Department of **Geography**





RESEARCH REPORT



Geography Research Report: "CONNECTIONS"

Here in the Memorial University Department of Geography, we think of our research in terms of making "connections": with each other, with other departments, with other institutions, and with a wide range of research partners and collaborators in communities and government. This year's Research Report highlights many of these connections, while also showcasing the diverse array of topics and techniques we employ. From biogeographical studies in coastal forests to visiting transformed places of worship to plastic pollution monitoring in Nunatsiavut, our researchers literally #ThinkOutside in diverse field locations and communities.

The report also features the incredible talents of graduate students and postdoctoral fellows working with our faculty. Graduate research training is a huge part of our mission and our award-winning grads are an important part of the connections we make with the world.

Finally, we are pleased to acknowledge the contributions of research partners, community members, and other collaborators in our work. Working with government, industry, community and fellow researchers across the university and beyond ensures our work remains relevant, accountable, and meaningful. It also reflects our commitment to publicly engaged research, a cornerstone of Memorial University of Newfoundland and Labrador's research vision.

Thanks to the contributors to this edition of the Research Report, and special thanks for Jenine Otto for editorial assistance and Chad Pelley from HSS for the report's layout and design.



Dr. Arn Keeling, Department Head



Dr. Joel Finnis, Graduate Officer

Geography BY THE NUMBERS







Our research interests encompass five clusters:



Globalization, Economy and Resources



Sustainable Communities and Regions



Climate and Environmental Change



Society, Knowledge, and Values



Health and Well-Being

A Message from Acting Vice-President (Research) Dr. Tana Allen

Memorial researchers – including talented research teams from the Department of Geography – are helping make our world a better place. Through ongoing collaborations with Indigenous communities, governments, academic partners and many other groups, they are solving problems, creating new knowledge and leading innovative studies to address challenges in communities around the globe. Collectively, this important work increases Memorial's international reputation as a research-intensive institution. Together with colleagues from the Office of the Vice-President (Research) and the Faculty of Humanities & Social Sciences, I congratulate the Department on another successful research year!



Pierre Elliott Trudeau Foundation doctoral scholar CHRISTINA GOLHAR

Connecting the housing needs of women and children with the child welfare system in Eastern Arctic Canada and West Greenland

Inuit Tapiriit Kanatami has identified the lack of access to appropriate and affordable housing in Inuit Nunangat as a national crisis, as well as "one of the most persistent and critical public health issues in this country" (ITK, 2019).

The current state of northern housing is often framed through the lens of "crisis" due to the immediacy and scale of housing need across northern and Indigenous geographies in what we know as Canada. In Inuit Nunangat, for example, it is estimated that roughly \$2.2 billion is needed to build a sufficient number of new housing units to address overcrowded housing conditions. This number doesn't account for population growth projections, or problems with the existing housing stock stemming from mould and the widespread need for major home repair – both issues that continue to worsen with increasing rates of coastal erosion and permafrost thaw, among other impacts of human-induced climate change.

The consequences of the housing "crisis" in northern Canada are vast and touch both the physical and psycho-social health of residents, connecting with higher rates of respiratory illness and tuberculosis, anxiety, depression, substance use, domestic violence, educational attainment and employment.

With the support of northern partners, my doctoral research seeks to understand the housing experiences of women, and in particular, women with children in Eastern Arctic Canada and West Greenland. While the many manifestations of the northern "housing crisis" have been well-documented, structural determinants of the housing insecurity of women and connections between the housing needs of women and the welfare of children have seldom been explored.

Nationally, we know women experience disproportionate levels of housing need, housing insecurity and homelessness that largely escapes national housing statistics due to methodological challenges enumerating housing insecurity and homelessness, and in particular, difficulties enumerating the forms of hidden homelessness that many women experience. There is a close relationship between chronic housing need and the apprehension of children by the child welfare system, though these areas of research and policy remain largely siloed from one another."

This systematic undercounting of women experiencing chronic housing need is even more prevalent among women with children, as these families are more likely to stay in overcrowded dwellings with friends or family, couch surf, remain in inadequate housing or in relationships of intimate partner violence to maintain relative housing security and to avoid the possible separation of mother and child through child welfare interventions.

There is a close relationship between chronic housing need and the apprehension of children by the child welfare system, though these areas of research and policy remain largely siloed from one another. Women remain underrepresented in housing research nationally, as well as internationally, hindering the ability of decision-makers to create informed housing policy that is responsive to the unique needs of women and children. This lack of representation is further exacerbated in northern Canada and in Greenland where the implications of the ongoing housing crisis are all too apparent.

