Initially, the RRN will support research on Northwest Coast expressive culture. [MOA 2001:2-4]

These words, forming the original vision for the RRN, provided guidance and benchmarking from development through to launch in 2010. The RRN (http://www.rrncommunity.org) is designed to provide a mechanism for bridging knowledge communities by facilitating and promoting research across institutions. This makes the RRN fundamentally different from many museum/community digital technology projects with deliberate educational outcomes. While the intention of the project was to increase access to cultural heritage through digital technology, the development of contextual information and educational tools was specifically prohibited within the terms of the grant.

After the initial exuberance of receiving the grant passed, MOA staff had to deal with the challenge of turning vision into reality. The RRN clearly needed to be developed through a collaborative process, but collaboration means different things to different people. Where would the RRN be positioned along the so-called "collaboration continuum" (Colwell-Chanthaphonh and Ferguson 2008)? What ways of working together would be appropriate to the task at hand? In what became on-going practice in the RRN's development, process and dialogue cleared the pathway.

The three First Nations organizations named in the research grant were: the Musqueam Indian Band, the Stó:lō Nation (This organization has since divided into the Stó:lō Nation and the Stó:lō Tribal Council, both of whom continue to work on the RRN), and the U'mista Cultural Society. They voiced the desire to be actively engaged in the RRN, not as collaborators but as co-developers with a voice in both the direction and the decision-making at all levels. A

Memorandum of Understanding (MOU) laying out representation was drafted and signed by all parties. These early discussions established what became a hallmark of the project: the importance of the process. Occasional frustrations were expressed when process delayed what appeared to some to be obvious solutions. However, with the benefit of hindsight, it was the times when actions leapfrogged process that led to disruptive, rather than creative, friction.

While each of the First Nation co-developers had worked previously on numerous projects with MOA, they had rarely worked with each other. Each co-developer brought different strengths to the project and also articulated different reasons to engage with the RRN.

Musqueam Indian Band

> It is encouraging to see over the past few years…an increased presence of Musqueam culture and people within the Museum of Anthropology, which has been a repository of cultural wealth. Museums have the obligation to bring that cultural information back to the community where it originated. [Leona Sparrow, Director Treaty, Lands and Resources, Musqueam Indian Band (RRN 2004)]

The traditional territories of the Musqueam Indian Band include the mouth of the Fraser River and the land occupied by the Vancouver campus of the University of British Columbia (Musqueam Indian Band 2006). Musqueam has been at the forefront of using the Canadian legal system to strengthen aboriginal rights. Landmark Canadian Supreme Court cases fought and won by Musqueam are *Guerin v. The Queen* 2 S.C.R. 335 (1984) and *Sparrow v. The Queen* 1 S.C.R. 1075 (1990). Indigenous groups around the world use these precedent-setting decisions in their legal cases (Reynolds 2005).

Musqueam has had a long relationship with MOA, continually challenging the institution to reflect on its relationships and behaviors towards Indigenous communities. One small example is provided as illustrative of this relationship. In 1980, MOA opened *Visions of Power, Symbols of Wealth: Central Coast Salish Sculpture and Engraving.* This exhibit, curated by Michael Kew, which focused specifically on Coast Salish cultures, contained many culturally significant, sacred, and ceremonial artifacts. Among the displays was the initiation regalia worn by a novice Longhouse spirit dancer. Prior to its arrival at MOA this regalia had been spiritually cleansed so that it could be placed on display. Almost immediately after the exhibit opening, community concerns were raised. At a community gathering in the Musqueam Longhouse, spirit dancers expressed their discomfort with the public visibility of private, sacred belongings. They instructed Leona Sparrow, a Musqueam band Councillor with an M.A. in anthropology, to take their message to MOA. Subsequently, MOA Director Michael Ames and Kew met with a delegation of spirit dancers at Musqueam where they formally requested the removal of the regalia from the exhibit (Sparrow, personal communication to the author, March 23, 2013). This marked the first time that MOA removed an item from display at the request of a community, and it opened the discussion on culturally sensitive heritage at the institution. For the Musqueam Indian Band, their involvement with the RRN is a continuation and furthering of their ongoing relationship with MOA and the university as well as an example of indigenizing the academy.

Museum of Anthropology

> The mission of the Museum of Anthropology is to investigate, preserve, and present objects and expressions of human creativity in order to promote understanding of and respect for world cultures.
>
> The Museum strives:
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> To provide information about and access to cultural objects from around the world, with emphasis on the achievements and concerns of the First Peoples and British Columbia's cultural communities;
>
> To stimulate critical thinking and understanding about cross-cultural issues;
>
> To pose questions about and develop innovative responses to museological, anthropological, aesthetic, educational, and political challenges. [MOA 2008][1]

The Museum of Anthropology has worked closely with BC First Nations people since its founding in 1949. Working in a university-based institution, the MOA staff is encouraged to publish on its professional practice, which has led to an international reputation for collaborative museology (Clavir, Johnson, and Shane 1988; Fisher and Johnson 1988; Ames 1990, 1992, 1999; Hawthorn 1993; Holm and Pokotylo, 1997; Phillips, 2000, 2005; Clavir 2002; Shelton 2007; Kramer in press).

