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Equity, Diversity, and Inclusion

Government Science and Innovation in the New Normal Discussion Paper

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ABOUT GSINN – CANADA NEEDS A NEW RELATIONSHIP WITH SCIENCE THAT REFLECTS OUR TIME

In December 2020, the Institute on Governance launched *Government Science and Innovation in the New Normal (GSINN)*, a multi-year, collaborative research initiative designed to explore the impact of the pandemic on federally-performed science and innovation, to support medium-term planning for federal science and innovation departments and agencies, and to provide insights to help rebuild the relationship between science and society.

Throughout the pandemic, anti-vaxxers – joined by anti-maskers – have challenged scientific evidence and public health officials with a mandate to keep us safe and stop the spread of the disease. This is just one example that demonstrates society's relationship with science is under strain.

But society's relationship with science and innovation did not decline overnight. The governance model that underpins Canada's relationship with science is based on a report called *Science: The Endless Frontier* (1945). This report outlined a basic compact in which society supports science with public funds and assures the scientific community a great deal of autonomy in exchange for the considerable but unpredictable benefits that can flow from the scientific enterprise.

Today, many of the underlying social, economic, and political assumptions in the postwar compact are outdated. This project examines the relationship between science and society and begins to imagine a new relationship, through nine specific themes:

- Equity, Diversity, and Inclusion;
- Global Research Collaboration and Infrastructure;
- Inclusive Innovation;
- Interdisciplinary Collaboration;
- Indigenous and Other Ways of Knowing;
- Mission-Driven Research and Innovation;
- Science Communications, Outreach, and Public Engagement;
- Skills and Knowledge; and,
- Trust, Integrity, and Science Ethics.



Taken together, these themes suggest elements of a new governance framework for science and innovation in Canada that embraces our current social, cultural and political realities, that recognizes the opportunities and limits of science. Perhaps most importantly, the project reinforces the role of science as part of society, and a tool ready to serve the needs of society.

Findings of the GSINN initiative were developed as a result of extensive research and engagement that included: a hindsight exercise, multiple foresight workshops, eight multisectoral roundtable discussions, and expert consultations that fed into this collection of 10 papers (one for each of the themes above and one capstone paper). Each discussion paper has been peer reviewed and explores a facet of how the relationship between government science, innovation, and society needs to be repaired in order to ensure science remains relevant in the new reality.

IOG extends its heartiest thanks to the eight federal departments and agencies that supported this work: Agriculture and Agri-Food Canada, Health Canada, Innovation, Science and Economic Development Canada, National Research Council, Natural Resources Canada, Public Health Agency of Canada, Public Services and Procurement Canada, and Transport Canada. We also wish to thank all of the individuals who participated in the workshops and roundtables whose input helped clarify and develop the project themes and findings. Finally, we want to acknowledge the following reviewers whose thoughtful feedback improved this paper: Christina Bellotti, Daniel Benoit, Gail Franklin, Jake Freeman, Christine Mao, Jo-Ann Osei-Twum, Adesiji Rabiou, Marie-Chantal Ross, Carol Ryckenboer-Barsalou, Trudy Samuel, and Kori St-Cyr.



USING THE RIGHT LANGUAGE

The following discussion of equity, diversity and inclusion attempts to utilize the most up-to-date language. We apologize for any terminology that has been included that is outdated or may unintentionally cause offence.



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INTRODUCTION

According to business, management, human resource, and innovation literatures, the full participation of diverse groups in the workplace is ethically imperative and has numerous benefits for the employer. Equity, diversity, and inclusion practices have been shown to increase creativity, lead to enhanced efficiency, productivity, problem-solving, customer-satisfaction, and improve morale, teamwork, and organizational performance. Ultimately, equity, diversity, and inclusion drive innovation and growth (Herring and Henderson 2014; Mor Barak 2015; CCDI and Dalhousie 2019; Nolan-Plescha 2019; OECD 2020; Government of Canada, undated; Government of Canada, 2019).

This discussion paper explores the concepts of equity, diversity, and inclusion in the context of the workplace environment of the federal government and its hiring and training practices. The paper is divided into five sections: the first section discusses the legal framework in Canada and efforts inside the federal government to promote equity, diversity, and inclusion. The second section presents data to demonstrate progress of the federal government to achieve EDI and discusses the limitations of available data. The third section discusses recent approaches to increase equity, diversity, and inclusion in the federal government, and in federal science, using mechanisms such as unconscious bias training. In the fourth section, the paper presents findings and recommendations from a foresight workshop the IOG held in April 2021. The paper concludes with a series of questions for further discussion.

EMPLOYMENT EQUITY, DIVERSITY, AND INCLUSION OVERVIEW

[Note to reader: Canada has generally adopted the language of employment equity, diversity, and inclusion (EDI). Much of the international literature pertaining to EDI is found under diversity, equity, and inclusion (DEI) or simply diversity and inclusion.]