My research begins with the origins of the "housing crisis" in Eastern Arctic Canada, tracing northern housing policy back to the post-war period and documenting the outcomes of these housing histories for women and children through the use of archival records and testimony gathered during the Qikiqtani Truth Commission (2007-2010).

A preliminary look at this evidence suggests that the post-war provision of housing in Inuit Nunangat was inseparable from settler-nationalist projects of Inuit assimilation and settlement, settler concepts of home, ideals of the moral family, and how to be a good mother and wife. During this period, "the home" is thus revealed as a space deeply connected with identity and place-making, while also serving as a gendered structure of containment, discipline, and a tool to advance the colonizing interests of the settler state.

These historical methods will be complimented by a media review, an analysis of policy documents and other grey literature, as well as a series of semi-structured interviews that seek to map the contemporary structural determinants of housing insecurity for women in Eastern Arctic Canada and West Greenland, and connections between the housing needs of women, the wellbeing of children, and the apprehension of children by the child welfare system.

Conceptually, I situate the "housing crisis" within the unique governance landscapes of northern social policy and settler colonialism, and ask: how do we acknowledge the devastation of northern housing insecurity and the structural injustices that continue to perpetuate it, without creating another hurtful narrative so-often told about Indigenous and northern geographies and contributing to the "crisis fatigue" that arguably has come to characterize our times? How do we respond to the urgency of these needs while providing a careful, evidenced and northern-driven response for women, children and all northern residents?

> AT HOME IN THE NORTH

Research & Friendship: Northern EDGE Lab Students Hannah Kosick & Ellise <u>Proctor</u>

After two years of a global pandemic, many university students seek companionship and community within their academic circles. Having a team, teammates, and cheerleaders is an essential part of every student's journey, and Hannah and Ellise found just that in the Geography Department at MUNL.

Ellise (she/her) is originally from a small town in southern Ontario, and holds a BSc. (Honours) in Environmental Science from the University of Guelph. While completing her undergraduate degree, Ellise was extremely interested in the topics of forest and plant ecology. As a result, Ellise made her way to Memorial University to complete her MSc. in Geography with a thesis focus on investigating forest management alternatives to prescribed burning in Terra Nova National Park, NL.

Hannah (she/her) is from Unama'ki (Cape Breton), the ancestral and unceded territory of the Mi'kmaw people. She is an inaugural graduate of Cape Breton University's Bachelor of Arts and Science in Environment program (Honours), where she had the opportunity to study biology, anthropology, geology, and Mi'kmaw studies. Her research project looks at the influence of Acadian forest range expansion on boreal forest health in the iconic and beloved Cape Breton Highlands National Park.

Hannah and Ellise both started their Master of Science in Geography in Fall 2021 in Dr. Carissa Brown's Northern EDGE Lab. Onto a new chapter of their lives, Hannah and Ellise were looking to grow personally and professionally. Coincidentally, they reached out to Dr. Brown around the same time, keen to explore forest management strategies in Canadian National Parks. It was a match made in biogeography!

Having registered for three courses, Hannah and Ellise quickly bonded over the piles of readings, projects, and reflections assigned in the first few weeks of the fall semester. They immediately connected and agreed that helping one another was a great way to ensure mutual success.



Whether reviewing written assignments or code in RStudio, they used their strengths to help overcome one another's weaknesses.

Hannah and Ellise have been able to meet both in person and online. During the Fall 2021 semester, Hannah and Ellise regularly met in the graduate office to complete work and to have fun conversations. When classes were moved to online for the Winter 2022 semester, Hannah and Ellise continue these meet-ups over Zoom, which helped them hold each other accountable by stay motivated.

By consistently meeting one another, it pushes them to work on either course assignments, conduct literature reviews, or write the methodology section they have been trying to for weeks. These weekly sessions also allow open conversations and questions to be asked. Both scientifically driven and personally meaningful conversations have occurred over zoom, which not only greatly assists in their projects but also strengthens their personal relationship.

These types of conversations are not specific to Hannah and Ellise, but the entire geography graduate cohort. Everyone is supportive of one another, whether that be as an academic peer or friend. Hannah and Ellise both agree that there is no academic competition amongst the graduate cohort, which is refreshing from their undergraduate experiences. Every cohort member wants to see the others succeed and actively goes out of their way to help each other when needed.

