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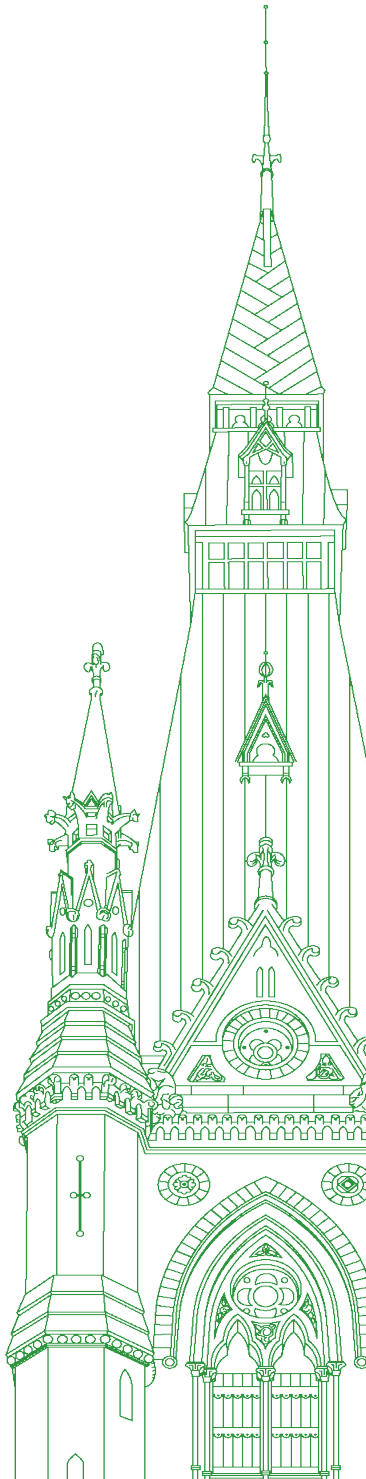

Chair: Salma Zahid

Standing Committee on Science and Research

Monday, September 15, 2025

● (1105)

[*English*]

The Chair (Salma Zahid (Scarborough Centre—Don Valley East, Lib.)): I call the meeting to order.

Good morning, everybody. Welcome to meeting number two of the Standing Committee on Science and Research.

Pursuant to the motion of the committee on June 18, 2025, the committee is meeting to study the impact that the criteria for awarding federal funding have on research excellence here in Canada.

Today's meeting is taking place in a hybrid format. Pursuant to the Standing Orders, members are attending in person, in the room, and remotely by using the Zoom application. I think all of the members are in person right now for this one.

Before we continue, I would like to ask all in-person participants to consult the guidelines written on the cards on the table. These measures are in place to help prevent audio and feedback incidents and to protect the health and safety of all of the participants, including the interpreters.

You will also notice a QR code on the card. It links to a short awareness video.

I would like to make few comments for the benefit of witnesses and members.

Please wait until I recognize you by name before speaking. To those participating by video conference, click on the microphone icon to activate your mic, and please mute yourself when you are not speaking. Those of you on Zoom can select the appropriate channel for “floor”, “English” or “French” at the bottom of your screen. Those in the room can use the earpiece and select the desired channel.

I will remind you that all comments should be addressed through the chair. Members in the room, if you wish to speak, please raise your hand. Members on Zoom, please use the “raise hand” function. The clerk and I will manage the speaking order as best as we can, and we appreciate your patience and understanding in this regard.

I would like to welcome our three witnesses for this panel. We are joined virtually by Gita Ljubicic, professor at McMaster University. We are joined in person by Steven Pinker, Johnstone family professor of psychology, Harvard University. The third witness for today is Azim Shariff, professor at the University of British Columbia. He has joined us via video conference.

Welcome, and thanks a lot for coming.

With that, we will go to the witnesses.

The first one will be Ms. Gita Ljubicic. You will have five minutes for your opening remarks. Please go ahead.

Gita Ljubicic (Professor, McMaster University, As an Individual): Thank you so much.

I'm just checking.... We can't see you online. Are we only doing audio, or do we have video too in the room?

The Chair: Thank you.

I think there are some technical issues, but we can see you. You can go ahead with your five minutes. The clerk is looking into that.

Thank you.

Gita Ljubicic: Thank you for the opportunity to appear before this committee on science and research today. It's an honour to share my experiences on how federal funding criteria impact research excellence in Canada.

Public investment in research is vital for advancing knowledge, solving complex problems and training future researchers. However, evaluating proposals is challenging. Reviewers aim to fund research that positively impacts Canadians through innovation, evidence and creativity, and in ways that improve our understanding of the world, quality of life and equity.

Conventional measures of excellence often focus on quantitative indicators like the number of grants, publications, awards and scholarships; the number of students graduated; an individual's track record; and proposal strength. While these do reflect academic productivity, they don't always capture real-world impacts, such as informing policy and community decisions, improving health and education practices and outcomes, supporting economic growth, advancing reconciliation, and promoting environmental sustainability and social equity. Researchers highlight these impacts in applications, but measuring them remains difficult, and this creates challenges for rigorous, fair and consistent approaches to evaluation.

My name is Gita Ljubicic. I'm a professor in the school of earth, environment and society at McMaster University, and I lead the StraightUpNorth, or SUN, research team. I'm a geographer, trained in both natural and social sciences, working at the intersection of cultural and environmental geography. My research is rooted in respectful collaboration with indigenous knowledge holders to address complex social and ecological issues. For over 25 years I've worked primarily with Inuit communities in Nunavut, and, through students and collaborators, I've been involved in projects across Inuit Nunangat—which are Inuit homelands in the Canadian Arctic—and with first nations and Métis communities in Yukon and Northwest Territories. Our SUN team aims to ensure that research benefits our community partners, informs decision-making, improves research practice and supports emerging northern researchers.

My recommendations here today reflect personal experience in community-engaged and interdisciplinary research. Federal funding criteria must include qualitative indicators that rigorously and fairly assess research excellence. I have experience working with NSERC, SSHRC, CIHR—receiving those funds as well as reviewing applications—and interdisciplinary initiatives through the tri-council, Environment and Climate Change Canada, and Crown-Indigenous Relations and Northern Affairs Canada.

Funding policies have evolved to better support interdisciplinary research, EDI initiatives, indigenous leadership partnerships, early career researchers, mentorship, and knowledge mobilization. However, alongside these important policy changes, targeted funding opportunities and new requirements in proposals, the conventional quantitative and academic focus metrics of excellence need to be re-envisioned.

There are six ways that I propose this can be achieved, and I would be happy to expand on any of these today or in follow-up written testimony. My suggestions are to ensure the representation of reviewers with direct cultural or community-specific experience in funding evaluation committees; to ensure the representation of early career researchers as reviewers for early career research-specific funding pools; to consider the amount of time dedicated to community-engaged and partnership research when assessing the rationale, methodology, budget and claims of significance in a proposal; to extend consideration of training and mentorship contributions beyond academic, highly qualified personnel; to assess partnerships according to their diversity of roles, strengths of relationships and evidence of collective planning and implementation; and to recognize that knowledge mobilization goes beyond academic audiences and public outreach.

● (1110)

In the few minutes I've had today, I've offered these six specific recommendations to refine how federal research funding is assessed and allocated.

The Chair: Can you please wind up?

Gita Ljubicic: Yes.

How excellence is defined influences the conduct of partnerships, approaches to mentorship and whether disciplinary norms evolve to meet complex challenges, so alongside academic records, we must assess impact track records.

Five minutes is a short time to present substantive ideas. The committee's study here deserves thoughtful discussion. I welcome the opportunity for more dialogue today and to further contribute to the committee initiatives in the future.

Thank you. *Merci*. *Qujannamiik*.

The Chair: Thanks a lot.

With that, we will now proceed to our second witness, Mr. Pinker.

Mr. Pinker, you have five minutes for your opening remarks. Please go ahead.

Steven Pinker (Johnstone Family Professor of Psychology, Harvard University, As an Individual): Madam Zahid, Monsieur Blanchette-Joncas and members of the Standing Committee on Science and Research, as a proud Canadian and graduate of Dawson College and McGill University, it is a tremendous honour to speak to you today about diversity in science.

Starting in the late 1970s, the concept of diversity became popular in the United States after the Supreme Court ruled—

The Chair: I'm sorry for interrupting, Mr. Pinker.

There is some technical difficulty. We have to suspend the meeting for a minute so that the clerk can look into this.

Thank you, Mr. Pinker. Again, I'm sorry for interrupting.

● (1110)

_____(Pause)_____

● (1120)

The Chair: I call the meeting back to order.

I'm sorry about that. I will instruct the clerk, for future purposes, to also do the checks with the witnesses present in the room.

We will go back to Mr. Pinker.

We will give you five minutes, so please start from the beginning. Thank you, Mr. Pinker.

Steven Pinker: Madam Zahid, Monsieur Blanchette-Joncas, and members of the Standing Committee on Science and Research, as a proud Canadian and graduate of Dawson College and McGill University, it's a tremendous honour to speak to you today about diversity in science.

Starting in the late 1970s, the concept of diversity became popular in the United States after the Supreme Court ruled that explicit racial quotas in university admissions were a form of unconstitutional discrimination, but that it was acceptable for schools to favour minority students if the goal was to enhance the educational experience of all students by having a diverse student body. Over time, the laudable goal of diversity morphed into policies that increasingly used race and sex as criteria in admissions, hiring and funding. That was the “D” in DEI, or EDI.

More recently, the term “viewpoint diversity” became popular as an ironic response to racial and gender diversity. The joke went that in a university, “diversity” means people who look different and think alike; viewpoint diversity, in contrast, is the form of diversity that really matters in scientific and intellectual life. It is simply not true—indeed, one might say it is a form of prejudice—to assume that all women or all members of a racial or ethnic minority think in a particular way.

