



HOUSE OF COMMONS
CHAMBRE DES COMMUNES
CANADA

44th PARLIAMENT, 1st SESSION

Standing Committee on Science and Research

EVIDENCE

NUMBER 054

Monday, September 25, 2023

Chair: Mr. Lloyd Longfield



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• (1530)
[English]

The Chair (Mr. Lloyd Longfield (Guelph, Lib.)): I call the meeting to order.

Welcome to meeting number 54 of the Standing Committee on Science and Research.

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 would like to take a few minutes for comments for the members and witnesses.

Please wait until I recognize you by name before speaking. For those participating by video conference, click on the microphone. On interpretation, again, Mr. Cannings, you're very familiar with that. You can choose floor, English or French.

Although this room is equipped with a powerful audio system, feedback events can occur and have occurred. They can be very harmful for the interpreters and can cause serious injuries. Please keep your earpiece away from the microphone so that we don't cause those events.

In accordance with the committee's routine motion concerning connection tests for witnesses, we have had our test done for Mr. Cannings. We also have a witness in the second hour who will be joining us via video.

I will remind you that all comments should be addressed through the chair.

Pursuant to Standing Order 108(3)(i) and the motion adopted by the committee on Tuesday, June 6, 2023, the committee commences its study of the use of federal government research and development grants, funds and contributions by Canadian universities and research institutions in partnerships with entities connected to the People's Republic of China.

It's my pleasure to welcome our witnesses for today.

First of all, as an individual, we have with us Margaret McCuaig-Johnston, senior fellow, Graduate School of Public and International Affairs, Institute of Science, Society and Policy, University of Ottawa. We also have with us Anna Puglisi, senior fellow, Center for Security and Emerging Technology, Georgetown University.

You will each have five minutes for your opening remarks, after which we will proceed to rounds of questions.

We will start off with Margaret McCuaig-Johnston, please, for five minutes.

Ms. Margaret McCuaig-Johnston (Senior Fellow, Graduate School of Public and International Affairs and Institute of Science, Society and Policy, University of Ottawa, As an Individual): Thank you, Mr. Chair.

Thank you to the committee for the opportunity to speak about issues of scientific collaboration with China.

I was fortunate to work in government for 37 years, primarily in science and technology policies, programs and funding, but my master's is focused on China. I speak some Mandarin and over the years I was often the official who engaged with China on R and D collaborations, including seven years on the Canada-China joint committee on S and T. In addition, for five years, I was the ADM responsible for the energy labs at NRCan, and for four years I was the executive vice-president of NSERC, so I can address both government and university R and D with China.

For more than 10 years since my retirement, I've been writing about China's innovation system. When I began seeing issues of concern about nine years ago, I started giving briefings to my former colleagues in government to raise their awareness of the risks.

My prime concern has been China's policy for the integration of military and civilian technology development. It became a top priority of the Chinese government starting in 2014, and Xi himself chairs the national commission for military-civilian development. The risk for Canada is that our university scientists could be partnering with civilian scientists or engineers at any university in China and not be aware that their research is going out the back door to the PLA. As I've said many times, the PLA are not our friends.

I'm pleased to see that the committee recognizes this issue by highlighting five specific fields of research, which are all priorities for the PLA, and also by stipulating that there are other fields that are potentially problematic. The Australian Strategic Policy Institute, or ASPI, has developed a list of these, and I would add to it space science, polar research and genomics. Canada should not be partnering with China in any of these.

The second issue is the direct presence of Chinese military scientists and engineers in our universities and partnerships. ISED has been working on guidance since their February 14 announcement. ASPI has compiled a Chinese defence universities tracker of military universities and labs. That list should be given to all Canadian university and government labs, advising them not to partner with people from any of those institutions, with due diligence applied for others, too, as Chinese scientists have sometimes listed a different institution to obscure where they are really from. The provinces need to be part of this process.

A third issue is Canadian researchers partnering with Chinese military and surveillance technology companies like SenseTime, Tencent, Alibaba, iFlytek and Huawei, which work with the military and which also design and sell equipment to repress the Uyghurs and others. They should be added to the list I mentioned. We know how MPs feel about the Uyghur genocide. Canadian researchers should share those concerns.

That brings me to the issue of academic freedom. I completely get that researchers want to be able to partner with whomever they want. I would just remind them of the ethical lens that they should be applying as a human being with Canadian values. Surely if they had a Uyghur or someone from Taiwan sitting in front of them, they would be ashamed to talk about how they helped with Uyghur repression and with weapons to attack Taiwan, and there is also a reputational risk for their university with such research.

The Government of Canada has realized the gravity of the issues I've raised and has taken numerous steps to address them, including briefings of university administrators and researchers, user-friendly guidelines to protect our research, the national security screening of proposals to the granting councils and the proviso that the government will not fund research with PLA-associated organizations.

The Business Council of Canada's recent recommendations are also important. There is more that can be done, especially to align our approach with our allies in the Five Eyes.

I'll stop there. Thank you.

• (1535)

The Chair: Thank you very much.

We'll now move to Anna Puglisi for five minutes.

Ms. Anna Puglisi (Senior Fellow, Center for Security and Emerging Technology, Georgetown University, As an Individual): Thank you very much.

Distinguished members of the committee and staff, thank you for the opportunity to participate in today's hearing. It's an honour to be here alongside my esteemed colleague.

I am currently a senior fellow at the Center for Security and Emerging Technology at Georgetown University. I previously served as a U.S. national counter-intelligence officer for East Asia and have spent most of my career looking at China's S and T development and tech acquisition strategies.

At the committee's request, my testimony today will focus on S and T collaboration with China. I'll provide a brief overview of China's S and T system, highlight how China's policies and pro-

grams challenge the global norms of science and finally discuss research security.

Lastly, I'll offer some lessons learned and put the bluff up front.

This is not just a Canadian or U.S. problem but one of open democracies, because China's system is not the same as ours. It takes a holistic approach to the development of technology and it blurs the lines between public, private, civilian and military. Our policies and mitigation strategies need to reflect that reality.

Regardless of their personal views, Chinese scientists, business people and officials interacting with our universities or companies have to respond to the PRC's government or security services if they are asked for information or data.

China intimidates and harshly silences its critics. This has only grown more prevalent in the past few years, and it increasingly includes its citizens abroad, both in Canada and the U.S.

Our institutions are not designed to counter the threat to academic freedom and the manipulation of public opinion that China's policies and actions pose. Beijing in many ways understands our societal tensions, and its statecraft is directed at them, promoting any changes in policy as ethnic profiling. This is a well-funded effort.

It's because of this last point that I do want to acknowledge how difficult and challenging these issues can be. There's no room for xenophobia or ethnic profiling in open liberal democracies. It goes against everything we stand for. Also, precisely because of these values, we must move forward and find a principled way to mitigate the policies of a nation-state that's ever more authoritarian.

The importance of science and technology is why China targets our universities and our labs. Emerging technologies are increasingly at the centre of global competition, providing the foundational research and developments that underpin future industries and drive economic growth. Future strength will be built on 5G, AI, biotech, new materials, quantum and areas currently researched at our universities, government labs and R and D centres.

