

Research Perspective

## Applying the 5 R's of Indigenous Research in Practice: Graduate Student and Van Tat Gwich'in Elder Reflections in Old Crow, Yukon

Karl-Antoine Hogue\*

Mary Jane Moses†

Jeremy R. Brammer‡

Allyson Menzies▫

Jesse Popp\*

**Abstract:** There is growing recognition that research with Indigenous communities should foster reconciliation and support self-determination. Research frameworks like the 5 R's—Respect, Relationship, Relevance, Reciprocity, and Responsibility—can help Indigenous and non-Indigenous partners work together in a good way. In this article, the authors, guided by Elder Mary Jane Moses of the Vuntut Gwitchin First Nation, Old Crow, Yukon, reflect on the 5 R principles in the context of a graduate student's research, and discuss ways to implement the principles into a wildlife monitoring project. We find that discussing and implementing these principles during all stages of the research process creates the space for respectful, ethical, and effective knowledge sharing between research collaborators. By sharing our experience, we hope to inspire other researchers to pause and reflect to ensure that we all conduct our research in a good way.

\*Department of Biological Sciences, University of Guelph

†Vuntut Gwitchin First Nation

‡Vuntut Gwitchin First Nation, Environment and Climate Change Canada

▫ School of Environmental Sciences, University of Calgary

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## Introduction

Research has earned a bad reputation in many Indigenous communities. When mentioned around some Indigenous people, the word research often “stirs up silence, it conjures up bad memories, it raises a smile that is knowing and distrustful” (Smith, 2021, p.1). Over the years, researchers from Western institutions have exploited Indigenous People, their lands, and their knowledge, often advancing their careers while causing significant harm, or providing no benefit, in the communities where they worked (Mosby, 2013; McGregor, 2018; Kovach, 2021; Smith, 2021).

Over the last few decades, there has been a movement towards making research more inclusive of Indigenous Peoples and their Knowledge Systems (Canada Research Coordinating Committee, 2019). However, this often translated to merely incorporating Indigenous Knowledge as data points to support Western scientific pursuits, or engaging Indigenous communities in the data collection component of a project (Thompson et al., 2020). To move forward “in a good way” that genuinely supports reconciliation (Reid et al., 2024) fundamental questions as outlined by Linda Tuhiwai Smith (2021) may include: “Whose research is it? Who owns it? Whose interests does it serve? Who will benefit from it? Who has designed its questions and framed its scope? Who will carry it out? Who will write it up? How will its results be disseminated?” These questions need careful and ongoing consideration as it is easy to perpetuate harmful behaviours despite researchers’ best intentions (Archibald, 2008).

More and more, Indigenous communities expect that researchers working on their lands or with their members go beyond university-mandated research ethics requirements and use local frameworks to establish what ethical or “good” research entails (Fingers, 2005; Xiiem et al., 2019; Reid et al., 2024). “Good” research or research “in a good way” is often defined holistically and is grounded in a deep sense of respect for all those who are involved in the research (including humans, plants, animals) and those who might be affected by it (e.g., community members, the land) (Kovach, 2021; Reid et al., 2024). Consequently, researchers need to be “accountable to [themselves], the community, [their] environment or cosmos as a whole, and to the idea or topic that [they] are researching” (Wilson, 2008, p. 108).

Many researchers working within Indigenous communities inhabit what Celia Haig-Brown (1992) calls a “border world,” or a space at the border between Nations, cultures, and world views. Border worlds extend to anyone (Indigenous or non-Indigenous) who is entering a place to conduct research with/within a community that is not their own. Some Indigenous scholars have proposed research frameworks that can help navigate this space including, for example, Ethical Space

(Ermine, 2007; Littlechild & Sutherland, 2021), Two-Eyed Seeing (Bartlett et al., 2012), and the 5 R’s of Indigenous Research—Relationship, Respect, Relevance, Reciprocity, and Responsibility (Kirkness & Barnhardt, 1991; Restoule, 2008). These frameworks describe research approaches that actively prioritize values like respect, reciprocity, relationship building, and accountability, and are, therefore, typically well-suited for research in Indigenous contexts (Wilson, 2008). Many Indigenous scholars have also stressed the importance of deep self-reflection in research, regardless of the approach or framework being implemented (Wilson, 2008; McGregor et al., 2018; Kovach, 2021; Littlechild et al., 2021; M’sit No’kmaq et al., 2021). Such relational and reflexive approaches to research can also help navigate differences in cultural protocols and guide researcher behaviours in the community.

Although these frameworks have been described and applied in previous articles (Snow, 2018; Abu et al., 2020; Reid et al., 2021; Lafferty et al., 2023), it is important to adapt their meaning and implementation to the specific cultural and research context of each project. In this article, we—graduate student Hogue and community Elder Mary Jane Moses—reflect on the cultural and ecological context of a wildlife monitoring project and interpret the 5 R’s within this context. We also translate each of the 5 R’s into actionable items that can be implemented in this project.