Like other Organisation for Economic Co-operation and Development (OECD) member states with legislation that protects against discrimination, Canada has its, the *Canadian Human Rights Act* 1985. This Act prohibits discrimination based on race, ethnic or national origin, colour, age, sex, sexual orientation, disability, etc., and accompanies the *Constitution Act 1982*, chapter 1, the Charter of Rights and Freedoms which guarantees every individual equality under and before the law. Federal employees are also governed by the *Employment Equity Act* (EEA) 1995 which identifies four traditionally underrepresented or disadvantaged groups: women, Indigenous Peoples, persons



with disabilities, and members of racialized communities. The EEA (section 2) also provides for “special measures and the accommodation of differences.”

A recent addition to the Canadian EDI legislation is the *Accessible Canada Act* 2019. This Act complements the *Canadian Human Rights Act* by “identifying, removing and preventing barriers to accessibility” leading to a “barrier-free Canada by January 1, 2040.” Section 5 of the *Accessible Canada Act* specifically identifies traditional sources of barriers: (a) employment; (b) built environment; (d) procurement; (e) programs and services; and (f) transportation; and highlights (c) information and communication technologies and separately (c.1) communications as emerging barriers. Furthermore, the *Act* has established National AccessAbility Week at the end of May.

MERIT PRINCIPLE

Government staffing is “based on merit” and “free from political influence”, in accordance with the *Public Service Employment Act* (PSEA) 2003 (30)(1). Merit appointments satisfy the requirement that candidates meet “the essential qualifications for the work to be performed” (PSEA (30)(2)(a)). Assessment methods must be considered “appropriate to determine” (PSEA (36)) that qualifications are met. The Appointment Policy (AP) (Public Service Commission of Canada, 2016) provides further guidance to hiring managers. According to the expected results of the AP, appointment processes are “designed so as not to discriminate or create systemic barriers” and are “conducted in a fair and transparent manner and in good faith.” The AP provides candidates with the right to request accommodation measures in advance of a selection board based on the methods or tools that the board member has advised them will be used. Furthermore, The Public Service Commission must approve tests of “intelligence, personality, integrity and aptitude tests, and tests of mental health” (AP 9). Board members must have the “necessary competencies, including official language(s), to assess the qualifications” (Public Service Commission of Canada, 2016).



EMPLOYMENT EQUITY BY THE NUMBERS

Government departments track and report on their progress towards workforce equity which is reported to Parliament by the President of the Treasury Board. The 27th and most recent report on employment equity in the public service of Canada (Government of Canada, 2020B) indicates that more than half (54.8% or 111,332) of employees in the core public administration are women and women comprise half of the executive group. Indigenous Peoples represent 5.1% (10,435) of the core public administration and 4.1% of the executive group; persons with disabilities represent 5.2% of the public service overall (10,622) and 4.5% of the executive group; members of racialized communities represent 16.7% (34,004) of the core public service and 11.2% of the executive group. (Important note to readers: Disaggregated data is not available for racialized groups, and so it is unclear whether representation of South Asian, South East Asian, and Black Canadians is proportional to the Canadian population overall). On March 31, 2019 the public service population¹ (including all departments and agencies, per Table 1, below) was 203,268.

As Table 1 below indicates, the research scientist (RE) occupational category remains dominated by men with less than one-third of REs women. Nolan-Flecha (2019) notes that for OECD countries “the profile of candidates for IT, transport, engineering, and other STEM (science, technology, engineering and mathematics) jobs has been stubbornly dominated by white males.” Similarly, Indigenous Peoples and persons with disabilities REs also fall below their representational proportions within the public service. The Architecture, Engineering and Land Survey (NR) occupational group in the science, technology, engineering, and mathematics fields shows a representational pattern. Note, the categories of Indigenous Peoples, persons with disabilities, and members of racialized communities are not mutually exclusive as public servants can self-identify in multiple groups.

¹ Notes (1) Population of public service of Canada includes indeterminates, terms of three or more months, and seasonal employees of organizations under the *Financial Administration Act* (FAA) 1985, Schedules I and IV. (2) The sum of designated groups does not equal the total (“All Employees”) because employees may have self-identified in more than one designated group, and men are included in the total.



Table 1: Distribution of Public Service of Canada employees, by designated group and occupational group

Occupational group	All Employees	Women		Indigenous Peoples		Persons with Disabilities		Members of Visible Minorities ²	
	Number	Number	%	Number	%	Number	%	Number	%
RE: Research	2,669	863	32.3	31	1.2	66	2.5	564	21.1
SP: Applied Science and Patent Examination	8,216	4,301	52.3	148	1.8	248	3	1,803	21.9
EC: Economics and Social Science Services	16,503	9,568	58	568	3.4	818	5	3,608	21.9
SH: Health Services	3,151	2,496	79.2	214	6.8	133	4.2	349	11.1
NR: Architecture, Engineering and Land Survey	3,809	894	23.5	68	1.8	124	3.3	840	22.1
EX: Executive	5,594	2,772	49.6	230	4.1	253	4.5	628	11.2
All other categories	170,286	93,828	55.1	9,458	5.6	9,050	5.3	6,603	16.1
Total	203,268	111,352	54.8	10,435	5.1	10,622	5.2	34,004	16.7

Source: Government of Canada, 2020B

² Though the term “visible minorities” has largely been replaced with “racialized communities”, at times this document refers to data sources which still use the former term.



