

RESEARCH ADVISORY COUNCIL AGENDA November 8, 2018 | 1:30 pm - 3:30 pm | Room B121

Welcome and Introductions

1.	Items for Adoption	
1:30	1.1	Agenda: November 8, 2018
1:35	1.2	Minutes: September 13, 2018
2.	Business Items	
1:40	2.1	Welcome the new Chair and Vice Chair
1:45	2.2	Welcome Amanda McCormick as the new College of Arts Social Sciences representative
3.	Presentations: Indigenous Research Methodologies	
1:50	3.1	Cindy Jardine
2:10	3.2	Elizabeth Cooper
2:40	3.3	Adrienne Chan
4.	. Discussion	
3:00	4.1	Aboriginal Peoples in Canada report – Please read the executive summary
5.	Information Items	
3:15	5.1	Research Office report – Greg Schlitt
3:20	5.2	Human Research Ethics Board report – no report
3:20	5.3	Teaching and Learning Advisory Council report – Joanna Sheppard
3:22	5.4	Senate Research Committee report – Shelley Canning
3:24	5.5	Article Processing Charge Discounts – for review
3:26	5.6	SASI – 2 nd Annual Research Symposium – Kamal Arora

6. Adjournment:

6.1 Next meeting: January 17, 2019 at 1:30 pm, room B121.



RAC Minutes September 13, 2018 | 1:30pm-3:30pm | B121

RESEARCH ADVISORY COUNCIL

Present: Edward Akuffo, Satwinder Bains, Deborah Block, Margaret Coombes, Sara Davidson,

Garry Fehr (chair), Michael Gaetz, Sandra Gillespie, Mary Higgins, Selena Karli, Emilio Landolfi, Lucy Lee, Olav Lian, Mariano Mapili, Lenore Newman, Greg Schlitt, Jon Thomas,

Kelly Tracey, Brad Whittaker.

Recorder: Tracy Morrison.

Regrets: Kamal Arora, Sue Brigden, Shelley Canning, Irwin Cohen, Alastair Hodges, Masud

Khawaja, Marcella LaFever, Nicola Mooney, Sylvie Murray, Jacqueline Nolte, Linda Pardy,

Joanna Sheppard, Anthony Stea, Erik Talvila, Noham Weinberg.

Guest: Laurence Meadows (MITACS).

Welcome and Introductions -

1. ITEMS FOR ADOPTION

1.1 Agenda: 2018 SEPT 13

MOTION: THAT the agenda for the September 13, 2018 RAC meeting be approved as presented Michael Gaetz, Jon Thomas CARRIED

1.2 Minutes: 2018 MAY 03

MOTION: THAT the minutes from the May 3, 2018 RAC meeting be approved as presented Satwinder Bains, Olav Lian CARRIED

2. BUSINESS ITEMS

2.1 Welcome New Members – Garry Fehr welcomed new RAC members Nicola Mooney (Anthropology), Linda Pardy (Communications), Mariano Mapili (Geography), Erik Talvila (Mathematics & Statistics), and Sandra Gillespie (Biology).

2.2 RAC Chair and Vice Chair nominations and election

Chair: Jon Thomas (accepted nomination) – no other nominations from the floor.

ACCLAIMED

Vice Chair: Joanna Sheppard (accepted nomination by proxy) – no other nominations from the

floor.

ACCLAIMED

3. PRESENTATION

3.1 MITACS - Laurence Meadows

The council was grateful for Laurence Meadows attending and presenting on the various ways that MITACS can assist with grants, funding and research opportunities at UFV and around the world, across all disciplines.

Please see the attached presentation for further information.

Laurence welcomes anyone to contact him with any further enquires at: Imeadows@mitacs.ca.



4. INFORMATION ITEMS

RESEARCH ADVISORY COUNCIL

4.1 Research Office report - Garry Fehr

There have been a few staff changes in the Research Office:

- **a.** Garry Fehr is the new AVP of Research, Engagement & Graduate Studies, taking over from the previous AVP, Adrienne Chan.
- **b.** Brad Whittaker has retired but is remaining on part time as Acting Director until the end of October 2018.
- c. Greg Schlitt has joined Research as a co-Acting Director until the end of December 2018.
- **d.** The posting for *Director of Research Services & Industry Liaison* is currently open and accepting applications.
- **e.** Yvette Fairweather is expected to return in October in her role as *Ethics, Grants & Compliance Officer*.
- **f.** Kelly Tracey is now working in a higher capacity role in a one-year temporary position as a *Grants and Contracts Coordinator*.
- **g.** Tracy Morrison is now the *Research Office Assistant* for a one-year temporary position.

4.2 Human Research Ethics Board report – Michael Gaetz

- **a.** Michael Gaetz presented on the report which looked at the last five-year trend. There has been a continuous increase in human participant research at UFV.
- **b.** Figure two in the report shows the high peaks times for turn around on applications. This can assist researchers in terms of planning.
- **c.** Please share with your departments that all courses which involve human participant research need to go through a course designation. Course approvals need to be submitted by the faculty member who is responsible for the specific course.
- **d.** There is a published <u>schedule</u> of meeting dates and when applications are due. The board generally has many external members who are unable to change their schedules, therefore meeting dates and deadlines need to be adhered to.
- **e.** There will be at least one workshop this year offered at both the Abbotsford and CEP campus; dates and times TBA.
- **f.** It can be difficult to get student research ethics submissions that are above minimal risk reviewed by the board in a timely manner. This is up to the DREC to have them submitted and reviewed as early as possible.

4.3 Teaching and Learning Advisory Council report – no report

4.4 Senate Research Committee report – no report

4.5 Safe Relationships, Safe Children Forum – Margaret Coombes

- **a.** Margaret has been involved with a provincial initiative working with community agencies to open communication lines with other agencies in regards to mental health, substance issues and their relation to domestic abuse.
- b. This initiative is holding a forum on how trauma affects the human brain. The forum is being held October 19th, 2018 at Abbotsford School of Integrated Arts (ASIA), 36232 Lower Sumas Mtn Road.
- **c.** This a one full-day forum that will focus on the issues of trauma and will record feedback through an app. Please encourage students to attend who might be able to connect these issues back to their course work or out of interest.
- **d.** UFV is supporting the forum day with food and other items.
- e. Contact Margaret Coombes with any questions at Margaret.Coombes@ufv.ca.



RESEARCH ADVISORY COUNCIL

5. DISCUSSION

5.1 RAC membership – There are currently three vacancies on the council; a representative position for College of Arts-Social Sciences, Access and Continuing Education, and Applied and Technical Studies. Kelly and Tracy have put a call out for these vacancies to be filled. Please encourage others to join if you know of anyone interested.

6. ADJOURNMENT – 2:40 pm

Lucy Lee, Mary Higgins

6.1 Next meeting: Thursday, November 8, 2018 at 1:30pm, room B121.



Inspiring innovation Inspirer l'innovation

Supporting Collaborative Research & Student Training

Laurence Meadows, Ph.D. Director, Business Development

LMeadows@mitacs.ca 778.878.0130





Overview

- 1) About Mitacs
- 2) Our core programs
 - I. Mitacs Accelerate
 - **II.** Mitacs Elevate
 - **III. Mitacs Globalink**

Why Mitacs?

- National research network
- 18 years in operation
- 20,000+ research collaborations
- 60+ academic partners



Mitacs by the Numbers















The Mitacs network









- ✓ Computer science ✓ Forestry
- ✓ Engineering
- ✓ Anthropology
- ✓ Economics
- ✓ Chemistry
- ✓ Geography
- ✓ Health sciences
- ✓ Genetics
- ✓ Social work

- ✓ History
- ✓ Languages & linguistics
- ✓ Mathematics
- ✓ Business
- ✓ Education
- ✓ Interactive arts
- ✓ Psychology
- ✓ And more...

- Small & medium business
- Large business
- Not-for-profit organizations

Our Core programs for faculty



Applied research projects with industry/ non-profit partners

Grad students + PDFs



2 year Post-Doc project with a prof + partner in Canada Additional skills training toward R&D management career PDFs



International collaborations with specific countries

- 1) Research Award: grad/undergrad projects with prof abroad or students come to Canadian universities
- 2) Research Internship: visiting undergrad project in Canada

Training

Free training workshops (includes on-line) e.g. Communications, Project Management

- Grad students + PDFs

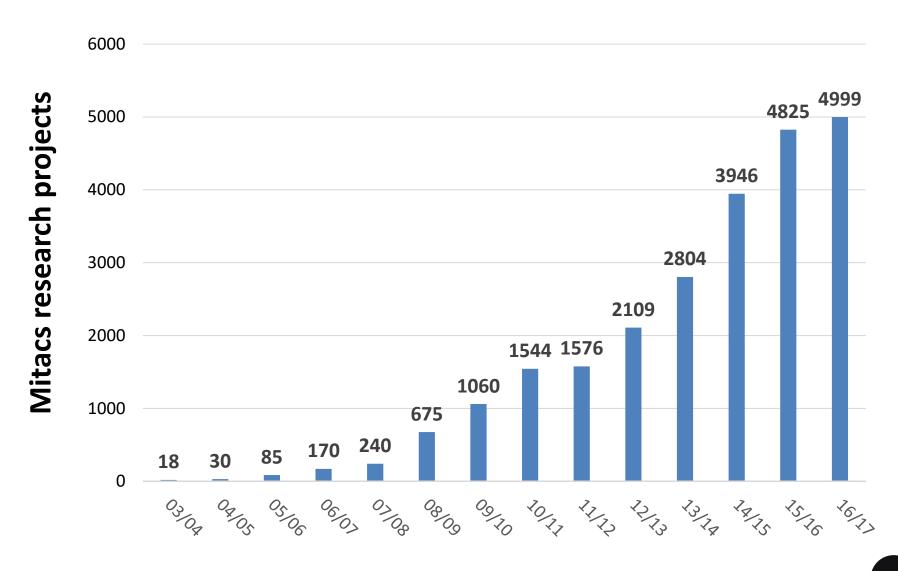


Mitacs program goals

- Support collaborative research projects
- Support all disciplines
- Maintain high-quality research
- Support international research collaborations in Canada & abroad
- Train graduate students & postdocs



Program growth



Building research collaborations



Applied research projects with non-academic partners undertaken by grad students & PDFs

- Grad students, Post-Docs, ANY discipline, enrolled at Cdn university
- Or visiting grad students doing a degree in France, Mexico, Norway, Israel, Saudi Arabia
- Small/large-scale, multidisciplinary projects defined by industry partner
- From \$15,000 to \$2M+ in funding
- Matching starts at 1:1 higher Mitacs matching with larger projects
- No deadlines, not a competition, we can help with applications
- Peer reviewed; quick turnaround; high success rate

*Can include projects with industry outside Canada











Mitacs Accelerate Partners

Offices/facilities where intern(s) can spend 50% time on-site

In Canada

Abroad

Company

Domestic or foreign

Includes: Consultants, Private Clinics, First Nations Dev. Corps. Crown corps.
Or Utilities

>50% revenue from sales

Eligible nonprofits

Projects with an economic or productivity orientation

Crown corps.

Any country























Not eligible: municipalities, hospitals, government agencies

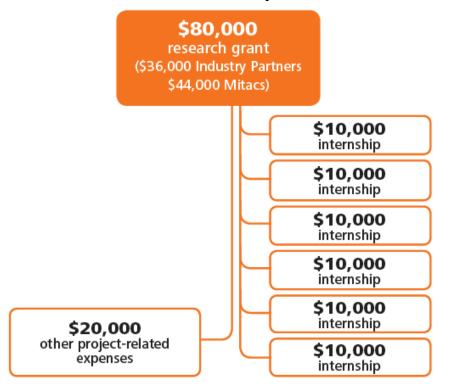
Please ask us if a potential partner might be eligible

Funding model

Standard: 1-5 internships



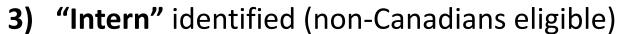
Cluster: 6 or > internships & 3 or > interns



Funds sent to university to cover intern stipends + research costs (e.g. reagents, supplies)

How it works

- 1) Partner has a problem that needs research to solve it
 - Project spans 4 months (or multiples thereof)
 - II. Opportunity for intern to spend time onsite
- 2) Professor identified
 - I. Manages grant
 - Oversees the Grad student



- Prepares proposal (with prof + partner, we can look over)
- II. Will undertake the research (including time onsite)
- 4) **Proposal submitted** for <u>peer-review</u>
 - I. No deadlines, not a competition



Creating research leaders



\$60,000* \$30,000 – Partner \$30,000 – Mitacs

\$55,000PDF Salary+Benefits

\$5,000Project support

Training program

valued at \$7,500 / year*

*For each of 2 years

Develop a research leader for your group

- 2 year postdoctoral fellowship
- Research collaboration with a for-profit / eligible non-profit partner in BC
- Includes research management training
- Open to ANY discipline
- A competition deadline Fall 2018 TBC









Elevate Training Program:

Unique post-doc program providing research management training Focuses on 3 core competencies



Training includes:

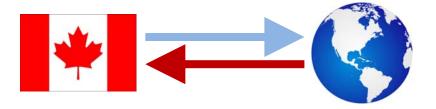
- Assessment of professional skills -> Individual Development Plan
- In-person & online training with a focus on project management
- ▶ Learning & collaboration management system -> track skill development, chart progress, online forums with other Fellows
- **Plus:** Prepare a business case, LinkedIn + CV support

Mitacs Globalink

- Funding for international research collaborations in Canada & abroad, with universities & companies
- Promotes Canada as a top destination for research opportunities and showcases Canadian research expertise around the world

Mitacs Globalink works by:

Recruiting top international students to Canadian universities



Sending Canadian students abroad to work with leading international researchers and industries



Mitacs Globalink - international program

Research Internships

Try out a potential grad student over a 12 week project

- host an undergraduate from a Mitacs partner country*
- apply Spring 2019 for summer 2020

Mitacs helps with paperwork, funds travel & stipend

- \$15,000 Fellowship available to return for grad studies

Research Award

3-6 Month project for **undergrad/ grad** students abroad \$6,000, no deadlines, not a competition

To: Australia, Brazil, China, Israel, India, Japan, Korea, Mexico, Norway, Saudi Arabia, Tunisia, US, UK, European Union
Bilateral travel available: Canada & Korea / Saudi Arabia

^{*}Australia, Brazil, China, France, Germany, India, Mexico, Saudi Arabia, Tunisia, Ukraine

Professional development exclusively for researchers

- Taught by industry professionals
- For graduate students and postdocs
- Transferable skills increase employability
- No charge to participants
- 1-2 day workshops on campus or online including;
 - leadership, project management,
 - communications, relationship building,
 - entrepreneurialism











Canadian Science Policy Fellowship

- Enhances relationships between policymakers & researchers
- A 12-month placement in a **BC** government agency
- Mitacs provides specialized training & networking opportunities
- Open to PhD holders in all academic disciplines (includes Professors)
 - Next call opens late 2018



Mitacs - summary

- Accelerate can support large scale projects in 1 application
 - Individual PhDs can be funded over 4 years (\$30K each)
- Partnerships:
 - Joint Accelerate-Engage applications via NSERC
 - Joint Accelerate-GAPP applications via Genome Canada
 - Incorporate Accelerate projects into approved SSHRC PG/PDG projects
 - Personalized Health Catalyst Grants & Health System Impact Fellowships via CIHR
 Developing a proposal? Please contact us
- Elevate PDFs with enhanced training can help manage teams
 - Deadline to apply Fall 2018
- Mitacs Accelerate & Globalink can support international collaborations
- We have funding

Our Funding Partners





Western Economic

Diversification de l'économie de l'Ouest Canada





















Laurence Meadows Director, Business Development Imeadows@mitacs.ca 778-878-0130



UFV Research Office Report November 2018

Research Office Staff:

Brad has officially retired from his role as Director of Research Services and Industry Liaison, we wish him well and he will be greatly missed.