Preparing for the 2022 fieldwork season, Hannah and Ellise felt confident knowing they have a lab partner they trust and can depend on. Because of their partnership, Hannah and Ellise will have the opportunity to work in two National Parks, network with Parks Canada staff from different provinces, and gain extra fieldwork experience. Most importantly, they can rest easy knowing they do not have to tackle the fieldwork season without a friend.

At the end of their projects, Hannah and Ellise will also have the opportunity to become coauthors on published works.

Lastly, Hannah and Ellise have different academic strengths. Hannah has previously worked for Parks Canada, has cultural/Mi'kmaw research experience, and is more dominant in science communication and creative writing. Whereas Ellise comes from a heavily science focused background, with more experience in statistics and RStudio, and is more dominant in quantitative science writing. Although both of their perspectives are different, they complement each other when working together as a team on their projects. This specifically will be beneficial when conducting their data analyses and writing their theses later in their program.





Graduate Student Awards & Scholarships

Jenine Otto | SSHRC CGS recipient

Jenine moved to St. John's after completing a Bachelor of Arts with a minor in Geography at Guelph University. Jenine is passionate about storytelling and accessible science communication, so joining Dr. Julia Christensen's Storytelling Lab was a perfect fit. When she's not in the Geography Department's graduate student office, Jenine can be found enjoying the natural beauty of NL, on hikes and by the water.

Jenine's MA thesis project focuses on the links between the housing and climate change crises across Inuit Nunangat, and the potential for better government responses. More specifically, her work will map the process of house-building in Nunatsiavut, highlighting where communities and the Nunatsiavut Government want to see climate change considerations, community involvement, and Inuit Knowledge meaningfully and effectively included.

Jenine will also use a 'study-up' approach to address these colonial crises, by focusing her attention on how various branches of government can improve their accountability toward these issues, through policy and capital investment.

In addition to being a 2022 SSHRC recipient, Jenine has been awarded the Dr. Ian A. Brookes Graduate Field Research and Travel Award and the James Maxwell Scholarship from The Royal Canadian Geographical Society.

Meghan Power | NSERC CGS recipient

Meghan Power is a geography student from Conception Bay South, NL. Her research interests are broadly situated within understanding the relationships between people and distinct physical environments. She strives to maintain a dual perspective in her work, both considering the impacts of people on environmental systems, as well as the influence of natural events on human activities.

Specifically, she is interested in the interrelationships between people and the environment under the context of natural hazards. For her undergraduate honours work with the Northern EDGE Lab (under the supervision of Dr. Carissa Brown), Meghan investigated the anthropogenic and biological factors contributing to flooding risk at urban and peri-urban riparian sites across the Northeast Avalon Peninsula.

This work was funded by an NSERC Undergraduate Student Research Award as well as the Dr. Ian A. Brookes Undergraduate Field Research Award during the summer of 2021. Meghan recently completed her Bachelor of Science in Geography (Honours) program with the department and looks forward to beginning her Master of Science work with the Northern EDGE Lab in fall 2022.

Outside of the lab, Meghan enjoys learning new languages and participating in a variety of physical activities, including running, hiking, and weightlifting.



8

Nolan Foster | SSHRC CGS recipient





After completing his undergraduate degree in history at UNBC, Nolan moved from Prince George, BC, to St. John's, NL to pursue an MA at Memorial.

His current research focuses on community development and identity in towns that once economically relied on nearby asbestos mines. Throughout this project, Nolan will be working with the people of Baie Verte, NL, to gain broader understandings of how asbestos mining impacted the way the community perceived mining, occupational health and safety, and how it may have affected any sense of community identity. Nolan's interest in this subject started during an undergraduate project that examined the connections between environmental hazards, asbestos mining, and labour activism in Cassiar, BC, another small community that once relied on asbestos extraction.

The intention of this research is to help locate Baie Verte's place within the controversial history of Canada's mining and export of what was once known as the "magic mineral." Though asbestos is no longer mined in Canada, the industry's legacies continue to affect human health, local communities, and environments for those that live in the shadow of these mines. Additionally, by engaging directly with community members within Baie Verte, NL, Nolan's project will also act as a form of heritage collection and preservation for rural resource communities in Newfoundland and Labrador. In addition to being a 2022 SSHRC recipient, Nolan also received a Master's Fellowship from the Institute of Social and Economic Research.