In 1976, MOA pioneered the concept of visible storage. By placing the majority of the museum's collection on public display, the museum invited visitors to be researchers. This act was seen as democratizing access to collections and, thus, to knowledge. Over the years, the strengths and weaknesses of this approach became apparent. While some Indigenous community members appreciated unmonitored access to the collections, others questioned the rights and authority of MOA to display this material as well as its decontextualized presentation and adherence to a Western classification system (Cunningham 1999). In the *A Partnership of Peoples* project, MOA undertook to re-conceptualize visible storage, working with communities to display materials in respectful, culturally appropriate ways using Indigenous classification schema (Kramer in press). The RRN was conceived as a way to take this new vision beyond the physical constraints of the museum building and the collections of a single institution.

Stó:lō Nation/ Stó:lō Tribal Council

> The network established by this project will give us greater access to information about our own culture and history housed in centres around the world. It is important that we continue to conduct research with our Elders, traditional Stó:lō historians, and Western-trained scientists alike on the many aspects of our culture

and history; the RRN project will assist us to this end. [Albert "Sonny" McHalsie, Director, Stó:lō Research and Resource Center, (RRN 2004)]

The Stó:lō Nation (SN) and the Stó:lō Tribal Council (STC) represent 19 First Nations bands located along the Fraser River in British Columbia (BC). Seeking to educate the public, they have engaged in public archaeology, initiated conferences, developed public outreach programs, assisted with exhibits, and published books (Carlson 1997, 2001). Over the past 20 years they have hosted numerous university-based courses in archaeology, ethnography, and history. These include field schools with the University of BC, Simon Fraser University, University of the Fraser Valley, University of Victoria, University of Saskatchewan, and University of California at Los Angeles. Students undertake projects developed by and with community members. For the Stó:lō, this is a way of altering future practice through training the next generation of scholars in new ways of working with Indigenous groups and sensitizing them to community-based collaborative research (Carlson 2001; Clapperton 2010). Working on the RRN continues this tradition of developing relationships based on reciprocity.

U'mista Cultural Society

We are a house providing information about our cultural and historical heritage first to our own peoples and then to the world of researchers, educators, and students. We are also coordinating and assisting our members to extend their boundaries of research worldwide. So much information about our cultural heritage exists outside of our boundaries and this information is very important to the intellectual and cultural growth of our nation. The RRN will allow us to bring this all together in a cohesive manner and enable us to further maintain our culture. [Andrea Sanborn, Director, U'mista Cultural Society (RRN 2004)]

The U'mista Cultural Society is located in Alert Bay, on Cormorant Island off the northern tip of Vancouver Island. It serves members of many Kwakwa̱ka̱'wakw bands. The Society was formed as a direct result of the enforcement and abuse of colonial authority. In 1884, the Canadian government outlawed the potlatch, a ceremony whereby hereditary rights, titles, and privileges were transferred, celebrated, and witnessed (Bell, Raven, and McCuaig 2008). Along the Northwest Coast, these ceremonies continued to be practiced, usually in secret. In 1921, when Dan Cranmer, a 'Namgis chief, held a large potlatch, the local government-appointed Indian agent decided to make an example of the attendees. Participants were illegally given the option of surrendering their regalia to avoid prosecution and prison (Webster 1995:138). The seized regalia were sent to the Canadian Museum of Civilization, and later almost 100 items were transferred to the Royal Ontario Museum (Jacknis 1996). Several pieces were illegally sold to George Heye. Over time, masks also found their way into several international museums and private collections. Following the repeal of the potlatch ban, community members worked towards the return of their regalia. In the early 1970s, the Canadian Museum of Civilization agreed to repatriate, but only if a museum-like facility was built to house the treasures (Mauzé 2003:505-506). In 1974, the U'mista Cultural Society was founded with the express purpose of constructing the required facility and working towards bringing the rest of the collection home. It has since brought back regalia from the Royal Ontario Museum, the National Museum of the

American Indian, and private collections in France, and has negotiated a long-term loan with the British Museum (Sanborn 2009). For the U'mista, the RRN is a way to continue their mission by bringing more of their material heritage visually home for their members.

First Steps

After an initial flurry of activity, including the first MOU, the entire *A Partnership of Peoples* project (MOA 2001) existed in limbo for five years. CFI and the BC Knowledge Development Fund had each contributed 40 percent of the costs, leaving the university to fund the final 20 percent. Planning continued, but the uncertainty weighed on all. Ann Stevenson, then MOA lead for the RRN, wrote grants enabling the hiring of a RRN intern from each co-developer. Tasked with engaging community and promoting the idea of the RRN, these interns rode the same roller coaster of optimism and pessimism. Terry Point (then Musqueam RRN intern) expressed concern and hesitancy about promising something to his community that might not materialize (personal communication with the author, March 24, 2013).