We are lucky to have Greg Schlitt who will continue in his role as Acting Director until December 31, 2018.

The Fall edition of the Research Office Newsletter **Research Matters** is out (hard copies available here) and highlights the winners of the Undergraduate Research Excellence Awards, and research projects led by Olav Lian, Renee Prasad and Jon Thomas and their student research assistants. There is also information noting the Research Mentors who are available to help faculty who are working on research projects or grant applications.

Upcoming Events:

- Jon Thomas will discuss the need for building an innovation ecosystem in the Fraser Valley on Tuesday November 20, 4 6 pm in F124.
- Visiting scholar Dr. Arjun Kalyanpur will be giving a talk about teleradiology and its relevance to Canada (particularly in remote locations and for Indigenous communities) on Thursday November 29 4 – 6 pm in F124.

Funding News:

Two NSERC Discovery Grant applications were submitted.

One SSHRC Insight Grant application was submitted.

One BCIC Ignite Grant application was submitted.

One Michael Smith Foundation Heath Research P2P Grant was submitted.

One Canada Research Chair Tier 1 application was submitted.

Upcoming Deadlines:

SSHRC Insight Development Grant

Student Graduate Scholarship Grant

SSHRC Partnership Development Grant

SSHRC Connection Grant

SSHRC Partnership Engage Grant

November 30, 2018, February 2, 2019

December 1, 2018

December 15, 2018

February 1, 2019

March 15, 2019

Senate Research Committee (SRC) Report November 2018

We've had 2 meetings and meet again at end of November.

We are currently engaged in the following:

- -Policies 53 (Responsible Conduct of Research and Scholarship) and 54 (Human Research Ethics) went to the last Senate meeting. Revisions to Policy 53 were accepted but Senate Policy 54 was sent back to SRC with a couple of questions. Garry is meeting with Mike Gaetz and James Bedard to review/resolve Senate's concerns/questions.
- -SRC identified the need to review/revise Policy 55 Intellectual Property. It's not clear at this point which body will take the lead with this process as the policy is currently listed as an administrative policy. Al Wiseman is helping to provide clarity here. However, SRC members are currently reviewing it, and it will be brought forward for discussion at our next meeting. Martin Warkentin from the library will attend as a guest to provide his expertise regarding copyright during our discussion
- -the Research Excellence Award subcommittee has been formed and will be meeting in early January to initiate our process.

SSHRC**≡**CRSH





TOWARD A SUCCESSFUL SHARED FUTURE FOR CANADA

Research insights from the knowledge systems, experiences and aspirations of First Nations, Inuit and Métis peoples

AUGUST 2018





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 - Knowledge mobilization and stakeholder engagement
- Knowledge synthesis: project overviews
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Indigenous research: Ethics, knowledge systems and methods

Arts, language and culture

Teaching and learning

Community and social well-being

Economic self-determination and Indigenous business

Self-governance, Indigenous law and resource rights

- Conclusion
- Notes

Executive summary

Canada has begun to chart a path toward reconciliation, toward establishing and maintaining respectful relationships between Indigenous and non-Indigenous peoples. First Nations, Inuit and Métis peoples are also making ever stronger strides toward self-determination—the right to freely pursue their economic cultural, and social development, and govern their affairs.

At this critical and promising juncture, the social sciences and humanities are playing tremendous roles in contributing knowledge and talent that Canada needs for a strong, shared future among Indigenous and non-Indigenous peoples.

This report summarizes findings of research projects and related dialogue that address the question "How are the experiences and aspirations of Aboriginal Peoples in Canada essential to building a successful shared future?" The question frames one of six future challenge areas identified through the Social Sciences and Humanities Research Council's (SSHRC) Imagining Canada's Future initiative.

This report draws on the findings of 28 knowledge synthesis reports, and insights from exchanges between researchers, graduate students, and leaders from Indigenous communities and the public, private and not-for-profit sectors. The knowledge syntheses were funded through an open call for proposals launched in 2016, and aimed to identify key strengths and gaps in current knowledge, as well as recommendations for policy and practice.

The findings are highlighted under the following six themes:

- Indigenous Research: Ethics, Knowledge Systems and Methods
- Arts, Language and Culture
- Teaching and Learning

- Community and Social Well-Being
- Economic Self-Determination and Indigenous Business
- Self-Governance, Indigenous Law and Resource Rights

While the insights presented do not cover all aspirations, experiences and knowledge systems of Indigenous peoples in Canada, the research and perspectives summarized in this report shed light on several critical and emerging issues related to Indigenous experiences and understandings, and the conduct of research by and with Indigenous peoples. These insights may guide research agendas, practices and policies in multiple sectors and Indigenous communities.

The findings suggest that positive changes are underway at both community and institutional levels regarding the rights and well-being of Indigenous peoples. Research discussed demonstrates, for instance, that progress is being made on revitalization of Indigenous languages and legal orders, reform of educational curricula, and Indigenous models of business that advance self-determination goals. Findings show, however, that progress could be improved with better knowledge about certain topics—such as cogovernance of fresh water systems, or social impacts of resource development—and more evaluation of new approaches to programs and services.

Following are some of the key messages resonating across the thematic findings:

- The research community increasingly recognizes Indigenous ways of knowing, and principles for participatory and ethical research by and with Indigenous peoples. There remains room for improvement in the application of these principles and related best practices.
- The preservation and resurgence of Indigenous culture—including languages, art and ways of life—are increasingly driven by community-level decision-making and supported by the active participation of youth.
- Transformational change is slowly happening in education systems, including teaching more Indigenous culture and worldviews, and taking collaborative approaches involving elders and families.
- Research strongly recognizes elders' contributions to well-being and intergenerational solidarity. However, institutional ways of assessing aspects of social well-being tend not to adequately reflect Indigenous perspectives.
- To meet economic, social and cultural goals, Indigenous communities are turning to entrepreneurship and co-operative businesses that reflect their needs and worldviews. Certain business theories and partnerships can, alternatively, be disempowering for Indigenous peoples.
- Some Indigenous communities are making strides toward self-governance, supported, in part, by court decisions and international agreements on Indigenous rights. Environmental management and resource development would benefit from greater recognition of Indigenous worldviews.

Overall, the researchers' findings call for future research to be more participatory and collaborative, led by Indigenous communities, and grounded in Indigenous worldviews and approaches to research. Meaningful and inclusive dialogue between communities, researchers and all levels of government is critical to building upon and applying resulting knowledge.

The research and perspectives explored in this report will help inform SSHRC's continued engagement and investment in Indigenous research and talent. The report highlights the insights of researchers and other participants in the Imagining Canada's Future initiative, and does not represent the views or policies of SSHRC or the Government of Canada.

SSHRC invites researchers and stakeholders from all sectors to examine these and other social science and humanities insights, to help ensure a prosperous and equitable shared future for all Canadians.

Introduction

"As First Nations, Inuit, and Métis communities access and revitalize their spirituality, cultures, languages, laws, and governance systems, and as non-Aboriginal Canadians increasingly come to understand Indigenous history within Canada, and to recognize and respect Indigenous approaches to establishing and maintaining respectful relationships, Canadians can work together to forge a new covenant of reconciliation." 1

Canada has begun to chart a path toward reconciliation, toward establishing and maintaining respectful relationships between Indigenous 2 and non-Indigenous peoples. 3 First Nations, Inuit and Métis peoples are also making ever stronger strides toward self-determination—the right to freely pursue their economic, cultural and social development, and govern their affairs. These developments have been shaped by the resilience and activism of Indigenous peoples, by government commitments, and by international agreements on Indigenous rights.

At this critical and promising time, research and talent in diverse social science and humanities fields are contributing knowledge that Canada needs to build a strong, shared future. From resource development and evaluation of community well-being, to burgeoning artistic production and the revitalization of Indigenous languages and law, among many other topics, research is strengthening understanding of issues critical to reconciliation and self-determination. Furthermore, the practice of research itself is changing in positive ways, with an emphasis on doing research by and with Indigenous communities.

This report summarizes insights from a series of knowledge synthesis reports produced by Indigenous and non-Indigenous social sciences and humanities researchers across Canada, and from dialogue among multisectoral stakeholders. These reports and dialogue focused on the question "How are the experiences and aspirations of First Nations, Inuit and Métis peoples essential to building a successful shared future for all Canadians?"

This question is one of six future challenge areas identified through SSHRC's <u>Imagining Canada's</u> <u>Future</u> initiative, which seeks to enhance the contributions of the humanities and social sciences, in order to address the complex challenges facing Canada over the next 20 years. Six future challenge areas were identified and launched in 2013, following an extensive two-year foresight exercise. <u>4</u> Each future challenge area includes a range of possible—yet not exclusive—issues and questions framed to facilitate cross-disciplinary and multisectoral collaboration.

The six future challenge areas are:

- 1. What new ways of learning, particularly in higher education, will Canadians need in order to thrive in an evolving society and labour market?
- 2. What effects will the quest for energy and natural resources have on our society and our position on the world stage?
- 3. How are the experiences and aspirations of Aboriginal Peoples in Canada essential to building a successful shared future?

- 4. What might the implications of global peak population be for Canada?
- 5. How can emerging technologies be leveraged to benefit Canadians?
- 6. What knowledge will Canada need to thrive in an interconnected, evolving global landscape?

In 2016, SSHRC launched a <u>funding opportunity</u> for knowledge syntheses, to generate insights into how the knowledge systems, experiences and aspirations of Indigenous peoples contribute to a successful shared future for all Canadians. The projects funded through these Knowledge Synthesis Grants would mobilize research knowledge on promising policies and practices in the academic, private, not-for-profit and public policy sectors, both Indigenous and non-Indigenous. Objectives of the knowledge syntheses included assessing the overall quality of existing research, and identifying knowledge strengths and gaps.

With cofunding from Indigenous and Northern Affairs Canada (INAC), ⁵ 28 projects were awarded funding through SSHRC's merit review process. The projects covered a range of critical thematic issues, and the practice of Indigenous research itself, through the lens of Indigenous worldviews and approaches. In their resulting synthesis reports, researchers presented critical assessments of the state of knowledge emerging over the past 10 years on their respective topics. They drew on a variety of cross-sectoral and interdisciplinary sources, case studies, knowledge-sharing events, and perspectives from elders and knowledge-keepers.

The final report of the <u>Truth and Reconciliation Commission of Canada</u> (TRC) on the harmful history and legacy of residential schools, the <u>TRC</u>'s calls to action, and the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), and a great deal of the research highlighted in this report. They are key elements of an evolving context for the rights and well-being of Indigenous peoples.

The topics covered, and by extension the findings summarized in this report, do not capture the full range of Indigenous peoples' experiences, aspirations and knowledge systems. Still, the researchers identified important gaps and strengths in what we currently know about several key issues. These insights may inform future research agendas, and strengthen practices and decision-making in multiple sectors and Indigenous communities.

This report also reflects and reinforces SSHRC's commitment to and support of Indigenous research since 2002. This ongoing commitment has since evolved into supporting and promoting social sciences and humanities **research by and with Indigenous peoples**, in dialogue with First Nations, Inuit and Métis communities. In collaboration with an Indigenous advisory circle, SSHRC has developed a number of related tools, including the **Indigenous Research Statement of**

<u>Principles</u> and <u>Guidelines for Merit Review of Indigenous Research</u>. The objectives embedded in SSHRC's commitment to Indigenous research serve to guide fair and equitable treatment, review and evaluation of Indigenous research, and to strengthen Indigenous research capacity.

Most recently, SSHRC's commitment to Indigenous research has been reaffirmed by the work of the TRC. In December 2015, the TRC issued 94 calls to action to advance reconciliation between Indigenous and non-Indigenous peoples in Canada. Z Call to Action number 65 calls on:

"the federal government, through the Social Sciences and Humanities Research Council, and in collaboration with Aboriginal peoples, post-secondary institutions and educators, and the National Centre for Truth and Reconciliation and its partner institutions, to establish a national research program with multi-year funding to advance understanding of reconciliation." 8

Since the calls were issued, SSHRC has engaged in dialogue and consultation with various partners to lead a co-ordinated response to this call, based on a broad interpretation of advancing reconciliation. Partners include Indigenous elders and leaders, researchers and communities, fellow funding agencies, relevant federal departments, the National Centre for Truth and Reconciliation, and national Indigenous organizations. With these partners, SSHRC is currently exploring two directions: One focuses on how to improve access and remove barriers in funding policies and programs, to accommodate the unique features of Indigenous research. The second concerns developing broad principles for a new initiative to support reconciliation objectives through Indigenous-led, interdisciplinary research and research training.