Hannah grew up in the small fishing village of Port Morien in rural Unama'ki (Cape Breton, NS). An island girl at heart, choosing MUNL for grad school was second nature for this proud Caper. Hannah graduated as class valedictorian from Cape Breton University in Spring 2021 from CBU's Bachelor of Arts and Science in Environment Honours program.

Hannah is passionate about learning, and she loves sharing knowledge with others. As part of her undergraduate honours thesis, Hannah wrote and published an open source educational guide through the AtlanticOER Pressbooks Network on bumble bees. In addition to her academic work, Hannah is a devoted volunteer with Girl Guides of Canada, where she sits on the Girl Guides of Nova Scotia Council as their Youth Forum Chair. Hannah's master's degree research will take place in 'Cape Breton Highlands National Park, a location close to her heart and close to home.

As a member of Dr. Carissa Brown's Northern EDGE Lab, Hannah's project looks at boreal forest distributions at their most southern geographic extreme in Atlantic Canada (see profile on p.6).

In addition to being a 2022 NSERC recipient, Hannah has been awarded the Joyce C. Macpherson Award in Physical Geography, the MUNL F.A. Aldrich Fellowship, and a Royal Canadian Geographical Society Research Grant to support her research.

MIRANDA MONOSKY

Recipient of the Canadian Association of Geographers Starkey-Robinson Award for Graduate Research on Canada

Miranda's master's research focused on operating mines across northern Canada to understand how different companies prepare for closure and remediation, with a concentration on the social, economic, and cultural implications for northern and Indigenous communities.

Miranda then took a more detailed look at Nunavik's multi-level governing systems to determine how they are, or are not, adequately protecting and promoting Nunavimmiut rights and priorities.

Ultimately, her work found that mining companies across the North are lacking, to different degrees, firm commitments to social and economic remediation plans. While Nunavik's unique governance systems create interesting opportunities for community participation, there are still major regulatory gaps that leave Nunavimmiut vulnerable to poor closure outcomes.

For her project, Miranda worked with a company-community committee, which facilitated a connection between different parties to establish an effective closure strategy. The committee consisted of Inuit community representatives from Nunavik, as well as a mining company located in the area.

Prior to her move to the Rock for her graduate studies, Miranda lived in Chilliwack, BC, on Stó:lō and Chi'yaqtel territory.

When she's not exploring her passion for research, Miranda loves crocheting, playing video games, and reading sci-fi.

Since her time in St. John's, Miranda has started a Master of Information Studies program at McGill. Her career goal is to work in a library or archives setting that allows her to stay engaged in research and support ethical and reciprocal research relationships between academics and communities.

2022 CAPTAIN JAMES COOK MEMORIAL SCHOLARSHIP RECIPIENTS

Awarded annually to a student who demonstrates particular merit in Geography.

MADELINE HART

Madeline Hart is an undergraduate student born and raised in St. John's, Newfoundland and Labrador. She is currently pursuing a Bachelor of Science with a Major in Geography and a Minor in Mathematics.

As a student, she has a strong work ethic and enjoys striving for academic excellence. In particular, she has a passion for international and regional border studies and border negotiations, as well as conservation, both environmental and cultural. Aside from academic interests, she enjoys sewing and the outdoors and is the co-founder of the Memorial University Minecraft Club. She would like to express her gratitude for being selected for the Captain James Cook Memorial



gratitude for being selected to thank the Department of Geography for selected of the award. Scholarship and would like to thank the Department of Geography for selected to continue her studies at Memorial with the assistance of the award.

CLAIRE ROBERTS

Claire Roberts is from St. John's, finishing up her BSc. in Geography.

In her free time, Claire enjoys spending time with friends, travelling, walking outdoors, or grabbing coffee. Claire was awarded the Captain James Cook Memorial Scholarship - a fund named for Captain James Cook, an explorer, and cartographer who mapped the coast of Newfoundland. With Claire's interest in GIS, she was honoured to receive this distinction.

Claire has loved her time studying Geography at MUNL and thanks all of her peers for the continuous support and inspiration. She also gives a big thanks to her professors for exposing her to the many opportunities and ideas that geography has to offer. Early in her degree, Claire found a particular interest in GIS and Arctic geographies. After her degree, Claire plans on travelling and continuing working in aerospace, tracking the sea ice and icebergs off the Newfoundland and Labrador coast. Claire also hopes to pursue a postgraduate diploma in GIS.