### *Lead Author Positionality (Karl-Antoine Hogue)*

I am a master’s student at the University of Guelph with a background in environmental biology. I was raised with my two brothers on a farm on the Traditional Territory of the Kanien’kehà:ka (outside Montréal, Quebec) in a family of French descent. Growing up, I spent a lot of time outside, whether playing in the forest or running through corn fields, and I still return to these natural spaces to find relaxation and intellectual stimulation.

At the start of my master’s degree, I was new to northern Canada, new to the town of Old Crow, and new to Van Tat Gwich’in culture and Knowledge Systems, so I tried to approach the project with humility and gratitude. I have tried to observe, listen, and learn any way I could, whether from written materials, in the classroom, on the land, or in community. Coming from a Western background, there were numerous instances where this project took me far outside my comfort zone; moments where I had to challenge some of what I thought I knew for a fact. It was not always easy, but I am immensely grateful to have had the opportunity to embark on this journey. I am also immensely thankful to the community of Old Crow who have made me feel at home so far from home, and who have provided me with so much. Mahsi’ choo.

## Context

### *Introducing Elder Mary Jane Moses*

I first met Elder Mary Jane when I presented my master's research proposal to the Vuntut Gwitchin Heritage Committee in 2022. Since then, we have collaborated on various aspects of this project, building a relationship based on mutual respect and trust in the process. Elder Mary Jane's lifetime of experience working on research projects in Old Crow, and her thorough understanding of the challenges involved when working across knowledge systems, allowed for a fruitful and insightful conversation on research, the 5 R's, and our wildlife monitoring project. Before we began our conversation, I asked Elder Mary Jane to introduce herself.

First of all, I'm a grandmother to 4 children. I'm originally from Teet'it Zheh (Fort McPherson, NWT) but I've moved to Old Crow in 1979. I've held many roles in the community. When I first came to Old Crow, I was working as a receptionist at the nursing station. Then, I was a community health worker. In 2002, I came on with the Heritage Department of the Vuntut Gwitchin Government. The position was called Heritage Researcher, but I told my manager that I wanted to change my job title to Heritage Coordinator because people were expecting me to do research for them, individually, and I didn't think that was my role. I got it changed, and I worked in heritage work with our Van Tat Gwich'in oral history database. I did culture work like hide tanning and language work transcribing Gwich'in. I understand my language, but I have difficulty speaking sometimes and I'm learning to write it.

I retired in March 2022 from the Heritage Department. In June 2022, I received an honorary bachelor's degree from Yukon University in Heritage and Culture. I sit on the Porcupine Caribou Management Board Steering Group in Indigenous Knowledge since last October and I'm on the Heritage Committee in Old Crow. In 2001, I took a course called Value-based Video Course here in Old Crow. Today, I still make films, and my last one was made in May 2023. That was film number 11 or 12, I think. All my films are made with my culture in mind, trying to pass the culture to young people. It's all for the future, for young people to remember and practice their culture and traditions. The last film I made is called "Instilling Gwich'in Values" so the title tells you what it's about. There are so many good experiences that I've had and today I try to pass that on and share my knowledge whatever way I can with researchers and other people. My knowledge I

gained from the many research projects I have experienced with the VGG [Vuntut Gwitchin Government] Heritage Oral History Project and coming away with how to do good research in our community, trying to engage everyone in the process. It was community driven, for the people, by the people. I just like where I am today in my life. (Elder Mary Jane Moses)

### *The Community of Old Crow, Yukon*

The Van Tat Gwich'in are a self-governing First Nation whose Traditional Territory extends through a vast area of northern Yukon and into northeastern Alaska (Vuntut Gwitchin First Nation & Smith, 2019). This landscape is composed of spruce-dominated boreal forests and open tundra with sedges, mosses, lichens, and shrubs (Sherry & Vuntut Gwitchin First Nation, 1999). Located at the confluence of the Crow and Porcupine rivers, the community of Old Crow is the heart of the Nation and home to around 250 community members. Elder Mary Jane describes how Old Crow has changed since she moved there more than forty years ago:

I came to Old Crow in 1979, I got married here. I'm from Fort McPherson (NWT). When I first came to Old Crow, it was not like it is today. It was much smaller but now it has really grown. When I first got here, it was really remote. We had a store, a nursing station, a school, and the First Nation office. Today, this is my home. When I go back to Fort McPherson, I'm in a hurry to come back here. I like Old Crow because it keeps me connected to the land, to my culture. With the different seasons, we have different food. In the fall, it's caribou, moose, and fish. In the winter, it's caribou, rabbits, and ptarmigan. In the springtime, it's caribou, beaver, muskrat, and ducks. Each season is different. We have berries, too, in the summer with vitamin C. Old Crow is unique. It's a strong little community with resilient people. We have our struggles, but if you're strong you can make it through. (Elder Mary Jane Moses)