Beijing views this technology and the robust S and T infrastructure needed to develop it as a national asset. The way it's structured its system to reach this goal is inherently at odds with the key assumptions of the global norms, which include transparency, reciprocity and sharing. Beijing, especially Xi, looks at this development in a very zero-sum way. My written testimony goes into many more details on the policies, programs and infrastructure that support these efforts.

China's legal system also complicates collaborations, because its laws compel its citizens to share information and data with Chinese entities if asked, regardless of the restrictions placed on that information. More importantly, who owns that information? I have also provided these points in my written testimony.

Moving forward, we need to consider the following.

We need policies for the China we have and not the China we want. Most policy measures to date have been tactical and not designed to counter an entire system that's structurally different from our own.

It's essential that open liberal democracies such as Canada and the U.S. invest in the future, but we must build research security into these funding programs. Existing policies and laws are insufficient to address the level of influence the Chinese Communist Party exerts in our society, especially in academia. Increased reporting requirements for foreign money at our academic and research institutes and clear reporting requirements are a good start.

We also have to ensure true reciprocity in our collaborations. For too long, we've looked the other way when China doesn't play by the rules and follow through on the details of these S and T collaborations. There have to be repercussions for not sharing data, providing access to facilities and, as my colleague mentioned, obfuscating the true affiliation of Chinese scientists.

In conclusion, what will also make this difficult is that the reality China is presenting is inconvenient to those benefiting in the short term. This includes companies looking for short-term profits, academics who benefit personally from funding or cheap labour in their labs and the many former government officials who cash in as lobbyists for state-owned or state-supported companies in China.

I want to thank the committee again for continuing to discuss this issue.

• (1540)

These are hard conversations that open, democratic societies must have if we are to protect and promote our competitiveness, our future developments and our values. If we do not highlight and address China's policies that violate global norms and our values, we give credence to a system that undermines fairness, openness and human rights. The Chinese people deserve better, and I think that Canadian and American people deserve better. Our future depends on it.

Thank you.

The Chair: Thank you very much. We look forward to your written brief that's in translation services and will be distributed once that has been done. It'll be put up on our website as well.

Before we get going with the questions from MPs, I would like to welcome MP David Lametti. It's great to have you as part of this committee.

Also, Helena Jaczek, it's great to have you as well. We look forward to your experience as part of our discussions.

Welcome also to Anju Dhillon, who is subbing for Ryan Turnbull today. It's great to have you.

Now we will start our six-minute round of questioning, with the first spot going to Gerald Soroka for the Conservatives.

• (1545)

Mr. Gerald Soroka (Yellowhead, CPC): Thank you, Mr. Chair.

Thank you to the witnesses for coming today and providing their great insight.

Ms. McCuaig-Johnston, you mentioned that you have been talking about the concerns already for years. Do you think that this delay in action has the potential to compromise Canadian research security?

Ms. Margaret McCuaig-Johnston: I have been concerned that it should move faster, but I know that within the government and across the government, officials were trying to understand exactly what was going on and then what levers they had available to affect it.

One of the concerns, of course, is that at the federal level, federal funding for R and D is the lever, so how would they go about that?

It has been a step-by-step process. They started with briefings of administrators and then developed guidelines, very user-friendly guidelines. I was impressed by them. Now they have gone all the way to national security screenings for proposals that come before the Natural Sciences and Engineering Research Council. Two-thirds of those have already been sent back and been told that, no, that's a risk for national security. That's alarming, because it means that for all those previous years there was a high proportion of proposals that were a risk for national security.

I'm really pleased that the government is now moving ahead and looking at what else it can do. I'm very much looking forward to this committee's report, because I think it will add to the body of work on what more can be done.

Mr. Gerald Soroka: On a next point, though, universities are looking for money or financial support. One of the things the government has said is that if you are partnering with China now and are getting funding, then it won't give you that funding. However, the Chinese can supply a lot more money, so is that really safeguarding, or is that just some quick backtalk from the government, saying that yes, it's concerned, but not much?

Ms. Margaret McCuaig-Johnston: Well, there are two dimensions to it. There's partnership with a university researcher in China, and that can be one-on-one or with a group. However, the rubber really hits the road with the Chinese companies that approach researchers here in Canada and offer a large amount of money with the proviso that the whole contract is to be made secret and that the senior administration of the university is never to tell anyone who inquires about it that this money is coming from Huawei or some other Chinese company.

That's a big problem, and universities have concealed their information about secrecy. A University of Alberta AI lab was shown to be partnering with SenseTime and Alibaba. It removed that information from its website, but if you go on the Hong Kong AI Lab website, you will see that there is a university AI lab in Alberta, Amii, partnering with Alibaba Group, Alibaba Cloud, Alibaba Damo Academy and Alibaba Entrepreneurs Fund, plus SenseTime, and Alibaba has developed a surveillance technology that will pick a Uyghur, or another minority, out of a crowd. This is part of the repression. It's very concerning.

Mr. Gerald Soroka: Yes. We can see a lot of issues. That's why we're bringing this study forward; it's for that reason.

I will go on to Ms. Puglisi.

You have dealt more with the United States and some of the policies there. Do you think that the Canadian government is doing enough? If not, what kinds of opportunities do we have to improve?

Ms. Anna Puglisi: As I mentioned, I think this is a problem we see not only in Canada and in the U.S but also in other open, liberal democracies. I think what makes it so challenging to get this started is we had hoped these collaborations—especially when many people entered into them—would lead to a more open China and that we wouldn't be in this place, especially 10 or 20 years ago. I think movement across the board is not as quick as I hoped it would be.

Looking at where the funding comes from and looking at these talent programs is a really good start, but it's also about telling the stories and making folks aware that these are the policies and programs of a nation-state.

It's also looking at investing in our own futures and looking at the importance of that foundational research, because what's really challenging is that as China has become more capable, it targets earlier and earlier in the development cycle, and our systems are not set up to counter that. Our systems are set up to counter the stealing of military technologies and other kinds of things, so I think it really requires us to think about a different way of doing things.

Thank you.

• (1550)

The Chair: You have 30 seconds.

Mr. Gerald Soroka: You'll probably have to reply back in writing, then. Could you give us some information as to...? Obviously the government is quite trusting—not only this government, but also a lot of governments. What kinds of opportunities should we be clamping down on and working with universities on to make sure we don't lose our resources and our technology, especially not to have it fall into foreign entities such as China?

I think that concludes my time.

The Chair: You've pretty much used it, but that was a good question. We look forward to an answer.

Now, for the Liberals, we have Lena Metlege Diab.

Ms. Lena Metlege Diab (Halifax West, Lib.): Thanks, Mr. Chair.

Thanks to our witnesses appearing before us today. You both come with such phenomenal experience and expertise. Thank you for coming to our committee.

Ms. McCuaig-Johnston, I have a question for you. Our government has been working towards improving research security in Canada. A couple of years ago, the innovation, science and industry department released the national security guidelines for research partnerships. I'm wondering what you think of that document.