Over the past 10 years, SSHRC has invested an average of \$35 million of its program budget annually (nearly 10 per cent) in research and research training related to Indigenous peoples. $\frac{9}{2}$ Since the funding opportunity's launch in 2011, nearly one-quarter (24 per cent) of SSHRC Partnership Grants have had an Indigenous focus. $\frac{10}{2}$

SSHRC-funded research related to Indigenous peoples, 2007-16

\$345.9 million awarded
9.6% of overall research funding
3,100 new grants and scholarships



SSHRC's commitments and investments in this area emphasize the importance of Indigenous perspectives and knowledge systems to better understand human thought and behaviour in the past and present, as well as the future. The knowledge synthesis projects on which this report focuses further reinforce this importance.

Knowledge Synthesis Grants: Selected knowledge strengths and gaps

Highlights from the state of knowledge revealed by the research syntheses discussed in this report include the following:

Knowledge strengths:

- Best practices for the conduct and ethics of research with Indigenous communities
- Changes in the use and vitality of Indigenous languages, and their maintenance and revitalization
- The role of youth in revitalizing languages and ways of life, and the supports they need to do
- Participatory and holistic approaches to assessing and addressing Indigenous students' needs
- Business approaches adopted by Indigenous peoples, both in Canada and elsewhere

Emerging areas of research:

 Models for bridging Indigenous and western knowledge systems, both in research and in the classroom

- Digitization, protection and accessibility of Indigenous knowledge and cultural heritage
- Indigenous perspectives on the delivery of early intervention services for children
- Critiques of traditional ecological knowledge approaches to environmental sustainability issues
- · Published descriptions of Indigenous legal orders

Where further research is needed:

- How to identify "the community" in Indigenous research
- Ways to integrate Indigenous languages into research based in Indigenous worldviews
- The reconciliation of various ethics protocols and policies to guide Indigenous research
- Qualitative study of the sociocultural dynamics influencing artistic production
- Links between Indigenous languages and ways of life, and individual and collective well-being
- Empirical study of how elders contribute to community well-being
- How culturally specific approaches to assessing children's developmental needs shape the outcomes of early intervention
- Links between education programs and the skills and knowledge needed by co-operative businesses
- Women's specific experiences of the social and economic impacts of oil sands development
- How the cogovernance of natural resources could help resolve uncertainties about free, prior and informed consent

Knowledge mobilization and stakeholder engagement

A range of activities complemented the Knowledge Synthesis Grants funding opportunity.

SSHRC convened a knowledge-sharing workshop in January 2017, and a forum in September 2017. Participants included the **Knowledge Synthesis Grants award holders** and research team members, as well as representatives from the government, industry, academic, not-for-profit and community sectors. Algonquin RIder Claudette Commanda provided inspiring remarks to open and close both events, and enriched the discussions that took place. Participants at the January event were also able to attend a workshop on writing effective op-eds, and an armchair discussion, hosted by the Institute of Public Administration of Canada in partnership with SSHRC, on the role of public administration in developing a new relationship with Indigenous peoples.

The September forum focused on sharing insights from the Knowledge Synthesis Grants projects. It also featured keynote panels on cultural institutions and Indigenous knowledge in Canada, and arctic governance from an international perspective. The panels were cocreated in collaboration with the Canadian Museum of Nature, the Research Council of Norway and the Royal Norwegian Embassy. Many of the researchers also participated in a half-day knowledge exchange directly with INAC, offered as part of its support of the projects.

"A common thread throughout the discussions I participated in was the power of language, and the role that language plays in all aspects of research, relationship and community building. I left feeling that language (both verbal and nonverbal) can be a powerful tool for encouraging more authentic exchange and reconciliation." 11

This summary report is also enriched with insights from graduate students. In 2015, SSHRC invited the Canadian Association for Graduate Studies (CAGS) to organize a national dialogue on the future challenge areas with students at postsecondary institutions. Over 300 graduate students, at 28 universities, participated in various roundtable discussions over an eight-week period. Seven universities focused their discussions on the topic of Indigenous peoples. Common threads from the roundtables included recognition and respect for Indigenous knowledge, the continued need for awareness-raising, and challenges for efforts to "Indigenize" their institutions. Participant views are available in reports prepared by CAGS and the host universities.



International Panel on Arctic Governance, Imagining Canada's Future Fall Forum, September 25, 2017

Photo credit: © Martin Lipman, SSHRC

"It is time to make space for Indigenous peoples so they themselves can build the future they want. We need to support them, but, above all ... to understand their lived reality in order to strengthen their capacity to act." 12

The current summary report begins with overviews of each of the 28 knowledge synthesis projects, followed by insights organized under six themes that emerged in the knowledge syntheses and during the stakeholder conversations convened by SSHRC. The insights are not exhaustive; full accounts of the findings—including the knowledge strengths and gaps identified, which may help guide future work and decision-making—are detailed in the respective synthesis reports. These can, in most cases, be accessed via a link following the corresponding overview.

The research and perspectives explored in this report will help inform SSHRC's continued engagement and investment in Indigenous research and talent. Note that the report highlights the insights of researchers and stakeholders who participated in the Imagining Canada's Future initiative, and do not represent the views or policies of SSHRC or the Government of Canada.

To find out more about the ways in which humanities and social sciences researchers are contributing their knowledge, talent and expertise to advance Canada's quality of life and prosperous future, visit www.sshrc-crsh.gc.ca/imagining.

Knowledge synthesis: Project overviews

The following knowledge synthesis projects are presented in alphabetical order by the lead author's surname. Principal investigators are identified with an asterisk. Overviews include researchers' names and affiliations, and, where available, a link to the full report.

For more information on the findings included in the reports, and for details on both current and proposed knowledge mobilization activities, contact the principal investigators directly, or email **SSHRC**. For more insights from Indigenous research, consult **SSHRC's awards search engine** to identify and connect with other **SSHRC**-funded researchers.

Between law and action: Assessing the state of knowledge on Indigenous law, UNDRIP and Free, Prior and Informed Consent with reference to fresh water resources

Hannah Askew, West Coast Environmental Law; Corey Snelgrove and Kelsey R. Wrightson, The University of British Columbia; Don Couturier, Alisa Koebel and Linda Nowlan, West Coast Environmental Law; and Karen Bakker,* The University of British Columbia

Water insecurity negatively impacts hundreds of Indigenous communities across Canada. The process of implementing UNDRIP could positively affect Indigenous peoples' governance of fresh water. Implementing UNDRIP in Canada provides an opportunity to redefine the relationship between International law, Canadian law and Indigenous legal orders. However, this is challenged by tensions between Indigenous legal traditions and how water is currently governed. Increased cogovernance of watersheds could help address concerns that free, prior and informed consent allows Indigenous communities to veto resource development. **Full report**

Increasing Indigenous peoples' ability to participate in, and benefit from, research

Hugo Asselin,* Suzy Basile, Francis Lévesque and Èva-Marie Nadon Legault, Université du Québec en Abitibi-Témiscamingue

Indigenous peoples, long excluded from research, except as "subjects," have condemned bad practices and demanded the decolonization of research. Ethical principles have been developed to increase Indigenous participation in research and its attendant benefits. Nonetheless, actual application of these principles remains problematic. Among proven good practices are establishing relationships of trust, defining research requirements, obtaining ongoing consent, validating interpretations of findings, and ensuring the results are applied. **Full report**(in French only)

Pedagogical pathways for Indigenous business education: Learning from current Aboriginal business practices

Simon Berge,* The University of Winnipeg

Many Indigenous youth preparing for postsecondary education will seek out business education programs. However, information on Indigenous business practices is limited, particularly in rural and remote communities. Three case studies of co-operatives in Canada's far North show the benefits of strong ties between these co-operatives and their communities, and the importance of skills training and cultural sensitivity for co-op members. This knowledge about Indigenous

business practices will enhance the teaching resources of business educators and help Indigenous students see themselves as future business leaders. **Full report**

Evaluation of Indigenous students' needs by educational actors: Fostering the adoption of promising practices based on informed decision-making Corina Borri-Anadon, Sylvie Ouellet* and Nadia Rousseau, Université du Québec à Trois-Rivières

In Quebec, as elsewhere in Canada, Indigenous students are at particularly high risk of failing in school. This may be explained, in part, by challenges associated with how professionals in the education system take Indigenous students' diversity characteristics into account when assessing these students' needs. It is important to identify promising evaluation practices. They must be based on strong collaboration with the family and the community, on recognition of cultural and linguistic characteristics, and on service models that are flexible and preventive. **Full report** (in French only)

Indigenous, industry and government perspectives on consultation in resource development

Brendan Boyd, Sophie Lorefice and Jennifer Winter,* University of Calgary

The Crown has a duty to consult Indigenous communities prior to approving resource development projects that affect traditional and treaty territories. The government may delegate this duty to administrative bodies or project proponents. Engagement could be improved if the different stakeholder groups better understood each other's motivations and perspectives. Indigenous communities often feel that consultation is rushed, they lack sufficient resources to engage with government and industry, and their traditional ecological knowledge is not respected. Research is needed on how different approaches to consultation affect the outcomes of resource development for Indigenous communities. Full report

Enriching Indigenous community-engaged scholarship using digital asset management systems

Keith T. Carlson,* Craig Harkema and Maureen Reed, University of Saskatchewan

Indigenous knowledge collected through research is too often stored in ways that threaten its preservation, and limit Indigenous communities' access to and control of that knowledge. There is an urgent need for universities to create Indigenous digital asset management systems (IDAMS), especially for use in community-engaged research. <u>IDAMS</u> can ensure that digitized Indigenous knowledge is preserved and accessible long into the future. These systems should use metadata that describe materials in ways that reflect Indigenous understandings, and user access should be configured so that Indigenous communities control who uses their knowledge. <u>Researcher's website</u>

Advancing Indigenous pedagogy on childhood: Identifying priorities for professional education

Franco Carnevale,* Delphine Collin-Vezina, Mary Ellen Macdonald, Martin Morris, Victoria Talwar and Shauna Van Praagh, McGill University

The Truth and Reconciliation Commission of Canada has called for improvements in postsecondary education to better assist professionals who work with Indigenous children. However, little practical

guidance exists on how to achieve these improvements. This review of approaches for educating such professionals found a rich diversity of documented teaching and learning strategies. However, there is little consistency in evidence about the outcomes of these strategies for professionals or the Indigenous communities they serve. A significant gap exists in information about how to prepare future professionals to work specifically with Indigenous children. **Full report**

O'man's 'Nam'a (We are One) project: Unearthing Indigenous leadership principles through language

. Sara Child* and Caitlin Hartnett, North Island College; and Katherine Sardinha, University of California, Berkeley

Indigenous youth leadership camps, when locally designed, and delivered through the lens of language, positively impact lifestyles and wellness. These camps support reconciliation by restoring relationships to self, spirit, people, places and the land. Youth must understand that upholding their language rights is important to their roles as future leaders. Further research is needed to explore best practices for ensuring that language is integrated into leadership programming. **Full report**

Thirty years of Indigenous art in Quebec, from 1986 to 2016—Summary and synthesis

Jean-François Côté,* Claudine Cyr and Astrid Tirel, Université du Québec à Montréal

The characteristics and conditions of Indigenous artistic creation in Quebec are not well understood, in spite of the richness of this creation. This study inventoried important contributions by 268 Indigenous artists. The research noted remarkable gender parity, and found that an artist's location affects the support they receive. This retrospective portrait will yield an action plan to enhance and nourish Indigenous art in society, and new avenues for research on the social and cultural dynamics that shape Indigenous artistic activity in Quebec. **Full report** (in French only)

Recognizing Indigenous legal orders: Their content, embeddedness in distinct Indigenous epistemologies, and implications for reconciliation Michael Coyle,* Western University

After being marginalized by Canada's colonization process, Indigenous legal orders are now being increasingly recognized and revitalized. This is vital to self-determination, cultural survival and reconciliation. Work on describing and analyzing Indigenous legal orders is growing, but it is still in its initial stages in Canada. Governments, educational institutions and funding agencies should increase support for Indigenous communities' efforts to document and revitalize their legal traditions. More training and practical models are also needed to implement Indigenous legal orders and reasoning. Important debates continue about whether and how Indigenous legal orders and the Canadian state and courts should interact. **Full report**

Indigenous futures: Research sovereignty in a changing social science landscape

Michelle L. Dion* and Chelsea Gabel, McMaster University; Claudia M. Diaz Rios, University of Toronto; and Kelsey Leonard, McMaster University

Meaningful participation of Indigenous peoples in social science research on Indigenous issues is still too limited, and their knowledge is not sufficiently recognized. As western research approaches become increasingly technical, better resources are needed to build Indigenous communities' ability

to critique or engage in this research. Researchers should go beyond the minimum ethical requirements and strive to strengthen Indigenous communities' participation and leadership in research. Also, academic institutions and gatekeepers, such as peer reviewers, should place a higher value on participatory research that includes Indigenous perspectives. **Full report**

Updating the research principles toolbox in Indigenous contexts: Ethics, respect, equity, reciprocity, collaboration and culture

Karine Gentelet,* Université du Québec en Outaouais; Suzy Basile, Université du Québec en Abitibi-Témiscamingue; Nancy Gros-Louis McHugh, First Nations of Quebec and Labrador Health and Social Services Commission; and Geneviève Beauchemin, Université du Québec en Outaouais

The progress on thinking about research ethics in Indigenous contexts is undeniable. Nonetheless, it is important to ensure these ethical ideas also feed into the reconciliation and decolonization process more generally through social and political interactions. To this end, it is important to educate the public service in relational ethics. The ethics of research in an Indigenous context must also become part of the curriculum for Indigenous-related studies. In addition, as new technologies evolve, we need to address the ethical aspects of disseminating and protecting digitalized traditional knowledge. **Full report** (in French only)