### *Wildlife Monitoring Project*

The wildlife research component of my master's research was part of an ongoing, community-based monitoring project called Nanh gwiinzii vik'ite'tri'giikhii (We read the land well). The project was started in 2021 by Jeremy Brammer, then Fish and Wildlife Manager of the Vuntut Gwitchin First Nation (VGFN) in collaboration with the VGFN Land Guardians. VGFN has been operating a Guardian program since the 1990s and had a team of two full-time Guardians

as of 2021. The VGFN Guardians are responsible for patrolling the VGFN Traditional Territory to monitor harvesting activities, and document changes to the land, water, and wildlife. In this community-driven project we aimed to investigate population densities and behaviour of large mammal species in the Vuntut Gwitchin Traditional Territory while fostering Gwich'in traditional lifestyles and ensuring that Gwich'in Knowledge and skills continue to be shared amongst community members, especially youth (Kuntz et al., 2018; Fish and Wildlife Planning Team, 2021).

In 2022, I joined the project as a master's student under the supervision of Dr. Jesse Popp and Dr. Allyson Menzies. I was tasked with assisting with the design and implementation of a camera-based wildlife monitoring program around linear corridors in the Vuntut Gwitchin Traditional Territory. Over the course of two years, I worked alongside the Guardians to deploy and service 72 game cameras during a dozen snowmobile patrols. The patrols were a few days in length and involved two to six community members each. I also teamed up with Elder Mary Jane to conduct ten interviews with Gwich'in Knowledge Holders. To ensure that we addressed the monitoring project's scientific, social, and cultural goals, I turned to the 5 R's framework and to community Elders like Mary Jane. Together, we were able to navigate community expectations and graduate school requirements to design and implement a sustainable wildlife monitoring program. This work was approved by the Heritage Committee of the Vuntut Gwitchin First Nation and the University of Guelph Research Ethics Board (#20-10-014).

### **Our Approach: Co-Interpreting and Applying the 5 R's**

Early on in my graduate school journey, I recognized the need to reflect on how best to conduct myself and my research as an "outsider," a settler, and a researcher within the community. To do so, I sought guidance from pre-existing Indigenous research frameworks, ultimately selecting the 5 R's of Indigenous Research—Relationship, Respect, Relevance, Reciprocity, and Responsibility (Kirkness & Barnhart, 1991; Restoule, 2008)—as the framework to generate important self-reflections, foster valuable discussions, and, ultimately, inspire my research approach. The 5 R's framework was first introduced in the field of Indigenous education by scholars Ray Barnhardt and Verna J. Kirkness (1991) as the 4 R's (Respect, Relevance, Reciprocity, and Responsibility). The fifth R of Relationship was later added to highlight the importance of relationships in the research process (2008).

To reflect on the 5 R's and to turn them into actionable guiding principles for our research project, I took inspiration from the field of ethnography as it seemed best suited for a profound reflection on research approaches in this cross-cultural context (Smithers Graeme, 2014; Graeme & Mandawe, 2017).

Ethnography creates space for the examination of self in relation to the community, community members, and research (Haig-Brown, 1992; Lassiter, 2005). Also, the ethnographer focuses on listening and watching as a way to learn and create new knowledge, which is akin to what is expected of a learner in many First Nations cultures (Haig-Brown, 1992; Archibald, 2008). Finally, ethnography and, more specifically collaborative ethnography, allows for research participants to become co-intellectuals, meaning they can take a leading role at each stage of the research process from setting the research objectives to writing and reporting on the findings (Lassiter, 2005).

When I started looking for a co-intellectual to co-write this piece with me, I immediately thought of Elder Mary Jane. She has a lot of experience with research and researchers in Old Crow, and a thorough understanding of our wildlife monitoring project. So I was thrilled when she enthusiastically agreed to co-author this article with me. Elder Mary Jane was more comfortable sharing her ideas orally, so we agreed to record and transcribe our conversations. We then reviewed the transcripts together making edits where needed. We repeated this process until we were both satisfied with the result in an approach similar to Archibald (2008). To get started, I organized a first meeting during which I introduced the 5 R's framework to Elder Mary Jane and we discussed the general direction of the article. We followed this first meeting with a series of visits at Elder Mary Jane's house taking inspiration from Keeoukaywin (The Visiting Way) (Gaudet, 2019). This approach recognizes the central role of informal visits for community members to share knowledge, maintain social bonds, and take care of each other. In my visits with Elder Mary Jane, we often shared food and hot beverages while discussing the latest community news, before diving into the 5 R's and research. I often started this part of the conversation by asking a broad question like how can researchers be respectful or give back when doing research in Old Crow? We then went into more specific questions related to our wildlife monitoring project. Our conversations were mostly unstructured in an approach that Haig-Brown (1992) calls "research as conversation." This back and forth allows for the co-construction of ideas in a format similar to a co-writing exercise. Reviewing and editing previous transcripts also sparked many conversations often expanding or clarifying what had been previously said. In total, we met on ten occasions over the span of nine months.