A diversity of viewpoints, though, is necessary to do science properly. This is not because diversity is aesthetically pleasing; it's because people are not omniscient or infallible. As a cognitive scientist, I can attest that the human mind is vulnerable to many biases and fallacies. The strongest is the “myside” bias, the conviction that my own tribe, coalition or party is correct and that a rival coalition is ignorant or evil or both. People are poor at spotting their own biases. As the economist Joan Robinson put it, “Ideology is like breath. You never smell your own.”

The reason that science can proceed despite these blind spots is that we're much better at spotting someone else's biases. In a community in which people with different viewpoints can criticize those they disagree with without fear of punishment, censorship or cancellation, one person can point out another's errors, and the whole community can be more rational than any of the individuals in it.

In contrast, there are several reasons to fear that diversity, in the DEI sense of allocating funding to scientists based on their race or sex, works against the interests of science and the nation.

First, it can be inherently unfair. Funding is a zero-sum game. If people of one sex or skin colour are given an advantage, then others of a different sex or skin colour are being put at a disadvantage. This was the reason that my own institution lost another famous Supreme Court case, Students for Fair Admissions, Inc. v. President and Fellows of Harvard College, in 2023. The court ruled that in favouring Hispanics and African Americans in admissions, Harvard was unconstitutionally discriminating against Asian Americans.

Second, it can be a waste of taxpayer money if grant dollars don't go to the scientific research that is judged to be of the highest quality and priority. Of course, reviewers of grant proposals are themselves subject to biases, including racism and sexism, but this means that the biases themselves should be minimized through blind review, audits and the most objective measures of quality and influence we can find.

Third, while it's laudable to attract the widest range of talent in science and to overcome past barriers to inclusion, the awarding of grants takes place at the end of the science training pipeline, far too late in a person's life to rectify social and historical inequities. Obsessing over statistical differences in the awarding of research grants draws attention away from formative influences that create inequities in the first place, including education from the preschool years through university as well as social and cultural norms that make science attractive as a career.

Finally, the promotion of diversity in gender and ethnicity at the same time that diversity in opinion is constricted by censorship, cancellation or intellectual monocultures undermines public trust in science. I often mention to audiences or interviewers that the massive scientific consensus is that human activity is warming the planet. Many times a listener has replied, “But why should we trust the consensus if it comes from a clique that does not favour the best science and that punishes anyone who disagrees with the orthodoxy?”

● (1125)

Recent events in the United States—with which, I'm guessing, you're familiar—illustrate the dangers that can result when politicians and the public lose trust in science.

The Chair: Thank you, Mr. Pinker.

We will now go to Mr. Shariff, who has joined this panel through video conference.

Mr. Shariff, you can go ahead. You will have five minutes for your opening remarks.

Azim Shariff (Professor, The University of British Columbia, As an Individual): Thank you for the opportunity to speak before this committee.

My name is Azim Shariff, and I'm a professor of psychology at the University of British Columbia. I was born and educated in Canada—first at the University of Toronto and then, for my doctorate, at UBC—and I later held faculty positions in the U.S. before being invited back home under the Canada 150 research chairs program. In light of this committee's study, my most useful contribution today will be to share my observations about how well-intentioned policies surrounding the Canada research chair program have played out in practice.

As you all know, the CRC program serves as one of Canada's primary tools for attracting and retaining highly impactful researchers. To fulfill its mandate to support research excellence, the program has, over its 25-year tenure, adjusted its policies with regard to equity, diversity and inclusion. There are many rationales for why academia should prioritize these values: A faculty that is more representative of the Canadian population earns trust and legitimacy with the community; it is also more tuned to the full spectrum of questions that Canadians care about. Chief among the reasons, from a public interest standpoint, is that removing barriers to access means that nothing prevents the most talented scholars from transmuting their talent into the products of research that benefit us all.

To achieve this goal, the CRC program set 2029 equity targets for groups that were severely under-represented at the program's outset: women and gender equity-seeking groups; racialized individuals, like me; persons with disabilities; and indigenous peoples. The targets have been, largely, reached nationally for all groups.

That said, not all targets for all groups have been reached at all institutions. As per the 2019 policy adjustment, so long as an institution trails behind its targets on any one group, it is restricted from submitting new chair holder nominations for individuals outside of any of these groups.

There are two concerns with this policy in terms of how it operates on the ground.

First, aggregating the equity groups in this way serves as a blunt and sometimes ineffective way of addressing barriers. The pool of scholars who are racialized individuals or are from women and gender equity-seeking groups is much larger and is therefore much easier to hire from than the pool of indigenous peoples or persons with disabilities. As a consequence, the policy incentivizes some institutions—like mine—to swell their ranks of women and racialized individuals well beyond their targets while continuing to trail the targets for the latter two groups.

The second concern is the impact on the public interest of the restriction in the first place. As I noted earlier, any barrier to equal access impoverishes everyone because it fails to position the most talented individuals into the roles where their talent can do the most good, yet with the restrictive policy, the CRC program employs exactly this kind of barrier—closing doors rather than opening them.

Here is a case study of how this plays out. Several years ago, my department sought to fill a tier one CRC vacancy. We were replacing the retiring director of a highly productive global excellence research cluster on language sciences. Since this needed to be a senior scholar with a particular expertise, the pool of candidates was already small. Since it was a CRC hire, the pool was further narrowed to members of the four equity-seeking groups, excluding many of the most relevant and impactful scholars. This left very few qualified candidates, and indeed only one was both above our thresholds and open to moving from her institution in the U.S. Unable to meet her requirements and without any backup options, the search failed, the CRC was revoked, and the future of the institute and the research cluster is now in jeopardy.

Equity and social justice are important goals of the CRC program. However, by explicitly excluding a body of scholars, this restrictive policy creates an unnecessary conflict. It sets those aims against the program's broader goal of improving our depth of knowledge and quality of life for all Canadians, leaving talent on the table.

This is especially pressing right now. We're currently seeing the academic environment in the United States undermined by attacks on academic freedom and by devastating cuts to research funding. America is the global centre of science and research. The whole world will lose out from the disruption to knowledge creation that they will now experience. Canada is best positioned to pick up that slack. For high-impact scholars choosing to leave the U.S., the most attractive alternatives are to come to the University of Toronto, Waterloo or UBC.

The world needs these people to remain productive. I would encourage Canada to reconsider the trade-offs involved in keeping one hand of its CRC program tied behind its back. We should refine our policies accordingly. Science and scholarship work best when everyone is invited to participate.

● (1130)

The Chair: Thank you. That was right on time.

Now we will go to our rounds of questioning. In the first round, you'll have six minutes each. We will start with Mr. Baldinelli.

Please go ahead. You have six minutes for your round of questioning.

Tony Baldinelli (Niagara Falls—Niagara-on-the-Lake, CPC): Thank you, Madam Chair.

It's good to see all of my colleagues again. I look forward to working with all of you on this committee as we proceed. Thank you to the witnesses for being here as well.

It's an important study; this past July, the industry minister announced that $1.3 billion had been awarded in federal research funding. This study, which we're picking up, builds upon the work of the committee from the previous Parliament and wants to examine and receive input and feedback on the various criteria used in awarding these federal funds.

Ms. Ljubicic, you talked about the use of quantitative criteria and how that may be harmful. We've heard previous testimony from colleges that say they're precluded from some of this research funding, for example. We've also heard about the issue of DEI and its use in criteria, and how that may impact science as well.

Mr. Pinker, I'd like to thank you for your comments. You talked about how DEI works against the interests of science.

I was looking back at some of the previous testimony. Going back to November 2024, we had Dr. Jeremy Kerr, a professor at the department of biology at the University of Ottawa. When he was asked by one of the committee members, “How important are diversity and inclusion in research when producing reliable and accurate data?”, he replied, “I want to be really clear here. As I said, our objective is not to implement an affirmative action program; our objective is to achieve excellence, on behalf of Canadians....”

That's not to say that a diversity of views or diverse backgrounds are not important. Can you pick up on what you said in some of your comments and that notion of how DEI works against the interests of science?

● (1135)

Steven Pinker: It very much echoes my remarks that a diversity of viewpoints is essential because of the cognitive limitations that lead people to overvalue their own viewpoint. It's only by getting opposing viewpoints that, collectively, we can hope to be more rational and be better able to seek the truth than any of us can do individually.

A diversity of skin colour or a diversity of chromosomes is no guarantee of better science, because people of a given ethnicity or of a given sex don't all think alike. If we had fair criteria to pick the best scientists and the best science, that would ideally be the ultimate way of reducing discrimination, because it would zero in on quality, ignoring irrelevant criteria such as skin colour or sex.

Tony Baldinelli: Thank you.

Professor Shariff, you also mentioned that barriers to equal access harm all. Closing doors, rather than opening them, is harmful in the use of the criteria.

Can you expand on that?

Azim Shariff: The point I was trying to make is that with the CRC program, there is an explicit policy to bar a certain demographic—that is, able-bodied white men—from being nominated for these chairs and from using these chairs to attract them or retain them in Canada.

I feel that whenever you shrink the pool of talent you're picking from, you're more likely to miss out on the most talented individuals. I don't think it's something that we should explicitly restrict by any means.

Tony Baldinelli: Thank you for that. To your point, it also leads to faulty science.

I was reading an article by Geoff Horsman, who's an associate professor of chemistry and biochemistry at Wilfrid Laurier University. When he was talking to a colleague, this colleague basically said to him, “I have made my peace with EDI. I will lie about my most deeply held beliefs or convictions on paper in order to get funding.” They're basically saying that if you believe in merit and competency, shut up and just lie on your application to get the funding. That doesn't advance science.