During this period, staff at MOA changed, including the director (twice), the project lead, and the RRN lead. The constant for the RRN throughout the development was the First Nations co-developers and their representatives. Working together, a Steering Group (SG) was formed to drive the RRN forward. It consisted of a member from each of the co-developers: Leona Sparrow for Musqueam, Dave Schaepe for SN/STC, Andrea Sanborn for U'mista, and myself for MOA. The SG put forward that it would make all major decisions regarding the scope and schedule for the RRN, including overseeing the hiring of project personnel and allocating the budget. For MOA and the university, this represented another step in letting go of control. This was facilitated and formalized in the RRN Project Charter (RRN 2006) compiled by the SG and signed by the governing authority of each co-developer.

The task of creating the Project Charter and the discussions that it engendered built trust and served to coalesce the SG members into an effective team. Whereas each co-developer had different reasons for participating, all agreed on the potential of the RRN to alter access and enable "community members to become active participants in and one of the drivers of research" (RRN 2006:3).

The charter reflected decisions derived through consensus. An example was the definition of the RRN's scope. In the final charter, the scope was presented as a series of tables with three columns. These columns were headed: "In Scope and Funded," "In Scope and Unfunded," and "Out of Scope and Unfunded." For an item to be placed in either of the first two categories, the SG had to determine that its successful implementation was critical to the project. The second and third categories led to the most discussion. The In Scope and Unfunded category included such items as: support for co-developer community members to work on the project. This category caused the most problem as budgets needed to be reworked or other funds secured. The Out of Scope and Unfunded category included many items that SG members agreed were important but not on the critical path and that, therefore, could not be supported through the grant. Examples of items in this category included: tools for quantitative analysis, support for virtual reality, and implementation of purely educational content. The scope became the "stake in the ground" against which progress was measured.

The Project Charter also contained several lists of deliverables. Included at the top of the first list was a signed "Framework Document" to include governance, research guidelines, access, use protocols, and other issues (RRN 2006:12). Further down the list were the technical documents for the RRN and the development of the system. The SG decided to focus on two aspects at the beginning of the project: the Framework Document and solutions for the creation of the RRN. Work commenced immediately on drafting a Framework Document.

Perhaps the largest stumbling block facing the project was the SG's lack of technology knowledge. All SG members used technology daily, but only one had working experience with information technology (IT) project management, and no one had experience in IT development. The task seemed daunting, and perceived hurdles were exacerbated by project management professionals who informed the SG that almost 90 percent of IT projects fail due to a poor understanding of requirements and attendant "scope creep." The SG was uncomfortable, as the front ending of requirements did not mesh philosophically with a collaborative participatory action model. We wondered how requirements could be set without ongoing community engagement and review. Here we experienced tension between our emphasis on dialogue and the hired consultants' expertise. With the completion of the Project Charter (RRN 2006), the SG decided to move forward without external project management. As the SG finished this document, MOA received the green light for the entire *A Partnership of Peoples* project (2001) from the university despite the ongoing need for fundraising to acquire the matching funds required by the original grant.

The early community input gathered by the RRN interns had been tempered by the concerns alluded to above. With the uncertainty now resolved, the SG felt comfortable requesting broader community assistance to develop requirements for the RRN. It researched websites with features similar to those outlined in the Project Charter (RRN 2006) and grant application. A subset of these was demonstrated to the Stó:lō Xyolhmet S'olhetawtxw Sq'éq'ip (Stó:lō House of Respect Caretaking Committee, composed of respected and knowledgeable Stó:lō elders). Meetings also were held with UBC staff and community members. Several basic principles were developed based on participants' feedback. These were: (1) make the site easy to use, (2) avoid form-based searches, (3) encourage discovery, and (4) keep it visually uncluttered.

Despite recommendations from management professionals that technical consultants be hired, the SG chose instead to work with university students. There were several reasons, including budgetary ones, for this decision. Paramount was the SG's desire to build capacity and to develop local expertise for all co-developers. For one term, a team of computer engineering students explored the technical requirements for the site as part of their course work. Two of these students were hired for the summer to develop a prototype. Within six weeks, the first features were ready for testing. Heeding the comments from members of the Stó:lō Xyolhmet S'olhetawtxw Sq'éq'ip, the developers created an open environment where all object records were available without having to enter any search terms. Instead, they included a faceted search based around questions of Who, What, Where and When, allowing users to focus in on their desired criteria. These searches employed tag clouds of words organized alphabetically, thus cutting out the guesswork involved in form-based database searches. MOA permitted data drawn from their collections database to be used for this test.

This first iteration was demonstrated to members from the co-developers. Within minutes, museum staff and community members were able to use the system and provide valuable feedback. Watching elders who rarely had used a computer connect with their cultural heritage, some of which they had never seen before, was remarkable. This experimental engagement also alleviated SG concerns by demonstrating the technical feasibility of the project.

Following the summer project, the student developers were hired for the entire project. They brought the concept of developing the RRN using an "agile" approach to the SG. Agile software development is based on principles of teamwork, rapid iterations, constant communication, customer satisfaction, and working software. (For insight into the agile approach, see: http://agilemanifesto.org/). The RRN implementation of this approach included a sandbox-testing environment to ensure institutional partners, researchers, and students could participate actively in the development process. The SG perceived agile development as a better fit for collaborative work with communities. This was proven to be the case time after time during the course of development.