Throughout the rest of this article, we are sharing parts of our conversation, organized by each of the 5 R's, in a format that alternates between Elder Mary Jane's perspectives and my own reflections and interpretations of what she said, pulling in the relevant literature.

## Relationship—Nihlak nat

When talking about the 5 R's, we started with "Relationships," as it is foundational to everything. According to Elder Mary Jane:

Relationship should be the first R because it is the most important. Doing research 'in a good way' means that when new researchers come into the community, they can't just come in and, right away, start interviewing people. They need to get to know the people first. It's important for them to make a good first impression. They have to state their case. We have to know why the researchers are asking those questions, what's the purpose, what's going to be done with it, and are we going to see something in a booklet in easy-to-understand language.

Meeting people is so important. It's a process. Researchers have to build trust, earn people's respect and get to know community members. Otherwise, they will be just another researcher, and people won't be interested in talking to them or talk about the land. Some researchers just want to do their field work but it's not good research when it's rushed. They don't get the full picture when it's rushed. That's how you make false assumptions too if you don't hear from people. They have to see what we mean when we say that we live off the land. They need to know that it's more than words, it's our way of life. Researchers will have a different understanding after spending time in the community. They will learn so much. They probably came in with a mindset, but that mindset will change.

I know some researchers come year after year and make a point of stopping by to say hello. My family has gotten really close to some of them over the years because they always make a point of saying hello and that's good. For me, it shows respect, and there can be no relationship without respect. (Elder Mary Jane Moses)

Listening to Elder Mary Jane speak reminded me of the importance of engaging with community members as humans rather than research participants. Most individuals I worked with, whether on the land during Guardian patrols or in town for interviews, were all people with whom my supervisor or myself had a prior friendship or connection. When asked, most participants mentioned that they joined the project because they knew me and trusted me.

Many authors argue that, because research involves the creation of new relationships between pieces of knowledge, between people and between animate and inanimate beings, it can only start once a rapport of trust has been

established (Haig-Brown, 1992; Archibald, 2008; Wilson, 2008; McGregor et al., 2018). Building this rapport might include following various cultural protocols, participating in ceremony, visiting with community members in town and on the land, demonstrating proper handling of community knowledge, and, above all, it might take time (Archibald, 2008; Gaudet, 2019; Kovach, 2021; Smith, 2021). For Elder Mary Jane, building this rapport starts by making a good first impression in the community. To do so, I applied to work for the First Nation government prior to the start of my degree. This opportunity allowed me to integrate into the community and start building connections and trust with community members, the land, and all its inhabitants without the requirements of my research project and graduate degree weighing on every interaction. It also allowed the community to get to know me as a person, which Smith (2021) says is often more important than explaining the technicalities of the proposed research. Those early relationships that were built before the start of the degree helped start the project in the right direction and created a level of trust and mutual understanding on which to base future knowledge sharing.

Elder Mary Jane highlights the importance of researchers spending time in the community as part of the research process. Previous work in Old Crow and other Gwich'in communities has stressed the importance of repeated, informal social interactions to build trust between outside researchers and community members, which is integral to satisfactory completion of a project for all those involved (Wolfe et al., 2011; Brunet et al., 2014; Hovel et al., 2020). To create space for these interactions to occur, researchers must be willing to spend time in the community. The Maori refer to the principle of *kanohi kitea*, or "the seen face" when describing the need to be "seen" and recognized within community (Smith, 2021). This is especially important for researchers, such as me, with limited or no prior connection to the community. Hence, I decided to spend half of my degree in the community. For many Indigenous community members, there is no distinction between research and personal relationships. As such, I made sure to get involved in community life, including school activities, sports, and community celebrations in order to engage with community members outside of work. In my experience, this process of relationship building is far from easy. It takes time and often requires spending long periods of time away from one's previous home, friends, and family. Personally, there were times when I felt lonely, uncomfortable, or exhausted, and I had to step back to take care of myself. Despite all the challenges, I would encourage every researcher and student to spend time and get to know the communities they work with. It is difficult work but one that can lead to life-long relationships.