Post Doc Profile JOSHUA TURNER

Safely traversing landfast sea ice has become a key issue for Arctic communities due to our rapidly changing climate. Traditionally used for access to hunting and fishing grounds and maintaining connections between these remote isolated communities, thinning ice has increased travel risk, thus negatively impacting food security, wellbeing, and cultural practices.

My current research focuses on providing additional tools to Inuit communities that supplement Inuit Qaujimajatuqangit (knowledge and values) of landfast ice, in partnership with SmartICE (smartice.org), a social enterprise that combines Indigenous knowledge of ice safety and travel with advanced data acquisition and remote monitoring technology.

My current research aims to assess the failure of landfast sea ice at the northern mouth of Admiralty Inlet, where it meets Lancaster Sound, through the application of machine learning techniques. The enclosed nature of the inlet (bound from the west and east) provides an ideal location for a case study.

The prediction of spring ice break-off events at the floe edge in Admiralty Inlet is a concern for members of the nearby community of Ikpiarjuk (Arctic Bay), who use the ice for subsistence hunting/ fishing, travel, and outfitting. To successfully apply machine learning techniques, information must be synthesised from a variety of sources over an extended time frame, including satellite imagery, ice charts, and met-ocean reanalysis data for the past 22 years, combined to make predictions on future ice break-off events.

Large failure events are not the only safety issue encountered when traversing community ice; traditional travel routes have in places become dangerous to travel due to thinning ice and spring slush conditions. A major challenge for community ice monitoring is the safety of operators when ice conditions become unexpectedly marginal for safe travel.

I will be working with SmartICE in response to this community priority through the testing of an dronemounted electromagnetic sensor that can capture information on marginal ice conditions through airborne surveys by trained community operators positioned on safe ice.



Joshua Turner is working with Smart Ice, the world's first climate change adaptation tool to integrate traditional knowledge of sea ice with advanced data acquisition and remote monitoring technology.

SMAR^{*}CE

After Church Partnership

with Department of Religious Studies

Church buildings have life histories. After they are conceived, they grow, undergo transformations and eventually die. Throughout North America and Europe, churches and other worship spaces are 'dying' at an increasingly rapid pace. In the United States, somewhere between 6,000 and 10,000 churches are closed annually; in Canada, 10,000 churches are expected to close in the coming decade.

> Religious communities, public institutions, commercial developers, and community and social enterprises are all facing difficult questions about the disposition, reuse, and management of former religious buildings. Mainline religious institutions are contending with aging populations, dwindling participation rates, and wider trends of secularization that undermine not only long-term financial health but also the preservation of religious 'missions' and their built assets. Aging historic properties require extensive financial resources to renovate and maintain, and many religious organizations have abandoned or sold their properties in private real-estate markets.

"Church-flippers," a breed of property investors, entrepreneurs and contractors targeting worship spaces, have increasingly shaped this market through creative adaptations that often accentuate and appropriate religious aesthetics. Worship spaces of all kinds are now routinely remade into a remarkable range of uses from houses to circuses, and cabaret shows to breweries.

The phrase "After Church," then refers to the process of un- and re-making that overtakes consecrated buildings and locales undergoing transformation. Even when this process seems to propel a site from sacred to secular, sacral residues, both tangible and intangible, may remain. Given the dynamic nature of this topic, After Church: Exploring Transformations in Sacred Space is a multidisciplinary study of the closure and transformation of worship spaces, led by Dr. Nicholas Lynch (Geography) and Dr. Barry Stephenson (Religious Studies).

The After Church project combines cultural and urban geography with religious and ritual studies to focus on the dynamic transformations of church buildings as lived spaces. This project involves a series of case-based investigations in NL and beyond, that help to build a typology of church closure and provide a comprehensive overview of the issues and questions across various contexts.

A key component is the After Church Atlas (www.afterchurchatlas.org), an online portal and resource for stakeholders to share and explore diverse examples and cases.



Although some heritage organizations and churches are collecting data on church closure, the Atlas represents a unique and significant tool for research, policy development, pedagogy, and more.

The Atlas provides users with map-based based visualizations that can be explored in terms of various parameters (location, type, use, etc.), identifying and developing patterns and relationships that would otherwise require extensive research. Users will be able to contribute their own data, a capacity that can be deployed as a creative means to engage communities and enable participatory research models.