Partner Institutions

Twelve museums, including university, provincial, state, and national institutions, had submitted letters of potential interest in the RRN for the CFI grant application: the Royal British Columbia Museum, the Burke Museum, the Laboratory of Archaeology at UBC, the Glenbow Museum, the Royal Ontario Museum, the Canadian Museum of Civilization, the McCord Museum, the National Museum of Natural History, the National Museum of the American Indian, the American Museum of Natural History, the Pitt-Rivers Museum, and the Museum of Archaeology and Anthropology, University of Cambridge.

Geographic distance, perceived budget constraints, misplaced priorities, perceptions of capacity issues, and communication difficulties across time zones led to serious challenges in relationship building between the SG and these institutions. Teleconferences were attempted throughout the project but were only somewhat useful, given people's busy schedules combined with multiple time zones. Later a website was established to aid in the distribution of documents. Again, it was only somewhat useful. Personal phone calls and e-mails proved to be a more effective communication strategy. The most effective communication method throughout the project was face-to-face discussion. However, the original budget contained funding for only one physical meeting of the partner institutions. The SG held off on this workshop until: (1) the University allowed the entire CFI project to proceed, (2) there was something concrete to demonstrate, and (3) a draft Framework Document was ready for circulation. The Framework Document was more than 30 single-space pages and contained information about governance, access, and terms of use. All pages were clearly marked "Draft for Discussion Only." This draft was sent to all partners prior to the in-person workshop.

On the first morning of the workshop it immediately became clear that our strategy had been a mistake. Over the course of the morning, many of the points that Indigenous communities raise to demonstrate misplaced institutional authority and museums' lack of attention to relationship-building were employed by staff from the partner museums to describe their sense of the SG. For

example, while the SG had created the Framework Document as a discussion draft, its completeness led some museum staff to question the use of the term "partners" for the institutions. Wouldn't partners have been invited to contribute to either the conceptual framework or to the document itself? For some of the institutional representatives the nature of the collaboration and the established hierarchy was an issue. Why hadn't they been asked to contribute to the establishment of the governance structure? Likewise the RRN prototype, while predominantly positively received, gained negative responses for focusing on MOA data and raised concerns that the project was MOA-centric. Salvaging the project can partially be attributed to the way we literally wiped the slate clean on the second day by throwing out the Framework Document and the agenda in preference for a day of dialogue on "Next Steps." However, an equally important component lay in the fostering of these tentative and emerging relationships that took place during the first evening's creek walk at Musqueam, followed by a delicious salmon dinner and a wicked after-dinner game of "Musqueam bingo." By holding off on the face-to-face partner meeting, product had been placed ahead of process and dialogue.

The tensions and frictions (see Karp et al. 2006; Tsing 2005) from the different experiences, expectations, and goals of those involved in the project led to creative solutions. It was in the face-to-face workshops that the transformative nature of the project became visible as each group/participant felt empowered to voice opinions, as relationships developed and people saw their concerns listened to and then acted upon. This spirit of collaboration that began in that first workshop continued with the addition of two workshops, allocation of funds for the partner institutions, and creation of a simple MOU between the co-developers and the partner institutions outlining the purpose of the RRN and the required staff commitments during the development process. At launch in 2010, 11 of the original 12 institutions contributed data to the RRN.

The partners saw the opportunities presented by the RRN for developing relationships based on reciprocity with communities. Challenges were also identified. These included issues of capacity, staffing commitments, relationships, control, and funding.

Relationships and Control

The partner institutions brought years of collaborative research and/or exhibit experience working with communities around the world to the RRN. It was therefore surprising to have several people allude to concerns over perceived power imbalances. Whether community or multi-vocal (Phillips 2003), most collaborative museum exhibits are dyadic in nature, while discussions dealing with the return of cultural belongings are almost always so. The institutions, including MOA, had less experience of working with multiple Indigenous communities with potentially divergent and/or competing interests. This was of special importance in BC in the contentious area of contemporary Canadian Land Claims. Two of the institutions, the Royal BC Museum and the Canadian Museum of Civilization, are part of the BC Treaty Process. Therefore, the collections they house are part of active negotiations. In addition, a potential power imbalance was noted in that the SG consisted of three representatives from First Nations organizations and only one from a museum. One observer commented *sotto voce* about the shoe finally being on the other foot. The fact that all of the institutions continued to participate in the

development demonstrated their willingness to experiment with new models of working and their commitment to shifting power relations.