Ms. Margaret McCuaig-Johnston: I thought those were excellent guidelines. I was very impressed. They talked about how to protect your IP in a direct partnership and how to protect your equipment when you travel. There were checklists and examples of how things can go wrong. I thought it was very user-friendly.

It was just the first start that the government made, and I thought it was great. They've done more since then, so I was encouraged by that.

Ms. Lena Metlege Diab: What would you say would be the next best steps to take?

Ms. Margaret McCuaig-Johnston: Minister Champagne said he wants to forbid university research of any kind with any defence or military university institution in China. I hope that would be a very broad list. In other words, there are 65 direct military universities in China, and there are 160 associated civilian labs that focus on military research. I'm hoping that all of those will be included in the list that the department is developing now and that it will be announced sometime soon. The sooner the better, because researchers are now putting in their proposals for their next research projects, and it's important that they know which organizations not to partner with. I've been saying since the very beginning that we should be giving the list from the Australian Strategic Policy Institute to every researcher and government lab in Canada so they don't partner with them.

Ms. Lena Metlege Diab: I do ask this question a lot because education is very much a provincial jurisdiction, but obviously the federal government provides a lot of research grants and money, etc. What would you recommend for the Government of Canada, the provinces and the university sector? What would you say each of their roles should be? How do you create a system whereby they can all try to share information as much as possible, given the intricacies of what we have?

Ms. Margaret McCuaig-Johnston: The member has put it very well herself in terms of how the governments can work together.

My first eight years in government were in the Ontario government, primarily in federal-provincial relations. I would like to see the provinces at the table every step of the way and being part of the decision-making in terms of what's communicated to universities.

Beyond the provisos that are stipulated around the spending of federal research dollars, virtually everything else is provincial, so it's going to be important that the provinces relay lists and relay directions to universities in terms of which companies not to partner with, for example, and give additional help to university researchers.

All through this, the provinces have been inclined to say that this is national security and that national security is not their business—that's the federal government's business—but the federal government has their act together, is getting their act together now, and can help the provinces convey the message to their universities.

• (1555)

Ms. Lena Metlege Diab: Thank you.

I have a minute left.

I'm sorry, folks. I was on an all-night flight from British Columbia and I'm just not used to it. It's obviously weighing on me.

Ms. Puglisi, from your experience, do you have anything to share on my last question?

Ms. Anna Puglisi: I think the sharing of information is really essential. We struggle with that as well in the U.S. in terms of how to provide our universities and even companies with the kinds of information they need to make good choices.

What is equally important, though, is that we really need to demand the kind of transparency that we receive when we do collaborations with other entities. The burden should really be on the Chinese entity to be transparent and to be forthcoming with those kinds of information, because oftentimes we don't see that kind of transparency and reciprocity, and that's really essential.

[*Translation*]

The Chair: Thank you.

Mr. Blanchette-Joncas, you now have the floor for six minutes.

Mr. Maxime Blanchette-Joncas (Rimouski-Neigette—Témiscouata—Les Basques, BQ): Thank you very much, Mr. Chair.

First of all, I would like to say hello to our colleagues who are joining us. I find it interesting that the government wants to add new members to this important committee. We've been waiting for

six months for the Minister of Innovation, Science and Industry to come. All the members of the committee agreed to invite him to come and testify and explain the decisions on his budget. Instead of having the minister here, we now have former ministers here. We are making progress, it should be noted.

I want to get back to concrete things and our study today.

Ms. McCuaig-Johnston, congratulations and thank you for your commitment over the past 37 years. That's something. You have expertise in this area, and we are pleased that you are with us today.

At the last committee meeting, last Wednesday, I quoted you when I talked about the approaches to take in cases of scientific collaboration. You said that a different set of rules should apply in assessing scientific collaborations with researchers from authoritarian regimes, such as Russia or China. Various witnesses have given us their mixed opinions on this proposal. Gordon Houlden talked about the need to focus on research as well, and Cherie Wong, another witness, talked about a country-blind approach.

Can you elaborate on your approach? Also, what do you think of the positions of the other witnesses?

[*English*]

Ms. Margaret McCuaig-Johnston: I had the pleasure of watching that committee meeting. I know what you're referring to.

My views are very much in the camp of Gordon Houlden's: We need to assess not just the professor and the institution they're coming from but also the field or discipline of research. The committee has looked at a list of these. ASPI has listed research areas. I would add polar science and so on, such as aerospace, rare earths and semiconductors. Even basic research into the properties of advanced materials and basic brain research are potentially problematic when China is now.... China has a policy for weaponry. They would like to develop weapons that meet the objective of winning without fighting. That's where brain research comes into it.

I'm not in the camp of being agnostic about where people are from or making researchers go through this process for every single country in the world. I also have a concern about the registry; this may be what it's going to look like. I think we should be focusing on the countries that we know are problems and on what's documented. China is certainly number one—and number two, three and four too.

• (1600)

[*Translation*]

Mr. Maxime Blanchette-Joncas: Thank you very much.

How do you think we should deal with co-operation between the various countries? For example, Australia has some mechanisms in place. Australian universities must inform the government whenever there are partnerships or collaborations with foreign countries of focus.

What do you think of those measures? Also, based on your expertise, how should we deal with collaborations with different countries?

[English]

Ms. Margaret McCuaig-Johnston: I certainly think that Australia's measure is an interesting one: simply stating transparently what the proposed partnerships are. That's one piece of it, but there are a lot of other pieces as well.

We have to keep in mind as well that China does not have a reciprocal arrangement with us. They want all of our work, but they are less than keen to share with us what they've been doing. They have a massive database for their research. In March, they closed the entire database to foreign researchers. They have strategic technology areas that are reviewed before publishing. If it's too strategic and sensitive, it won't be published, even if it was developed with foreign researchers.

These are some of the things we need to keep in mind when we're reviewing researchers from China.

[Translation]

Mr. Maxime Blanchette-Joncas: Thank you very much, Ms. McCuaig-Johnston.

I want to go back to the guidelines and the progress.

In 2021, the national security guidelines for research partnerships were published.

What progress do you think has been made two years later on the issue of research safety, and what obstacles have been encountered in the process?

[English]

Ms. Margaret McCuaig-Johnston: As I said, I believe those are very useful guidelines, as far as they go. They are user-friendly for professors, who can review and assess every one of their research partnerships against those guidelines. They can raise any questions with their office of research and international relations if they have any questions or concerns.

The major research universities now have national security research officers, who usually have national security experience.

The Chair: That's terrific. Thank you. You did well in getting the answer in under time.

Now we'll turn virtually to Richard Cannings from the NDP.

Mr. Richard Cannings (South Okanagan—West Kootenay, NDP): Thank you.

Thank you to both witnesses for being with us today. It's a very interesting topic.

I would like to follow up on what Mr. Blanchette-Joncas was talking about with Ms. McCuaig-Johnston: these guidelines, and the lists of institutions and topics to avoid.

Is there a sense out there that these are being followed? Between the provinces and the federal government, it's a very tricky landscape. I'm wondering where we are in terms of having the capacity to track down all those partnerships and arrangements.

Ms. Margaret McCuaig-Johnston: Is that question for me?

Mr. Richard Cannings: Yes, thank you.