What we have now is individuals being put in a position where they know that unless they tick off a box, they're not going to get their program funded.

I was wondering if you could elaborate on that.

Steven Pinker: Yes, well, many American universities require so-called “diversity statements” in which an applicant for a professorship has to basically endorse the policies of DEI, including racial preferences, and has to endorse the critical social justice theory as to why there are racial disparities.

I've had students who've had ChatGPT write their diversity statements because they could not honestly fill them out. It would go against their conscience to say things that they knew were not true, but they knew they would be blackballed and eliminated from a job if they expressed their true opinions. That's one of the reasons that many universities—now including my own, Harvard—have got rid of diversity statements.

Also, I think it is a peculiar version of social justice that says that the composition of a scientific body, a university body or a pool of funded scientists has to match the demographics of the population at large. It leads to, I think, rather monstrous consequences, like saying that there are too many Asians on a committee, or that too many Asians are getting funded, or too many Jews, or too many Sikhs or too many Arabs. It is just not going to be the case that every ethnic group or every sex is going to be perfectly represented in proportion to their membership in the population. If we are truly seeking quality, that should not matter. We don't have to count. There may be discrepancies, and they can go in different directions, but if we're funding the best science, we get the best science.

The Chair: Thank you, Mr. Pinker. Your time is up.

I'll just remind all the members that all the questions should be directed through the chair.

We will go to MP Noormohamed for six minutes.

Taleeb Noormohamed (Vancouver Granville, Lib.): Thank you so much, Chair.

Thank you to our witnesses for being here.

I'm going to pick up, Professor Shariff, where you left off.

It's good to see you again. It's been a long time—probably 30 years or maybe longer. It's great to see you.

I want to pick up where you left off in terms of talking about the importance of making sure that we are able to attract and keep our best and brightest minds, regardless of some of these criteria. Some of these criteria may be important, but we should not index on those in making sure that we have the best folks around the table,.

What, in your view, is the best way for Canada to approach poaching talent—I'm going to say it bluntly—from the U.S., where folks are feeling uncomfortable right now about the threats to academia and there is this pervasive attitude that you have to think a certain way or else your funding is going to be cut? What do we need to make sure that we aren't falling into the wrong traps on either side of this conversation, to make sure that we're attracting the best talent—without leaning in on this perceived attack on “woke ideology”, which I want to get to, whatever the hell that means—in a way that gets us the best talent here and allows us to do the best types of research while also building an inclusive environment for academics?

● (1140)

Azim Shariff: One of the areas of my research is looking at institutional trust and perceived politicization. One of the challenges that we've discovered is that once people perceive an institution to be politicized, it has a negative impact on trust, not just for the people who perceive the institution to be on the opposite side from their politics but also for the people who perceive the institution to be on the same side as their politics. Scientists, the consumers of science and the consumers of scholarship do not want their institutions to be politicized.

Canada, unfortunately, has a reputation of having a somewhat politicized academy. Dr. Pinker talked about the impact that the perceptions of politicization are now having in the U.S.; Canada has an opportunity here to try to be a safe haven for a more objective, less politicized academy. People who are trying to flee a politicized and undermined academic environment in the U.S. could hopefully find a more flexible, free funding climate in Canada, as well as an academy that tries to lower the temperature on politicization.

Politicization in science is like bacteria in an operating room. There's no way you'll be able to get rid of it entirely, but you do want to do as much as you can to remove it. I don't think you should trust any surgeon who's not trying to do that.

Taleeb Noormohamed: Thank you.

I'm going to follow up with one more question for you, and then I'm going to throw the same question over to Professor Pinker.

In watching President Trump's attacks on my two alma maters, Princeton and Harvard, and the threats of cuts, what we've seen are cuts to funding for cancer research, diabetes, new ways of farming, preschool development and teacher quality. These are all things that have been affected by this attack on what is being termed “woke ideology”. We've heard this term “woke ideology” being used by the Leader of the Opposition in this country; he says wants to cut “woke ideology” from Canadian universities.

When you hear terms like that and the types of attacks on universities that are being made under that guise and that cover, does it concern you that Canada might go down a similar road in terms of using that as a cover to attack academic freedom, academic research and academic intellectual expansion?

Azim Shariff: Yes, it does concern me. As I said, there's a danger of politicization, which attracts targeting from both sides. There's a sociologist and physician at Yale University named Nicholas Christakis. He had an interesting point that once universities made themselves political actors, they made themselves political targets. I think we're seeing that very much in the United States. It should be in Canada's interest to do everything it can to avoid the fate that academia is now having there in the U.S.

Taleeb Noormohamed: Thanks.

Professor Pinker, I'm going to throw the same question over to you. I just want to say that I really enjoyed your piece “Harvard Derangement Syndrome”, because I think it actually brought to light some of the concerns that folks have about when the attacks become blanket attacks. You used the example of the impact on Jewish professors as a perfect example of how, when you're using, perhaps, one angle, there is a broader impact on research, on science and on folks whose funding is getting cut.

Can you talk a little bit about how we dial down that type of rhetoric and why it's important to dial down that type of rhetoric in Canada so that we don't fall into the same trap? Can you then also follow up on the question I asked Professor Shariff?

● (1145)

Steven Pinker: I certainly agree with Professor Shariff's quoting my friend Nicholas Christakis about how, once the universities politicize themselves, they have opened the door to being, themselves, targets of political attacks. It is essential for universities to keep their reputation as disinterested pursuers of the truth, not captive to a particular ideology, because the threats can come from both directions. In the United States, the threats now from the federal government are worse than the threats from within, because the government is so much more powerful, but the threats are coming from both directions.

The Chair: I'm sorry for interrupting, but the time is up. Thank you.

Now we will move to MP Blanchette-Joncas.

You have six minutes. Please go ahead.

[*Translation*]

Maxime Blanchette-Joncas (Rimouski—La Matapédia, BQ): Thank you, Madam Chair.

I'd like to thank the witnesses who are here today to take part in this important study.

My first questions are for Professor Pinker.

Don't equity, diversity and inclusion policies risk replacing merit with political considerations, thereby undermining public trust in science?

If science is perceived as ideological, doesn't that also risk undermining public trust, even when it comes to issues like climate?

[*English*]

Steven Pinker: Yes, I did not get the translation, but I think I can remember enough from my Protestant School Board of Greater Montreal French to understand your question.

Indeed, the influence of ideology on science means that it's not the best science if there are a priori convictions that are putting a thumb on the scale. The great danger is that, as Professor Shariff and I have mentioned, it undermines trust in science. The public has to know that their tax dollars are going to the best possible science. They have to know that the people conducting the science are open to criticism and open to a diversity of viewpoints, so that they trust what the scientists say, and that scientists not become just a priesthood in white coats that is competing with other influencers but actually have grounds for their claims to be taken seriously.

[*Translation*]

Maxime Blanchette-Joncas: Madam Chair, would it be possible to interrupt Mr. Pinker's testimony to ensure that the interpretation is working properly? He said he couldn't hear the interpretation.

[*English*]

The Chair: Can I ask the clerk to look into that? Is the interpretation good now?

Okay, we'll start the clock. Please go ahead.

[*Translation*]

Maxime Blanchette-Joncas: Professor Pinker, you said that grants were awarded too late to correct social inequities. At what point should intervention take place earlier in the process, for example, in terms of education, training or scientific culture, to truly expand access to science and reinforce excellence?

[*English*]

Steven Pinker: First and foremost is the quality of science education, starting in elementary school.

The second is to be sure that science itself does not seem to have a political colouring that would turn off the part of the population from a different part of the political spectrum. If science is seen as a left-wing activity, people on the right will blow it off. That's probably the main reason. In fact, that is certainly the main reason for rejection of scientific consensus in the studies that I have seen. It is not because of scientific ignorance; it is because of perceived ideological contamination of science.

The third is not easy for governments to manipulate, and that is cultural norms as to whether science is an attractive career option. That depends on peer influence, on culture and on many things that government policy may not easily be able to control directly: Is science cool?

[*Translation*]

Maxime Blanchette-Joncas: Following the U.S. Supreme Court's decision in Students for Fair Admissions, Inc. v. President and Fellows of Harvard College regarding race-based admissions, do you believe it's morally and scientifically wrong to award research chairs or grants on the basis of gender or race rather than scientific merit or excellence?

● (1150)

[*English*]

Steven Pinker: The American Supreme Court decision referred to university admissions. It's widely expected that it will be extended to promotion, to hiring and to granting. We are in the midst of quite a bit of turmoil in the United States, including the extreme slashing of all support for basic science, a slashing of the indirect costs that universities incur in the process of spending dollars, and rather arbitrary cuts to many programs.

I expect that grants that are targeted on the basis of sex or race will be in the crosshairs, targeted by an extension of the Supreme Court decision.

[*Translation*]

Maxime Blanchette-Joncas: You argue that viewpoint diversity is more crucial to scientific progress than the demographic diversity promoted by equity, diversity and inclusion policies.

Why is that, especially since it helps correct the cognitive biases that affect any scientific community?

[*English*]

Steven Pinker: Diversity of viewpoints is a complicated problem, because you don't want the diversity to be so broad that you have people who support a flat earth or people who deny the 2020 U.S. election. There is an infinite number of viewpoints, many of which should not be discussed in a university context, because they have no grounds for belief. It is a challenge. I don't think it's an impossible challenge, but how do you draw a boundary around the ideas that are worth taking seriously without excluding those who just don't agree with your viewpoint? It's a challenge that I don't think universities or funding agencies have solved, but it is one that they should take seriously.

[*Translation*]

Maxime Blanchette-Joncas: As a cognitive psychologist, you described confirmation bias, which limits our ability to see our own errors.

How does viewpoint diversity actually help the scientific community to correct its biases and move toward excellence?