Generally collaborative community/museum projects focus on community-specific materials, whereas the RRN mandate was Northwest Coast material culture. As a result, some institutions wondered if they should send information only about items with definite Musqueam, Stó:lō or Kwakwa̲ka'wakw provenance. This way of regarding the RRN aligned with repatriation in that some people saw the RRN as a digital or virtual repatriation, and therefore viewed it as confined to items from the Indigenous communities represented by the RNN co-developers. At the same time, the SG heard that some First Nations communities wondered, "If our heritage appeared on the RRN would this mean that control over it was being given to MOA, Musqueam, Stó:lō, and U'mista?" These were serious concerns impacting issues of trust, authority, and control. With more than 190 First Nations bands in BC, would it be feasible for SG members to attend band council meetings and request band council resolutions supporting the RRN from each? The SG decided instead to approach the three First Nations umbrella political organizations within BC: the BC Assembly of First Nations, the Union of BC Indian Chiefs, and the First Nations Summit. Each passed a resolution stating that its members: (1) endorse and support the development of the Reciprocal Research Network (RRN) as a research tool to assist First Nations and museums to develop relationships and to access and share cultural information, and (2) encourage museums to provide the RRN with data culturally and historically significant to the First Nations of British Columbia.

These resolutions were important as a way of reaching out to local Indigenous communities in BC. They were also of assistance to the partner institutions in assuring different levels within the administration of wide support from BC First Nations for the RRN.

Control over data was expressed in multiple ways but could be divided into two: reliability and authenticity. Each institution had to overcome concerns over the reliability of their contributed data. All were aware that their records contain numerous gaps, omissions, and even errors. This is sometimes referred to as "messy" or "dirty" data. Providing general access to this made many institutional representatives uncomfortable. No matter how museums present information, the public sees institutional voice as having authority. Therefore, for a museum-sponsored site to allow errors, inconsistencies, and ancient terms that should be maintained with the record but seem pejorative today out into the public realm is problematic. Some institutions perceived the digital records as less accurate than other forms of records or as being incomplete when compared to their accession files. To the SG, these concerns were surprising as most of the institutional partners had already made their collections accessible online through their own websites. It was this concern with reliability of data that ostensibly led one institution to withdraw, explaining that while it wanted to continue, it currently did not have the staff capacity to check its data before they could be shared via the RRN. Other institutions chose to send only a subset of their data that had been "cleaned." This issue of letting go of control over data is one that many museums are still struggling to resolve.

None of the members of the SG nor of the immediate RRN development team were involved with records management. They were, therefore, slow to understand concerns that some of the institutional partners raised in regard to authenticity as opposed to reliability. To facilitate the

user experience on the RRN, all records are displayed using the same layout. This makes comparisons, searching, and viewing simple for the user. However, this also alters the institution's data. Sometimes these changes are as simple as reformatting, but in other cases data manipulation occurs (e.g., the splitting of terms when an institution uses the same field for material and techniques, whereas the RRN has a separate field for each). Given that the archival authenticity of a record is based on the understanding that the person/institution that is presented as having created the record did in fact do so and that no one has tampered with the data (http://www.archivists.org/glossary/term_details.asp?DefinitionKey=9), the RRN clearly disrupts the record's authenticity. The software engineers, who participated in all the workshops, proposed a technical solution to successfully address this. They added a tab so that, in addition to the RRN record format, users can view the data as sent from the institution. They also added links from the record to the same item as displayed on the institution's own website (where available). Administrators of the site can also see the mapping notes showing the data translations made by the RRN. This is merely one example of the benefit derived from using an agile development methodology and having the software engineers present at all meetings.

Finally, the RRN platform allows members to create their own "Projects." Users select items based on their own criteria to put into their Project. In a Project, unlike in a physical museum exhibit, where cultural belongings can exist in only one physical space, users can reorder materials using their own classification systems. The creator of a Project also determines levels of access to that Project. The basic set of access criteria is: (1) all members of the RRN can see and participate in the project, (2) all members can see that the project exists but must ask to join, and (3) no one can see that the project exists unless invited. When this capacity was first demonstrated for the partners, they asked if this meant people could establish Projects to target pieces for repatriation without the museum's knowledge. The simple answer was, "Yes." The partners' ability rapidly to accept this demonstrated the developing of relationships between the communities, the SG, and the partners.

Community Perspectives and Reciprocity

Gathering community feedback was a critical component of the project, as was building capacity within communities. Hiring consultants to carry out user testing in communities could not fulfill this goal. Once again, the budget was reworked and funds transferred to each First Nation co-developer to hire Community Liaison Researchers (CLRs). In addition, a CLR coordinator was added to the RRN development team. The CLRs worked with groups from youth to elders, gave demonstrations at home and across the province, tested new features, and provided ongoing feedback to the development team. They constantly questioned the project, their familiarity with the system enabling them to point out weaknesses and suggest modifications. The CLR coordinator liaised between the CLRs and the Development team to ensure a reciprocal flow of information.

The aim throughout the development process was to build a system that encouraged exploration, could foster trust, and could lead to the development of new relationships. Creative tensions existed between desires to keep the site simple and to have all the features and requirements requested by the multiple, overlapping user groups. There was also a very tight feedback loop in

the early stages where the developers would hear a request and implement the feature within a week or two. This did not translate as well later in the project when there were many features that had to work together. Management of this process fell to the CLR coordinator. Her job was to ensure that users continued to feel their contributions were important and that they understood the reasoning when a suggested change was not integrated into the system. The CLRs also attended the Partner Institution Workshops and gave presentations providing the museum with an opportunity to understand the impact and importance of the project for the co-developers' communities.