BEYOND THE NUMBERS

On the surface, the Government of Canada's (GoC) legislative and policy framework for people management provisions is such that there should be little reason for the federal science community or public servants to contend with workplace segregation, harassment, or discrimination based on observable differences such as skin colour, race, gender, and wearing religious or cultural symbols, or unobservable differences such as cognitive biases (e.g., preferred educational institutions) or sexual orientation (Mor Barak, 2015; Roberson, 2006).

However, workplace and workforce challenges that these frameworks and EDI are intended to address, such as systemic racism, ableism and other forms of discrimination, persist throughout society and workplaces (Nichols 2017; Hayes 2012) and subsequently, within the Canadian federal public service.

To recognize its need to confront racism and discrimination, in June 2019, the GoC launched its *Building a Foundation for Change: Canada's Anti-racism Strategy 2019-2022* (Canadian Heritage, 2019). The strategy resulted from public consultations held from October 2018 to March 2019. The engagement process undertook to:

- Identify issues and experiences related to racism, and the factors that contribute to them;
- Generate ideas and suggestions on how the Government of Canada can best address racism;
- Increase public understanding of the nature of racism in Canada and the Government of Canada's role in overcoming it;
- Demonstrate the Government's interest and involvement in combating racism. (Canadian Heritage, 2019B)

On January 22, 2021, Ian Shugart, then Clerk of the Privy Council challenged leadership of all federal departments and agencies in the Call to Action on Anti-Racism, Equity, and Inclusion in the Federal Public Service (Privy Council Office, 2021) to tackle systemic racism and actively improve inclusion and equity in the public service workforce. This call to action, and its subsequent responses builds upon the Accessibility Strategy for the Public Service of Canada (Government of Canada, 2019) which led to the *Accessible Canada Act* 2019 and the recommendations found in the final report *Many Voices One Mind: a Pathway to Reconciliation* (Government of Canada, 2017) of the Interdepartmental Circles on Indigenous Representation.



The Clerk's challenge (Privy Council Office, 2021) extended beyond developing knowledge and tools to strike down barriers to equity and inclusion and combat systemic racism to:

- “**Appoint** Indigenous employees and Black and other racialized employees to and within the Executive Group through career development and talent management;
- **Sponsor** high-potential Indigenous employees and Black and other racialized employees to prepare them for leadership roles;
- **Support** the participation of Indigenous employees and Black and other racialized employees in leadership development programs (for example, the Executive Leadership Development Program) and career development services (for example, official language training);
- **Recruit** highly qualified candidates from Indigenous communities and Black and other racialized communities from across all regions of Canada” (Privy Council Office, 2021).

Public Sector leadership took up the challenge and departments and agencies progress reports (Privy Council Office, 2021B) requested June 28, 2021 were found “encouraging” and leading towards the “public service Canadians desire – one where everyone feels supported and included, and reflects the people we serve.” Sharing the letters allows all Canadians to learn of each department and agency’s plans, actions, and reporting on EDI activities while sharing best practices throughout the federal community.

However, much work remains to be done.

PUBLIC SECTOR MERIT PRINCIPLE: PROCESSES, TOOLS, AND BIASES

Determining merit using standardized or generic tests can lead to selection bias (Hayes 2012: 163-174). For instance, the theoretical underpinnings of the GoC’s EDI initiative recognizes that there are gender and cultural differences in how candidates interact with board members, that selection board members may have unconscious biases (blind-name techniques) (Yiridoe, 2021; Nolan-Flecha, 2019; Banerjee et al., 2017; Nichols, 2017; O’Neil, 2016). Test preparation courses and application and resume preparation services are available and can give candidates that are aware of and can afford these services advantages over candidates without access to these resources (Markovits 2019; O’Neil, 2016; Hayes, 2012). Similarly, as merit is based on knowledge and skills, providing proof of foreign credentials imposes costs and therefore is a barrier to some equity groups (Treasury Board Secretariat, 2017, Recommendation 7).



Standardized tests are intended to pass objective judgment on candidates but their design can ingrain unconscious bias for candidates unfamiliar with cultural mores (Soares, 2020; O'Neil, 2016). Training hiring managers on unconscious bias has been recommended (including acknowledging the limits of unconscious bias training), although this training, like diversity and inclusion training, has not been proven to produce desired outcomes (Nolan-Flecha, 2019; Nathoo, 2021). Some accommodations can be made to offset barriers to candidates such as extending time limits. One roundtable participant indicated their department includes an Indigenous evaluator on the staffing board to directly address cultural barriers that may arise in the selection process. This process has contributed to avoid screening out qualified applicants. Hiring managers are advised to use services provided by the Public Service Commission (PSC) to review their assessment tools and to use those tools that the PSC has made available.