Promising approaches in evaluating comprehensive community initiatives to promote Aboriginal child and family well-being

Judy Gillespie,* The University of British Columbia; and Jason Albert, First Nations University

Comprehensive community initiatives (CCIs) hold promise for addressing complex social problems, including issues that affect Aboriginal well-being and the overrepresentation of Aboriginal children and families in Canada's statutory child welfare systems. Yet, CCIs are difficult to evaluate. Debates continue over principles and methodologies, while case studies highlight a wide range of approaches. Despite the importance of CCIs to Aboriginal well-being, there is limited knowledge on the role of Indigenous ways of knowing and approaches to research in evaluating CCIs. The development of such knowledge, through partnerships with Aboriginal-led CCIs, funders and policymakers, should be a priority for future research. **Researcher's website**

Does entrepreneurship meet the aspirations of Canada's Aboriginal Peoples? Albert James*, Christopher Hartt, and Julie Marcoux, Dalhousie University; and Shelley Price, St. Francis Xavier University

Indigenous peoples place significant faith in entrepreneurship benefitting their communities, in Canada and around the world. However, Indigenous and mainstream approaches to entrepreneurship differ in important ways. Indigenous communities define entrepreneurship more broadly; they look beyond individuals accumulating wealth toward strengthening community and social development, culture, and self-determination. When non-Indigenous languages and understandings of entrepreneurship are imposed on Indigenous peoples, this pressures them to adapt and assimilate to settler society. Instead, Indigenous entrepreneurship needs more of its own theories and models that reflect their worldviews linked to the values of sharing, distributive economy and importance of place. Researcher's website

Taking research off the shelf: Impacts, benefits, and participatory processes around the oil sands industry in northern Alberta

Tara L. Joly and Clinton N. Westman,* University of Saskatchewan

Northern Alberta is being increasingly industrialized, but many Indigenous communities depend on the land for their ways of life. There is very limited credible social science research on the impacts of oil sands development in the region. This raises concerns about ill-informed approval processes for industrial development. There are also persistent concerns about consultation and other participatory processes; too often, a company's social license to operate is not based on permission from Indigenous communities. More peer reviewed, community-based action research is needed on oil sands' social impacts, and on whether consultations with Indigenous communities promote benefits from industrial development. **Full report**

A decade of Métis self-governance in Canada

Jo-Anne Lawless, Carleton University; and Sheri Longboat and Anita Tucker,* University of Guelph

Historically unrecognized or marginalized by the Canadian government, many Métis communities in Canada are now acting on their right to establish self-governance. Research on Métis self-governance emphasizes issues of law, rights, geography, Métis organizational structures and identity. Recent Supreme Court decisions have established and reinforced certain important Métis rights, laying the groundwork for future negotiations. Across Canada, some Métis communities have made significant strides toward self-governance, but progress is geographically uneven. Self-governance depends on provincial legal decisions and recognition of Métis rights. Progress is also challenged by a continued lack of clarity about Métis identity. Researcher's website

Governance, entrepreneurship and equity in Indigenous tourism Dominic Lapointe* and Haytham Mohamed Ragab, Université du Québec à Montréal

It is important to understand the forms and governance of Indigenous tourism so that it supports cultural affirmation and community development. When governance is spread across multiple levels, Indigenous organizations often suffer inequities in power and decision-making. Locally, distribution of the work involved in joint management and ownership by Indigenous and other players is gauged as a success by some, but can also reproduce colonial economic relationships. Indigenous communities must be allowed to define their own criteria for success for their tourism initiatives. **Researcher's website** (in French only)

Learning across Indigenous and western knowledge systems and intersectionality: Reconciling social science research approaches

Leah Levac,* Lisa McMurtry and Deborah Stienstra, University of Guelph; Gail Baikie, Dalhousie University; Cindy Hanson, University of Regina; and Devi Mucina, University of Victoria

To address pressing socio-political challenges, research should draw more on Indigenous and other marginalized knowledges, while avoiding the risks of appropriation. Linking Indigenous and western science is critical for truth and reconciliation. Many "linking frameworks" demonstrate how this might be done in specific contexts. Meanwhile, intersectional approaches seek to address how traditional western science has marginalized other voices. Seven principles draw together linking frameworks and intersectional approaches, and can guide better social science research, policymaking, and solidarity building. More research, education and training are needed on how to employ multiple knowledge systems in research. **Full report**

Building together: Culturally appropriate housing evaluation for sustainable communities

Shelagh McCartney,* Judy Finlay and Jeffrey Herskovits, Ryerson University

Poor housing and related social outcomes of First Nations peoples are the result of perpetual intervention by the state in on-reserve housing. From mould to morality judgments, successive Canadian governments have used housing measures to assert colonial power. The uniqueness of cultures, geographies and climates are ignored to replicate a "Canadian standard" of housing. Self-determination and the creation of meaningful change in lived-experiences require a new understanding of problems and solutions. Critically examining evaluation approaches will allow for the creation of a framework based in Indigenous knowledge. If implemented, the framework could restore housing's role in the practice and recreation of culture. **Full report**

How can Aboriginal knowledge systems in Canada contribute to interdisciplinary research on the global extinction crisis?

Audra Mitchell, Wilfrid Laurier University; and Zoe Todd* and Pitseolak Pfeifer, Carleton University

Three-quarters of the Earth's species could go extinct within a few centuries. Western scientific understandings of extinction create divisions between humans and nature, and these understandings have been used to take away the land and rights of Indigenous communities. Efforts to address extinction will be more effective if they engage with the full range of plural Indigenous knowledge systems, instead of treating Indigenous peoples as sources of ecological data. Their systems emphasize the interrelatedness of all living things and the deep-seated obligations to maintain balance among them. **Full report**

(re)Visioning Success in Inuit Education: A report of the 2017 Inuit Education Forum

Melanie O'Gorman,* The University of Winnipeg; Peter Geikie, Amaujaq National Centre for Inuit Education; Kathy Snow, Cape Breton University; and Ian Mauro and Shelley Tulloch, The University of Winnipeg

Educational attainment in Inuit regions is significantly lower than in the rest of Canada. At a three-day forum in Nain, Nunatsiavut (Newfoundland and Labrador), Inuit educators from all four Inuit regions gathered to share their knowledge of strategies for achieving student success. Enhanced Inuit control of education, more linguistically and culturally relevant curricula, and the proper resourcing of schools were noted as being critical for the success of Inuit students. Many participants noted that a separate Inuit school board could achieve many of the recommendations highlighted in this forum. Full report

From Dene Kedə to Dene Ts'ılı: Rethinking resurgence in the Sahtú Region, Northwest Territories

Faun Rice, Keren Rice* and Deborah Simmons, University of Toronto; Walter Bezha, Déline Got'ine; Jordan Lennie, Shelby Lennie and Michael Neyelle, ?ehdzo Got'ine Gots'é Nákedi (Sahtú Renewable Resources Board)

In the Northwest Territories, resurgence of Dene language and ways of life is a strong component of self-governance. Seven areas have impacted resurgence efforts: law and policy, education, documentation, media, local knowledge, the number of speakers and learners, and ways of life. Resurgence is a complex and multifaceted process; it is critical to see the connections between language, ways of life, well-being and being on the land. Youth, as inspired drivers of resurgence, need stronger supports for language learning, and more opportunities to create and lead their own programs. Regional strategic planning should focus on co-ordinated, holistic support for Dene language use and ways of life. **Full report**

Walking together: Applying OCAP® to college research in Central Alberta Krista Robson,* Michelle Edwards Thomson, Vickie Cardinal-Widmark and Lloyd Desjarlais, Red Deer College

Researchers are increasingly applying OCAP® (ownership, control, access and possession) principles to strengthen the ethics of their work with Indigenous communities. However, research ethics boards have not fully incorporated these principles into their policies and procedures. Conflicts between the requirements of OCAP® and research ethics boards raise questions about the impacts of projects that the boards approve. Greater clarity is needed on what role research ethics boards should play in advising researchers on using OCAP®. Institutions should commit to changing the idea that Indigenous communities should accommodate non-Indigenous ways of knowing and doing to fulfil academic requirements. Full report

Ethical relationality, Canadian applied linguists and Indigenous language revitalization

Mela Sarkar*, McGill University; and Andrea Sterzuk, University of Regina

The Canadian Association of Applied Linguistics recently committed to support the urgent work of maintaining and revitalizing Indigenous languages. But the association's mostly non-Indigenous members are not sufficiently aware of the colonial character of many educational projects, or how Indigenous language is connected to identity and belonging. The teaching of Indigenous languages cannot draw upon the same tools and approaches used in settler contexts. In response to the need for training and materials, a web-based repository is being created with resources on Indigenous language issues and the ethics of research and teaching. **Full report**

Unlocking the chronicle of an Inuit community: Hopedale, Nunatsiavut Mark David Turner* and Hans J. Rollmann, Memorial University of Newfoundland

Significant barriers have prevented Inuit in Nunatsiavut from accessing archival and printed materials that document their history and culture. These materials are not only important for addressing community needs and concerns; their repatriation represents an opportunity for community development. The initial steps in repatriating these materials have begun to address the organizational and linguistic challenges of accessing cultural heritage. This work can position Labrador Inuit as leaders in developing best practices of dealing with archives for other Indigenous groups. However, for that work to be successful, more discussions are needed on approaches towards archives in Indigenous contexts. **Full report**

Embedding Indigenous perspectives in early childhood education, care, family support and intervention

Kathryn Underwood* and Nicole Ineese-Nash, Ryerson University; and Arlene Hache, District of Timiskaming Elders Council

Early intervention can improve developmental outcomes for children with disabilities. However, many Indigenous children and their families lack access in their communities to the services they need. Most mainstream services do not incorporate Indigenous understandings of disability and child development into their practices of diagnosis, rehabilitation, education or care. To encourage alignment between early intervention strategies and the values and needs of Indigenous families, there should be greater emphasis placed on the role of culture in understanding child development

and disability. Both mainstream and Indigenous services need more funding to provide a fuller range of culturally relevant child services. **Research team's website**

Social participation and intergenerational solidarity: Contribution of Indigenous elders to the well-being of individuals and communities

Chantal Viscogliosi,* Hugo Asselin and Suzy Basile, Université du Québec en Abitibi-Témiscamingue; Kimberly Borwick and Yves Couturier, Université de Sherbrooke; Marie-Josée Drolet, Université du Québec à Trois-Rivières; Dominique Gagnon, Université du Québec en Abitibi-Témiscamingue; Natasa Obradovic, Université de Sherbrooke; Jill Torrie, Department of Public Health, Cree Board of Health and Social Services of James Bay; and Diana Zhou and Mélanie Levasseur, Université de Sherbrooke

To improve the well-being of Indigenous peoples and communities, better understanding intergenerational solidarity and the social participation of elders is fundamental. Elders contribute in many ways to individual and collective well-being—among others, by passing on traditional knowledge and skills, by defending rights and land claims, and through the roles they play in various aspects of social, civic and domestic life. Future research could seek to better assess the contributions Indigenous elders make to well-being, putting emphasis on measurement tools designed with the Indigenous peoples involved. **Full report** (in French only)

How we are coming to know: Ways in which Indigenous and non-Indigenous ways of knowing, being, and doing might circulate together in mathematics and science teaching and learning

Dawn Wiseman,* McGill University; Florence Glanfield, University of Alberta; and Lisa Lunney Borden, St. Francis Xavier University

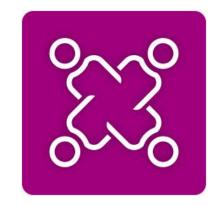
The Truth and Reconciliation Commission of Canada has called for Indigenous knowledge and teaching methods to be integrated into curricula for K-12 and teacher education. In math and science, it is particularly challenging to reconcile tensions between different worldviews and understandings. Moving towards an educational system where Indigenous and western ways of knowing, being and doing "circulate together" in mathematics and science teaching and learning requires questioning the assumptions underlying the current system. More attention should be paid to working relationally alongside communities, unlearning colonialism, the role of language, and training for preservice and in-service teachers. **Full report**

Thematic insights on the aspirations, experiences and knowledge systems of Indigenous peoples

The projects listed, and the related dialogue among scholars, practitioners and policy-makers, produced a vast collection of knowledge. This knowledge is summarized in the following sections, according to six interrelated themes that emerged:





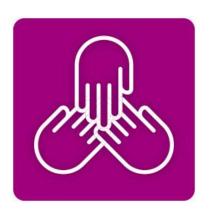


Indigenous research: Ethics, knowledge systems and methods

Arts, language and culture

Teaching and learning







Community and social well-being

Economic selfdetermination and Indigenous business

<u>Self-governance,</u> <u>Indigenous law and</u> <u>resource rights</u>

Each section outlines main insights and the state of knowledge related to the theme. Insights reflect key research findings that can help enhance understanding of the issues at hand, and that may strengthen related policies and practices. The state of knowledge—including knowledge strengths and research gaps identified—describes the quality and quantity of research and data currently available, and may suggest areas for future research.

Collectively, the themes illustrate the benefits of connecting social sciences and humanities researchers with potential users of their research, to exchange ideas and explore opportunities for future collaboration.

Indigenous research: Ethics, knowledge systems and methods



"It is not about how Indigenous research fits into mainstream research as much as it is about how research can be transformed through Indigenization." 13

Indigenous research 14 is undergoing what some call "decolonization." 15 This involves changing the purpose and power dynamics of the research, and recognizing Indigenous knowledge. 16 Research is increasingly "by" and "with" (instead of "on" or "for") Indigenous peoples. 17 This focus helps centre the interests, participation and worldviews of the Indigenous peoples involved.