The reciprocal nature of the RRN is a fundamental component of the system. Within the RRN this is achieved in several different ways. One of these is the ability of users to "Ask a Question" or enter "Shared Knowledge" about a piece. These entries are attached to the item's record, and other users may respond. In addition, this knowledge is sent to the relevant institution, allowing it to contribute to the conversation and/or update its own databases. Can the ability to have conversations across knowledge communities actually lead to change in practice within institutions? Two examples from the development period of the RRN are discussed below. Both of these items are rattles and fall under the rubric of culturally sensitive material. Their inclusion in the RRN touches on issues of control, authority, and access.

Rattle A2100 from the MOA is defined by the institution as:

> Description: Rattle made of five scallop shells in decreasing size (the four largest are pink-brown while the smallest is lighter in colour) hanging from a light brown wood hoop bound with brown string. History Of Use: Ceremonial rattle usually used during the Sxwayxwey (Coast Salish) or Xxwi Xxwi (Kwakwaka'wakw) dance. According to some Cowichan visitors who viewed this rattle in 1997, it is meant to be held in the right hand of a dancer. Culture: Northwest Coast. (www.rrncommunity.org/items/5113)

The Musqueam, Stó:lō and other Coast Salish communities practice a cleansing ritual called sχayχʷəy [Sxwayxwey]. The regalia of the sχayχʷəy dancers include pectin shell rattles. All sχayχʷəy regalia are considered sacred, and many of those with the rights and privileges to sχayχʷəy feel that they should not be put on display in museums.[2] As a result, sχayχʷəy regalia have been removed from most museums on the Northwest Coast. The Kwakwaka'wakw have a dance derived from, but entirely different from, the sχayχʷəy that is called X̱wi X̱wi. The X̱wi X̱wi is not considered sacred, and X̱wi X̱wi masks and regalia are put on display, including at the U'mista Cultural Centre and at MOA.

This could be read as a simple binary equation: If MOA A2100 is Coast Salish, then it should not be on display, or in the case of a website, there should be no image; if MOA A2100 is Kwakwaka'wakw, then it can be on display, or in the case of a website, the image is permitted. However, in the case of MOA A2100, the only provenance information is the even more general term *Northwest Coast*. Therefore, a simple toggle switch does not work. Should this image be displayed or not? This led to a discussion among several of the CLRs, MOA staff and other RRN users. Here is part of the conversation as it appears on the RRN:[3]

these shells are part of the regalia. Image should not be shown.
User: rrnworkshop 14 [CLR workshop]

This may depend on what culture this rattle is from. This is one of the difficult issues faced by museums. In this case we are unclear which culture this rattle belongs to as both cultures use rattles of this type and the records aren't clear enough to be certain.
User: Sue Rowley [MOA staff]

rattle for sxweyxwy dancer.
User: Terry Point [Musqueam]

Just a personal comment on this. The Kwakwaka'wakw use this regalia as part of a dance. It must be said that we should give reverence to the originating culture. This was passed over through marriage and is a Salish item, which is sacred.
User: David Houghton [U'mista Cultural Society CLR]

yes it originated from coast salish and we should respect that its a [culturally] sensitive item
User: Lawrence Isaac [U'mista Cultural Society CLR]

Unless the Museum is 100% sure of where this item comes from than [sic] it should be assumed to be Sxwayxwey to be safe. This is part of the whole regalia and as to protocols is not to be photographed or recorded.
User: Jody Felix [Musqueam Indian Band CLR]
[http://www.rrnpilot.org/items/5113, accessed October 15, 2013]

Attached to MOA A2100's RRN record, this discussion is visible to all RRN members. Did this commentary result in any changes? Yes and no. At present, MOA's database remains unchanged with the image viewable (http://collection-online.moa.ubc.ca/collection-online/search?keywords=A2100, accessed October 18, 2013). When the Kwakwa̲ka'wakw section of MOA's *Multiversity Galleries: Ways of Knowing Galleries* exhibit was being installed, A2100 was selected for display based on its condition. However, following the discussion on the RRN, the curator chose to replace A2100 with a similar rattle with known Kwakwa̲ka'wakw provenance (Karen Duffek, personal communication with the author, December 10, 2009).

In terms of the RRN development, these discussions were a concrete example of the project's engagement with concepts of cultural gatekeeping and active monitoring of data and discussions. It was another rattle, Museum of Archaeology and Anthropology at the University of Cambridge (MAA) 1934.1072, that provided a case study for discussion and policy formation at the final RRN Partner Institution workshop held in March of 2010. This is a sxelməx̌ʷcəs rattle used in a specific cleansing ceremony among certain Coast Salish groups. Its use is a privilege passed down through families. Rattle MAA 1934.1072 is described in the MAA catalogue as:

Description: Rattle made from mountain-sheep horn with an incised design and strands of mountain goat wool cascading from the sides. As Emmons writes, "On one side is shown in full front face of the Thunderbird, very human, but the bird view indicated by the mouth on each side the two profiles. On the other side the double profile of the Thunderbird in the middle." Good