Elder Mary Jane also echoes the words of Elder Shawn Wilson (2008) who sees no difference between relationships made with people and with the

environment. Hence, I made sure to spend a lot of time on the land to meet the wolves, caribou, and moose who were part of this research. Camps or personal traplines might be off-limits to outside researchers at first, but I found that offering to help with camp repairs, firewood collection, or other tasks was a great way to get an invitation. Being on the land, whether at people's camps or on hunting trips, was also a way to get to know community members who are otherwise unavailable when in town. There was no better place to talk about the land than on the land itself. Through those interactions, I learned about the history, geography, and biology of the Traditional Territory, which helped prevent what Elder Mary Jane calls "researchers not getting the full picture" or the misunderstanding of the local context leading to misleading or false results. I identify with what Archibald (2008) calls a "learner," someone with limited cultural knowledge who needs to be guided by more experienced Knowledge Holders. As such, I was committed to listen and take direction from the cultural knowledge shared by Elders, Guardians, and other community members to help navigate each step of this research journey.

### **Respect—Yiinji'hidhoh'ee**

Respect can take many forms, from how the research is handled to researchers' behaviour in the community. Elder Mary Jane highlighted that, most importantly, respect starts before setting foot in the community and continues once researchers arrive.

To be respectful, researchers need to do some homework before they come here. They should do research on Van Tat Gwich'in history, culture, traditions, and learn how this community operates. It's quite different from other communities because we are so isolated, and we live off the land. We're connected to the land; we are hunters and gatherers.

It's good for them [researchers] to look at a map too and learn the place names. Researchers have to learn the protocols in the community too. For example, if there's a funeral, everything shuts down. It's about asking questions and respecting what goes on in the community and helping where you can. Researchers should not be shy to experience the culture and not be afraid to taste new food. I think it comes under respect, respect the culture. Some of the researchers, they use Gwich'in in their presentations and I find that really respectful. They are trying to learn our ways and our language, and have it their presentations.

Respect has to extend to the land too. Everything is done to respect the land here. Watching and listening; listening is a big part too. We've had so many researchers, so people are used to

researchers coming here but sometimes it gets to be too much. It's too much for the community, too much for the land, and too much for the caribou so we have to say no. We need to respect all three, and researchers have to understand that sometimes it's just too much.

Because the research is happening here, I think it has to involve the people that live here, too. If researchers are isolated by themselves and not including community information, then it's just one-sided. We've lived here forever. The information is always passed down from one generation to the next and that's how we survive. It has to be a two-way communication. If a community member knows the information, they will provide it. (Elder Mary Jane Moses)

As Elder Mary Jane pointed out, and as I learned through experience, cultural competency is essential to work across cultures. When I first visited Old Crow, I realized that, although much can be learned from books, stories, or films before getting to the community, Indigenous knowledge and lifeways are best learned by doing (Bartlett et al., 2012; McGregor et al., 2018). I have learned the most about culture by taking part in community events and by spending time on the land with Knowledge Holders. Another way I found to learn about culture in an experiential way was to sign up for Dinjii Zhuh k'yuu (Gwich'in language) classes. As an outside researcher, it is crucial to navigate cultural spaces with care and access them appropriately. For example, there is often more interest for learning Indigenous languages than there are resources available, so I made sure to wait for an invitation before joining a language class to ensure that I was not taking resources away from community members. When I first joined the class, some of my classmates shared some concerns and questions related to my motivations for learning Dinjii Zhuh k'yuu. Together, we discussed why I wanted to learn the language, and I explained my intended use of the knowledge shared in the class. In the end, my presence in the class was well received and even perceived as a sign of respect by community members.

Through the time I have spent with Knowledge Holders, I learned a lot and tried to embody the idea mentioned by Elder Mary Jane that respect starts with listening. To truly listen, one must approach each interaction with a healthy dose of humility about what they know or what they think they know (Graeme & Mandawe, 2017). Modesty is of the essence especially when discussing academic achievements (McGregor et al., 2018). Listening to community members is also key to navigate protocols around funerals and other community events. Previous research in the area has highlighted the necessity of closely following local protocols to maintain respectful and constructive relationships with communities

(Wolfe et al., 2011; Brunet et al., 2014; Hovel et al., 2020; Pedersen et al., 2020). Although community protocols create some challenge especially with the rescheduling of research activities, I have found that, with some creative thinking, we were often able to pursue research objectives while contributing to local customs and traditions. For example, we were able to provide meat for community feasts by incorporating caribou harvesting during our camera deployment trips.

In our project, there was an early request from community Elders to formally include Gwich'in Knowledge as part of the research process. As Elder Mary Jane puts it: "Because the research is happening here, I think it has to involve the people that live here."

To address the legacy of non-Indigenous researchers exploiting, diluting, or misinterpreting Indigenous Knowledge (Smith, 2021), it was important to consider how to engage with Gwich'in Knowledge in a respectful and meaningful way and to ensure community leadership at each stage of the process. To do so, I decided to seek the guidance of respected Knowledge Holders to guide the collection, interpretation, and dissemination of Indigenous Knowledge (Kimmerer, 2000; Smith, 2021). Specifically, I turned to Elder Mary Jane to co-design and implement knowledge collection and to the Vuntut Gwitchin Government staff to ensure that participants' data would be handled according to local standards and adhere to the Ownership, Control, Access, and Possession (OCAP) principles (First Nations Information Governance Centre, n.d.).