Ms. Margaret McCuaig-Johnston: Thank you very much.

In fact, we haven't really embarked yet on giving the lists to the universities. We said that anything they put forward that the granting councils, in consultation with ISED and CSIS, think are sensitive will be reviewed. What we really need to do is give the lists of the institutions to the universities and tell them that they will not partner with any of these.

Also, I believe—and this was also suggested by Mr. Houlden—that it is also the topics and disciplines. Even for something seemingly innocent at a civilian university, we know that civilian researchers are obliged to partner with the Chinese military, if they're asked to do so, under the policy for the integration of military and civilian technology development. This is the thing that got me really concerned about this situation many years ago.

It's both a list of institutions and a list of topics. I guess the worst-case scenario, in my mind, would be if the universities were given simply a very narrow list of universities that have the words “military” or “defence” in them. That would not be sufficient at all.

• (1605)

Mr. Richard Cannings: Do you foresee a need for a federal-provincial agreement that would come up with such a combined list, so that we can have some sense that this is really being taken care of on a national level?

Ms. Margaret McCuaig-Johnston: A lot of this work has been done already by the Australian Strategic Policy Institute. We can adopt their list with great comfort and security.

For the federal government to convey to the provinces how the list was developed, maybe have some people from ASPI come and meet with them and go through it with them. That would go a long way, I believe, toward helping the provinces, which have been looking for guidance on this. They don't want to do the wrong thing. They don't want to be helping the PLA, but they need clear directions, guidelines and checklists so they can be sure they're being safe.

Mr. Richard Cannings: You see the federal government providing some of that capacity because some provinces may say that they can't check all these things that are going on in our universities.

Would that be a role that the federal government could play, as long as the provinces agreed on that list and those guidelines?

Ms. Margaret McCuaig-Johnston: Yes, Mr. Chair. I think that would be a very good place to start.

Having come from the world of federal-provincial relations, I know that those things can drag on. I would hope that those consultations would be held in a very speedy manner, which will convey the level of urgency that we all have for these questions.

Mr. Richard Cannings: Finally, quickly, you mentioned that there was some security vetting of research proposals, and two-thirds of them were sent back.

Can you give me more detail on that? How many proposals were looked at? Were these all proposals to the tri-council?

Ms. Margaret McCuaig-Johnston: I believe it was around 36 of the NSERC proposals in the first round. I believe that's where that two-thirds statistic came from. Again, it's a very concerning number.

Mr. Richard Cannings: Were these turned back because of the institutions they were partnered with?

Ms. Margaret McCuaig-Johnston: I believe that a more detailed national security review was done for each of those, which involved both ISED and CSIS officials.

Mr. Richard Cannings: Thank you.

I must be getting close to the end of my time.

The Chair: You have about 30 seconds.

Mr. Richard Cannings: Okay.

I'll just turn to Ms. Puglisi, then, and ask what would be the best way forward for a country like Canada.

Ms. Anna Puglisi: I think putting together lists is very challenging, because we have a very dynamic actor that will take things off the Internet, that is not forthcoming, is not transparent and is very opaque. How can you have collaborations or share if you take your entire academic basic science holdings in Mandarin off-line?

That right there is a first step—

• (1610)

The Chair: I'll have to hold you on that one. Thanks for getting that in.

Now we'll go to Corey Tochor for five minutes, please.

Mr. Corey Tochor (Saskatoon—University, CPC): I'll let the witness continue. You mentioned a list and you talked about a first step, Ms. Puglisi.

Ms. Anna Puglisi: Thank you.

I was just going to say that China is not a neutral actor, and that's one of the challenges with lists. Having more of a risk matrix that looks at what the research is and what we know about the entity is a good start.

Mr. Corey Tochor: That has to be coming from the federal government. Institutions don't have the ability to make that matrix. Would you agree with that?

Ms. Anna Puglisi: I would agree with that. It's very challenging.

Mr. Corey Tochor: Do you think Canada's doing enough to coordinate with our allies, especially with America, regarding the threat that the PRC is?

Ms. Anna Puglisi: I've been out of government for a while, so I'm not aware of what the current conversations are, but I think that the U.S. and Canada are partners and like-minded and that we really do need to work together to counter this threat, because it comes out our seams in a way that our systems are not set up to counter, so yes.

Mr. Corey Tochor: I would agree with that. I suspect there's been some tension over the years, especially with Huawei and the Five Eyes deciding not to allow Huawei in. For whatever reason, this current government would not make a decision, and that probably would have strained things, obviously, between our two countries.

In your testimony to the U.S. Senate several years ago, you noted that the PRC is increasingly targeting non-ethnic Chinese as well. Can you expand on what groups the PRC is targeting?

Ms. Anna Puglisi: That would include experts in the different technology areas.

Previously, most of the talent programs were really focused on ethnic Chinese scientists worldwide, regardless of citizenship. They were using, in the same way, the same tactics—funding, lab space—to attract individuals back. The challenge with that is that oftentimes these contracts are opaque and the host institutions are not aware of them.

Mr. Corey Tochor: Have you heard of the terminology—we heard it last week—“feed, trap, kill”?

Ms. Anna Puglisi: I have not heard that.

Mr. Corey Tochor: Increasingly there are more stories of them feeding, as in the example we heard last week of offering three times their salary, and trapping them and then asking them to do questionable things for the host.

Moving along to our other witness today, you talked about the top three target countries for China that we should be concerned about. What are their top three targets? Which countries would they be?

Ms. Margaret McCuaig-Johnston: That's very clear. Their top targets are the U.S., the U.K. and then Canada. Again, ASPI has done a lot of statistical work on the extent to which there are Chinese military researchers in our universities now. That's a big concern.

Canada's among the top, and the reason is that we're advanced in all of the strategic technologies that the PLA wants to get a hold of, and it's not a surprise: artificial intelligence, photonics, quantum....

Mr. Corey Tochor: Those three are all Five Eyes countries, so there must be some coordinating among them. If there's been a lack in the past in our approach to Beijing, what are the other countries that are increasingly turning towards China?

Ms. Margaret McCuaig-Johnston: Are you asking—

Mr. Corey Tochor: I mean on the research side. Outside of Canada, as much as we should be worried about Canada, what are the other countries that should be more alarmed—not the U.K. and the U.S., but ones that are fully engulfed in their control?

Ms. Margaret McCuaig-Johnston: You mean under China's control?

Mr. Corey Tochor: Yes.

Ms. Margaret McCuaig-Johnston: Perhaps Ms. Puglisi would know better than I, but I know that there's been a lot of collaboration with Germany and with Australia. Australia's now getting on top of that and is really a model for Canada.

In terms of the Five Eyes coordinating, I believe there's a lot of consultation, but I don't think there's coordination yet. I'd like to see coordination and have the allies line up so there's consistency across universities as to which universities in China should not be collaborated with.

• (1615)

The Chair: Thank you.

I keep wanting to jump in, but as chair I have to keep the time moving along. Dr. Jaczek, it's over to you for five minutes.

Hon. Helena Jaczek (Markham—Stouffville, Lib.): Thank you so much, Mr. Chair. Thank you for the warm welcome to this committee. I certainly look forward to participating.