[*English*]

Steven Pinker: Diversity is indispensable, simply because, even though we all have our blind spots, we're a little better at pointing to the other guy's blind spots. If I'm not seeing something, someone else will tell me that I'm wrong. That is why academic freedom—freedom of speech—is of such an essential value in the conduct of science: not because professors deserve privileges, but because it is essential to doing their jobs.

The Chair: I'm sorry for interrupting, but the time is up. Maybe you will get an opportunity in the second round.

We will now proceed to our second round, and we will go to MP Ho for five minutes.

MP Ho, please go ahead.

Vincent Ho (Richmond Hill South, CPC): Thank you, Madam Chair.

My question is directed to Mr. Pinker.

Do you agree that universities should be a forum for the free exchange of ideas, including discussion of dissenting opinions?

Steven Pinker: Absolutely. It's essential.

Vincent Ho: It is essential.

You mentioned how DEI quotas are a form of discrimination, effectively, a form of reverse discrimination. Do you agree that doing this DEI check box and all of these affirmative statements that they're now requiring in Canada has a chilling effect on research because it's effectively shutting off half of the population from being able to participate in an honest way?

Steven Pinker: I think it can chill research in two ways. One of them is by excluding sectors of the population based on their sex, ethnicity or race. The other is that, on top of the preferences, there's a regime that it is a criminal offence to criticize the policy of preferences. We've seen that in the United States and in Canada, where people who cast doubt on the policy, who argue against it, get censured, fired or cancelled. That adds another layer of chill, probably a more severe chill.

Vincent Ho: Well, that's really unfortunate to hear, that these Liberal top-down policies effectively shut out half of the population from being able to participate and block high-quality research from being produced at some of the top institutions in the country.

When it comes to, let's say, astronomy, physics or even medicine, there are limited government resources to be granted. You mentioned that it's a zero-sum game in research. Shouldn't the best person for the job get it, or the person with the best potential? I see we're doing cancer research, and we're trying to find a treatment for a type of cancer that could save many lives, millions of lives, potentially. Shouldn't the grants go to the best person or the person with the best potential to achieve those aims?

● (1155)

Steven Pinker: Yes, I believe that is the most defensible policy.

Now, at the margins, there are often judgment calls about proposals when, at the end of the day, you throw up your hands and say, “I don't know which one is better.” In cases like that, if you tilt it so that under-represented groups get the benefit of the doubt, I don't think that is harmful, as long as they are within the envelope of the best-quality research.

Vincent Ho: The race and the sex of the researcher shouldn't have any effect on the quality of the research. We're studying cancer, physics or something like that, so by imposing this top-down ideology, Liberal ideology, it almost feels like they're trying to.... It's political. They're politicizing it and implementing it into our great institutions, our universities and colleges. Do you agree that it is potentially a venue for Liberal ideology to permeate and to be implemented?

Steven Pinker: I guess I would have to ask whether “liberal” has a capital *L* or a small *l* in this context.

Vincent Ho: It has a capital *L*.

Steven Pinker: I don't want to single out one of the parties, because many of these policies, at least in the United States, have taken place under the leadership of both parties.

Vincent Ho: It does have an effect of imposing a political view onto researchers.

Steven Pinker: In general.... One can imagine certain circumscribed exceptions. If there is research, for example, in anthropology, culture or history on a particular group, then common sense might say that sometimes a member of that group could add specialized expertise, but in the cases you mentioned—astronomy, cancer research, climate change and so on—then, indeed, the sex and race should not make a difference.

Vincent Ho: You brought up things like social sciences and the humanities, which could benefit from a diversity of viewpoints. Why do you think the Liberals are so concerned about people's skin colour and gender, but have absolutely no consideration for people's differing views when it comes to the humanities and social sciences?

Steven Pinker: Again, I think it goes beyond just the Liberal Party of Canada. It applies to many western countries and many political parties.

Vincent Ho: Is it a problem?

Steven Pinker: I think it's a problem, yes.

Vincent Ho: Thank you.

The Chair: MP Ho, your time is up.

We will now proceed to MP Rana for five minutes.

Aslam Rana (Hamilton Centre, Lib.): Thank you very much, Madam Chair.

It's an honour to be a part of this committee, as I've been a student of science throughout my life. After doing my master's in civil engineering at Toronto Metropolitan University, I applied for my Ph.D. as well, but I couldn't make it due to some time constraints.

My question is for Professor Gita Ljubicic. She's a professor at McMaster University, which is next to my riding.

I'm pleased to see the work you have been doing in the faculty of science. I'm curious to know whether you, based on your experience with the braiding project, have faced more or fewer issues regarding the funding for research around indigenous knowledge.

Gita Ljubicic: Can you repeat the end of that question, please?

Aslam Rana: Have you faced more or fewer issues regarding funding for research around indigenous knowledge?

Gita Ljubicic: Thank you for the question.

As I mentioned, there have been a lot of changes over the past decade or so in tri-council policies that increasingly recognize the value of indigenous knowledge, encourage indigenous leadership in research and encourage partnerships. There's actually more and more funding available for indigenous scholars and partnerships with indigenous communities. The challenge that I was trying to highlight, though, is how to effectively assess whether those partnerships are respectful, whether they are upholding indigenous leadership and whether they enable indigenous scholars to access those funds.

A lot of the comments that were discussed around EDI are also really important in the context of indigenous and other community-engaged research in terms of how it's evaluated, so that researchers are not just ticking boxes to be able to apply for these particular sources of funding but are actually following through on what they say, and you can actually track partnerships and respectful, culturally appropriate methodologies in how they write their methods, in who their team is and in how they allocate their budgets. This is a big factor.

Yes, I think there's more support for and recognition of indigenous research, but that's where I think some of the qualitative assessments are really important, to differentiate between those who get really good at writing proposals in a certain way and those who are actually implementing meaningful, respectful approaches to research.

● (1200)

Aslam Rana: [*Technical difficulty—Editor*] of isotopes for cancer treatment around the globe. Thank you.

My next question is for Professor Shariff.

You argue for more transparency and clarity about the objectives of diversity through your work. As you just mentioned in your testimony.... I would appreciate if you could expand more on DEI. Importantly, during your time in academia and higher education, have you seen any shifts toward greater diversity, equity and inclusion? Are you anxious that we are shifting backwards, Professor Shariff?

Azim Shariff: I have seen a shift over my career. I've been a professor for 15 or 16 years. EDI has become more of a criterion that's been used to evaluate candidates, applicants for funding and students. All of that has increased. The conversation became pleasantly more nuanced about a year ago, and then, when President Trump came to power for the second time, it became much more heated again.

I have concerns about how it is used now in Canada. Some of the chilling effects that Dr. Pinker referred to are an issue, especially in the social sciences. In addition to perhaps excluding certain scientists from different perspectives, it also has the chilling effect of making certain questions too risky, or perceived as too risky, to pursue funding for. There are questions that I'm able to study only because I have considerable leeway in the research funds that were allocated to me through the Canada 150 research chairs program, which I don't think I would apply for dedicated funding to—

The Chair: I'm sorry for interrupting, Mr. Shariff, but your time is up.

We will now proceed to Mr. Blanchette-Joncas for two and a half minutes.

[*Translation*]

Maxime Blanchette-Joncas: Thank you, Madam Chair.

My question is for Professor Pinker.

Harvard University recently eliminated its office of equity, diversity and inclusion, as well as its diversity-related recruitment criteria. What impact did that have? How might those reforms influence the funding policies of Canada's granting agencies?

[*English*]

Steven Pinker: Applicants for grants will have to waste less time on showing how their research will benefit minorities. The simple bureaucratic requirements for satisfying DEI requirement regulations are a considerable imposition, especially on smaller universities that don't have a huge infrastructure. It's likely that it could attract, ironically, a broader talent pool of people who no longer fear that, simply because they are a white male or they have political opinions that are not on the left, they are excluded from academia. Of course, in the United States, all this has to be taken in the context of the rather destructive slashing of research budgets and some of the onerous requirements that the Trump administration is applying. The United States at present is a chaotic and complex situation.

● (1205)

[*Translation*]

Maxime Blanchette-Joncas: Thank you, Professor Pinker.

Professor Shariff, I listened to one of your speeches at a conference on April 6, 2024, in Kelowna. You mentioned that you did your Ph.D. at the University of British Columbia. You say that researchers who are selected based on their gender or skin colour may feel bad or feel judged by their colleagues, because both they and their colleagues know that they weren't appointed or selected solely for their experience or knowledge.

Could you expand on that?

[*English*]

Azim Shariff: Could I get a little clarification on the question?

[*Translation*]

Maxime Blanchette-Joncas: You said at a conference in Kelowna on April 6, 2024, that people appointed on the basis of their gender or skin colour could feel bad, or judged by their colleagues, because neither they nor their colleagues feel that they were chosen for their experience or knowledge.

I'd like you to elaborate on what you said at that conference.

[*English*]

Azim Shariff: The point I was trying to make there—and this is in my own case, as well—is that I recognize that my race had an influence on my being hired. What that means is that I recognize that I was hired for different criteria than the rest of my colleagues were. I also know that they know that. When you have a field such as ours, where you're surrounded by a lot of smart people, there is a degree of imposter syndrome.

The Chair: I'm sorry. The time is up.

[*Translation*]

Maxime Blanchette-Joncas: Madam Chair, would it be possible to ask the witness to provide a written response to that question, please?

[*English*]

The Chair: If you could provide a written answer to the question and send it to the clerk of the committee, that would be great. We will circulate it to the members.

Now, we will end this session at 12:10 p.m. because we had nine minutes of interruption due to technical issues.

We'll have one minute of questions from Ms. DeRidder, and one minute from MP McKelvie. Then we will end this panel and go to the second panel.