According to the OECD (2020) the “application of behavioural insights to reduce bias in recruitment and promotion processes is being increasingly adopted.” For the GoC, an initiative that emphasizes training on recognizing and eliminating unconscious bias is underway. This training emphasizes that “unconscious biases are important to recognize in instances when quality, relevance and competence are evaluated” (Government of Canada, not dated).

In the federal scientific community, systemic barriers for underrepresented groups include expectations that they participate on selection boards, on other committees, and in inclusion related activities such as being mentors to other, junior staff. The underrepresented nature of these communities requires that a fewer number of people is increasingly asked to take on more tasks, yet none of these tasks are recognized as developmental opportunities. As a result, these employees may be penalized because the time they devote to the activities above takes them away from their lab, from research and from producing publications on which their performance is assessed. As an IOG workshop participant (2021) indicated: *“I’m concerned about overloading diverse people with “unfunded mandates” in relation to diversity and inclusion workplace activities.”*

Another barrier to EE group members is that of unconscious bias. Unconscious bias can play a role in assessment for promotions as well as deference given to dominant group members and their preferences can be career advancement obstacles (Yiridoe, 2021). Unconscious bias can affect applicants from underrepresented groups, especially those with foreign credentials (Banerjee et al., 2017). Institutional bias, due to affiliation for hiring managers or prestige (name recognition), similarly age bias can discount an applicant with younger applicants perceived to having more up to date



skills or older applicants preparing for retirement (for further information on types of biases, see Nolan-Flecha, 2019).

These findings are important for the scientific community where EE groups are clustered in the lower-paid levels of occupational categories which leads to wage gaps (OECD 2020). To overcome barriers to entry and to promote career advancement for Indigenous Peoples, training and employment programs such as the joint Health Canada and Public Health Agency of Canada Recruitment for Indigenous Peoples (2017) initiative are available. The Public Service Commission's Indigenous recruitment centre provides support for hiring managers.³

Though there has been interest in recent years to employ artificial intelligence (AI) algorithms to overcome bias, O'Neil (2016) cautions against blindly turning to data science including AI to resolve these and similar problems. AI algorithms are only as good as the training and historical data upon which they draw. If the data includes the biases of previous hiring managers, and the biases of previous applicant pools, these biases will be perpetuated.

The EDI philosophy promotes a sense of belonging so that individuals bring their “whole selves” to work (Roberson, 2006). This thought was echoed by an IOG workshop participant who said: *“We need to have an environment that allows individuals the freedom to be themselves and to bring their whole self to the workplace, even if they are non-traditional.”* While this comment references EDI philosophy, it may also be a reference to the real and perceived larger systems of power – settler colonialism, white supremacy, and heteropatriarchy – and their ongoing impacts in Canada.

To break down barriers and improve inclusion, practices such as cross-functional teams and non-hierarchical office spaces are recommended, as well as ongoing, mandatory training on unconscious bias, intercultural ‘essentials’, and inclusion and diversity (Bernstein et al. 2020; OECD 2020; Roberson, 2006). This is especially critical for those with hiring responsibilities, as this is the first point where unconscious biases may influence the path of EE candidates.

Roundtable participants pointed to the need for a standardized post-selection board review to evaluate hiring process and assessment tools in their departments and agencies in order to avoid screening out EE candidates at any particular stage of the hiring process or as a result of a specific assessment tool, and to train hiring staff on alternative methods and approaches for assessing applications. On the subject of retention and promotions, roundtable participants suggested rather than taking the approach to justify the selection of a candidate for hiring, promotion, or other career

³ Aboriginal and Indigenous are used synonymously on some Government of Canada websites. Throughout this document, Indigenous has been used except for direct citations.



opportunities, staff with these decision-making powers should be required to provide justifications as to why candidates were not selected. This recommendation is similar to those provided by diversity and inclusion experts who recommended that all candidates should be considered eligible for promotion, and promotion boards should provide substantiated reasons against promotion (Nolan-Flecha 2019).

OVERVIEW OF GSINN EDI WORKSHOP DISCUSSIONS

In April 2021, the Institute on Governance hosted a half-day workshop on EDI. Subject matter experts from eight federal departments – Agriculture and Agri-Food Canada; Health Canada; Innovation, Science and Economic Development Canada; National Research Council of Canada; Natural Resources Canada; Public Health Agency of Canada; Public Services and Procurement Canada; and Transport Canada – participated in the discussion. The workshop employed the seven-question foresight methodology to explore the themes of equity, diversity, and inclusion. In February 2022, the IOG hosted a multisectoral roundtable with partners of the above listed departments to discuss this topic in the context of relationships with federal departments. Meetings with subject matter experts occurred between these two roundtables, both informally through adhoc phone calls and email exchanges, and formally in the form of written responses to earlier drafts of this paper.

What follows are some key take-aways and overall considerations about EDI from those workshops.