Because respectful engagement with Indigenous Knowledge also extends to how researchers analyze and evaluate the validity of their findings (McGregor et al., 2018), we decided to conduct a community-based result interpretation workshop during which community members were encouraged to share, discuss, and reflect on the different findings from our camera monitoring work and our interviews. We planned the event around a community meal followed by a short presentation of preliminary result findings. During the workshop, community members reviewed preliminary research findings, asked questions, provided additional information from their lived experience, and suggested different ecological mechanisms to explain patterns in wildlife movements observed during the study. This workshop was open to all but some community members, identified by Elder Mary Jane, were specifically targeted because of their extensive knowledge of the land and animals. We believe that this kind of workshop, when done prior to publication, can reduce the risk of misinterpreting or exploiting Indigenous Knowledge and is essential to respectful research collaborations between Western institutions and Indigenous communities.

## Reciprocity—Nihjihkhe' Nihts'oh Gi'giikhii

Reciprocity, or the action of giving back to the community, has been identified as a possible avenue to counteract the often extractive nature of research in Indigenous communities. Many opportunities to give back exist both within and outside the research process, and Elder Mary Jane discussed a number of them.

It is important to give back. The researchers need to share the end product of their research with the [Indigenous] government. They need to leave something here because they took a lot of information and we need to know what is happening out there ([e.g.,] erosion, lakes drying out, climate change). It can't be the researcher just getting info from community members and them not giving us something back. Researchers have to tell community members what they're doing here in simple language. They have to tell community members how long they are staying and what they need from the community. At community meetings, some researchers have slideshows with pictures. Pictures really say a lot, we see what is going on the land. By them just telling us, we don't know but if we see pictures, then we understand the damage that's happening.

It's really important to keep that communication ongoing and for the researcher to share their plans with the community. Researchers should stay true to their word because at some point they will need the community's help.

Reciprocity can also happen outside the research process. Getting involved in community activities is good because it shows that researchers are sincere about their stay in the community. It shows that they are trying to get to know the ways of the people, the traditions, the culture and going on the land, they are connecting with the land. Researchers are learning how it's done out there. (Elder Mary Jane Moses)

During my time in Old Crow, I got to witness many community assemblies during which the community discussed various issues affecting the community and decided collectively what to do about it. Listening to community members discuss solutions to very complex issues like permafrost melting drove home the importance of communicating research results back to the community.

However, as Elder Mary Jane mentioned, researchers should also share research objectives, protocols, timelines and any other relevant information. Sometimes, scientific protocols differ from local ways of doing and this can create tension between researchers and community members, which reinforces the need

for effective communications (Brunet et al., 2014). I have found that, following Elder Mary Jane's advice to use pictures and videos, and to try to show rather than tell, leads to very effective communication. Also, I have had great success combining pictures of community members at work on the land alongside research results or other scientific information to capture community interest and maintain support for the project. Of course, pictures were only shared after obtaining proper permissions.

Elder Mary Jane explains that giving back can also extend outside the research process. As researchers get more involved in the community, Kim Tallbear (2014) argues that they can go from giving back to standing with the community. When I first got to Old Crow, I found it useful to identify some of my skills and interests that might be of help to community members. In my case, this has meant helping Elders with technology or chores, babysitting for single parents, and getting involved with recreational volleyball. I also allocated some of my time to support the First Nation government during larger events like on-the-land trips and community feasts. By engaging in reciprocity, I am hoping to give back some of my time, skills, and energy to a community that has already provided me with such a warm welcome, profound learning opportunities, and very dear relationships.

### **Relevance—Gwiyeendoo Ch'igwiju'ee**

The importance of research that can help address gaps in the scientific literature, and be useful to the inhabitants of the North has been a priority for a number of years (Canada Research Coordinating Committee, 2019). However, Elder Mary Jane stressed that useful research is not limited to the topic of investigation and should extend to more holistic community goals like cultural revitalization or skills development.

How is this research going to benefit the community? That's one of the questions we always ask researchers in their application. I like when our people are going to be hired for research, when different people get hired. Some researchers, they pick and choose who they want to work with, but I prefer when different people get hired. I'm really proud of the community members doing on the land work with researchers.

I was raised up on the land and with the daily survival activities on the land. When you are doing that, you are learning the culture, hearing the language and learning the traditions. All those are connected. Most of our young people today, that is lost upon them. Elders and Knowledge Holders today, they are trying to pass that knowledge on but there's still a big gap missing. We have to practice the culture as much as we can. But if people

are willing to learn, it's going to help them because the culture is so rich. It's so important to create those opportunities for our young people to go on the land. I know lots of them want to go on the land but they have no equipment, no gear so when those opportunities happen for them, they'll jump at that opportunity.