Context: The original European tribal names and, where possible, current tribal names have both been given in separate GLT fields.; Emmons provided detailed information with the rattle in a letter, 04121934. "This is the original ceremonial rattle of the Salish people of the continental shore of British Columbia about the mouth of the Fraser River in the Musqueam Band and the Salish people of the eastern coast of Vancouver Island from Comox to Cowichan including the Comox Nanaimo and Cowichan bands. As I say this was the original proncative [*sic*] rattle of this people. The mountain sheep was and still is a habitant of the more inland mountains beyond the coast range, but in later years the hunting of the sheep was not carried on, so horn could not be obtained, when its place was taken by other materials such as cow's horn, sheet copper, brass and iron, and rattles of wood of any neighbouring tribes, all of which rattles were hung with the twisted strands of the wool of the Rocky Mountain goat. This decoration too was original with these Salish bands. They wore their ceremonial blankets of like strands of this wool. These rattles were rudely carved and in almost every case the Thunderbird was shown in full front view or profile. The rattle was used at death ceremonies, at potlatches and particularly when giving names to older children and for some old custom they pointed the rattle three times and at birth of child. The rattle was called Schl-mocok-Tux (rattle for hand), the goat' s wool decoration Fai-He. Rattles made of the horn of Rocky Mt. sheep are undoubtedly the rarest kind of rattle on the continent. Judging from the colour, which is naturally white, this specimen is more than 100 years old." Collected by: Emmons.Commander.G.T
Culture: Coast Salish Language: Cowichan
[http://maa.cam.ac.uk/home/index.php/40/catalogue/32/?id=74269, accessed
October 15, 2013]

When the sxelməxʷcəs rattle from Cambridge was added to the RRN, a Coast Salish community member noticed it and posted:

This item is a rattle used in a hereditary cleansing ceremony. Its use in traditional culture is restricted to specific use during its ceremonial use and is not for general public display.

As a member of one of the families with the right to use such a rattle, I have personal knowledge of the application for this item.
User: Victor Guerin [Museum community member]
[http://www.rrnpilot.org/user_submissions/1071, accessed October 15, 2013]

In a later post on the same item Victor Guerin continued:

This may be only the start. Prior to the onset of cultural decline that ensued with the arrival of settler populations in our territories, there were literally dozens of the ceremonies known to our people as t'ᵒəχʷteːn. Today, there are only a few left in use. However, explorers and the collectors that travelled with them arrived at the time of first contact with Europeans. So, it's very possible that examples of these sorts of objects from rites that have fallen into disuse will turn up in collections held by museums around the world. After all, even though the indigenous people of that period would not have likely parted with such treasured objects, it is known that epidemics from European diseases travelled over land from the east and devastated populations long before the arrival of the first explorers to this coast and many villages were left devoid of their populations.

[http://www.rrnpilot.org/user_submissions/1071, accessed October 15, 2013]

The more than 40 participants at the March 2010 workshop included representatives from the partner institutions, the SG, the CLRs, co-developer community members, and the RRN development team. Anita Herle, curator at the MAA, brought the case of this rattle forward to the group, seeking advice on how to answer the inquiry and to explore the role of the RRN in moderating, arbitrating, or participating in the process.

In the case of the sxelməxʷcəs rattle, people familiar with Coast Salish cultures know it to be culturally sensitive, but how does a geographically distant institution without expertise in this area become aware of this? How can the institution assess the knowledge being shared on the RRN? Who has the authority to decide? Is this something that the RRN would do, through either a programming or personnel solution? A programming solution could simply block all images of items determined to be culturally sensitive. A personnel solution might involve a committee tasked with exploring the request and providing knowledgeable advice. Discussion on this topic ranged far and wide, touching on the nature of reciprocity, trust, power, and authority. The following paragraphs, phrased as a series of questions, represent the issues those present raised and discussed.

When RRN members add information to records, a copy of the comment is sent to the institution thus opening a channel for communication. When the University of Cambridge museum received the comment on MAA 1934.1072, staff contemplated how they might respond. Who is the sender of the message? Does he or she speak for him- or herself or for a broader group? Who could they turn to for further information? Could/should the RRN facilitate this or set up a committee to act as an arbiter/determinant?

Should the image appear on the RRN? If an artifact is generally known to be culturally sensitive, should the RRN simply filter out the image or the record? Keeping a list of culturally sensitive materials and automatically screening their images and or entries would be a simple solution. However, the classification of "culturally sensitive" is fluid, and an item's designation may change over time.

In the original scope document, the RRN is viewed as a discovery tool to assist in research and in the development of relationships between Indigenous communities and institutions. If the

images and records were screened either automatically or by a committee, how would this impact the ability of community members to discover, identify, and comment on their heritage? One frequently mentioned method would be to have differential access levels to the data.[4]

This had been considered but eventually was abandoned due to the difficulties of monitoring a system containing records relevant to hundreds of different groups including but not limited to: colonially imposed band and tribal systems, hereditary leaderships, families, and societies that cross-cut band and clan systems. Who would determine the authorities for each member?