Language Matters. Throughout the workshop, participants emphasized the impact of words and language. Roundtable participants agree that Federal EE language is outdated and contributes to a lack of individual considerations for employees. For example, the use of the term ‘visible minority’ has been identified by The United Nations Committee on the Elimination of Racial Discrimination as masking groups that are experiencing the greatest inequities (United Nations, 2007). Similarly, participants noted that the language within the Employment Equity Act classifications amalgamates heterogeneous groups, subsequently misrepresenting and overlooking the difficulties that specific groups face. Workshop participants also counselled that not all candidates or employees self-identify in EE groups. Managers need to be aware that EE identification continues to carry stigma for some employees.

Participants explained that language within frameworks centered on ‘merit’ and ‘quotas’ is problematic and can cause additional workplace stresses. Throughout the workshop, participants spoke to their lived experiences as minorities who entered organizations and confronted the biases



of their colleagues who presumed that they are were hired solely on the basis of their identity. These employees are often made to feel that they must prove their ‘merit’.

Targets and Quotas. At the organizational level, participants agree that targets and quotas are useful tools to measure progress; they provide accountability frameworks and other benefits. However, targets in isolation do not accurately measure equity in the workplace, and according to roundtable participants, they can be misleading. Quotas and targets must be considered alongside Human Resource policy, leadership governance, and workplace culture to determine whether a workplace is truly equitable. For example, while a department may have reached their targets and subsequently be considered as an ‘equitable employer’, this does not consider the microaggressions, unequitable access to training, and other barriers that employees may face in the workplace.

The Need for Psychological Safety. Roundtable participants noted that psychological safety in the workplace, for marginalized groups, is often overlooked. A number of studies demonstrate that discrimination in the workplace is a daily occurrence for racialized employees and employees with disabilities (Zou et al., 2022). Studies have linked the effects of discrimination in the workplace to serious health impacts, leading to increased levels of stress, depression, anxiety, insomnia, changes to blood pressure, and even post-traumatic stress disorder (PTSD) (Kearney et al., 2022).

The workplace must be psychologically safe for employees to self-identify without fear of stigmatization or career limitations. Participants suggested that the Public Service Employees Survey could become a vehicle to ask employees about their psychological safety.

Inclusive Workspaces. As more and more public servants contemplate various return-to-the-office scenarios, workshop participants proposed a hybrid model of “part-time on-site/part-time work-from-home” which they perceive as a flexible model that allows employees and their employers the best of both worlds, i.e., employees working from home for concentrated, independent projects and working on-site for team projects and cohesion purposes. Other suggestions were full-time work-from-home for those with mobility problems or who may have difficulties commuting. These models accommodate parents with school age children and potential school closures and permit employees to schedule their work activities outside traditional core business hours. Such a model promotes a focus on productivity and accountability in the workplace over “presentism”.

Another consideration brought forward by participants is that infrastructure requirements, such as availability of laboratory space and access, persist. Participants noted that transferability of special equipment without ergonomic or medical assessments and general provision of office supplies for



those working from home were strongly suggested as recognition that people work differently, and that employee well-being is paramount.

Accessible Training. Public servants are required to be fluent in English and French to move into supervisory or management positions. Is this an outdated paradigm in Canada's public service? Learning second (or more) languages presents a variety of challenges. Workshop participants championed the need to recognize individuality in language learning. Some learners perform well in group learning situations while others succeed better with one-on-one training. Workshop participants were mindful of the need to respect and consider different learning styles. The workshop participants were also mindful of the frequency and availability of second language French training over English training in the National Capital Region, and of (English) training for French-speaking public servants. Others noted that many candidates in EE groups are already bilingual or trilingual, but only one of those languages is an officially recognized language of Canada, and suggested that language requirements be revisited across the public service and only required for those roles that have a public or citizen-facing function.

Shifting How and What We Know. Science uses a specific methodology and validation structure which can inform how individuals think about and solve problems. Participants noted that science in Canada has, and continues to, perpetuate the exclusion of specific groups. For example, gender data gaps, like those highlighted by Criado-Perez in *Invisible Women* (2019), continue to persist in scientific research. Scientists also, often, disregard other ways of knowing, are not inclined to use qualitative data, or include in their research lived experiences and Indigenous Knowledges. These scientific practices promote bias and fail to acknowledge the limits of the scientific enterprise.

FUTURE DIRECTIONS AND QUESTIONS FOR DISCUSSION

EDI practices result in more diverse workspaces and improve diversity and inclusion by breaking down cliques often caused through hiring practices starting with preferential treatment of alums or familiar local institutions of higher education. Hiring processes' and assessment tools should be subject to regular assessments and updates to ensure they do not impose barriers for EE candidates.

Hiring and promotion are two key aspects of EDI. However, daily work life and workplace practices are also essential to retention and staff morale. There are a multitude of recommended practices, including how to set up office spaces to flatten hierarchies and to encourage cross-team fertilization



of ideas and interactions. Co-locating teams of scientists that normally would not work together, e.g., creating multi-departmental shared labs, would amplify cross-team knowledge sharing (a play on co-locating research and development and production teams in manufacturing). [See also GSINN discussion paper on Global Research Collaboration and Infrastructure.]