Culture should be part of every trip. Researchers have to be flexible. If they have to choose between setting up a game camera and harvesting caribou, I would choose the caribou. It's not only a project for the science, it's about getting our people on the land and getting them connected to the land. (Elder Mary Jane Moses)

When I first visited Old Crow, it didn't take long to appreciate the importance of "the land" in people's lives. Everybody was either getting supplies to go on "the land," coming back from "the land" with firewood, or discussing in which area on "the land" they had last seen caribou. Even in town, "the land" was everywhere.

Much of Van Tat Gwich'in cultural identity is tied to the land and, as Elder Mary Jane and other publications have alluded to, time on the land can cultivate a feeling of wellness for community members and contribute to intergenerational knowledge transfer and cultural revitalization as community priorities (Sherry & Vuntut Gwitchin First Nation, 1999; Brunet et al., 2014; Vuntut Gwitchin First Nation & Smith, 2019). Since environmental, economic, or social benefits of a research project are often perceived as intertwined by communities, it was important to us to include local priorities that go beyond the creation of knowledge as metrics of a project's success to ensure community support and local relevancy (Artelle et al., 2019; Thompson et al., 2020). With my master's degree project, I wanted to go beyond simply investigating a topic that the community deemed useful, and wanted to help support the VGFN's effort to bring its members on the land to practice cultural activities. To do so, we selected a research approach that involved multi-day, on-the-land patrols with a large group of community members. To bring new community members on the land, the research team helped them get through the hiring process with the human resources department and the First Nation provided them with a snowmobile, camping gear, and winter clothes when needed. We also planned our patrols to include unstructured time, usually at camp, to allow for hunting, storytelling, and other traditional activities to occur. With this research project, we were able to offer on-the-land employment while providing a space for Elders, youth, and other community members to practice, share, and pass down their culture.

## Responsibility—Jidii Guk'andehnahtii

As I build more and more relationships with community members, the land, and the other inhabitants of the Vuntut Gwitchin Traditional Territory, I feel a great responsibility to honour and stay true to those relationships. Here, Elder Mary Jane highlights a few concrete responsibilities for researchers operating in the community.

Old Crow has seen enough researchers from way back and more since the 2007 International Polar Year (IPY) to know how it works and what damage some researchers can do. We always ask for the end product (report, book, film, etc.) of whatever research is happening in the community and sometimes we don't get anything. This breaks the trust between researchers and community members, and it hurts the community because we need the research in some ways. Researchers have to be honest with their actions and with their words.

Paying people in a timely manner is important too because researchers are taking them away from what they need to do (e.g., seasonal harvest, family duties, etc.). The knowledge they share is also important, so they need to be compensated. Continuity is another thing too. Researchers that come back year after year, I really respect them today because their research is still ongoing and for me that says that their research is really important for the community. They are true to their word. Every year they come back and give us the information. Continuity is important to make good research and to make it valuable to the community. If there was turnover every year, it would just go nowhere.

I do all of what I do to educate the outside world about who we are, where we are at. I hope researchers tell a true story of Old Crow. I hope they truthfully tell their colleagues about their visit to the community. I hope they share how they interacted with people; how they built connection; what worked and didn't work in the community; what they could do better; the lessons they've learned; how they were able to connect with people on the land, to experience the land. Showing their pictures too. Hopefully, it will help new researchers coming in. (Elder Mary Jane Moses)

In my conversations with Elders, many have shared fond memories of their participation in research projects and of the relationships they have built with the anthropologists, archaeologists, hydrologists, and other scientists who visited Old Crow in the 1960s, 1970s, and 1980s. Some other researchers do not enjoy

a stellar reputation. Elder Mary Jane identifies a few key responsibilities of the researcher to foster trust, mutual respect, and accountability between themselves and the community.

Elder Mary Jane starts with communicating research results with the community. When conducting research in Old Crow, researchers are required to present their research project to the Heritage Committee of Vuntut Gwitchin First Nation and sign a research agreement with the VGFN heritage manager. The VGFN research agreement mandates that researchers provide the product of their research back to the Nation, but some do not. Breaching this agreement, as Elder Mary Jane mentioned, can harm the community in very tangible ways as the community often needs the research conducted on their land more than anyone else. In our project, we not only shared project results but also protocols and accompanying documentation to ensure continuity of the project, another responsibility of researchers as identified by Elder Mary Jane. Following Thompson et al.'s (2019) recommendation, we applied for and were successful in obtaining funding to hire a Guardian coordinator to ensure the continuation of the project at the end of my degree and the creation of local capacity at the Vuntut Gwitchin First Nation government.