For the sxelməxʷcəs rattle at the MAA, the provenance is given as Coast Salish with a further attribution of Cowichan. Could the current Cowichan tribes be contacted and make a determination? In this case, however, Cowichan is actually a linguistic term employed in the late 19th/early 20th century anthropological literature encompassing a much larger area and number of groups than the current usage of the term.

As an inherited privilege, the right to the rattle might have passed to people living in different communities. How would it be possible to determine who is the appropriate authority for this particular rattle if the image is not available for viewing? Community members commented that the dialogue is more productive if the image is present. They also expressed the opinion that speed of action (a concern expressed by the partner institutions) was not as important as doing things correctly. Process and dialogue needed to proceed action. The CLRs wanted to know: What would the institution's response be? Would the museum work towards repatriation of the piece? Would it work towards portraying a greater understanding of the people? They felt the creation of this reciprocal communication on the RRN could demonstrate respect and foster new relationships. Thus, the RRN could lead to the exchange of knowledge and the possibility for creative rather than reactive solutions.

As a result of these discussions, the partners and SG decided that the role of the RRN was that of a facilitator of conversations. Institutions retain control over the data they contribute and the RRN makes data available in ways that increases people's ability to find and engage with it, with others, and with the contributing institutions. Any decision to designate an item as culturally sensitive/sacred and to remove its image/record from the RRN should therefore be determined through a conversation between the relevant community/communities and the institution.

This role of the RRN is clearly laid out in the MOU drafted by the workshop participants, guiding the first five years of the RRN from 2010 through 2015 (RRN 2010). Article 3, the Purpose Statement, reads:

> 3.1 The RRN links participating users and institutional collections. It provides an innovative, dynamic tool for interdisciplinary research as outlined in the CFI Grant. The RRN is intended to facilitate the reciprocal sharing of data and information regarding cultural objects and artifacts contributed by the Parties in digital or electronic form.
>
> 3.2 The physical exchange, transfer or repatriation of cultural objects and artifacts between or among Parties or any originating communities, or negotiations regarding the physical exchange, transfer or repatriation of cultural objects,

therefore do not fall within the scope, mandate or purpose of the RRN. [RRN 2010]

Conclusions

How are large-scale institutions and indigenous communities altered through collaborative digital projects? This question was posed at the After the Digital Return workshop held in Washington DC in January 2012. For the RRN, there were certainly a number of unanticipated outcomes that came about through the shifting nature of the relationships and of the perceived authority and power dynamics between the co-developers, partner institutions, CLRs, and development team. Hopefully, this paper has demonstrated the fundamental role of process and dialogue in the creation of the RRN.

Taking an agile approach to the software development and engaging continuously with the co-development communities led to a more flexible and robust technical system and a more reciprocal social partnership. The ability of participants to see within a relatively short time frame how their concerns were addressed promoted sharing and permitted people to make fundamental and challenging decisions. A concrete example is the discussion about the sxelmәxʷcәs rattle, which assisted in steering the role of the RRN towards facilitation rather than gatekeeping.

The people involved in the project were certainly affected. Some had their current collaborative practices enhanced and reinforced. Others were exposed to working with institutions and communities for the first time and carry the impact of this with them. Institutional change at any of the partner institutions is difficult to gauge and might suggest hubris on the part of the RRN. For the co-developers, this project expanded their collaboration with museums. Originally, only the two co-developers that are cultural heritage institutions planned on contributing data to the RRN. As the RRN developed, both the SN/STC and the Musqueam Indian Band decided to contribute their collection records. This makes these materials widely available for the first time.

The partner workshops, transformed from the one envisioned to the three actually held, were where institutions and communities were humanized, tensions expressed, and solutions derived. The transformation of discussions from concerns over lack of inclusion at the first workshop to engaged discussions on culturally sensitive heritage and its inclusion on the RRN at the final workshop demonstrate the value of process and dialogue in building relationships and developing the network. Without the all-important face-to-face meetings and the active engagement of the attendees, the RRN would not be as successful.

"The network will expand in two ways: to include other partners in Northwest Coast research and to conduct research in other areas" (MOA 2001:2-4). These words are contained in the *A Partnership of Peoples* application. Since launch, the RRN continues to expand. There are now 21 institutions contributing data to the RRN with on-going exploration into different models of expansion and the addition of data from archives.

Acknowledgments

Notes

1. MOA rewrote its mission statement in 2010. The new statement is available at http://www.moa.ubc.ca/about/mission.php, accessed August 12, 2013.

2. For a recent case involving the removal of a sχayχ^wəy mask from a museum exhibit, see Griffin 2011.

3. RRN users select one of three Creative Commons licenses for any information that they share on the RRN. All quotations used in this paper were attributed with a license permitting non-

commercial use of the knowledge as long as attribution is given to the author and the words are not altered. For general background on such CC-BY-NC-ND licenses, see: http://creativecommons.org/licenses/by-nc-nd/3.0/, accessed August 12, 2013.

4. The RRN allows users to create different levels of access through "Projects." However, for discussion of a community-based system with the ability to construct different levels of access, see Anderson and Christen *this volume*.

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