Discussion questions:

- What workplace practices can employers undertake to enhance EE group talent attraction, development, accommodation, and retention?
- How can systemic racism be and harassment be effectively addressed?
- How can the federal community ensure that hiring and promotion of EE group members are not perceived as tokenism or dilution of the merit principle?

In addition, the pandemic has demonstrated the ability to work effectively in **geographically diverse regions** of the country.

Discussion questions:

- What sort of impact does a geographically dispersed workforce have on inclusion practices within science-based departments and agencies?
- What workplace practices could be explored to support or improve cross-team knowledge sharing and adoption of best practices?
- What incentives are required to ensure that senior management actively work to realize a diverse and inclusive federal (science) workforce?

This discussion paper has largely focused on achieving equity, diversity and inclusion in the workplace through **hiring practices and training**. EDI has implications for the conduct of science that go beyond human resources. Such questions include but are not limited to what science is conducted and how. What counts as evidence? What counts as expertise? What policies, frameworks and structures in the scientific enterprise perpetuate racism, oppression, and white supremacy? How can we reconsider epistemological foundations of government science to value equity, diversity and inclusion?

Discussion question: How can government scientists and stakeholder work together to reconsider the epistemological foundations of government science to recognize and value equity, diversity, and inclusion?



REFERENCES

- Accessible Canada Act, 2019 (c10). [Online.] Ottawa: Federal Legislature. Available from: <https://laws-lois.justice.gc.ca/eng/acts/A-0.6/page-1.html#h-1153414>
- Banerjee, R., Reitz, J.G., and Oreopoulos, P. 2017. Do Large Employers Treat Racial Minorities More Fairly? A New Analysis of Canadian Field Experiment Data. *Research Report*. Toronto: Munk School of Global Affairs, University of Toronto.
- Bernstein, R. S., Bulger, M., Salipante, P., and Weisinger, J.Y. 2020. From Diversity to Inclusion to Equity: A Theory of Generative Interactions. *Journal of Business Ethics* **167**, pp.395-410. Available from: <https://doi.org/10.1007/s10551-019-04180-1>.
- Canadian Heritage. 2019. Building a Foundation for Change: Canada's Anti-Racism Strategy 2019–2022 [Online.] Available from: <https://www.canada.ca/en/canadian-heritage/campaigns/anti-racism-engagement/anti-racism-strategy.html> [Accessed June, 2021.]
- Canadian Heritage. 2019B. What we Heard – Informing Canada's Anti-Racism Strategy. [Online.] Available from: <https://www.canada.ca/en/canadian-heritage/campaigns/anti-racism-engagement/what-we-heard.html>. [Accessed June, 2021].
- Canada Human Rights Act 1985. [Online.] Ottawa: Federal Legislature. Available from: <https://laws-lois.justice.gc.ca/eng/acts/h-6/>.
- Canadian Centre for Diversity and Inclusion (CCDI) and Dalhousie University. 2019. *National Diversity and Inclusion Benchmarking Study: Senior Leaders and Diversity Personnel*. [Online.] Available from: <https://ccdi.ca/media/1867/20190225-research-national-diversity-and-inclusion-benchmarking-study.pdf>. (Accessed 3 June 2021).
- Constitution Act 1982 (c1, The Charter of Rights and Freedoms). [Online.] Ottawa: Federal Legislature. Available from: <https://laws-lois.justice.gc.ca/eng/const/page-12.html>
- Criado Perez, C. 2019. *Invisible Women: Data Bias in a World Designed for Men*. New York: Abrams Press
- Employment Equity Act, 1995. (c.44) [Online.] Ottawa: Supreme Court. Available from: <https://laws-lois.justice.gc.ca/eng/acts/e-5.401/page-1.html>
- Financial Administration Act, 1985. (c. F-11) [Online.] Ottawa: Supreme Court. Available from: <https://laws-lois.justice.gc.ca/eng/acts/F-11/>



Government of Canada. 2020. Policy on People Management. [Online.] Available from: <https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32621> [Accessed June 2021.]

Government of Canada. 2020b. Employment Equity in the Public Service of Canada for Fiscal Year 2018 to 2019. [Online.] Available from: <https://www.canada.ca/en/government/publicservice/wellness-inclusion-diversity-public-service/diversity-inclusion-public-service/employment-equity-annual-reports/employment-equity-public-service-canada-2018-2019.html>

Government of Canada. 2019. Accessibility Strategy for the Public Service of Canada [Online.] Available from: <https://www.canada.ca/en/government/publicservice/wellness-inclusion-diversity-public-service/diversity-inclusion-public-service/accessibility-public-service/accessibility-strategy-public-service-toc.html>. [Accessed June 2021]

Government of Canada. 2017. Many Voices One Mind: a Pathway to Reconciliation. [Online.] Available from: <https://www.canada.ca/en/government/publicservice/wellness-inclusion-diversity-public-service/diversity-inclusion-public-service/knowledge-circle/many-voices.html>. [Accessed January 2022]

Government of Canada. (Not dated). Bias in Peer Review – A Training Module. [Online.] Available from: <https://www.chairs-chaires.gc.ca/program-programme/equity-equite/bias/module-eng.pdf> (Accessed June 2021).