Ms. DeRidder, you have one minute.

Kelly DeRidder (Kitchener Centre, CPC): Thank you.

Thank you to all the panellists for being here today.

My question is for you, Mr. Pinker. You mentioned that, with the system as it is today, if anyone goes against the current orthodoxy, it creates a loss of trust in science, and I think this is the most detrimental effect of what's happening today in the DEI base.

I'm going to echo very quickly an article that came out: “a fellow academic scientist...said, 'I have made my peace with EDI. I will lie about my most deeply held beliefs or convictions on paper in order to get funding.'”

How would you assess the current merit-based criteria for federal funding in Canada? How will that trust be eroded in time, and how quickly, especially in innovation hubs like Kitchener Centre, where I'm from?

Steven Pinker: Yes, well, I want to echo Professor Shariff in saying that there's a ripe opportunity for Canada to poach American scientists. Even as a professor at Harvard, I would like to say, “Poach us.”

The situation in the United States is threatened. The only disadvantage that Canada has is that it has a reputation for being woker than the United States and for there being possibly onerous requirements on the range of opinions expressed—the racial and gender preferences for the Canada chairs, for example.

I guess I would urge Canada not to squander the opportunity by imposing distortions of science coming from the other direction.

The Chair: Thank you.

Now we will end this panel with MP McKelvie for one minute.

Jennifer McKelvie (Ajax, Lib.): Thank you, Chair.

Earlier, a member opposite mentioned world views and the importance of incorporating world views. I am a western scientist. That's how I've been trained. That is the world view I use, but I also know that if I look at the world only in that context or if we use only that context, it is incomplete. The example I want to use with regard to that is indigenous knowledge. In the environmental sciences, where I come from, we know that the first nations of this land already knew that there was an ice age in the past. They already knew that the Great Lakes were in a different location. There is a tremendous amount of knowledge that is there, especially around sustainability, so it's important that we work together.

My question is for our first speaker, Dr. Ljubicic.

Could you just speak to the importance that you see of indigenous knowledge and of collaboration and partnerships so that we can further the field of science?

● (1210)

Gita Ljubicic: Thank you so much for your important recognition of indigenous knowledge.

Yes, this has been what I've been working on for my career, learning primarily from Inuit knowledge holders, but also from first nations and Métis partners, over time. It's so important to learn from indigenous perspectives. They're the experts in their lands and in their ways of life. There's so much inspiration and innovation that can be learned from a very holistic way of thinking and the connections between people and their environments in all ways. We've worked so hard—and many others have, as well—to ensure that indigenous knowledge can be learned very respectfully within partnerships. This relates a lot to the actual methodologies for working together.

I would be happy to provide a more in-depth written response, since I know we're short on time.

The Chair: Now we will have to end this panel.

I want to thank all the witnesses for their important testimony. If there is anything you would like to bring to the attention of the committee, you can always send written submissions to the clerk, and those will be circulated to the members.

With that, we will end this panel, and we will suspend the meeting for two minutes so that we can have the next panel.

Thank you. Thanks a lot for coming today.

● (1210)

_____(Pause)_____

● (1215)

The Chair: Welcome, everybody.

I would like to make a few comments for the benefit of the new witnesses. Please wait until I recognize you by name before speaking. Those participating by video conference can click on the microphone icon to activate their mic. Please mute yourself when you are not speaking. Those on Zoom can select the appropriate channel for interpretation at the bottom of the screen: floor, English or French. Those in the room can use the earpiece and select the desired channel. I will remind you that all comments should be addressed through the chair.

For this panel, I would like to welcome Dr. Kelly Cobey, scientist at the University of Ottawa Heart Institute. We are also joined, via video conference, by Dr. Grace Karram, assistant professor of higher education and coordinator of the higher education graduate program at the University of Toronto. Our third witness for this panel is Mr. Vincent Larivière, professor, Université de Montréal.

Welcome to all the witnesses.

Each of you will have five minutes for your opening remarks, and then we will proceed to the round of questioning. We will start with Dr. Cobey.

Dr. Cobey, please go ahead. You have five minutes. Thank you.

Kelly Cobey (Scientist, University of Ottawa Heart Institute, As an Individual): Thank you, Madam Chair and members of the committee, for the invitation to discuss the impact of federal funding criteria on research excellence in Canada.

I am a scientist at the University of Ottawa Heart Institute and an associate professor at the University of Ottawa. I also co-chair an international initiative called DORA, the Declaration on Research Assessment. DORA operates globally and across all disciplines. Our recommendations at DORA apply to funding agencies, academic institutions, journals, metrics providers and individual researchers. DORA advocates broader assessment criteria to acknowledge the diversity of researcher activities.

Our meeting today comes at a time when the criteria to assess researchers in this country are shifting. Historically, decisions were based on quantitative metrics, such as the number of articles we published, the journal impact factor of where those publications sat and the amount of funding that we brought in. Quantitative metrics are easy to calculate, which makes them convenient for assessing a lot of people very quickly. Unfortunately, they're not evidence-based, they're not responsive to changes in the research ecosystem and they can't be used for any mission-driven goals of the federal government.

The misuse of the journal impact factor, as well as the overemphasis on quantitative metrics, has created a culture in the research ecosystem of “publish or perish”. As researchers, we often feel that the surest or only pathway to success in our domain is through publishing more and doing more, with less emphasis on quality and more on quantity.

However, presently in Canada, we're seeing a principled shift away from these quantitative metrics and toward consideration of qualitative metrics that consider a broader impact of research. Canada's tri-agencies signed DORA in 2019 and have been working to implement its recommendations since then. This process is an evolution, not a revolution. In my view, Canada is becoming active on the global science policy stage with respect to the criteria to assess researchers. The tri-agencies are actively involved in DORA's community of practice for funders, they have a leadership role in the Global Research Council's research assessment committee and, through SSHRC, they have joined RORI, the Research on Research Institute.

Concretely, as researchers, we see recent changes that have had a widespread and immediate impact on us. For example, CIHR has an entirely new research excellence framework that now considers research excellence across eight domains, one of which is open science. The tri-agencies as a collective are implementing a new narrative CV, which sounds exactly like what it is: It's a descriptive report on what a researcher is doing, how they did it and why it had an impact. This is replacing a traditional CV, which was much more considerate of a list of outputs as opposed to a qualitative, nuanced assessment.

This new format requires researchers and reviewers alike to be trained in how to create these narrative CVs as well as how to appropriately adjudicate them. Otherwise, there's the concern that old habits and these leadership-style quantitative metrics are going to persist in the written narrative form. Narrative CVs are part of the solution to assessing research appropriately; however, I would say that I'm concerned about how these reforms are being implemented in our country and that there's a gap between the strong science policy that we're creating around this and the actual realities of what's happening at committees. We need to ensure effective monitoring and implementation as we roll out these changes.

I have three final short points.

First, how the federal government chooses to assess research excellence directly impacts what research is done, how it is done and who does it.

Second, the tri-agencies' new definitions of research excellence do not always come to be considered in practice in how research is evaluated by committees. This again comes back to repeated implementation gaps between what we say we want to do and what actually happens.

Finally, even if we assume that the criteria used to assess excellence in this country, historically or presently, were appropriate, there are a series of issues with how funding is administered in this country that prevent us from achieving that excellence in an efficient way. One example is the across-the-board funding cut for funded research projects.

There's also, in my view, incredibly limited grant monitoring. Once we get funds based on the promises of what we wrote in our grant, there's very little monitoring to see that, as researchers and as a federal government, we're providing returns on that investment.

Thank you.

● (1220)

The Chair: Thanks a lot, Dr. Cobey.

We will now proceed to Dr. Grace Karram for five minutes.

Grace Karram (Assistant Professor of Higher Education and Coordinator, Higher Education Graduate Program, University of Toronto, As an Individual): Thank you very much, honourable members.

[*Translation*]

Thank you for the opportunity to talk about this important topic.

[*English*]

When we compare Canada's position in scientific research with the positions of other members of the OECD, several paradoxes come to light. I will present these paradoxes as a way of clarifying Canada's research and development sector and those who work within it.

Specifically, I'll examine the role of post-secondary institutions, the impact of international research collaborations, the role of the business sector and labour market inefficiencies that have led to an underutilization of our Ph.D.s. I'm going to conclude with several recommendations to help strengthen Canada's research production.

How does Canada compare globally? Well, Canada's general expenditure on research and development, as a percentage of the GDP, is notably below the OECD average, and it has declined steadily since 2001. The paradox, of course, is that higher education expenditures in research and development have increased 30% during the same 20 years, so Canadian post-secondary institutions and the researchers they house play a significant role in the country's research and development.

The second paradox is that while our percentage of publications per researcher places us at seventh in the world in—and that's great—in our production of patents, we're actually 18th from the bottom. This is likely because of fairly low levels of R and D in the business sector. Even though industry tends to fund some R and D in post-secondary institutions, the ties are relatively loose.

The third paradox relates to international collaboration and a significant gender divide. Studies have repeatedly confirmed that international collaboration is correlated with an increase in research production, often identified by publications, however limited. However, in Canada, a statistically significant gender divide exists between men and women researchers. Men have significantly more international collaborations, and thus more high-impact research outputs.

The final paradox relates to labour and personnel. Although Canada has increased the number of individuals graduating with doctoral degrees, the number of tenure-track positions has plateaued. This has led to highly skilled researchers being employed in part-time, precarious positions mainly focused on teaching, and some eventually leave academia. You just have to visit one of Canada's amazing colleges, universities, CEGEPs or polytechnics to see a huge labour force of underemployed Ph.D.s, many with international experience and many who are women. Because much of our R and D is housed in post-secondary institutions, our private sector does not absorb Ph.D.s in the same way as other countries.