The Royal Commission on Aboriginal Peoples (1991-96) was a key impetus for changes in the conduct and ethics of Indigenous research in Canada. ¹⁸ Volume 5 of the commission's final report included new ethics guidelines for research. These aimed to ensure the commission, in its work, appropriately respected the cultures, languages, knowledge and values of Indigenous peoples, and the standards used to legitimate knowledge. ¹⁹

Today, influential sources guiding researchers and Indigenous communities include the OCAP® principles 20 and those outlined in Chapter 9 of the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS2). The OCAP® principles, established in 1998 by First Nations peoples, provide for collective ownership of information; control over all aspects of research and information management that impact them; access to information about them, and the right to make decisions about access; and physical possession of data as a mechanism of ownership. 21

Chapter 9 of the TCPS2 provides a framework for research with Indigenous communities, based on respect for human dignity and its three associated principles—respect for persons, concern for welfare, and justice. The framework addresses consultation, capacity-building and intellectual property rights, among many other issues in Indigenous research. Some Indigenous communities and organizations have also developed their own codes of research ethics, based on their own values and tools. 22

The ways in which research is conducted are gradually contributing more towards self-determination, reconciliation and sharing of experiences. There are many principles and best practices for Indigenous research, but their application is uneven and often incomplete. Researchers and research-supporting institutions can continue to improve.

Insights:

• Indigenous knowledge systems are gaining greater recognition, but still remain underapplied in research: Western scientific traditions have marginalized Indigenous theories and understandings of knowledge. An analysis of 500 social science journal articles on Indigenous issues in Canada showed that mainstream epistemological perspectives continue to dominate. 23 Indigenous ways of knowing are experiencing some resurgence, however, and

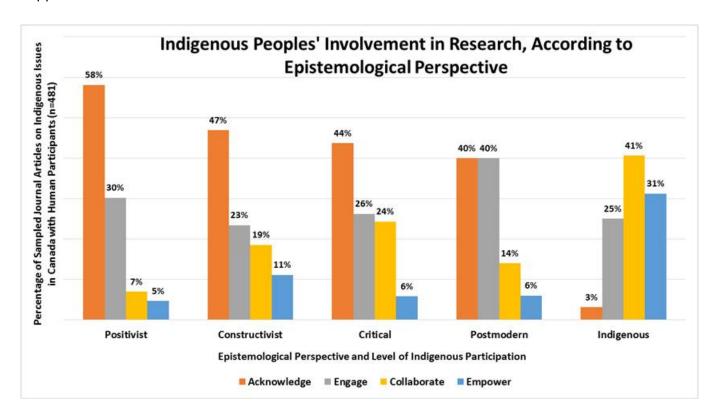
non-Indigenous scholars have begun to recognize the need to change the expectation that Indigenous communities accommodate non-Indigenous ways of knowing.

"[T]he onus is especially on non-Indigenous peoples to learn more about and respond, respectfully and with humility, to Indigenous ways of knowing and to linking frameworks that facilitate connections between Indigenous and Western ways of knowing." 24

• Learning from and across Indigenous and western knowledge systems is important for reconciliation, and can enhance intersectional approaches: One method for bridging ways of knowing in knowledge creation uses "linking frameworks." Two-Eyed Seeing is an example of this type of framework. The metaphor, proposed by Mi'kmaq Elder Albert Marshall, evokes one eye seeing with the strengths of Indigenous ways of knowing while the other uses western understandings, in the pursuit of common ground. In some cases, linking frameworks can be combined with intersectional approaches, which recognize multiple sources of oppression and privilege, such as gender, race and class. 25 A combined approach can build solidarity among communities and enhance ethical research practice.

Summary of Guiding Principles of Linking Frameworks ²⁶	
Principle	Essential commitment
Relationality	All of creation is interdependent and interconnected in complex and sometimes antagonistic ways.
Reciprocity	We must value and engage with ways of knowing other than our own to create an equal basis for exchange.
Reflexivity	Researchers must continuously examine their positions within existing power relations.
Respect	Research designed and directed by collaborators helps to ensure that the research is respectful of difference.
Reverence	Research should be informed by spiritual values and practices.
Responsivity	Knowledge systems are fluid and responsive to change.
Responsibility	Research should further social justice and holistic well-being, in part by challenging colonialism.

• Indigenous research is built on relationships and based on community needs: Preexisting and ongoing positive relationships between researchers and Indigenous communities are key for ethical research practice and successful projects. In addition to knowing about the community and their traditions, researchers should craft research in response to community concerns. Despite the sentiment of some Indigenous communities that they have been "researched to death," 27 many see the value of research that is related to their needs. Some Indigenous researchers feel a strong moral responsibility to address communities' needs through their work. Institutions could recognize and help alleviate this pressure through stronger support.



Percentages have been calculated within each epistemological perspective. Because articles may include more than one epistemological perspective, the total will exceed the total number of articles (481).

Data reproduced with authors' permission. Dion, Indigenous futures, 21-22, 26

- Participation is a best practice for research in Indigenous contexts, but a lot of research on Indigenous issues does not involve Indigenous peoples: Among the many forms participation can take, ²⁸ Indigenous communities can contribute knowledge as research participants, or lead studies. However, a review of 501 relevant journal articles on Indigenous research found that 250 of the research projects included no human research participants, and that Indigenous communities had led only 24 of the projects. ²⁹ There is an association between more collaborative and empowering forms of participation, and the use of Indigenous epistemologies and methods. ³⁰
- The current context of research and policy-making requires greater research capacity in Indigenous communities: Social science research is increasingly technical, quantitative and complex, and policy-making is evidence-based. In the interests of research

sovereignty and self-determination, communities—through designated individuals or offices—should be able to evaluate proposed projects and develop their own. Researchers can support capacity-building by using participatory methods, hiring Indigenous research team members and offering project development expertise. It is important that institutions and research communities address the feeling some Indigenous scholars have that it is their responsibility alone to build Indigenous research infrastructure and capacity.

- There are disconnects between institutional processes or requirements, and best practices for Indigenous research: Ethics and funding rules do not yet adequately recognize the time required to develop relationships, or the flexibility that respecting Indigenous practices and protocols may require. Research suggests OCAP® principles are not sufficiently integrated into the research ethics, funding or administrative procedures of most postsecondary institutions in Alberta. Moreover, in a suggested example of institutional bias, researchers using participatory methods and Indigenous epistemologies have more difficulty getting funding for their research and getting published in mainstream journals. Among other steps, institutions could provide better education and training for administrators and research ethics board members, ensure Indigenous representation on these boards, and work in greater partnership with Indigenous communities or organizations.
- Secure yet accessible digital asset management can strengthen community-engaged scholarship: Many Indigenous communities cannot access data generated by faculty research. They also want to be able to securely preserve information far into the future, beyond the life of a research project. Universities should adopt Indigenous digital asset management systems (IDAMS) for community-engaged scholarship. This decolonizing methodology sees faculty and Indigenous partners collaborate to cocreate knowledge. 31 An IDAMS serves as a repository for the storage and preservation of digital information, while allowing certain users access. IDAMS developers should ensure the metadata and access protocols used suit both Indigenous communities and scholars.

"Although creating an ethical IDAMS ... will not expunge universities' role as colonizing agents from the past, it will shape the way people interact with the material and think about it. It will create the opportunity to see [Indigenous knowledge] mobilized in more culturally appropriate manners that [account] for Indigenous rights and not merely academic interests. " 32

State of knowledge:

• Indigenous scholars, communities and organizations have defined principles and best practices for Indigenous research, but their implementation by researchers

and institutions could be improved: Considerable consistency is evident in the last ten years of writing on how to conduct Indigenous research, with significant emphasis on OCAP®, relationships, and participatory and community-based approaches. Discussion is ample on why Indigenous research requires changes to conventional approaches and on how to do so. However, some research suggests that implementation is insufficient. The application of best practices could be strengthened through greater discussion of concrete situations, and more sharing of examples of documents like research agreements.

"In general, researchers understand the principles of the ethics of doing research with Indigenous peoples, but their practical application on the ground remains problematic." 33

- Scholarship is increasingly strong on how to do research through the lens of Indigenous worldviews, though how to integrate language into the research process is not as clear yet: The research community increasingly acknowledges the importance of designing research informed by Indigenous knowledge systems and methodologies. Language strongly influences the meaning and understanding that emerge in such research. However, there is little guidance for researchers or research ethics boards on how to incorporate this recognition of the importance of language into the research process—for instance, when researchers are not able to communicate in Indigenous languages. Many concepts do not have a direct equivalent in non-Indigenous languages, and intended meanings can be lost or distorted.
- More guidance is needed on how to identify the "community" in Indigenous research: Ethical guidelines tend to equate definitions of community with territory. In research with Métis peoples, or in urban contexts or with more than one Indigenous group, it can be difficult to identify "a community," or its leadership. It can also, therefore, be hard to know who to consult about proposed research. Available literature does not provide enough guidance for how to reconcile "community-based" research ethics with complex and political definitions of community.
- Researchers and research ethics boards need more guidance on how to reconcile various ethics principles, laws and protocols: With OCAP®, TCPS2, UNDRIP, national and provincial laws, and Indigenous communities' own policies and protocols, there is no shortage of direction for ethical research. But, there is a noticeable gap in the literature on how they all tie together, and how to address differences between provisions, such as those regarding individual and community consent. The lack of guidance in this area is problematic for researchers, research ethics boards and Indigenous communities.
- Although emerging, work is limited on issues surrounding digitized Indigenous knowledge and open data: Importantly, the diffusion and protection of digitized knowledge is gaining traction in discussions in Canada and around the world, but reflection on these issues is not yet very advanced. Uncertainty remains, for instance, about how to

protect ancestral knowledge through digital means, how to discern what qualifies as open data, and how open data should be reconciled with principles such as OCAP®.

Theme Arts, language and culture



The protection and revitalization of Indigenous culture—including languages, stories, ceremony, art and ways of life—are vital to self-determination and reconciliation. Many languages and practices have been lost, and some are at risk of being lost, due to continued harms from colonial and institutional practices. However, research shows recovery, preservation and resurgence are taking place.

This section focuses on how Indigenous communities and non-Indigenous partners are regaining and strengthening critical elements of identity and belonging through artistic expression, archival work, and the revitalization of Indigenous languages.

The restoration and vitality of languages is of particular importance to Indigenous communities, and governments increasingly recognize it as a priority. Languages connect Indigenous peoples to their land, communities, worldviews and ways of life. Indigenous artistic creation, meanwhile,

affirms cultural identity, retells histories, enables healing and promotes cross-cultural understanding. Many Indigenous communities' histories and cultures are captured in vast archival collections. Recovering heritage materials, preserving them and making them accessible helps communities better understand their identity and past, and helps address present-day needs for education and self-determination.

Insights:

• Indigenous artistic creation in Quebec has grown remarkably in the last 30 years, while certain factors continue to influence who and where artists are: The 268 Indigenous artists identified as such in Quebec in the synthesis 34 produce works in seven disciplines—visual arts, cinema, storytelling, dance, literature, music and theatre—with fairly even gender representation. Access to funding, role models and artist networks shape both the concentration of artistic creation in urban areas, and how production is spread across Quebec's Indigenous communities.

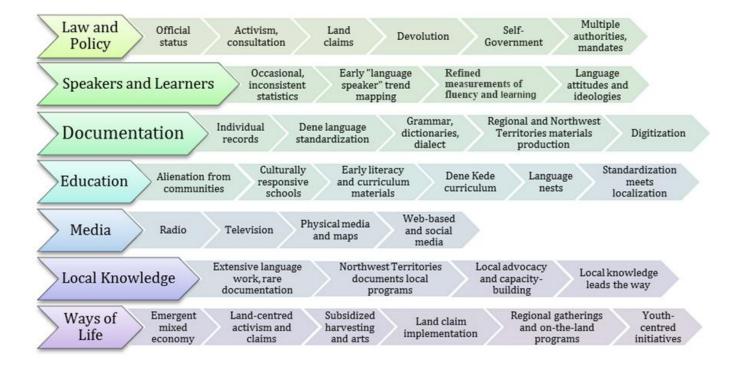


Multidisciplinary artist Terry Randy Awashish, an Atikamekw from Opitciwan, Quebec, is influenced by the importance of traditional and contemporary territory. Awashish explains that his performance expresses "contemporary Indigenous identity, the balance between two worlds, that is, between traditional territory and the cities of today." 35

Photo credit: © Ondinnok. Reproduced with organization and artist's permission.

• The resurgence of languages and ways of life can be purposefully fostered through policies and initiatives across multiple areas of society: A review from 1970 to the present shows that, following the institutional and political developments in the Northwest Territories that weakened Dene Kedə (languages) and Dene Ts'ılı (ways of life), positive changes are now occurring. Initiatives such as official language policies, culturally relevant educational curricula, local self-government, and documentation of traditional practices are revitalizing community use of language, ways of life, well-being and connection to the land.

Timeline of Seven Domains of Resurgence of Dene Languages and Ways of Life, 1970 to present $\frac{36}{}$



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- Non-Indigenous allies can contribute positively to language revitalization, but they
 need the right tools and training: The Canadian Association of Applied Linguistics has
 committed to being involved in Indigenous language instruction. Its members are becoming
 increasingly aware, however, that, being mostly non-Indigenous, they currently lack the
 understanding and resources they need to work ethically in and with Indigenous communities,
 build positive relationships, and not repeat colonial educational practices.
- Technology and good archives practice can help communities access cultural records important in addressing contemporary concerns: A massive archive of over 800,000 items produced by Moravian missionaries extensively documents Inuit history, culture and language. Language barriers and organizational ownership and control have prevented Inuit communities in Nunatsiavut from accessing and using these materials. Gradually, these items are being digitized, systematically categorized and described, and made available through publicly accessible computer terminals. The process has highlighted some good practices in community-directed decision-making about archives management. These could provide a model for other Indigenous communities.
- It is imperative to understand the interconnectedness between what are often treated as separate elements of culture, and how these are linked to identity: Language, ways of life, the land, and various art forms are integral to who Indigenous peoples are, and how they see the world, approaches to leadership, and sense of belonging. It is important to adopt a holistic understanding of Indigenous culture, to see its elements as interwoven and interdependent. For instance, Indigenous languages are central to expressing knowledge and

worldviews, to exercising leadership, and to performing and teaching traditional practices. Although pragmatic, the very classification of Indigenous art into different disciplines hides the intimate connections among types of artistic expression and the links between these and daily life.