Hayes, C. 2012. *The Twilight of the Elites: America after Meritocracy*. New York: Broadway Paperbacks, Division of Random House

Health Canada and the Public Health Agency of Canada. 2017. Recruitment for Indigenous Peoples. [Online.] Available from: <https://www.canada.ca/en/treasury-board-secretariat/corporate/reports/building-diverse-inclusive-public-service-final-report-joint-union-management-task-force-diversity-inclusion.html#toc17>. [Accessed June 2021]

Herring, C. and Henderson, L. 2014. *Diversity in Organizations: A Critical Examination*. New York: Routledge

Institute on Governance. 2022. Multisectoral stakeholder workshop on equity, diversity, and inclusion. Ottawa.

Institute on Governance. 2021. Foresight workshop on equity, diversity and inclusion. Ottawa.



Kearney, M. D. et al. (2022) Employee Health and Wellness Outcomes Associated with Perceived Discrimination in Academic Medicine: A Qualitative Analysis. *JAMA network open*. [Online] 5 (1), e2145243–e2145243.

Markovits, D. 2019. *The Meritocracy Trap*. New York: Penguin Press.

Mor Barak, M. E. 2015. Inclusion is the Key to Diversity Management, but What is Inclusion? *Human Service Organizations: Management, Leadership & Governance*. **39** (2), pp. 83-88. Available from: [DOI:10.1080/23303131.2015.1035599](https://doi.org/10.1080/23303131.2015.1035599).

Nathoo, Z. 2021. Why ineffective diversity training won't go away. *BBC Worklife*. [Online]. 16 June. [Accessed 17 June 2021]. Available from: <https://www.bbc.com/worklife/article/20210614-why-ineffective-diversity-training-wont-go-away>

Nichols, T. 2017. *The Death of Expertise: The Campaign against Established Knowledge and Why It Matters*. New York: Oxford University Press. (reprinted 2019)

Nolan-Flecha, N. 2019. *Next generation diversity and inclusion policies in the public service: Ensuring public services reflect the societies they serve*.

[Online.] 34. Paris: OECD Working Papers on Public Governance. [Accessed June 2021]. Available from: <https://dx.doi.org/10.1787/51691451-en>

O'Neil, C. 2016. *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy*. New York: Broadway Books.

Organisation for Economic Co-operation and Development (OECD). 2020. *Focus on Diversity at Work: Making the Most Out of Increasingly Diverse Societies*. [Online] Available from: <https://www.oecd.org/els/diversity-at-work-policy-brief-2020.pdf> [Accessed June, 2021]

Privy Council Office. 2021. Call to Action on Anti-Racism, Equity, and Inclusion in the Federal Public Service [Online.] Available from: <https://www.canada.ca/content/dam/pco-bcp/images/pco2/misc/Action-eng.pdf> [Accessed January, 2022]

Privy Council Office. 2021B. Letters on the Implementation of the Call to Action on Anti-Racism, Equity, and Inclusion in the Federal Public Service. [Online]. Available from: <https://www.canada.ca/en/privy-council/corporate/clerk/call-to-action-anti-racism-equity-inclusion-federal-public-service/letters-implementation.html> [Accessed January, 2022]



Public Service Commission of Canada. 2016. Appointment Policy. [Online]. Available from: <https://www.canada.ca/en/public-service-commission/services/appointment-framework/appointment-policy.html> [Accessed June 2021.]

Public Service Employment Act, 2003. (c. 22, ss. 12, 13) [Online.] Ottawa: Supreme Court. Available from: <https://laws-lois.justice.gc.ca/eng/acts/p-33.01/FullText.html>

Roberson, Q. M. 2006. Disentangling the Meanings of Diversity and Inclusion in Organizations. *Group and Organization Management* **31** (2) pp. 212-236.

Soares, J. A. 2020. *The Scandal of Standardized Test: Why We Need to Drop the SAT and ACT*. New York: Teachers College Press, Columbia University

Treasury Board Secretariat. 2020. Directive on Employment Equity, Diversity and Inclusion. [Online.] Available from: <https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32635§ion=html> [Accessed June 2021.]

Treasury Board Secretariat of Canada. 2017. Building a Diverse and Inclusive Public Service: Final Report of the Joint Union/Management Task Force on Diversity and Inclusion. [Online] Available from: <https://www.canada.ca/en/treasury-board-secretariat/corporate/reports/building-diverse-inclusive-public-service-final-report-joint-union-management-task-force-diversity-inclusion.html#toc17>. [Accessed 27 April, 2021.]

Treasury Board Secretariat of Canada. 2017B. What's in a Name? Name-blind recruitment comes to the Government of Canada. [Online.] Available from: https://www.canada.ca/en/treasury-board-secretariat/news/2017/04/what_s_in_a_namename-blindrecruitmentcomestothegovernmentofcanad.html [Accessed June 2021.]