Thank you to the witnesses for being here.

Ms. McCuaig-Johnston, you referred to our government's policy in terms of what we've done to date. You said you would perhaps like things to speed along a bit faster.

One thing our government has said has been to our funding agencies. These are agencies that we fund that then go on to fund research themselves. We talked a lot about lists. Has our government ensured that we've gone to all the agencies that fund research themselves? As you listed off some of the areas, I thought particularly of Genome Canada. Have we ensured that all of those agencies are also aware of our concerns?

Ms. Margaret McCuaig-Johnston: In fact, when the government indicated it was going to broaden beyond NSERC and go to CIHR and SSHRC, I noticed that Genome Canada was missing. I was very concerned. About a year ago, Radio-Canada did a major investigation of the Chinese company BGI and the genomic research it was working on with Canadian institutions, teaching hospitals and universities. BGI was giving them free equipment on the condition that BGI would receive all the data from that equipment. That's very concerning and alarming. For that reason, I think Genome Canada should be part of it.

Hon. Helena Jaczek: Do you have a list you could provide to us, or suggest, regarding these other potential agencies?

Ms. Margaret McCuaig-Johnston: Yes, I think those are the four.

When it became public—that it was being expanded to the three—I was interviewed. I suggested that Genome Canada also be added. I don't know whether that will be done.

Hon. Helena Jaczek: Thank you for that practical suggestion.

In reading some of the background material we were given, I noticed that some university researchers are rather resistant to some of the suggestions being made. In particular, I'll quote from an article in *The Globe and Mail*:

The U of T's Mr. Wong defended the university's long collaboration with NUDT,—

—that's one of the Chinese organizations—

saying the papers were published in “widely available reputable peer-reviewed academic journals.”

The implication is that this is publicly available information, so everybody has access, not particularly the Chinese researchers.

Do you have some comments on that?

Ms. Margaret McCuaig-Johnston: I do indeed.

That's the way the researchers see it. They say, “My friends of 25 years in China would never do anything unseemly.” However, when military researchers are part of the research process, they can redirect the research to their priorities in the PLA, whether it's through NUDT or a civilian university partnering with the Chinese military.

We often hear the expression “dual use”. “Dual use” gives you the impression of equipment that's sitting on a shelf somewhere, and you can use it for a piece of defence equipment or in some kind of civilian thing—for a plane or something. Anybody who talks to you about dual use in the context of China's military and civilian fusion program doesn't know what they are talking about, in my opinion, because that's way too simplistic an approach. It's far more nuanced. Having Chinese researchers—even those partnering with civilian researchers, who in turn are partnering with Canadians—as part of that research process will redirect Canadian innovation into weaponry for the PLA. We'll never know how it tracked. The reason is that there's no transparency in the Chinese research system.

• (1620)

Hon. Helena Jaczek: Do I have more time?

The Chair: You have 30 seconds.

Hon. Helena Jaczek: You also referenced private companies that engage university researchers. I'm sure that in many cases of this type of research, those findings are not in fact published.

Ms. Margaret McCuaig-Johnston: No, and the IP sometimes—not always, but sometimes—rests with the Chinese company.

Yes, that's yet another dimension. There are many dimensions to this problem. That's why it's taken a while for the government to get its head around it.

The Chair: Great. Thank you.

[*Translation*]

Mr. Blanchette-Joncas, you now have the floor for two and a half minutes.

Mr. Maxime Blanchette-Joncas: Thank you, Mr. Chair.

My questions are for both witnesses, who will be in the best position to answer them.

I would like to know their opinion on the testimony we heard last week, which stated that Canada's competitiveness, particularly with China, could sharpen the greed of some researchers. I think you know where things stand.

Federal government investment in research and development has declined over the past 20 years. However, China has significantly increased its investments, from less than 1% of its GDP in 2000, to almost 2.5%. Canada invested 2% of its GDP at the beginning of the millennium, and in 2020, it invested a little more than 1.5%.

Has the fact that some researchers were interested in doing business with certain countries ever compromised the national security of research?

[*English*]

Ms. Margaret McCuaig-Johnston: Again, ASPI has developed a critical technology tracker that shows that China leads now in 37 of 44 technologies. That's a big concern. One of the reasons they're leading is they've been standing on the shoulders of Canadian, U.K. and U.S. researchers. The U.S. is next after China in all of those technologies, but where would the U.S. be if Canadian, U.K., Australian, German and other researchers were all partnering together to get behind an allied standard and an allied effort to be first in these technologies?

We know from China's long-term plans, which go out to 2050, that they intend to have the strongest military, the most advanced innovation and the strongest economy. Why are we helping them to do that when we know they will attack neighbours? It's not just Taiwan but India as well. Will they take all the fish from the Philippines? Their behaviour is bizarre and quite dangerous.

We also need to be putting a lot more money into innovation here in Canada. The numbers on innovation have just been dropping over the last 10 years.

[*Translation*]

Mr. Maxime Blanchette-Joncas: If Ms. Puglisi wants to add something, she can send us a written response.

[*English*]

The Chair: Great. Thank you both.

Mr. Cannings, you can bring us home for two and a half minutes, please.

Mr. Richard Cannings: Thank you.

I'd like to follow up on the last question that Mr. Blanchette-Joncas asked Ms. McCuaig-Johnston, and that is Canada's investment in innovation and in research.

We heard a comment earlier about Canadian scientists being lured to get involved with China, just because of the money offered for the research and for salaries. Is that something that Canada should be doing better—our investments have been dropping off—and can we compete with China in offering our scientists the money they need to do their research?

Ms. Margaret McCuaig-Johnston: It's very hard to compete with China, because they're pouring trillions into research and development. We don't have the money to compete with that. We were at our peak in R and D investment back in the early 2000s, when we had a surplus. Since we lost our surplus, there has been less and less invested.

I see it. My first ADM assignment was in the Department of Finance, so I was funding R and D. It should be seen as an investment. When our R and D investment can be put together with investment from the U.S. and other countries, it will have more traction and more power. We should not be taking our Canadian resources and handing them to the Chinese. This pains me to say, because I worked for many decades on those collaborations, but China has changed under Xi Jinping.

• (1625)

Mr. Richard Cannings: Just quickly on that, with students, how concerning is it for researchers here to take on Chinese students, who are well funded, for that research?

The Chair: You have 30 seconds.

Ms. Anna Puglisi: I think the student issue is a challenge worldwide. We talk about it a lot in the U.S. We have a leaky STEM pipeline. There are wide swaths of our own populations who are not participating in STEM, and so it's important to invest in the future, because that is really, in lots of ways, what's going to counter a lot of what China is doing.

Mr. Richard Cannings: Thank you.

The Chair: That's terrific. Thank you. Thank you both for your testimonies.

Thank you, members, for great questions.

Thank you again, Margaret McCuaig-Johnston and Anna Puglisi, for being here with us this afternoon in relation to this study. If you have any other information—I know there were some questions we had to cut short—please direct it to the clerk. If you have any questions in general, the clerk is here to help us in any way she can.