"When our language is taken, so is our perspective." $\frac{37}{100}$

• Educational, leadership and networking opportunities help youth actively engage in cultural preservation and revitalization: Indigenous youth are often inspired to learn and protect their languages and traditional practices, and to represent their cultures through artistic creation. Yet, they need the proper support and teachings to realize their potential. Dene youth would benefit from language instruction beyond elementary school, in closer co-operation with elders. Role models and access to networks are helpful for young artists. And educational programming and leadership camps that are language-based, land-based, immersive and holistic show potential to empower Indigenous youth.

"I feel most comfortable speaking English, but I would be totally proud of myself if I learned to speak my language better. It makes me feel part of my heritage and my culture and who I am." 38



Participants at the Dene Ts'_||_| Fall School 2017 take part in a Kó Gha ?ets'eredı ("feeding the fire") ceremony on the Sahtú Də (Bear River), Northwest Territories.

Photo credit:

© Deborah Simmons. Reproduced with authors' permission. 39

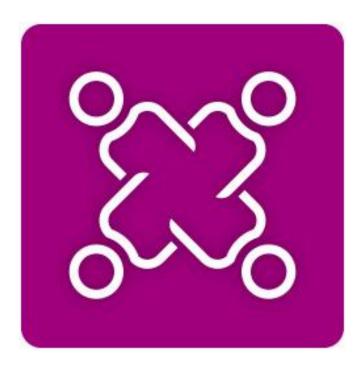
State of knowledge:

- There are considerable knowledge divides between scholars and community members regarding archives: Specialists have a large and growing understanding of Moravian archives and their relationships to Labrador Inuit, but the knowledge of these among Inuit communities is limited. Awareness-raising events and media use would help close this gap. In addition, however, community members need opportunities to bring their perspectives to bear on archives theory and practice.
- Understanding is growing about how languages' vitality evolves, including through their use, recovery and maintenance, but more evaluation and documentation is needed: Based on understanding of language dynamics, exciting new programs have emerged to strengthen Dene languages. Little information is available, however, about the uses and impacts of previous materials and programs. Better evaluation could provide

valuable information for improving programming and for regional strategic planning.

- Understanding is relatively limited on how Indigenous languages and ways of life
 are linked to well-being: The importance of language to Indigenous cultural practices,
 leadership and worldviews is well established. However, whether and how the vitality of
 languages and ways of life contributes to individual and community well-being has not been
 sufficiently assessed empirically. Ideas to explore include whether languages encode values
 and beliefs that are vital to wellness, and what the respective roles of language and ways of
 life are in healthy and fulfilling lifestyles.
- More qualitative research and greater information about funding would help Indigenous artistic production continue to grow: Although quantitative data presents a rich snapshot of Indigenous artists in Quebec, qualitative research would generate better understanding of how artists define their artistic practices, and what cultural and social dynamics influence them. More detailed data about how financial support is divided across disciplines and Indigenous communities would help identify where the needs for funding are greatest, relative to outputs of artistic production.

Theme Teaching and learning



Education is critical to Indigenous well-being and self-determination. Attainment levels in postsecondary education are rising among Indigenous students: in 2016, 10.9 per cent of Indigenous people in Canada had a bachelor's degree or higher, up from 7.7 percent 10 years earlier. The proportion of Indigenous people with a college diploma rose from 18.7 per cent in 2006 to 23 per cent in 2016. 40 Importantly, with proper understandings, tools and approaches, schools and other learning settings can be ideal sites for working toward reconciliation. 41 They are places where truths can be told, worldviews explored, and new types of relationships built through teaching and learning.

Yet, in many respects, education systems and approaches are not working well for Indigenous students. Among young adults aged 20 to 24, only 40 per cent of those living on reserves have finished high school, compared to 70 per cent of young off-reserve First Nations adults, and 90 per

cent of non-Indigenous Canadians in that age group. $\frac{42}{5}$ Further, Indigenous students are overrepresented in special education programs. $\frac{43}{5}$ And, many Indigenous postsecondary students feel they are not sufficiently supported, or that their knowledge or experiences are not valued by their instructors and peers. $\frac{44}{5}$

Educators and other professionals increasingly recognize the need for systemic changes to education systems and classrooms to improve both outcomes for Indigenous students, and the education of all learners in Canada. Much of it inspired by TRC calls to action concerning education and training, the research highlighted in this section is gradually pointing the way for making these improvements.

Insights:

• Systemic changes are required to improve the education of Indigenous children and youth, and of those who work with them: In the Sahtú region of the Northwest Territories, and the four regions of Inuit Nunangat, ⁴⁵ curricula have undergone much-needed, if not yet satisfactory, changes. Increasingly, students are learning Indigenous languages, understandings, histories and practices. Yet, significant changes are also needed regarding who teaches, how they deliver curricula, and who leads educational institutions. Teachers and administrators across Inuit Nunangat are calling for greater Inuit representation in both teaching and education leadership positions. Both those Inuit educators and some postsecondary Indigenous students elsewhere in Canada are suggesting Indigenous-controlled school boards may be needed. In addition, pedagogical approaches to postsecondary education for business careers and child-focused careers—such as teaching, guidance counselling and social work—could draw more from Indigenous knowledge systems. This would better equip professionals to work with and in Indigenous communities.

"The results shared in this paper echo decades of calls for Inuit control of a truly Inuit education system in which Inuit ways of knowing, being and doing are reflected and celebrated, in which Inuit act as leaders, and in which Inuit students succeed." $\frac{46}{}$

• Transformational change requires questioning assumptions and frameworks that underpin education systems and subjects: At the postsecondary level, many Indigenous students have denounced the undervaluation of Indigenous knowledge systems, and complained of "epistemic racism." 47 These students are calling for more dialogue to improve understanding about alternative worldviews. 48 An exploration of K-12 and teacher education in math and science showed there is a gradual process underway of decolonizing and unlearning assumptions underpinning those subjects. Committing to examining how Indigenous and western thought might "circulate together" in the classroom requires putting the two on equal footing. Drawing on both sets of ideas can enhance students' understanding.

"Recognizing the value clash between western and Indigenous philosophies of learning, and building a shared understanding with a focus on equality, relationships and sociopolitical dialogue, is a necessary transformation of the education system." $\frac{49}{49}$

- Approaches to teaching and assessing students should be more culturally relevant and culturally specific: Curricula should include more content that reflects and teaches Indigenous culture. Teachers from Inuit Nunangat, for instance, wish to see more bicultural schooling (instead of individual, culture-focused courses) and more time devoted to Inuktut instruction. Both there and in Sahtú, Northwest Territories, educators are increasingly emphasizing the importance of land-based educational activities, which teach Indigenous values and skills through experiential learning. In addition to increasing cultural relevance, education professionals should base their approaches in specific Indigenous contexts and cultures. For instance, assessments of learning challenges should be done in the student's local language, and with a solid understanding of cultural particularities that might be misinterpreted as learning difficulties.
- Involvement of parents, elders and the wider community is critical for good teaching, training and assessment: Educators in Nunangat are supporting parent engagement by providing toolkits that help them participate in their children's learning, and by offering adult education and doing home visits. The educators also emphasize the need to involve elders more in teaching and guiding students. Other research shows efforts to improve the education of professionals who will work with children should engage Indigenous communities through, for instance, consultation and direct participation in curriculum reform. Assessing and addressing learning needs should, meanwhile, involve school-family-community collaboration, for example, by getting family members' points of view about a child's needs, and ensuring that strategies correspond with community understandings.



Miali Coley, a teacher at Joamie School in Iqaluit, presents her views on the key determinants of success in Inuit education, at the Inuit Education Forum, Nain, Nunatsiavut, February 14-16, 2017.

Photo credit:

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- Training for professionals who work with children should focus on relationships, dialogue, attitudes and culturally safe approaches: It is critical that teachers and other child-focused professionals receive both foundational training and professional development to work effectively with Indigenous children and communities. It is important to build and maintain long-term, ethical relationships characterized by dialogue, respect and mutual learning.
 Curricula for professionals who will work with children should include training on "culturally safe" practices.
 These include self-awareness, and consideration of power imbalances. Similarly, those who assess students' learning needs should receive support to recognize the influence their own beliefs and attitudes have, and to develop culturally appropriate practices.
- Some Indigenous students and faculty feel that efforts to "Indigenize" the academy do not go far enough to effect institutional change or build new relationships: When Indigenous material is included in courses and programs, many see this as "tokenistic" or a "tacking on," instead of as affirming Indigenous knowledge, acknowledging the diversity of Indigenous peoples, and more substantively addressing concerns of racism, inequity and integration. Some Indigenous scholars feel academic institutions are merely "ceding" space to Indigenous knowledge systems without making broader commitments to support Indigenous scholars and communities. Some also contend that Indigenous knowledge should be seen as

"unceded," because there has been no framework or agreement on its entry into academic spaces. Beyond Indigenous knowledge issues, there is widespread feeling that more needs to be done to recruit and retain Indigenous faculty, both to help reduce the overload on current faculty and to provide better instruction on Indigenous worldviews and issues for all students.

"Though we have policies on how to Indigenize the academy ... we must remember that these corrective policies are not [t]reaties. They are not adequate or even appropriate proxies for the bigger conversations that must take place regarding the role of universities and academic/research agencies in honouring their reciprocal responsibilities to those whose territories they occupy." 52

State of knowledge:

- A large body of research exists on approaches to preparing professionals to work
 with Indigenous communities, but information specific to working with children,
 and evidence about outcomes, is lacking: Research emphasizes that experiential and
 immersive learning, as well as critical self-reflection exercises, can be helpful in training nonIndigenous professionals. However, the body of work available on how to prepare
 professionals specifically to work with Indigenous children remains very small. As well,
 evidence on how certain pedagogical approaches influence professional practice or outcomes
 for Indigenous people is limited or fragmented.
- A lot of academic research shows ways to foster Inuit student success, but it is
 harder to identify all the things successful schools do: Existing research highlights the
 importance, for instance, of strong community partnerships and appropriate teacher
 materials to promoting teaching and learning of Inuit culture. However, few studies have
 been able to capture the entire array of approaches and activities of the schools that are
 more effective than others in nurturing student success. Further, very little research has
 been done that pulls together experiences among all four Inuit regions.
- There is considerable agreement about what constitute good practices in assessing
 and addressing student learning needs: For instance, screening, case histories,
 assessment exercises and recommendations should involve interdisciplinary teams of
 professionals, as well as the family and community, and be culturally and linguistically
 appropriate. Future research could track how certain Indigenous communities themselves
 are adopting these best practices.
- The majority of research on multiple worldviews in math and science education uses a strengths-based approach, while stories about implementation and impact are largely absent: Most studies in this area focus on honouring Indigenous knowledges,

and on how they strengthen understanding in the classroom. As yet, little is known about the actual implementation of math or science programs that allow worldviews to circulate together, or about the impacts of this approach on student engagement and achievement in these subjects. Future research could explore what support both Indigenous and non-Indigenous teachers need in order to adopt these teaching approaches.

Theme Community and social well-being



Indigenous views on well-being emphasize its holistic and collective nature, and its strong connections with culture and nature. Well-being encompasses much more than meeting basic needs and achieving a certain quality of life. Dimensions of Indigenous community well-being include a strong sense of identity; connection to the land; the vitality of languages, ceremonies and ways of life; and intergenerational transmission of these aspects of culture. It requires that children and families have the means and supports to be healthy, thriving and contributing.

Research in this section highlights how elders' social participation can contribute to well-being as defined in these ways. It also demonstrates that some Indigenous children, families and communities are struggling with certain aspects of well-being. On-reserve households in Canada are three times more likely to fall below the minimally acceptable housing standard; 53 and Indigenous children are overrepresented in child

welfare systems, $\frac{54}{}$ and are diagnosed with a disability at a higher rate than non-Indigenous children. $\frac{55}{}$

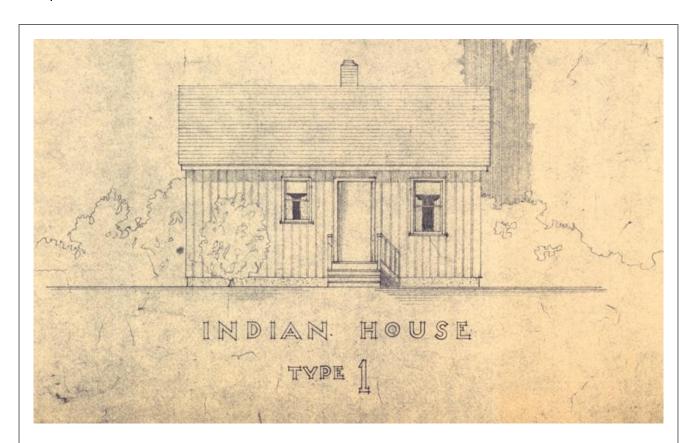
Several experiences and factors contribute to deficits in well-being, but the research draws attention to suggested problems with the ways in which these deficits have been defined, measured and addressed. Centring Indigenous worldviews and active Indigenous participation in assessing housing and fostering children's development, for instance, could contribute to better outcomes and to self-determination. It is also important to integrate Indigenous perspectives into how well-being initiatives are evaluated.