United Nations. 2007. Committee on Elimination of Radical Discrimination Considers Report of Canada. [Online]. [Accessed June 2022]. Available from: <https://www.ohchr.org/en/press-releases/2009/10/committee-elimination-racial-discrimination-considers-report-canada>

Yiridoe, E. K. 2021. Fostering a culture of equity, diversity, and inclusion in the Canadian agricultural economics profession. *Canadian Journal of Agricultural Economics*. 69 (1) pp.5-15 [Online.] Available from: [DOI:10.1111/cjag.12262](https://doi.org/10.1111/cjag.12262)

Zou, C., Borova, B., Parkin, A., & Opasina, K. O. 2022. Experiences of Discrimination at Work. [Online]. Canada: Future Skills Centre. [Accessed August 10th 2022]. Available from: <https://library.leeds.ac.uk/referencing-examples/9/leeds-harvard/92/e-book--online-or-via-e-book-reader->



APPENDIX 1: DEFINITIONS

Barrier “means anything — including anything physical, architectural, technological or attitudinal, anything that is based on information or communications or anything that is the result of a policy or a practice — that hinders the full and equal participation in society of persons with an impairment, including a physical, mental, intellectual, cognitive, learning, communication or sensory impairment or a functional limitation.” From the *Accessible Canada Act*, **barriers** “include physical, architectural, technological or attitudinal obstacles, policies, practices, systems, or procedures that exclude or hinder the full and equal participation of persons protected from discrimination by the *Canadian Human Rights Act*, in employment.” (Accessible Canada Act, 2019; Government of Canada, 2020)

Disability “means any impairment, including a physical, mental, intellectual, cognitive, learning, communication or sensory impairment — or a functional limitation — whether permanent, temporary or episodic in nature, or evident or not, that, in interaction with a barrier, hinders a person’s full and equal participation in society.” (Accessible Canada Act, 2019)

Discrimination is “treating someone unfairly by either imposing a burden on them, or denying them a privilege, benefit or opportunity enjoyed by others, because of their race, citizenship, family status, disability, sex or other personal characteristics.” (Canadian Heritage, 2019B)

Diversity, defined by Treasury Board of Canada Secretariat as: “a workforce that comprises individuals who have an array of identities, abilities, background, culture, skills, perspectives, and experiences that are representative of Canada’s current and evolving population. This includes but is not limited to differences in ethnicity or race, culture, religion, disability, sexual orientation, gender identity, age, educational background, region, and marital or parental status.” (Government of Canada 2020)

Employment equity “aims to achieve equality in the workplace and to correct conditions of disadvantage in employment for the four designated groups: women, Aboriginal peoples [referred to as Indigenous Peoples in this document], persons with disability and members of visible minorities [referred to as racialized communities in this document].” (Treasury Board Secretariat, 2020)

Equity: “Fairness, impartiality, even handedness. A distinct process of recognizing differences within groups of individuals, and using this understanding to achieve substantive equality in all aspects of a person’s life.” (Canadian Heritage, 2019B)

Inclusion, similarly defined in the Policy on People Management (Government of Canada, 2020) “Refers to creating a workplace that is fair, equitable, supportive, welcoming and respectful of all. It recognizes, values and leverages differences in identities, abilities, backgrounds, cultures, skills,



experiences, and perspectives that support and reinforce Canada's evolving human rights framework."

An **inclusive workplace** is fair, equitable, supportive, welcoming and respectful. It recognizes, values and leverages differences in identities, abilities, backgrounds, cultures, skills, experiences and perspectives that support and reinforce Canada's evolving human rights framework. (Treasury Board Secretariat, 2017.)

Intersectionality is "the idea that, in individuals, multiple identities (for example, gender, ethnicity, sexual orientation, ability) intersect to create a whole that is different from the component identities." (Canadian Heritage, 2019B)

Race "is a 'social construct.' This means that society forms ideas of race based on geographic, historical, political, economic, social and cultural factors, as well as physical traits, even though none of these can legitimately be used to classify groups of people." (Canadian Heritage, 2019B)

Social participation consists of "Involvement in meaningful activities (social, cultural, physical, educational, recreational, etc.) that increase one's sense of belonging and well-being. (Canadian Heritage, 2019B)

Systemic or institutional discrimination "consists of patterns of behaviour, policies or practices that are part of the social or administrative structures of an organization, and which create or perpetuate a position of relative disadvantage for racialized persons. These appear neutral on the surface but, nevertheless, have an exclusionary impact on racialized persons." (Canadian Heritage, 2019B)

Unconscious bias "is an implicit attitude, stereotype, motivation or assumption that can occur without one's knowledge, control or intention. Unconscious bias is a result of our life experiences." "Examples of unconscious bias include gender bias, cultural bias, age bias, language and institutional bias. (Government of Canada, not dated)

Workforce diversity refers to the division of the workforce into distinct categories that (a) have a perceived commonality within a given cultural or national context and that (b) impact potentially harmful or beneficial employment outcomes such as job opportunities, treatment in the workplace, and promotion prospects – irrespective of job-related skills and qualifications. (Mor Barak, 2015).