We're going to suspend briefly now. If Mr. Cannings can stay online, we'll bring in our next panel. We should be up and running within the next three or four minutes, so stay close and we'll get going.

Thanks again.

• (1625)

(Pause)

• (1630)

The Chair: I call the meeting back to order. Welcome back.

We're going to get into our next panel. After a really good discussion in our first hour, I'm looking forward to this hour as well.

This study we're doing is pursuant to Standing Order 108(3)(i) and the motion adopted by the committee on Monday, December 5, 2022. The committee is commencing its study on the long-term impacts of pay gaps experienced by different genders and equity-seeking groups among faculty at Canadian universities.

It's my pleasure now to welcome our witnesses today.

First we have Airini, provost and vice-president academic at the University of Saskatchewan. From Simon Fraser University, we have Joy Johnson, who is president, via video conference.

Thank you both for joining us today.

We'll start our first testimony for five minutes with Airini, please.

Airini (Provost and Vice-President Academic, University of Saskatchewan, As an Individual): Hello. Thank you so much for the invitation to speak.

My name is, yes, Airini. I'm a professor specializing in equity in higher education. My career includes working for governments, the OECD and the United Nations, and I hold the role of provost and vice-president academic at the University of Saskatchewan.

I'll cover three areas today: the University of Saskatchewan's context with regard to pay gaps, actions universities can take and actions the federal government can take. Together we can advance science and research to benefit a more equitable and prosperous Canada.

The University of Saskatchewan is similar to many universities nationally. Right now, in a new cohort of assistant professors, we have more faculty who are women than men. Over the next decade, we expect to see women trend closer towards 50% of full professors.

Even with good news, we know there is a pay gap, especially at the full professor level. There are specific data points we track. We work to evaluate performance inclusively and apply compensation fairly with women, indigenous faculty, faculty of colour, 2SLGBTQIA+ faculty and those with disabilities.

The causes of the gender pay gap that we're seeing are around the full professor ranks and who makes it to this rank, starting salaries and research productivity. Elder and child care responsibilities affect the productivity, and we saw this especially during the pandemic. My colleague Professor Scott Walsworth and others have written on this most recently. There's the time-consuming service work and more teaching and there's workplace discrimination and the achievements of women being devalued and undervalued. This suggests that alongside the pay gap actions, there are also pay discrimination actions.

What can a university do, then, to address the gender gap?

In 2015, the University of Saskatchewan introduced the gender pay equity increase, which was negotiated with the faculty association and provided a lift to base. This narrowed the pay gap by 2% for women faculty. It was a band-aid solution, though, and we are working on systemic solutions, including career progression, training in EDI and anti-discrimination, flexibility in workplace arrangements and access to child care services. We're aware of provinces and institutions that have introduced pay transparency. Research has shown that this can reduce the gender gap and reduce salaries.

On a note about indigenous and EDI pay gaps, in 2023 our university launched the indigenous citizenship verification policy. This means we can now track measures of inequity such as compensation. Following the lead of other universities, USask will launch a regular equity census, and the data obtained will enable us to examine diversity and gender pay gaps and identify actions. We had to put policies in place so that we could start this work.

Two long-term impacts are the gender inequality in pensions—and we know the committee has heard about research by Professor Smith-Carrier and team on the gender wage and pension gap that's about half a million dollars and grows over the career of a woman faculty—and then there's the talent for science and research. Canada is in a global and highly competitive talent market for top researchers. Making a difference in gender equality and inclusion is essential. The alternative may be to continue to lose women and equity-seeking scientists from Canada despite high productivity levels and potential.

You may be thinking that many of the actions on the wage gap in universities will be for the universities to see through, and that's true. Even so, government may wish to consider three levers for change: investment, influence and information.

In terms of investment, the primary route for government influence is through the granting councils. Government may wish to ask for data that universities are tracking and then use this to inform policy. This was done very effectively with Canada research chairs. Granting councils could ask for grant recipients to provide assurance of pay equity within their research teams.

In terms of influence, this committee's report will be influential, because you're seeing pay gaps affect science and research. Government could ask for sector outcomes to be reported on, associated with your report.

With information, ongoing audits of pay and gender are already happening through the government's gender results framework. In collaboration with universities, the framework could generate case studies, beginning with pay gaps experienced among faculty at Canadian universities.

In closing, everyone has a right to be paid fairly. Government and universities can work together to attract and retain the talent needed to advance science and research to benefit a more equitable and prosperous Canada.

Thank you.

• (1635)

The Chair: Thank you very much. You're bang on time. I appreciate that. I look forward to the questions on your presentation.

Our second presentation will be from Joy Johnson, the president of Simon Fraser University.

Dr. Joy Johnson (President, Simon Fraser University): Thank you very much. I probably will be echoing some points of Dr. Airini's excellent presentation.

I want to thank the panel for inviting me to speak today. I do want to acknowledge that I'm speaking to you today from the rainy west coast on the unceded traditional territories of the Musqueam, Squamish, Tsleil-Waututh and Kwikwetlem people.

I do appreciate the opportunity to be part of this dialogue.

At SFU and at universities across the post-secondary sector, we recognize the importance of diverse viewpoints and perspectives. In a historically male-dominated field, which academia has been in the past, gender diversity among faculty is something we take very seriously.

SFU has made important strides in increasing the number of women faculty members at the university, but we also know that those numbers don't show the whole story. B.C. has one of the highest gender pay gaps in Canada, with women in B.C. earning 17% less than men did in 2022. This systemic issue can be seen replicated across the post-secondary system.

In 2015, SFU completed a study on gender disparity in faculty salaries. The study found that although we were making strides in terms of gender parity, the increased representation did not translate

into improvements in women's pay relative to that of men. The gender salary gap at that time was about 10%.

Interestingly, this result seemed to apply only to research faculty. We found no evidence of a gender salary gap among our teaching faculty. We also found that the gender salary gap for research faculty was largely attributable to what we refer to as "off-scale" salary supplements, or what you might think of as market differentials, rather than a gender gap in placement on the base salary scale.

We also found that faculty who take parental or medical leaves, regardless of gender, faced lower odds of promotion, and therefore the gender salary gap, we have continued to conclude, is real and systemic. However, it's complicated, with many overlapping factors. This is why this conversation is so very important.

I want to give you a quick outline of some of the actions we're taking at SFU to address the gap.

Similar to the University of Saskatchewan, in 2016 we implemented salary adjustments to begin to address the gap. Those included a permanent salary increase of 1.7% for our women faculty, as well as an additional financial award of 1.7%. Since then, we have seen some evidence that the gender salary gap for research faculty is shrinking. It was 10%; it is now sitting around 7%.

There is still more progress to be made.

One of our biggest challenges in further addressing the issue has been a lack of comprehensive data. In recent years, there's been growing awareness and concern about data limitations and administrative data that reproduce the gender binary and an absence of information about other dimensions of diversity relevant to understanding salary inequities. We have a new vice-president of people, equity and inclusion. In her work, she's trying to move forward to really address this issue.

In British Columbia, there are several pieces of legislation that have recently been passed, including new pay transparency legislation and broader anti-racism legislation. We believe these are important legislative pieces that will help our work.