Community monitoring of plastic pollution in Nunatsiavut

Nunalinni kamatsianik palastikkinik igitauKattatunik Nunatsiavummi

CLEAR & the Nunatsiavut Government's Department of Lands and Natural Resources

This project started when Liz Pijogge of the Nunatsiavut Government recognized Dr. Max Liboiron at the airport strip in Nain, Labrador. As the Northern Contaminants Researcher (NCR) for the Nunatsiavut Government, Liz knew that plastics (palastikkinik) pollution was an emerging concern. She had recently read about Max's work in a magazine and a couple months later, Liz was going to the Nain airstrip to pick up another researcher when Max got off the plane. Liz recognized her and asked: "hey, are you the plastics person?" They began a discussion, and the partnership grew from there. Today, Liz oversees the sample design and collection in Nunatsiavut, and Max leads the lab work in St. John's. Together, they analyze and communicate results.

The Nunatsiavut Government's (NG) Department of Lands and Natural Resources where Liz works partnered with Liboiron and their lab, Civic Laboratory for Environmental Action Research (CLEAR), to carry out a longterm environmental plastic pollution monitoring and mitigation project. Their shared aim is to conduct community-based monitoring for plastic pollution in water, snow, ice, shorelines, and traditional wild foods.

The project has received funding from the Nunatsiavut Government, the Northern Contaminants Program, Polar Knowledge Canada, the Canada-Inuit Nunangat-United Kingdom Arctic Research Programme (CINUK), and ArcticNet. Max notes that, "Liz and I sit on several international working groups on plastic pollution, and to our knowledge this project is the only Inuit co-led, comprehensive plastic monitoring project in the Arctic. "The project has several monitoring sites in Nain, Makkovik, Upper Lake Melville, and the Torngat Mountains. The team is working to expand to all Nunatsiavut communities in the future. Currently the research focus is on plastic ingestion by Ringed seals (Natsik) and Arctic char (iKaluk), as requested by community members. But the project investigates any animals caught for food that are brought to the team, including turbot, ducks, cod, salmon, pigeons. The team also monitors plastics on shorelines, surface water, snow, ice, and outdoor drinking water (Imik imiKattajavut).

Liz explains that, "As the Northern Contaminants Researcher (NCR) for the Nunatsiavut Government, monitoring contaminants in my homeland of Nunatsiavut is very important. Inuit have lived, gathered, hunted, and fished off this land for thousands of years and I want to make sure it stays as healthy as can be. Plastic is so much part of our lives that it is becoming more of a problem. We are monitoring our food that we eat including Arctic char, ringed seals and sea birds. We are also monitoring the environment in which these animals live including the sediment and water."

About the team

The research team includes Geography faculty, MUNL students, NG employees, community

members, and research partners from other institutions. Max hires students to help with sample processing in the lab at MUNL, prioritizing Nunatsiavumuit so students are processing samples from their own homelands.





The university as a whole is involved via the Indigenous Data Sovereignty agreement, which ensures there is a legal basis for NG to own and control the data. There is also staff and programmatic support at MUNL– including the MUCEP and ISWEP programs (to hire undergrad researchers), as well as contract, finance, and research staff who ensure funds, supplies, and personnel flow smoothly between NG and MUNL.

Inuk undergraduate researcher Jefta Merkuratsuk recalls that, "My mother sent me an ad put out by CLEAR looking for Nunatsiavimmiut to work in the lab processing samples looking for microplastics. I was at another job at the time, and as soon as I seen the ad I went straight upstairs to talk to my manager to get a reference lined up because I knew that I reallillilly wanted to work with this project with CLEAR." He says that an important part of the work is "having a project that accurately takes into consideration the concerns of Indigenous communities when doing research." Merkuratsuk explains that the research "revolves around communities who request for us to work with them on a collaborative basis. MUNL then handles the bulk of the admin work, who then hires students to work alongside each other to achieve a CLEAR project."

When research is Indigenous-led and Indigenous communities have final decisionmaking authority, it necessarily shifts how research is done. Members of the team highlighted the project's attention to ethics and collaborative approach, with continuous accountability embedded in the project design. Liz and the NG make the major decisions about the project. In academic research, power over knowledge and data is often unevenly distributed towards the institution. Community co-analysis and final review are necessary steps for any resulting publications. Team members expressed how their collaboration and individual knowledges bring unique benefits to this partnership. They use the term "capacity sharing," to emphasize how they learn from one another. Liz and Max act as a duo, sharing capacities with each other and the larger team. As an academic,

Max is versed in funding structures, research norms, and scientific jargon, and navigates the team through these components of the project. Max is also responsible for ensuring the project remains accountable to community guidelines and ethics as a whole, and teaches these skills and methods during student training. As a local researcher who grew up in Nunatsiavut,, Liz leads the team through what is most important and meaningful in research for her community.