Insights:

• Indigenous peoples often do not see their cultures and worldviews reflected in how well-being issues are defined: The research suggests that institutions play a determining role in identifying or defining problems. For instance, definitions of childhood disability tend to "pathologize differences," while identification of "at-risk" children focuses on deficits. 56 These approaches often conflict with Indigenous understandings of children and their development, in

which children are considered gifts from the Creator, and their unique abilities are understood as contributing to the collective good. In housing, government definitions and measurements were developed for urban populations and for market economies not present in many First Nations. These definitions and measurements tend not to recognize the symbolic and cultural understandings of housing that Indigenous communities may hold—for example, of a house as a place where ways of life are enacted, and relationships and social networks are built. To address these disconnects, any understandings of Indigenous experience should centre Indigenous culture.

then need to be fixed through programs or interventions: For instance, clinical definitions and diagnoses of disability among Indigenous children highlight underlying assumptions and biases within childhood disability services. These perspectives can contribute to a disproportionate number of children from diverse cultural and linguistic groups being diagnosed with disabilities, and can lead to assertions that parents are ill-equipped to handle or help their children. The clinical early interventions that result often do not align with Indigenous perspectives about childhood, well-being and healing, which emphasize family-centred upbringing, and connections with land, culture and spirituality. In addition, it is argued that evaluations of on-reserve housing show continued exercise of colonial power, as evaluations identify "crises" that First Nations communities are deemed unable to solve. 57



Section of Indian House Type 1 [architectural drawing], circa 1960

Credit and ©: Library and Archives Canada

"[We] need to determine whether they're in their own housing crisis or someone else's housing crisis." 58

"Recognition of the role that institutions play in defining disability, as they seek to support optimal development, can help to illuminate the ideology of childhood disability services and the cultural implications of this ideology." 59

• Evaluations should be sensitive to context and culture, and involve community stakeholders: Although many communities struggle with the types of issues that comprehensive community initiatives (CCIs) 60 seek to address, each community has unique circumstances. Evaluation of efforts to address these circumstances should reflect the environments and Indigenous worldviews at work there. Alternative frameworks for housing evaluation should also reflect the goals, values and understandings of a given Indigenous community, such as those regarding the holistic significance of housing to an occupant. This can be done by allowing the community to answer questions about what housing is, and why and how it should be evaluated. Research on evaluations of both housing and CCIs also emphasizes the need to directly involve those affected. For instance, Indigenous users of housing should participate as evaluators.

"If the aspirations of Canada's Aboriginal peoples to foster sustainable, vibrant communities is to be met, then surely strategies to evaluate such efforts must incorporate culturally relevant approaches that resonate in those communities?" 61

• Tensions between approaches to interventions and evaluation could be addressed through hybrid strategies and by rethinking what counts as evidence: Mainstream early intervention and children's services should integrate Indigenous understandings and experiences of disability. Research on disability could combine clinical studies with Indigenous cultural knowledge about children and their development. Tensions arise from the preference for "scientifically rigorous" evaluation approaches that focus on objectivity and generalizable data so as to apply results in different places. For evaluating CCIs, a way forward would be to identify certain conventional approaches that fit best with key aspects of Indigenous worldviews. In housing, hybrid approaches to evaluation could be based in Two-Eyed Seeing: external experts and local users could work together, using a mix of technical and experiential questions. Programs and policies remain "evidence-based," but questions are increasing about what and whose evidence should count as legitimate.

"This reliance on systematization ... ignores the critical element of power in the development of housing evaluation and its ability to impact methodological decisions." 62

• Elders' contributions to improving social and individual well-being are vital to any holistic approach to addressing community issues: Through their activities and interactions in economic, civic and domestic life, elders support both individuals and communities, and contribute to strengthening intergenerational solidarity. Among their roles, elders transmit knowledge and cultural practices, contribute to raising the cultural awareness of non-Indigenous people in workplaces and schools, and organize ceremonies and spiritual teaching activities. On an individual level, elders can help strengthen self-esteem, pride and beliefs. At the collective level, they may strengthen language and culture, and contribute to defending rights and reclaiming territories. Elders' contributions to well-being could be optimized by improving communication with young people.



Participants at an informal gathering of elders in the Innu community of Uashat Mak Maliotenam, Quebec.

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State of knowledge:

• A solid body of literature exists on different approaches to evaluation, but certain Canadian contexts, Indigenous voices and ways of knowing are largely absent:

Research on CCIs highlights different evaluation methods, as well as debates about respective aims regarding the information sought and how it will be used. However, no case

studies were found that apply Indigenous ways of knowing to evaluating comprehensive community change initiatives. More research is also needed on evaluating CCIs in the Canadian context, where various levels of government are involved. Meanwhile, housing research illuminates the underlying worldviews and theories related to different evaluation approaches. There is little literature on housing evaluation or lived experiences of housing authored by, or centred on, Indigenous voices.

- Work is emerging on Indigenous ways of delivering early intervention services, but knowledge is not yet being widely applied: Indigenous-specific understandings of childhood development and disability still rarely appear in research or in practice. However, awareness has grown about the importance of using approaches that are family-centred, and that integrate culture into disability assessments and services. As yet, few changes to early intervention programming have resulted from the emerging body of knowledge on service delivery that is rooted in Indigenous understandings. Future research could usefully explore whether more culturally specific assessment approaches contribute to more positive outcomes for Indigenous children.
- There are many observations and experiences of the contributions elders make to well-being and intergenerational solidarity, but there has been relatively little empirical study of these contributions: Grey literature is very instructive on elders' perceived impacts, including on violence prevention, attitudes and behaviours, and environmental protection, among many other examples. However, there has been relatively little scientific analysis of the precise effects of elders' activities, and little qualitative study to show how these effects happen. Future research could address these gaps, undertake more gender-based analyses, and emphasize concepts and measurements of well-being that are significant to Indigenous peoples. Additional questions to investigate include how young people perceive the factors that shape elders' contributions to community well-being. The results could help improve intergenerational communication.

Theme Economic self-determination and Indigenous business

Indigenous peoples and communities are increasingly taking on economic opportunities in business to improve their quality of life and promote community development. The population of self-employed First Nations, Inuit and Métis peoples continues to grow, and information on the growth of Indigenous businesses shows that they are increasingly profitable. 63 In addition to helping achieve Indigenous peoples' own goals, both private and community-owned businesses can help close the persistent employment and income disparities between Indigenous and non-Indigenous peoples in Canada. 64 65

Drawing on research from Canada and beyond, this report section explores Indigenous entrepreneurship, tourism and co-operative businesses. Indigenous communities have placed a lot of confidence in entrepreneurship as a tool for development and positive change. 66 Meanwhile, the expanding Indigenous tourism industry in Canada employs over 33,000 people and generates \$1.4 billion of national gross domestic product. 67

Some communities in Canada's North are turning to co-operatives to ensure that their needs are met and that economic benefits stay in the community. ⁶⁸ These co-operatives are a form of



Indigenous social enterprise, an expression of self-determination, and a topic of emerging research. Indigenous social enterprises are characterized by their combination of economic, social, cultural and environmental values and goals. 69

Research suggests that Indigenous business initiatives can best advance self-determination when they are based on Indigenous aspirations, understandings, control and place-based knowledge. It also indicates that knowledge about Indigenous entrepreneurship and business practices can both support reconciliation and strengthen business education.

Insights:

- Indigenous economic activity is oriented toward community and culture: Mainstream definitions and practices of entrepreneurship tend to focus on wealth accumulation and individual economic gain. Indigenous entrepreneurship aims for broader beneficial impacts, including the strengthening of culture, and development of the community as a whole. Similarly, Indigenous communities see tourism as an important source of cultural affirmation, community development, and dialogue between communities. And case studies of co-operatives in communities in Nunavut, the Northwest Territories and the Yukon show a tendency to understand and respond to place-based needs, and to make sure co-operatives benefit the community first and foremost.
- Forms of colonialism continue to characterize the language of entrepreneurship and models of Indigenous tourism governance: Language is symbolic of underlying values and ideas, and much of the academic literature on entrepreneurship is framed in settler language and theories. Imposing mainstream literature on Indigenous entrepreneurship results in Indigenous peoples, their histories or worldviews being disregarded. This puts pressure on them to adapt and assimilate to mainstream approaches. Certain forms of tourism governance may also replicate colonial patterns: Indigenous communities may opt for models of comanagement and co-ownership of tourism activities with non-Indigenous partners; these are generally more economically successful, and can build community capacity. While some authors see these models as signs of success, others see the common division of responsibilities as a reproduction of economic relationships characteristic of colonialism. Non-Indigenous partners have more management and marketing experience, as well as access to markets, while Indigenous communities contribute their traditional knowledge and resources, and risk having their culture commodified.

"[W]hen these partnerships are created without building capacity or transferring expertise and skills, communities can become tourism commodities rather than stakeholders in development." $\frac{70}{2}$

• Indigenous students and businesspeople need their own business theories and models, including those that are place- or community-specific: Mainstream understandings of entrepreneurship cannot be universally applied to Indigenous contexts because of the ways in which Indigenous entrepreneurship can be distinct. Indigenous entrepreneurship literature emphasizes themes of collectiveness, community development, and social conditions. Indigenous entrepreneurship, therefore, needs its own theories. The many Indigenous students enrolled in postsecondary business programs ⁷¹ would benefit, as well, from more information about Indigenous business practices. This information is currently scattered across academic disciplines. Access to this information would help students see themselves as future business leaders, and to embed Indigenous communities' aspirations and place-based knowledge into their business practices. Whether for Indigenous entrepreneurship, co-operatives or tourism governance, models cannot be one-size-fits-all, because, despite some similarities, there is a wide diversity of Indigenous cultures and worldviews.

"The need to expand business education to incorporate Indigenous culture and a place-based understanding of business will be crucial if rural and remote Canadian Indigenous communities are to become sustainable places for business for future Indigenous business leaders to live and work." 72

- Community control is a key element in how Indigenous communities want their businesses run or managed: Some Indigenous communities involved in tourism perceive a lack of control over decision-making, traditional natural resources, and how these resources are developed for tourism. This perception results from economic and political inequalities between the multilevel actors involved, as well as from the distance between decision-makers, who are often located in urban centres, and the rural or remote communities involved. There is, in fact, debate about whether the very definition of "Indigenous tourism" should include or be based on Indigenous control over lands and activities. Meanwhile, some northern communities have opted for co-operatives instead of private retailers, so the communities have more control over who can sell goods there, the prices they charge, and who benefits economically. This control increases the communities' ability to plan for the future.
- Forms of governance that favour Indigenous control or management do not necessarily benefit everyone in the community: Community-based enterprises and other

models that provide Indigenous communities with more control over tourism practices can strengthen local self-determination and governance, and build solidarity between communities. However, community control does not necessarily rest on or contribute to community cohesion and co-operation. Conflicts are possible because of leadership hierarchies within communities. If community leaders do not adequately share power or benefits, certain community members may be marginalized and disempowered. This is particularly the case for women and youth. In the North, links between communities and co-operatives are shown to be important, but challenges can arise if leaders blur the lines between the two in their decision-making.

"Without taking specific actions to include a diverse crosssection of community groups, including those historically disadvantaged, increased local participation can just mean transferring control over development from one privileged group to another." 73

State of knowledge:

- Research illustrates many business approaches that different Indigenous peoples around the world have adopted, but much of this research remains outside mainstream scholarship, and frameworks and theories need more development:

 Methodological strengths of the research lay in case studies and other types of qualitative research that document Indigenous experiences. However, only a small minority of articles on Indigenous entrepreneurship have been published in top-tier management journals. This can make it challenging to unite academics with the information they need to do research in this field. As well, more guiding theories are needed that apply to Indigenous contexts, incorporate traditional knowledge, and broaden the scope of entrepreneurship beyond individual economic gain. For its part, literature on tourism discusses models of initiatives that Indigenous and non-Indigenous partners comanage. However, less is documented about precisely what other forms the governance of Indigenous tourism can take, and how to let Indigenous communities define what tourism success looks like.
- How certain groups of factors interact to influence tourism prospects needs to be better understood: In any region, certain circumstances, such as geographic location, applicable laws and environmental risks or sensitivities, make it more or less difficult to develop a tourism enterprise. However, other factors pertain specifically to Indigenous contexts or lands within these regions. Research does not currently show how the interaction between these two sets of factors influences prospects for successful tourism initiatives.
- Greater understanding is required about the links between co-operatives and education opportunities offered in communities: Each of the three northern communities highlighted in the case studies on co-operatives has strong educational

infrastructure. Yet, local educational institutions may not be targeting co-operatives' needs for certain knowledge, skills and training, including business acumen and cultural sensitivity training. Future research should look at the strength of links between the co-operatives and existing education programs in each community. Possible partnerships with southern postsecondary institutions could help provide more educational opportunities to fill gaps that are found.

Theme Self-governance, Indigenous law and resource rights



This section addresses Indigenous selfgovernance, Indigenous law and international Indigenous rights. The research looks at how these intersect with resource development and environmental sustainability, and how they relate to Canadian constitutional, case and domestic law.

Self-governance is a group or community's ability to make decisions and determine who to involve in decision-making; it involves autonomy over internal or local matters.

1 Indigenous laws are central to governance. They are part of Indigenous legal orders, which embody approaches to restoring community harmony and advancing aspirations for self-determination.
Indigenous laws are based in Indigenous worldviews and come from a history of interactions in a particular culture. Often unwritten, people know them through stories, traditions and ways of life.

The increasing acknowledgement and revitalization of Indigenous law is being spurred in Canada by the TRC, Supreme Court decisions and UNDRIP. The instance, UNDRIP's article 32 on free, prior and informed consent gives recognition to Indigenous laws, as giving or withholding consent is Indigenous law in action. Research here shows Indigenous law's relevance to current issues, including species extinction and water insecurity. Also related to resource management, the research raises the concerns Indigenous groups in Canada have about the duty to consult, which is a government obligation before deciding whether to approve development projects affecting Indigenous communities.

Insights:

Métis peoples' assertion of their rights has led to recent Supreme Court of Canada decisions that are key for reaching the goal of self-governance: Section 35 of the Constitution Act, 1982, accords treaty and Aboriginal rights to Métis peoples. In recent years, Métis peoples have begun to more strongly claim some of these rights. This has led to groundbreaking legal decisions. Three of the most important of these, respectively, laid out who

can claim Métis rights, found that the Crown failed to fulfil an 1870 agreement to set aside over one million acres of land for Métis children in Manitoba, and confirmed the federal government's fiduciary responsibility to Métis peoples. Together, these cases have established that the Crown must uphold its obligations in dealing with outstanding constitutional claims. They also lay the groundwork for negotiations between Métis peoples and the Crown and provincial governments.