We're also working to address disparities for other groups targeted by the Employment Equity Act, including people with disabilities, indigenous peoples and visible minorities.

A lot of this work rests on better data collection. To that end, we are implementing an institutional-level diversity data framework. The intent, really, is to gather better data and to monitor and think very carefully about our diversity objectives and ways in which we can cultivate a more equitable and inclusive campus.

When I became president in 2020, it was a priority of mine to address equity, diversity and inclusion. I think it's a very important issue for all of us. I want to say that there's still much more work to be done. I am proud of the progress we've made but recognize that we are not where we need to be.

I look forward to your questions and to the discussion.

• (1640)

The Chair: That's terrific. Thank you, Dr. Johnson, for your remarks.

Now we'll turn to the questions, starting with Ben Lobb for six minutes.

Mr. Ben Lobb (Huron—Bruce, CPC): Thanks very much, and it's great to be here.

My first question is to the president at Simon Fraser. How is it possible that there's a pay equity difference among the research staff?

Dr. Joy Johnson: One of our issues is that we have offered, over time, market differentials for particular areas. These would be differentials that are given to areas where it's hard to recruit people or where their salary expectations are higher.

For example, in our business school, in our accounting program, many of those faculty get market differentials, but we see actually more men represented in those departments than women, and therefore we end up across the board seeing higher wages for men overall.

Similarly, we've seen certain market differentials being offered in our engineering faculty. This is to attract and retain faculty that get offered compensation on top of base salary, and that really is what, I think, tends to exacerbate this issue.

Mr. Ben Lobb: Just so I'm clear, there was some talk about staff who are more focused on research versus faculty who would be teaching. Are you saying it's the same, or is there a distinction between the two, in your mind?

Dr. Joy Johnson: We hire some faculty who are teaching faculty. They're lecturers at the university. Their full-time role is to engage in teaching, and we do not see a wage gap in that group, but our tenure-track faculty are also responsible for research in service, and that's where we're seeing the gaps.

I think that speaks to what I said earlier about market differential, but there are also some of these other dynamics in terms of parental leave and other factors that tend to take people out of the workforce for a period of time and basically disadvantage them in terms of their salary growth.

• (1645)

Mr. Ben Lobb: There was one other point you made about data. It was that there wasn't enough data. Did I misunderstand what you were saying about data?

Dr. Joy Johnson: It has been an issue for us, and I think for many universities across Canada. We have not, to date, collected detailed information from our faculty on all of the demographic categories that, in my view, will influence and impact salary outcomes. Currently at SFU, we're moving forward in this regard, but we're not there yet. We're not collecting information about race. We haven't collected information about indigenous identity or about disability.

Some of the constraints have been because of privacy issues, but we are overcoming those now. Some of the legislative changes are going to be requiring us to collect and report on some of this data, and I think that's going to really help us a great deal.

Mr. Ben Lobb: With this topic of study being in Canadians' minds for quite a long time, why hasn't there been more of an effort, I guess, among faculty staff to collect this data? There are thousands and thousands of staff that work at universities across the country. Why wouldn't they have had some focus groups put together to study this years ago? It shouldn't be a surprise today. Do you have any ideas on that?

Dr. Joy Johnson: I think that part of it has been the issue of privacy and how that data gets collected and stored and what we do with it. I think our colleague from the University of Saskatchewan also recognized that even, for example, self-reported indigenous identity is complicated. For that reason, other steps are being put in place to verify indigenous identity.

It's really about asking the right questions and making sure that you know how to deal with the data. Even around our indigenous data, we have to deal with issues of data sovereignty. Who's going to be able to access this best, and how are we going to report on it?

Mr. Ben Lobb: I can see that on some of the specific ones in certain areas, but if you have male researchers and female researchers, it shouldn't take too much time for people to be able to put that list together—how much one makes versus the other—and sift through it.

I'm glad we put this study forward. I'll say that. I'm just confounded that universities, of all places, have shown up as a weak spot in this area. I just can't even believe it, to be honest with you.

Anyhow, thanks for coming and giving your explanations. I'm sorry I didn't get a chance to ask the doctor here a question.

The Chair: You still have a minute, if anybody would like to share time.

Mr. Ben Lobb: I would give it to Ms. Rempel Garner.

Hon. Michelle Rempel Garner (Calgary Nose Hill, CPC): Thanks.

Dr. Johnson, I just want to follow up on the statement that you made, which my colleague picked up on, with regard to the pay equity gap between teaching staff and researchers. We had a witness before committee this week who stated, “men's earnings rise significantly with academic productivity, whereas women's do not.”

Can you and Airini elaborate on some of the reasons there's this “work harder but have less pay” dynamic that is emerging?

Dr. Joy Johnson: I think there are a variety of factors.

I just want to go back to the comment that was made earlier. We do have data on what I would say is the binary male-female data at the university. We also recognize that there is a spectrum of gender identities as well. We don't have that data to the degree that we really do need.

There are also these other factors that influence outcomes. In terms of—

The Chair: We'll have to stop at that sentence. Maybe in the next round we can pick up where you've left off, if that's what the questioner would like.

It's over to David Lametti for six minutes, please.

Hon. David Lametti (LaSalle—Émard—Verdun, Lib.): Thank you, Mr. Chair.

Thank you, colleagues, for the warm welcome to this committee.

This issue is a life that I have lived for 20 years. I also lived it at the time vicariously through my ex-spouse. Both of us were academics in the same cohort, moving lockstep through the university.

There is an inbuilt bias, not with teaching positions but in actual positions. In our case, it was a third, a third and a third. A third was teaching, a third was research and a third was service. In all of the merit and promotion exercises, the third that was research was weighted way more heavily than the third that was service, and that ended up creating gaps exponentially over time because, as has been pointed out in one of the documents we have, women in particular are often more associated with the service side, for whatever reason.

I want to flip it around, particularly to President Johnson: Is there anything that's working?

We've had a really robust day care system in Quebec from the late 1990s. That certainly helped my family at the time. It helped two academics at the time. Are there regional differences based on policies such as day care or targeted policies that certain universities may have taken to address pay equity over the years? What's worked?

• (1650)

Dr. Joy Johnson: Yes, I think that some of the things have worked. I would certainly say that day care is one of them. We have day care on our campus that's available to our faculty and staff, but it's oversubscribed. There aren't enough spots. I think that can make a big difference.

The other thing that I think is working is a lot of the unconscious bias training that we're now doing for hiring committees. I think that's helping a great deal. There has been a tradition, to be frank, at

universities that people basically replace themselves. You have a largely male, white faculty, and they think excellence looks like that. There's been this sense of replacement or seeing excellence as basically looking like a particular kind of productivity.

To your point as well, I think that there is also very good documentation that women have stepped up and engaged in more service at the universities by chairing committees, stepping up to be on working groups, etc. I think that department heads, chairs and deans are now looking at that very carefully to make sure that there is better distribution of that work.

I think these are some of the things that can help. I do believe that we need to continue to be thinking about reporting, being transparent about this, trying to move forward to help departments and faculties understand where these gaps are starting to exist and how they can redress them.

Hon. David Lametti: Thank you for that.