What does this tell us about scientific research in Canada? Higher education is a significant actor. We have relatively loose business ties, limited participation in global collaboration and an inefficient labour market that's not making the most of its skilled labour.

What do I recommend? Well, first, post-secondary institutions are at the heart of our research success, so keep funding universities and colleges. Canada needs to increase research funding to build the infrastructure at smaller institutions, as others have said in these panels, and definitely at our colleges, with their ties to industry and applied research. This practice of funding both projects and institutions has been very successful in the European context. In contrast, Canada tends to focus more on the projects than the institutional infrastructure, and we need to bring institutions up as well.

Second, fund both theoretical and applied research, establish strong partnerships with industry and make a pipeline to patents. However, as gatekeepers of research funding, we need thoughtful regulatory frameworks that ensure that it's done ethically and equitably and that it considers the social impact of research.

Third, we have to expand who is considered a researcher. Our precarious faculty who teach on part-time, limited contracts are rarely eligible to apply for federal funding. Moreover, federal funding prevents salaries from going to principal investigators, meaning that part-time researchers, when they are eligible to receive a grant, cannot increase their income to a living wage with funds from the grant. Our selection criteria need to adapt to the reality that not all researchers have the same conditions of employment.

Fourth, we need to increase our global collaborations and provide funding for travel to work globally with other teams. When I have conducted research on international publications, other teams in other countries are shocked that international collaboration is not one of our requirements. We need to focus on the big issues that impact our planet.

Lastly, we need targeted programming to support populations of researchers who are left outside the high-impact world of scientific research: women, researchers of colour and indigenous communities. In short, we want to see research funding going to diverse institutions and diverse researchers who can make Canada a global leader in scientific research with a positive social impact.

● (1225)

The Chair: Thank you, Dr. Karram.

We will now proceed to Mr. Vincent Larivière, a professor from the University of Montreal.

You will have five minutes for your opening remarks. Please go ahead.

[*Translation*]

Vincent Larivière (Professor, Université de Montréal, As an Individual): Thank you very much for the invitation to testify on the important issue of research excellence.

My name is Vincent Larivière, and I'm a professor of information sciences at the Université de Montréal. I'm also the UNESCO Chair on Open Science and the Quebec research chair on the discoverability of scientific content in French. I'm not representing the Université de Montréal today. I'm appearing as an individual, as an expert who has spent about 20 years studying the scientific community, and specifically the issue of research excellence and evaluation.

The first thing that's important to mention is the lack of consensus on what research excellence is. This can be seen virtually everywhere in the scientific community. Funding evaluation committees don't always agree on which projects are the most important. Journal editors and reviewers don't always agree on the quality of a paper.

Excellence in research is, in a way, the holy grail of the scientific world, but it remains quite difficult to define. There's a lot of subjectivity in all of this. It can be explained in a number of ways, but one thing is clear: Scientific excellence is multi-faceted. It can vary depending on the context. It can be the ingenuity of a method, the originality of a research issue, the quality of an argument's construction or the potential applications of a research project.

Because of this lack of consensus, evaluation committees often rely on quantifiable indicators, things that can be measured: the number of papers written in prestigious journals, the number of times they are cited, whether the person graduated from a prestigious university or whether they have gotten funding before. One of the main criteria for getting funding is having already gotten it. Those quantifiable markers don't always reflect research excellence, but they make the evaluation much simpler. A dozen or so publications will always be more than five. A million dollars will always be more than $100,000. That way of evaluating scientists and their projects, often done implicitly, raises important questions for the Canadian scientific community.

Focusing on publication volume will promote certain works, but also certain themes that are more easily published. That contributes to an overproduction of papers, which shouldn't be confused with overproduction of knowledge. Overproduction of papers contributes to noise and information overload, especially of mediocre quality. Many Nobel Prize winners, including Peter Higgs, have said that they wouldn't have been able to make their discoveries in today's context of research evaluation.

I'd like to make three recommendations for improving research excellence in Canada.

The first one is quite complicated, but I think it's doable. The idea would be to enable funding agencies to experiment with peer review. Peer review is known to be imperfect, but many countries are experimenting with it, including Switzerland, Norway and the United Kingdom. We can't say that those countries are lagging behind in science. There are countries that have taken the bull by the horns, realized the biases currently associated with research evaluation and decided that they should try to find new ways to encourage excellence. As my colleague Julien Larrègue says, it's important for the results of those experiments to be available to the expert community.

The second recommendation is somewhat related to what my colleague Ms. Cobey said on the issue of CVs, which are evaluated by the various committees. Narrative CVs were recently put in place, which I think sounds like a good idea on the surface, but it isn't entirely clear how those CVs are going to be interpreted. They will, in fact, also be interpreted based on their volume. I recently received a seven-page narrative CV that was longer than the application itself. We have absolutely no idea how committees are going to evaluate that. That has to be considered. Some countries have implemented a requirement for short, two-page CVs that don't focus on the publication volume and that can then show the publications that are most relevant to the project.

The third recommendation goes back to indicators. In Canada, there usually isn't an explicit request to provide indicators for evaluations. However, during evaluations, committee members often pull indicators out from nowhere. Obviously, committees are often sovereign, so there isn't much that can be done. I think there needs to be a ban on using those indicators in the evaluation committees of granting agencies. It isn't just a matter of not encouraging them; it's also about telling the committees that all of that is outside the scope of the evaluation.

Thank you, and I look forward to taking your questions.

● (1230)

[*English*]

The Chair: Thanks a lot.

We will proceed to our round of questioning. We will start with MP Baldinelli for six minutes.

Please go ahead, Mr. Baldinelli.

Tony Baldinelli: Thank you, Madam Chair.

I'd like to quickly indicate that I'll ask one question, and then I'll cede some of my time to my colleague Ms. DeRidder. She has a few questions she'd like to ask.

I'd like to follow up with Ms. Cobey and Mr. Larivière.

Mr. Larivière, you mentioned a notion that struck me—the lack of consensus on what constitutes research excellence.

Ms. Cobey, you talked about DORA and the move away from quantitative to qualitative metrics, for example. The DORA principle is being accepted by the three federal granting agencies, but I read in the briefing materials provided that only nine universities have accepted that principle. Why do you think there's only a limited uptake on that with regard to accepting the DORA principle? What's precluding others from accepting that idea?

Kelly Cobey: Through you, Madam Chair, that's a great question.

I would say that the DORA movement in Canada is quite robust. Many institutions are thinking about responsible research assessment more through this broader narrative of impact perspective. Sometimes the administrative hurdles of pushing a signature onto a declaration aren't worth the battle. I see personally, as the co-chair of DORA, many institutions in this country actively implementing so-called responsible research assessment without having signed a declaration. Certainly the tri-agencies signing it has prompted more institutions to consider it more deeply.

● (1235)

Tony Baldinelli: Thank you.

Before I cede my time, in one of your comments you mentioned that there's very little monitoring of how federal funds are being spent and on checking the status of projects. Could you write down some of your thoughts on why that is and on how we could correct or work on that?

I'll cede my time to Ms. DeRidder.

Kelly DeRidder: Thank you.

Thank you, everybody, for coming today and for being part of our panel.

Dr. Cobey, being a part of DORA, you come with a wide range of insights from across the country. First, do current federal funding models support meaningful collaboration among academic researchers, especially related to the technology and innovation sector?

Kelly Cobey: I think it's a good question. In terms of meaningful collaboration across the sector, I would say that right now we have science policies that I think would support doing that, such as the open science initiative. For instance, if there's a federal goal towards AI innovation, we need robust research data management. We have a policy being rolled out in that respect to get data management plans done at the front end of research so that at the back end of research we can have data to share and to be leveraged and innovated upon. We have the policy and we have the vision, but we don't have the incentives and rewards for researchers to actually do that.

For example, at my institution and others across this country, researchers don't have the skills and the practical knowledge to get consent, to de-identify their data and to prepare it for that mission-driven goal of AI innovation. I think that because we don't have those skills, as researchers we need to upskill. To do that, we need to know that we can focus on getting those skills and getting that training, and that it will be valued. It's not just about producing more; it's pausing and taking time to upskill ourselves so that we can get our data into a position for lending toward collaborations beyond our single use of how we envision that data to be used.

Kelly DeRidder: Thank you very much for your answer.

Second, what improvements do you think can be made to ensure that our federal research funding programs are flexible enough to captivate community-focused research happening in local innovation hubs, such as mine in particular in Kitchener? How do we not rely on publishing to fund and start to rely more on innovating to fund?

Kelly Cobey: Thank you.

I think one thing that needs to be done is that there needs to be more consultation on an ongoing basis between, say, the tri-agencies and the government and the researchers in the institutions. There's a bit of a siloing, I think, in terms of how messages and policies translate from the federal funders to the institutions. At the tri-agencies, they may be saying that they signed DORA and they value a broad range of impacts, including community-based research and these types of things, but if the institutions don't send that same message, there's a bit of a mismatch.

I feel that researchers are often caught between two systems as we roll out at the federal level. We're being told EDI, open science and broader excellence from our federal funders, but many of our institutions are still focused on those quantitative indicators. It creates a duplication of effort for us as researchers.

Kelly DeRidder: You mentioned EDI among some of the qualitative things happening right now. My fear with that is whether trying to create inclusion is actually creating exclusion, especially in the funding world. In its form today—through defining sex, skin colour and things like that—how truly inclusive do you think the criteria are for awarding federal funding in the broader research spectrum?

Kelly Cobey: It doesn't speak specifically to EDI. It speaks about broader incentives and rewarding a range of different outputs that researchers contribute to and being transparent about how you assess researchers. I think that's really critical. We need to know what the criteria are.

● (1240)

The Chair: Thank you.

Dr. Karram, I see that your hand is raised.