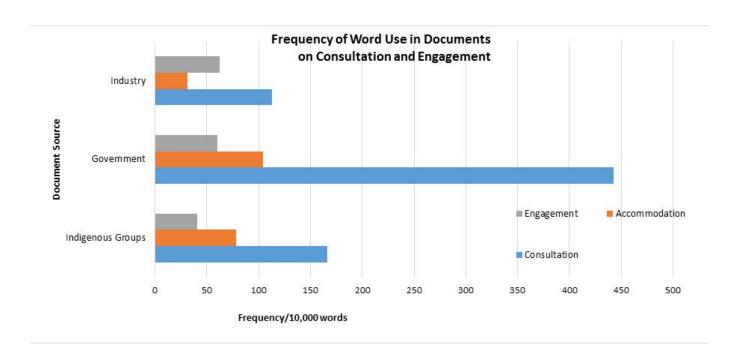
- Métis organizations are taking steps toward self-governance, but identity issues are a particular challenge to meeting this long-term goal: Many organizations representing Métis peoples have built aspects of self-governance into their structures, for instance through bylaws or constitutions. Importantly, many of the organizations have received recognition from the provinces in which they operate, allowing the organizations to represent Métis peoples in consultations and agreements with governments. However, debate continues about who the Métis are, as Métis identity is shaped by complexities of language, geography and history. This makes it challenging for Métis peoples to claim the status and rights granted under section 35.
- Growing scholarship on Indigenous legal orders reveals both their diversity and four points that can orient understandings about them: Each Indigenous legal order is rooted in particularities of language, worldviews and traditions; there are no universal Indigenous legal principles. While remembering the distinctiveness of Indigenous legal traditions, those coming to better understand Indigenous law can keep four things in mind: First, the orders focus on maintaining harmonious relationships in communities, and with the land and other life forms. Second, they are shaped by language, as languages shape understandings of the world. Third, they come from different sources—including teachings, stories, and principles derived from observing nature—than do state-based laws. Fourth, they continue to evolve and they remain relevant to addressing the challenges Indigenous peoples face.
- Indigenous law views issues of resource management and extinction through a lens of holistic, spiritual and moral relationships: Western law and understandings tend to see natural resources as available for human exploitation. Indigenous law related to environmental stewardship places different, more complex meanings on land and water, and the life forms they support. According to these laws, parts of the environment are interrelated, have spiritual and cultural significance, and impose legal-ethical obligations on humans. For instance, water is seen as a living, rights-bearing entity; land degradation by oil sands development risks cultural knowledge being lost; and extinction occurs when humans do not meet their ethical obligations to ensure balance among living things. Some Indigenous communities are developing their own resource-governance policies, grounded in Indigenous law.

"A key issue is the articulation between Indigenous and western worldviews on water ... our worldviews influence our approaches to governance." $\frac{79}{}$

 Many Indigenous communities are raising repeated, significant concerns about consultation regarding proposed resource development: When proposed development projects would affect lands where Indigenous communities have a claim or treaty rights, there is a duty to consult. According to case law, Canada's provincial and federal governments are obliged to ensure that Indigenous communities or groups are consulted, and that their concerns are accommodated, before deciding whether to approve such projects. Indigenous communities have called attention to many problems in how consultation is carried out—including, the shortness of timelines during which to respond to proposals, delegation of consultation duties to industry, lack of information-sharing and transparency in the process, and power imbalances between consulters and those consulted. Research in Alberta suggests that many Indigenous communities feel resigned to oil sands projects getting approved because consulters do not pay adequate attention to their concerns. Contributing to these circumstances are the divergence in understandings of and motivations around consultation and accommodation between Indigenous communities, government and industry; incongruences between government and communities' own consultation policies; and insufficient support from governments for Indigenous communities to adequately participate in consultations.

"Paired with a 99 per cent approval rate for oil sands projects in Alberta (Behr 2017), there is a sense that development is inevitable and that industrial projects will be developed whether or not a community participates." 80

"Without the ability to reject a project, consent ... is not being achieved in Alberta." 81



Based on a content analysis of 58 publicly available policy and guideline documents related to consultation and engagement produced by governments (n=21), industry members (n=17) and Indigenous communities and organizations (n=20). $\frac{82}{n}$

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- Important differences exist in how actors understand and use Indigenous knowledge in resource and environmental management: Government and industry recognize that decisions about resource development do not sufficiently take account of traditional knowledge. Elders' knowledge, in particular, can improve project development and environmental preservation. However, research suggests attention should be paid to how knowledge is understood and used. When referring to "traditional ecological knowledge" and "Indigenous knowledge," western approaches tend to draw on fragments of Indigenous knowledge that closely resemble western scientific categories. Knowledge may be used only as empirical data to help achieve predetermined ecological goals. In addressing extinction, western approaches to using traditional ecological knowledge and Indigenous knowledge fail to fully engage with the plurality and integrated nature of Indigenous knowledge systems. Such systems include theories of extinction, and situate ecology in relationship with philosophy, cosmology and legal thought.
- Canada's systems of law and governance make implementing both Indigenous law and international Indigenous rights challenging: Recognizing and revitalizing Indigenous legal orders is important. These efforts help Indigenous communities govern themselves according to principles that reflect their values, and preserve their knowledge and worldviews. Yet, applying Indigenous law in Canada is currently difficult. One challenge is a reliance on written laws, whereas Indigenous law is often found in and transmitted through oral traditions. Few models exist to show how the Canadian state could engage more meaningfully with Indigenous legal orders. A related concern, however, is that Indigenous norms and values may be distorted if integrated into the Canadian legal system. Meanwhile, UNDRIP's recognition that Indigenous water rights are rooted in Indigenous peoples' legal traditions conflicts with the current Canadian legal regime, which defines Indigenous rights according to European understandings of law. Also, UNDRIP's articles relevant to water rights conflict with Canada's approach to governing fresh water, which constitutionally divides responsibilities between provincial and federal governments. Indigenous water rights exist alongside these responsibilities, and the Supreme Court has ruled that land rights accorded by treaties include water rights.
- Uncertainty continues about whether free, prior and informed consent amounts to a veto over resource development, while some prefer to focus on relationships and cogovernance: Debates in Canada about implementing UNDRIP have focused a lot on what its free, prior and informed consent provisions mean for resource development. Related to but different from the duty to consult, free, prior and informed consent concerns obtaining the permission of Indigenous peoples prior to the approval of projects affecting their lands, territories and resources. 83 Tensions exist between "procedural" interpretations of free, prior and informed consent, where governments have to seek but not necessarily obtain consent; and "strong" interpretations, where the result of consultation determines a project's fate. Some feel that this focus on whether free, prior and informed consent could be a veto is misplaced; they prefer a focus on long-term, partnership-based dialogues and possibilities for the cogovernance

of water systems.

"The government should never be approaching Indigenous peoples with a yes or no question. It's actually about building new relationships: having Indigenous peoples involved at the very beginning in any project or process where their rights might be affected and sitting there as true partners ..." 84

State of knowledge:

- Credible social science research lags far behind natural sciences research on impacts of oil sands development: In Alberta, there are concerns that consultants researching social impacts of resource development are not properly qualified, and about the lack of quality controls around such research. Indigenous communities and allies fear that project approvals are being based on incomplete or biased information. Regulating research and reviewing consultants' qualifications would help increase credibility, as would doing more peer-reviewed academic and community-based research using communities' own indicators and thresholds of impacts. Topics needing more social science research in oil sands regions include: specific experiences of Métis peoples; how people combine wage labour and traditional land use economies; the purported influx of drugs, alcohol and shadow populations into the vicinities of isolated Indigenous communities; and how communities are responding to impacts on their languages and cultures.
- Research on the experiences of certain Indigenous populations—especially women and youth—in the context of oil sands development in Alberta is still scarce: The literature available on Indigenous women's experiences acknowledges that development can impact them differently and more acutely than it does men. However, little gender-based analysis has been done to document this in the oil sands region specifically. Research is needed, for instance, on the links between oil sands development and the sex trade, domestic violence, and missing and murdered Indigenous women and girls. Existing research does document a few aspects of young people's experiences, such as attitudes toward education and training, and having to leave home for employment. Despite their importance to renewing and maintaining ways of life that could be impacted by resource development, both women and youth are often underrepresented in consultations for impact and environmental assessments.
- More knowledge is emerging on Indigenous legal orders—and universities, law schools and funding agencies have important support roles to play: Given the tradition of oral transmission of Indigenous law, documenting it may not be important or appropriate for some Indigenous communities. However, published descriptions of Indigenous legal orders are quickly increasing in Canada. Some Indigenous communities have begun their own work on this, but many do not have sufficient resources. A few

universities have supported this work through funded projects, such as the Accessing Justice and Reconciliation project at the University of Victoria, and the Legitimus project at the University of Ottawa. Although Indigenous communities should always lead in the transmission of Indigenous legal traditions, law schools could help by teaching Indigenous legal reasoning.

"Non-Indigenous peoples need to learn Indigenous law or legal orders. Until that learning happens, it is difficult for Indigenous rights to improve." 85

- There is uncertainty about how to resolve a conflict between two legal decisions concerning Métis self-governance: R. v. Powley, [2003] 2 S.C.R. 207, created a 10-point test to determine who can claim rights afforded by subsection 35(1) of the Constitution Act, 1982. Among the requirements is membership in a present-day Métis community. Meanwhile, Daniels v. Canada (Indian Affairs and Northern Development), [2016] 1 S.C.R. 99, confirmed that Métis are "Indians" under subsection 91(24) of the Constitution Act, 1867, which commits the government to provide for their welfare and protection. However, the Daniels ruling states acceptance in a Métis community, as suggested by the Powley test, is not a requirement. Uncertainty continues about how the Daniels decision affects the rights and self-governance of Métis communities.
- Future research could help address problems in how consultation is done, and address conflicts and uncertainty regarding free, prior and informed consent: There is a call to involve Indigenous peoples in the design of government consultation processes. Future research could look into what mechanisms, tools and decision-making procedures Indigenous communities would want to see incorporated. It could also examine the links between how consultation is performed and impacts of resource development. For example, does better consultation contribute to stronger and healthier communities? Finally, more research is needed to answer questions related to free, prior and informed consent, such as what procedures should be used when disputes arise, and how to address industry concerns about mitigating risks. In response to the proposal that watersheds could be cogoverned by governments and Indigenous groups, research could track how UNDRIP contributes to changes in governance of natural resources.

Conclusion

Efforts and awareness are growing in support of a successful shared future in Canada among First Nations, Inuit, Métis and non-Indigenous peoples. Our collective ambitions will take considerable time and effort, but positive changes are increasing in pace, both in Canada and internationally, for the rights and well-being of Indigenous peoples. Indigenous research involving diverse social

sciences and humanities fields demonstrates the many promising steps that are being taken, and how future research can continue to guide the way.

The research summarized in this report explores the experiences, aspirations and knowledge systems of Indigenous peoples, and highlights key strengths, gaps and emerging insights in knowledge important for reconciliation and self-determination. For instance, it was noted that understanding is increasingly rich about factors that influence language use, ingredients for fostering Indigenous student success, and principles of Indigenous business. Meanwhile, more research is needed on many fronts, such as on the social impacts of resource development, the application of Indigenous law, and integration of Indigenous understandings in community services and initiatives.

The research projects also highlight how Indigenous research itself is being strengthened by more robust ethical principles, greater commitments to working in relationship and partnership, and better management of digitized knowledge. Best practices for ethical and effective Indigenous research are increasingly being recognized. Future research can help strengthen their application, resolve tensions among different protocols and policies, and further build Indigenous research capacity and governance. This report explores only a fraction of the issues that Indigenous research is helping address. Yet, it brings to light several critical emerging insights, while drawing attention to ongoing questions and challenges. These have been presented in a way that may guide practices, policies and research agendas going forward.

Reflecting the interconnectedness in Indigenous ways of knowing and doing, certain themes are found woven through this report. First, researchers and community members have emphasized the roles of elders. Elders are vital to transmitting and revitalizing languages and ways of life, especially through their work with youth. They guide the development and reform of curricula, discussions on resource development, and the design of research projects. Their social participation further contributes to well-being in myriad other ways.

A second theme is the increasing recognition of Indigenous knowledge systems, even though there is still much more to do in both education and research. Research shows how important this recognition is to issues of shared concern, including for how to address species extinction or improve student learning in math and science. Research is also showing how to bridge western and Indigenous knowledge systems in pursuit of better understanding for everyone.

Third, Indigenous languages has emerged as another interwoven theme. Language vitality is essential to Indigenous identity, culture, belonging and well-being. There is a great deal encoded in language—including ways of life, law, worldviews, leadership principles and connection to land. Revitalization efforts should mirror this connectedness. The research has also conveyed that Indigenous youth are key actors in language resurgence. Non-Indigenous allies, meanwhile, can also play a role in revitalization, provided they have the right tools and training.

Indigenous and non-Indigenous peoples in Canada stand at a very promising and historical moment. The knowledge highlighted in this report further reinforces the role of social sciences and humanities research in urging us forward—in reflection, dialogue and relationship—toward an equitable and sustainable shared future.

SSHRC invites all stakeholders and researchers to participate in our ongoing dialogue on all the future challenge areas identified through the Imagining Canada's Future initiative. Through partnerships and innovative collaborative efforts, we can leverage new and promising opportunities for research, training and knowledge mobilization. Together, we can build a better tomorrow for all Canadians.

SSHRC'S Imagining Canada's Future initiative enhances the contributions social sciences and humanities make in addressing complex societal challenges facing Canadians over the coming decades.

About SSHRC

The Social Sciences and Humanities Research Council (SSHRC) is a funding agency of the Government of Canada. Through research grants, fellowships and scholarships, we support research that provides key insights on the social, cultural, environmental and economic challenges and opportunities of our ever-changing world.

Notes

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 <u>Commission of Canada</u>. Ottawa, Truth and Reconciliation Commission of Canada, 2015, 17.
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