NunatuKavut Community member and student researcher Alex Flynn notes that, "In academic research, power over knowledge and data is often unevenly distributed towards the institution. Methods and actions to change that dynamic are not often highlighted in natural science education so students/recent graduates may not be aware of them. This project allows for people to use what they learned in academia without inadvertently contributing to colonial researcher practices. As a mixed-Inuit researcher, I am grateful for the opportunity to use skills I acquired during my academic education to contribute to a project that is of benefit to the Inuit of Labrador."

Now in its fourth year, the project is possible due to the work of many people. The MUNL team includes: Co-leads Max Liboiron and Liz Pijogge; student researchers Joseph Onalik, Jefta Merkuratsuk, Luke Lucy-Broomfield, Alyson Park, Domenica Lombedia, Silvana Rodrigues Pereira, Alex Flynn, Molly Rivers, Janine O'Reilly, Charlotte Muise, Hridisha Arif, Killian Chidley, Kelechi Anyaeto, Shramana Sarkar, Alex Hayward, Erin Burt, Mikaya Bowney, Elise Earles, Natalya Dawe, Tristen Morris, Carley Mills, Tiaasha Naskar, Tammy Sheppard, Lauren Watwood, Anna Malone, Paddy Dawe, Elise Earles, Emma Ford, Alana Derry; lab managers Charlotte Florian, Kaitlyn Hawkins, and Natasha Healy (all MUNL alum); data manager Brittany Schaefer; and research partners Louis Charron, Tanya Brown, Dave Cote, and Alex Bond.

Research partner profile: Community collaboration for mine closure



Memorial Geographers work with a wide range of research partners, including from industry, government, NGOs, and community organizations.

This year, one of our external collaborators was recognized with a Faculty of Humanities and Social Sciences Research Partner Award, which recognizes individuals or organizations that have made a significant contribution to an HSS research project: the Raglan Mine Closure Plan Subcommittee (CPSC).

This group is composed of: representatives from the management of Glencore Raglan Mine, located in the Nunavik territory of Quebec; the Inuit communities of Salluit and Kangiqsujuaq; Makivik Corporation, a Nunavik Inuit governance organization; and university researchers, including Memorial's Dr. Arn Keeling. The CPSC is a collaboration that, according to its mission statement, "aims to provide assurances for safe water, land, and food resources, maximize community benefits, and contribute to a sustainable future for Salluit and Kangiqsujuaq by mitigating he negative social, economic, and ecological impacts of mine closure. This will be realized through the creation of culturally relevant closure goals and criteria and the integration of Inuit knowledge, enterprise, and values, scientific expertise, and industry know-how.



Memorial University's Faculty of Humanities and Social Sciences Research Partner Award recognizes individuals or organizations that have made a significant contribution to a research project

Over the past four years, the CPSC has collaborated with Arn and students in geography through an NSERC-funded "Towards Environmentally Responsible Resource Extraction" Network (TERRE-NET) project on social aspects of mine closure. Arn was invited to join the CPSC to assist with closure planning consultation and engagement. The Subcommittee meets roughly guarterly (either in person or, more recently, by teleconference) to identify and pursue key actions and objectives, including: to keep the communities wellinformed; to develop the expertise of the subcommittee; to establish clear governance structures; and to review the full closure plan for Raglan Mine. The subcommittee stands as a unique example within the mining industry of community-engaged mine closure and reclamation planning.

This project is as much about collaboration, public engagement, and knowledge sharing as it is about traditionally conceived "research" activities. Nevertheless, the CPSC has significantly supported research, training, and engagement activities of Memorial-based faculty and graduate students. In particular, three TERRE-NET-funded students (two master's, one doctoral) were invited to participate in CPSC meetings and to undertake research aimed at supporting the Subcommittee's objectives, particularly those identified by the Inuit parties. This has resulted in two completed master's projects as well as a series of community reports and academic publications, and presentations to industry and academic forums. In turn, the students supported the CPSC by helping with planning, logistics, record keeping, and report writing. Most recently, the Subcommittee, through its Makivik representative, participated in an international Indigenous exchange forum, hosted virtually through the University of Queensland in Australia, where they shared the Subcommittee's experiences and approach while learning from other mineaffected communities in Canada, Australia, and Aotearoa/New Zealand.