Grace Karram: Thank you. I want to comment on the EDI question—

The Chair: The time is up. We have to proceed to the next member. Maybe you will get an opportunity in there.

We will proceed to MP Jaczek for six minutes.

MP Jaczek, please go ahead.

Hon. Helena Jaczek (Markham—Stouffville, Lib.): Thank you so much, Madam Chair.

Thank you to our witnesses.

The purpose of this committee is to make recommendations, as all three of you have done, on the type of evaluation criteria to be used for the allocation of federal funding through the tri-agencies. I was one of the members of this committee who was here in the previous Parliament when we studied this question. We heard a number of ideas.

Dr. Cobey, you mentioned the "publish or perish" imperative. One of the ideas we heard was that perhaps applications should be completely blinded as to who the proponent is. In other words, that potential bias would be removed, and the evaluation would be done simply on the quality of the proposal. That would perhaps be part of a stepwise review of the application. In other words, once various proposals were considered excellent, they could then proceed to more evaluation of the team. Since we're so interested in the whole EDI evaluation criteria, perhaps that could be part of the second step. It might relate to the training of researchers, etc.

I'd like some of your comments to see how, in a very practical way, you could remove some of the potential biases that have existed institutionally for a long time.

Kelly Cobey: Through you, Madam Chair, thank you for the question.

I think you point at issues or shifts in the potential way peer review is done at grant panels. I would agree with your suggestion. I think having blinded peer review at these committees could help address some of these issues, and then selecting for excellence in the second phase where perhaps it's not blinded.

I would encourage the committee to consider making peer review more open, generally speaking. While we may have blinded peer review initially, at the end phase, once selection is done, I think it would be of extreme value to open up the black box that is the peer review process in this country for federal funding and make those peer review reports as available and as open as possible. Sometimes there are trade secrets or things that need to be closed, but to me, in order to improve the system, we need to know how the system is working and we need to do active research, or metaresearch, on peer review to improve it. We don't want to go from one system that's clearly not working to another system that we think might be working better without actually having the evidence. As a researcher, I think we need research, metaresearch, to show that the goals for how we'd like to change peer review and select for excellence are actually being changed and achieved. Right now, across the board, I would say there's very little implementation in monitoring our policies and practices.

Hon. Helena Jaczek: Thank you for that.

Since you've raised yet again the whole issue of grant monitoring, how do you see that happening? Would the original peer review assessment team have a role in that? Would there be a time frame, with a sort of "let's take a look at where they're at"? It seems like a lot of extra work. Could you try to convince me that it would be really useful to have that piece?

Kelly Cobey: I will, absolutely.

Right now in Canada, for the vast majority of grants, once you get funding, there's essentially no monitoring until your final report. In other jurisdictions, there are grants officers assigned to funded projects to ensure that certain milestones are met and that overall outputs are delivered.

I'll use, from my area of expertise, the concept of open science. For instance, with clinical trials, we have federal policy to ensure that these trials are registered prospectively in an appropriate registry. We know that we're not doing that for metaresearch.

We have a policy and we need to monitor, when we do fund a trial, that those trials are indeed getting registered and that the results are subsequently being reported fully and completely. We know from an audit we've done that about half of the trials conducted in this country never see the light of day in terms of having their results reported in a public registry or even in a peer-reviewed publication. That suggests inefficiency. We want to make sure that there's monitoring to make sure that some of these basic science policies that we have—our science policies are quite strong and getting stronger—are being implemented on the ground.

● (1245)

Hon. Helena Jaczek: Thank you.

Dr. Karram wanted to give us a little bit more on DEI, so perhaps the remaining time would be an opportunity for her to contribute.

Grace Karram: Thank you so much.

We see this polarization that assumes there's a woke community on one side and then others who are feeling shut down on the other side. We really have to nuance that, because if we're looking at trying to change our labour market inefficiencies, we have to remember that we have a large number of recent Canadians and groups of students who are in graduate school who are soon to be our main researchers and our early career researchers, and they come from a rich wealth of communities that have cultural and religious heritages. They also see themselves as apart from the woke community, but they're not the top-tier researchers who are saying we have to just pick based on merit. I hope I can begin to point out the differences between these groups and say that if we include EDI in an effective way, we will actually bring all of those new researchers into the Canadian landscape of research production, making sure that we have the best talent from around the world that has chosen to live in Canada to do research. We cannot throw EDI out in this myth that we're not choosing the best research because of the groups of recent Canadians. They are highly educated and need to get into our labour market.

The Chair: The time is up for MP Jaczek.

We will now proceed to MP Blanchette-Joncas.

Please go ahead. You have six minutes.

[*Translation*]

Maxime Blanchette-Joncas: Thank you, Madam Chair.

Thank you to the witnesses for being here.

Professor Larivière, you have shown in your work that the group of Canada's 15 major research universities, or U15 Canada, has received about 80% of research funding in Canada over the past 20 years. Out of that group, five universities in particular receive nearly half of that amount.

Does this federal allocation criterion really promote excellence, or does it preserve a concentration that perpetuates institutional prestige without improving scientific production?

Vincent Larivière: It's obviously a complex issue, and it's hard to find cause and effect relationships in all of this.

However, there's a well-known phenomenon in the sociology of science called the Matthew effect. Basically, the scientists or the institutions with the biggest amount of symbolic capital and prestige will receive even more, regardless of the intrinsic quality of it all. If two scientists discover the same thing at the same time, the discovery will most likely be attributed to the one who already has an enormous amount of capital. We know this to be one of the natural effects, say, of the scientific system, that is, giving more to those who already have it.

If future funding is based on past funding, that obviously leads to the concentration of funds, largely in the hands of researchers affiliated with U15 Canada.

Maxime Blanchette-Joncas: According to your data, the more funding a university receives, the more the average cost per paper goes up, even with the impact taken into account.

Doesn't that prove that the current federal criteria, which amass funding, undermine excellence by reducing the scientific effectiveness per dollar invested?

Vincent Larivière: Yes, that's what the data shows: The cost per paper is higher in large universities. You still have to question the data to be a good scientist, so we're trying to find the causes of all of that. I can't say that that's what it proves, but the data shows that it definitely costs more.

To put it charitably, we know that the big universities work extensively with the small ones. In all likelihood, it could be said that there are ripple effects on the smallest universities. More research is needed on the matter. It goes back to what my colleague said: We need data on the research system.

What we want to do in our labs is to find a way to fund it. Among other things, public policies should be created to fund research more fairly and generate the greatest collective benefits. For that to happen, the granting agencies have to share their data.

Maxime Blanchette-Joncas: Yes.

You mentioned a little earlier that peer review committees can use bibliometric indicators as criteria for excellence—you just now said, “pull indicators out from nowhere”—such as citations, impact factors, the h-index and publication volumes. However, your research shows that the committees favour certain disciplines, as well as scientific publications in English, to the detriment of francophones, the humanities and emerging researchers.

Do those criteria really reflect excellence, or do they introduce new biases into research funding?

Vincent Larivière: That definitely introduces biases into the research system. There's nothing inherently superior about publishing in one language or another. Almost all of our evaluation committees automatically give English publications higher prestige. That's how it is in Canada, and that's how it is in just about every country in the world.

In Canada, it's important to admit that this adds a particular dynamic to the country's linguistic balance. When Belgian scientists switch to English, that doesn't affect their language dynamic, because English isn't one of their national languages. In Canada, though, any switch to English automatically influences the country's linguistic balance.

● (1250)

Maxime Blanchette-Joncas: Your work reveals discrepancies related to institution sizes, language—particularly for francophone researchers—and disciplines. However, the federal government's equity, diversity and inclusion, or EDI, criteria focus mainly on demographic diversity.

Shouldn't the criteria be broadened to include those measurable inequalities that determine scientific excellence?

Vincent Larivière: Are you talking about language inequalities?

Maxime Blanchette-Joncas: Yes.

Vincent Larivière: Yes, that should happen, if EDI is being considered in a broader sense.

An official languages act should also apply to all of that. It's an aspect of diversity that brings a greater plurality of views to the scientific space. Canada gains an advantage. French has to be seen as an advantage for the Canadian scientific community, rather than a handicap.

Maxime Blanchette-Joncas: International studies, such as the one by Aagaard and others, conclude that a more scattered distribution of funds produces greater collective results.

Should the Canadian federal criteria evolve along those lines to better serve excellence?

Vincent Larivière: I think things have improved a lot in Canada. There was a time when the concentration of funds was such that the success rates were much lower. For example, there are currently two types of requests at the Social Sciences and Humanities Research Council. You can ask for a small amount, and the success rates will be higher, or you can ask for a large amount, and the funding rate will be lower.

I think the government can experiment more when it comes to spreading out research funding. Spreading out the funding allows for more chances for discovery. The more researchers there are doing research, the more discoveries there will be.

Maxime Blanchette-Joncas: Since federal funds are public money, shouldn't the government require that the criteria for awarding them promote not only excellence, but also institutional, linguistic and regional diversity? What concrete reforms—such as caps per researcher, expanded core funding or better support for emerging researchers—would you recommend to better align excellence with the distribution of funds?

Vincent Larivière: Those are all good suggestions in a way. What I want most is for us to give ourselves the room to experiment. At the moment, it's easy to imagine that the funding system generates inequalities and that there are biases. By trying things out, it will be possible to find slightly fairer ways to develop, to better measure or to better qualify scientific excellence.

As I said a little earlier, scientific excellence is multi-faceted. There's no one right way to do science.

[*English*]

The Chair: Thank you. The time is up.

We will now proceed to the second round of questioning. We will start the second round with MP Singh Mahal.

Please, go ahead. You have five minutes for your round of questioning.

Jagsharan Singh Mahal (Edmonton Southeast, CPC): Thank you, Madam Chair.