Elder Mary Jane reminds us that it is a researcher's responsibility to report truthfully on what they have learned working with communities. As researchers, we become stewards of the knowledge being created; thus we have a responsibility to ensure that the knowledge is collected, analyzed, and used in a way that honours Knowledge Holders and the knowledge itself (Wilson, 2008; Kovach, 2021). Elder Mary Jane also stresses that this reporting should go beyond research results and discuss the relationships and the experiences that we shared with community members. I take this advice to heart and, in writing this report, I hope to honour all my relationships in the community and encourage other graduate students and researchers to work towards conducting their research in a good way and building long-lasting connections with the communities they work with.

## Conclusion

Towards the end of this project, as Elder Mary Jane and I were reflecting on the many hours of conversation we shared together, it became evident that the 5 R's are intrinsically linked and represent five different aspects of a whole. This whole is a space for mutual understanding between researchers, community members, and any other research collaborators. Elder Mary Jane reflects on the importance of creating and maintaining such a space in research.

What I take from this work is the importance of open and honest communications back and forth. If we are not able to communicate openly, we won't get far in the research. Both sides must listen and understand and not let assumptions get in the way. I say this because in many research projects people come in with their own ideas, interpretations, understandings, and assumptions. For good research, in the beginning stages, it's good to be on the same page and make sure each person (researcher, research advisor, community member, Elder, etc.) has a basic understanding of their role in the project, what is expected of them and what they can hope to get out of the project. The researchers also need to understand the community, the lifestyle, the traditions, and the culture. All this ensures that we can listen to each other and understand each other. This leads to more effective and respectful research and minimizes the chance of misinterpretations or misleading research conclusions. (Elder Mary Jane Moses)

I wholeheartedly agree with Elder Mary Jane that creating a space for the respectful and effective exchange of knowledge and ideas is what makes good research. For me, her words echo the concept of Ethical Space, which Littlechild and Sutherland describe as “an invitation to co-create a space between different cultures and knowledge systems [...] to engage with each other in an ethical way” (2021, p. 9). This close connection between the 5 R's and Ethical Space frameworks does not make the former less relevant. Rather, it demonstrates how reflecting on the 5 R's can create the space for ethical collaboration between external researchers and Indigenous communities.

As I look back on the project, I contemplate the central role of time in this journey across the 5 R's to a space of mutual respect and understanding. Over the course of my degree, I have gotten to know, trust, and understand Elder Mary Jane in a way that would not have been possible throughout an interview or two. Time has allowed us to work together and co-create a relevant research project, identify effective ways to give back, and understand our responsibilities in the research process. More broadly, I have found that my two years in Old Crow have allowed me to get to know community members as people rather than research subjects, understand the local context, and experience the land as a place of life, sustenance, and spiritual nourishment rather than strictly a research topic. I recognize that funding constraints and scheduling requirements from universities and funding agencies do not always allow for extended stays in community. I would encourage those institutions to increase support for extended student stays in partner communities. Another potential barrier to extended stays in small

communities is housing. I would encourage a conscious, community-led approach to housing external researchers with the view of supporting long-term stays and relationship building.

In this article, we have presented how the 5 R's framework can create a space of mutual understanding and respect on which to build a sustainable research project. We have also shown how the 5 R's framework can be applied to the local context through shared conversations and reflections between a Van Tat Gwich'in Elder and a non-Indigenous graduate student. We recognize that this method will not be appropriate for every situation, but we hope that this report will encourage other graduate students, researchers, and faculty in Western institutions to take the time to pause, reflect, and enact meaningful changes to ensure that we are all doing research in a good way.

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## Reflection

# What's Love Got To Do With It: Renewing the Foundations of Conservation Science and Practice

At Saxán, Konnoronhkwa, Love, Miłość, Amare†

**Abstract:** We seek a renewing of the foundations of conservation science and practice with love as one of the main pillars. We trace how this has been embodied through histories, practices, knowledge systems, writings, and key figures throughout conservation science and practice. We see this work as a call to renew our vows to practise conservation science and practise with a deep love for the species and places we work with and for.

†Author Contribution Statement: Here we interrupt the regular hierarchical nature of journal authorship and present authorship to the concept of love translated into different languages. The word for love is listed as our authors in Tlingit, Kanién'keha, English, Polish, and Latin. The contributors to this paper include, in no particular order, Krystal Isbister (she/her, Yukon settler/western Europe, northern flora), Katarzyna Nowak (she/her, Polish return migrant/former asylee, hoofed mammals), Jared Gonet (he/him, Indigenous, Tlingit/Polish/Dene, ecosystems), Paul McCarney (he/him, settler/western European), and Dan Longboat (he/him, Mohawk Nation of the Rotinonshón:ni (People of the Longhouse) the Six Nations Confederacy). We see all as equal contributors in various ways that create a whole greater than the parts.