The Great Northern Peninsula Research Collective

Dr. Roza Tchoukaleyska, cross-appointed between Department of Geography and School of Science and Environment, Grenfell Campus



How do we build resilient communities? I am exploring this question in collaboration with community partners and organizations in Newfoundland. Our goal is to understand how community-led initiatives can transform the social and economic fabric of towns and buoy them in moments of crisis, of which COVID-19 has been the starkest. In Western Newfoundland, much of this work has been facilitated through the Great Northern Peninsula Research Collective (GNP-RC), a community-university collaboration that includes community members, local organizations, and faculty, staff, and students at Grenfell Campus. The GNP-RC is a conversation: we meet monthly, review local community projects and university research initiatives, and try to connect our ideas so that research activity is to the mutual benefit of all partners. The GNP-RC has collaborations in Norris Point, Port au Choix, and St. Anthony, many of which started in 2019 and grew with hybrid community meetings and new research initiatives during the pandemic.

While the topics of GNP-RC projects are wide ranging rural health access, food security, agriculture, economic innovation, philanthropy, aging-in-place – through research we have identified several elements in common. All of the research collaborations involve partnerships with community-led initiatives, which include directors of the newly established Community Place in Port au Choix and the well-established Old Cottage Hospital in Norris Point, which have come together to address identified needs in the local area. In each case, the organizations also operate as a social enterprise, renting office space and medical space or running a hostel, as a way of financially supporting their activity. Finally, in both Norris Point and Port au Choix, the community-led organization have repurposed buildings in each town centre to a new use. In Norris Point, the Old Cottage Hospital, decommissioned in the early 2000s, has become the hub for the Bonne Bay Cottage Hospital Heritage Corporation and provides offices, a daycare, performance space, and a community kitchen, amongst other amenities. In Port au Choix, a disused grocery store on the main street has been purchased by the Community Place organization via fundraising and municipal support, and transformed into a health hub that is building up a range of services.

The GNP Research Collective's work suggests that such initiatives are able to engage community members and

mobilize social and economic networks to address regional needs. Community resilience is often defined as the ability to adapt to change and bounce back after a crisis on a neighbourhood or town scale, and the work of organizations partnered through the GNP-RC serve as a model for how that can be done in smaller towns in Newfoundland. The research also notes the importance of built heritage in Newfoundland, and how retrofitting older buildings to a new purpose can reinvigorate communities and provide much needed meeting space, flexible rental space, and community events space. Relatedly,I am also collaborating with Dr. Nicholas Lynch and the ACE-Space network to consider the role of heritage planning in smaller communities in NL.





Isabelle Côté and Yolande Pottie-Sherman, Resettlement: Uprooting and Rebuilding Communities in Newfoundland and Labrador and Beyond (ISER 2020)

Max Liboiron, Pollution is Colonialism (Duke University Press, 2021)

Max Liboiron and Josh Lepawsky, Discard Studies: Wasting, systems, and power (MIT, 2022)

C.A. Sharpe and A.J. Shawyer, Corner Windows and Cul-de-Sacs: The Remarkable Story of Newfoundland's First Garden Suburb (Memorial University Press, 2021)

John Sandlos and Arn Keeling, Mining Country: A History of Canada's Mines and Miners (Lorimer, 2021)



Dr. Trevor Bell

Frederik Paulsen Arctic Academic Action Award (Arctic Circle/UArctic, 2021); Martin Bergmann Medal for Excellence in Arctic Leadership (Royal Canadian Geographical Society, 2021)

Dr. Max Liboiron

Royal Society of Canada College of New Scholars (2021)



Considering Graduate Studies?



For more information about graduate study at Memorial, visit: www.mun.ca/sgs

Come #ThinkOutside with us!

MEMORIAL UNIVERSITY



We offer competitive, fully funded studentships for MA, Msc, and PhD programs. Our graduate program attracts students from across Canada and around the world, and provides opportunities for study and research in a wide variety of research areas.

Here, you'll use the most current geographical practices and methods. Our program offers you the chance to interact with a diverse group of fellow students, and to live and study in St. John's, the culturally vibrant capital of the ruggedly beautiful province of Newfoundland & Labrador. Our graduates go on to further advanced study, government and private sector employment, and university faculty positions.

Dept. of Geography