Thank you to all the witnesses. Thank you to the members opposite as well.

Since this committee is about government funding for research and academic excellence, I will focus my questions on where the grant should go and how better use of that grant can be made. I will start with the heavily talked about question of DEI in this session.

My question is for Dr. Karram.

You said in your evidence that drawing a balance is an important thing that we need to keep in mind when federal funding comes into question. Here is my question for you. When there's DEI, it's a mandatory condition put by the government on educational institutions. How do you think a balance can be drawn for researchers who do not want to disclose that information? If they disclose that information, they risk not getting that funding or not having their application approved. How would you respond to that?

Grace Karram: We have years of research that shows that names, for instance, bias hiring with résumés.... This is well documented in sociology. When we have things like blind peer review as part of the process, that can be a way to evaluate the research without considering EDI. That's one option.

We also have really good streaming that we do for early career researchers. You say that you're an early career researcher, and you're in a particular pool that allows you to be evaluated accordingly. Why can we not have certain pools for people who are saying, “I want to be evaluated on merit”, and for people who say, “Look, I'm from a group that has historically been marginalized in the academy. I do not have the family resources. I went to a small institution, so I don't have the institutional resources to get these great research ideas off the ground”?

When I say that we're going to fund research infrastructure.... I work at a university where my hand is held from the inception of my research ideas right until the moment I click send on my SSHRC grant applications. I have such a robust community, offices that help me, and we want to make sure that groups of people who don't have access to that have access to that.

In their files, if we know they're from one of these groups and if they've been able to identify the reasons they have been on the outside of the research community, we want to bring them in, because that research that's getting missed is actually putting Canada behind. We know that international collaboration increases publications. The people who have natural ties to other parts of the world—because they're first-generation Canadians in the academy or have come here with a Ph.D. from another place—are a huge asset in the Canadian labour force, and we are missing it.

● (1255)

Jagsharan Singh Mahal: That was my next question, actually. You already mentioned that people from international jurisdictions who come to Canada with Ph.D.s in hand are also not being taken care of, and they are underemployed because they do not qualify for the grants that are available.

Don't you think that putting in a clause like DEI also eliminates those who want to be involved in education but don't want to come up because they don't want to disclose their political affiliations or because they have a fear of not being accepted if they disclose their political affiliations?

Grace Karram: Political affiliation is a serious concern right now, but there are many other indicators and factors that allow us to identify groups. We are social scientists. We do well at creating metrics and following them. It is not impossible to create effective selection criteria that allow us to protect people's political affiliations—right now, we have a lot of things that are politically sensitive—but, at the same time, allow us to identify first-generation Canadians and those from groups that are not well represented in the academy and to say to them that these factors will prioritize their research so that this important issue can get on the ground.

If our application systems are so limited that our researchers are scared, we do need to re-evaluate that. Is it just EDI, or is it that we don't have a robust system of academic freedom right now that protects academics overall?

I do think that we have to make sure that these people who are coming in with high skills.... This is well documented in the medical sciences, the limitations to transitioning to Canada and to employment. We want to do the same thing for our Ph.D.s in all disciplines to make sure that we have programming that isn't EDI for the sake of faces and tokenism but that is taking people with skills and helping them transition those skills to Canada.

The Chair: We will now proceed to MP McKelvie.

MP McKelvie, you will have five minutes for your round of questions. Please go ahead.

Jennifer McKelvie: Thank you, Madam Chair.

We think of research as the time you start the experiment until the time you end the experiment. However, there is a lot that happens before that, and there's a lot that happens after that.

On the research funding criteria—which was the actual basis of this study and why we brought you here—I heard some great comments earlier. I'm hoping you can elaborate on that around knowledge mobilization and uptake and how we should be including, or not including, that in research criteria for awarding.

I'll start with you, Dr. Cobey.

Kelly Cobey: It's difficult to answer this question generally, because we have such a range of research activities in this country. There are some people who are doing purely discovery-based research. There are others who are doing community-based research, for instance, that sometimes lends itself very well to immediate translation in those communities.

We need to ask our researchers what they intend to do and understand from them and their community, through consultation, what the indicators for success might be. In some areas, immediate impact on communities, policy and the like, and mobilization in that way are some things that may be relevant. In others, that's going to be less relevant. I think we need to open up the conversations with our disciplines to consider how we define research excellence with a discipline-specific lens.

Jennifer McKelvie: Following up on that, I was previously an NSERC committee member for assessing applications. NSERC has a wide variety of programs. There's discovery, which is very fundamental and science-based, but then they had.... I was on the selection committees for something that was more applied, where there was knowledge mobilization. In your expert opinion, should we be having different grants and programs with different objectives?

● (1300)

Kelly Cobey: Yes, I think so. If we have mission-driven goals in this country, the incentives and rewards for achieving those goals may differ, and where they differ, we need to appropriately create the incentives.

I'll give the example of AI, which I mentioned before. In order to do AI, you need large quantities of data. We have large quantities of data that are siloed by individual researchers and their institutions. If there's a mission-driven goal to achieve that, one of the things we might want to think about incentivizing is data management, data sharing, and responsible consideration of privacy versus openness in how we approach that. I think that if we want to move toward specific mission-driven goals, we have to be considerate about how to appropriately incentivize those in that context.

Jennifer McKelvie: Okay. That's great.

My next question is for Dr. Karram.

My question is around curiosity and questions. We just spoke about and heard about knowledge mobilization and uptake, but I'm wondering about that curiosity and asking the right questions. In that respect, I was wondering if you could speak to where EDI might be important around that.

Grace Karram: Well, from the very outset, as soon as we have people from different walks of life in a room, we have different ideas. This is, I think, the nature of diversity. One of the really fascinating things we're looking at right now is models of student retention using large datasets with AI. AI cannot recognize certain groups of people, because its creators did not make it representative. As soon as we have different people sitting at the table, all of those things get corrected.

The research questions we come up with can be as global as the community we have. Right now we have major issues facing the globe. We have migration, poverty and climate change, and the students who sit in my classrooms—my doctoral students—have lived this. Their questions are at the cutting edge. They're not old and stale. They are the things we need to listen to. Curiosity is at the heart of community, I think.

Jennifer McKelvie: As a follow-up to that, do you have examples of where we've gone wrong? I lean toward the medical community and not having enough diversity there to identify diseases that affect certain groups more, proportionally, and investment in those different things. Do you have examples of where a lack of diversity at the table has really set us back?

Grace Karram: When we look at the amazing research that's happening in our colleges, which needs to be funded more strongly, we have this applied research that is looking at how work-integrated learning, for instance, is able to build curriculum, and we're getting a much faster pipeline from post-secondary into the labour market. That's really important.

When we have people sitting at the table who've worked in other jurisdictions, they begin to make these networks. Right now, we have incredible programs happening at a few of our community colleges where we're making links to institutions in other nations. Canada plays both a development role and a learning role in seeing how places with strong, robust technical education can move forward.

The sharing of best practices internationally is one of the most effective ways to improve your post-secondary sector, which, again, is at the heart of your research. It goes wrong when we have people who have worked in only one small community, where they are. They've done an effective job, but they haven't included the diverse voices of, say, the international students—

The Chair: I'm sorry for interrupting, but the time is up.

Jennifer McKelvie: Thank you.

The Chair: We will now proceed to Mr. Blanchette-Joncas for two and a half minutes.

[*Translation*]

Maxime Blanchette-Joncas: Thank you, Madam Chair.

My next question is for Ms. Cobey.

You mentioned earlier that the application of the San Francisco Declaration on Research Assessment, or DORA, was quite robust. However, the three granting agencies took six years to apply the DORA.

After such a six-year delay, how can you say that the application is robust enough? In my opinion, there is instead a lack of leadership or vision. Can you also confirm how many universities in Canada have signed DORA?

[*English*]

Kelly Cobey: Thank you for your question.

Can I clarify? The translation trailed off at the end. How many universities in Canada signed...?

[*Translation*]

Maxime Blanchette-Joncas: How many universities in Canada have signed DORA?

[*English*]

Kelly Cobey: I don't know the exact number of universities. There are over 65 organizations. Some of them may not be universities. They may be publishers or funders.

Yes, we signed in 2019. My understanding is that part of the delay in implementation was due to the pandemic. However, I know of no jurisdiction in this world that is done with responsible research assessment implementation, and I don't think it's something we would ever want to be done. I think that as a federal government we will always want to be monitoring, evaluating and improving how we assess research excellence in this country and how we fund research.

● (1305)

[*Translation*]

Maxime Blanchette-Joncas: The answer is that only six universities in Canada have signed the San Francisco Declaration on Research Assessment. I think that can certainly lead to a hypothesis, which I'd like you to clarify for me. Does maintaining traditional indicators benefit certain actors? Does that contribute to why Canadian organizations are taking so long to join DORA?

[*English*]

Kelly Cobey: I think we don't judge the signature as the be-all and end-all to an institution's view on reforming research assessment. There are many parallel change movements that exist in our community beyond DORA that have similar messaging.

As I mentioned earlier.... For instance, I know of organizations in this country that have reached out, with senior leadership, and they're going ahead with reforming research assessment without signing DORA. There's no requirement to sign DORA to begin this approach in one's work.

The Chair: Thank you.

With that, we will end the round of questioning.

Thank you to all the witnesses for appearing today and providing important testimony. If there is anything you want to bring to the attention of the committee members that you were not able to address because of limited time, you can always send written submissions to the clerk of the committee. Once you do that, those submissions will be circulated to all members of the committee and will be taken into consideration at the time of the drafting of the report.

I really want to thank all the witnesses.

Do I have the consent of the members to adjourn the meeting?

Some hon. members: Agreed.

The Chair: Okay. The meeting is adjourned.