Dr. Airini, you mentioned investment influence and information as something that we could do. You mentioned a positive example of what we've done thus far with the Canada research chairs. Is there a way to institutionalize those kinds of things without getting too much push-back from academics who say that they have enough reporting to do already? How can we thread that needle?

Airini: What we have is a sector that wants to make moves on the EDI representation within our researchers and within our academic community overall.

Where we actually have the data.... For Member Lobb, we have data available, and we're becoming more refined in the datasets. That can become a very compelling case, because it shows faculty members how close we are to the vision targets. In the case of the University of Saskatchewan, we have pay equity that favours women when looked at as a group overall. For the assistant professor, we're only a few points off, similar to the associate professor, so it shows progress.

When it comes to saying, “Let's take the next step and build incentives”, it all has a logic to it because it's part of the vision and part of the value set underpinning the university. For the University of Saskatchewan, diversity is one of our underpinning values.

Hon. David Lametti: I have a quick question if I might, to either person, I think. Is it any better in unionized contexts than in non-unionized contexts?

I was in a non-unionized faculty that voted to unionize while I was here in Parliament, so I don't have any anecdotal evidence, but is it actually better in those areas where there's unionization?

Dr. Joy Johnson: I will respond.

Airini: Please go ahead, President.

Dr. Joy Johnson: I think it's actually hard to tell. We have a unionized faculty and they are certainly concerned about issues of pay equity, but they are also concerned about making sure that people who are in temporary roles get into permanent roles, so when we're trying to do some of the equity work we want to do, we also experience some constraints. For example, if you want to do targeted hires of indigenous faculty, that sometimes gets some push-back.

I think there are some very positive things about the unionized environment in terms of pushing administration, but there are also constraints.

• (1655)

The Chair: You have 10 seconds or so, if you have....

Airini: Yes. It would be the same experience as well.

I'm noting that the movement to create a lift to base for women faculty was done in collaboration with the union. It means that all members can see this is something that not only the administration sees as important, but the members as well. Remember too that fundamentally, a collective agreement is a partnership. It's a signed agreement between the two parties—

The Chair: That's great.

Airini: —so we go forward together.

The Chair: Thank you very much.

We'll go to Mr. Blanchette-Joncas for six minutes.

[*Translation*]

Mr. Maxime Blanchette-Joncas: Thank you, Mr. Chair.

Greetings to the witnesses joining us for the second hour of the meeting.

My first question is for Ms. Johnson.

I took the time to analyze a report on a study on the gender wage gap in the faculty of Canadian universities. This study was conducted over a 10-year period, from 1996 to 2016. Of course, it targeted the 15 largest Canadian universities. In that study, it was noted that men were, on average, paid 2.14% more than their female colleagues. The study also found that the gaps were even greater among Canada's major research universities, also known as the U15.

Ms. Johnson, do you have any hypotheses that explain why the wage gap between men and women is larger at the U15 Group of Canadian Research Universities?

[*English*]

Dr. Joy Johnson: Yes. Thank you for that question.

I think the gaps are larger in some of these institutions—I'm thinking of the University of Toronto, McGill, UBC, etc.—in part because we also see huge salary bands at these institutions and, particularly for certain areas like medicine and business, we tend to see higher salaries. I talked about these differentials that sometimes get offered in order to attract and retain certain faculty, and many of these areas are male-dominated areas. That's also why we see that kind of widening taking place.

That finding doesn't surprise me, because of that.

[*Translation*]

Mr. Maxime Blanchette-Joncas: Thank you, Ms. Johnson.

I noticed that the two universities with the lowest gap are the only two francophone universities in Quebec, including the Université de Montréal, where the gap is 3.6%, and Université Laval, where the gap is 4.1%.

Can you explain to us why francophone Quebec universities are doing better in terms of pay equity within their faculty?

Are there lessons to be learned or academic practices that we should be looking at?

[*English*]

Dr. Joy Johnson: I'm happy to speculate. I don't know the answer 100%, but in part I'd like to refer back to the earlier question or comment about access to child care.

I think this is actually very important, because when women leave the workforce for a period of time for parental leave, if they aren't able to return in a timely manner or feel they can't find adequate child care, they stay away longer and the gap grows. I think access to really good, high-quality child care is essential. Quebec has nailed it.

[*Translation*]

Mr. Maxime Blanchette-Joncas: Thank you very much, Ms. Johnson.

Can you talk about the data? I know that you already have data and that you would like to have more so that you can get a better picture of the situation.

Do your respective universities collect and share information on wage gaps between genders, between men and women? If so, what does that look like? Have there been any trends in recent years?

[*English*]

Dr. Joy Johnson: Thank you.

I'm on the executive of Universities Canada and I can say that the area of inclusive excellence and equity for faculty has certainly been a top-of-mind issue. Universities Canada has surveyed members—particularly based on representation of equity-deserving groups—in terms of numbers, but to my knowledge, we haven't really seen a study looking at pay gap issues. That's also a very interesting....

There hasn't been a sharing of data across universities that I'm aware of. That's obviously another area for potential collaboration and opportunity.

• (1700)

[*Translation*]

Mr. Maxime Blanchette-Joncas: Thank you very much, Ms. Johnson.

I'm going to stay on topic. What role do you think the federal government could play? What could the federal government do to better support equity among university faculty members, in particular?

[*English*]

Dr. Joy Johnson: That's an interesting question. I think my colleague from Saskatchewan alluded to some of this.

The Canada research chairs program is a federal program. It introduced very clear guidance around equity in terms of distribution of those chairs, creating requirements in reporting. We saw the universities respond—slowly, but they did respond.

I think the important thing federally is to think about what the levers are. I would say that the levers are through the granting councils, for the most part. As you know, post-secondary education is a provincial matter, but funding for research is a federal matter through the tri-council and through their various programs like the CRC program, the granting council programs and the Canada excellence research chairs program.

We have seen movement on the part of the tri-council to start to make sure that issues related to equity are considered, but they stop in terms of representation. They don't ask that next question around pay gap. They want to make sure that universities are basically creating opportunities for women, for individuals who are disabled and for the BIPOC population, etc. However, they don't ask that next question about making sure that there is actually pay equity for those individuals as well.

The Chair: Thank you very much, President Johnson. That's great. It's good to get some of these things for our analysts as well.

Mr. Cannings, we'll go over to you for six minutes, please.

Mr. Richard Cannings: Thank you, and thank you to both witnesses.

I'll start with Airini.

It's great to hear from someone with an obvious New Zealand background. My son and grandchildren live in New Zealand. It's a wonderful place. I read somewhere that you kayaked across Cook Strait, which to me is a frightening trip, even in a large ship. Kudos for that.

You mentioned that one of the band-aid solutions that has been tried is the “lift to base”. I'm just wondering if you could expand on that and explain why that isn't a long-term solution.

Airini: Thank you very much.

In 2015, we introduced the lift to base. It was a correction. It does help to create a narrowing of the gap—by 2%, in our case.

What we're looking for is the long-term fitness of the university system. To do that, we all have to be more attentive to professional development around career progression and more attentive to our actions, our words and our practices in the hiring and decisions

around salary placement at the beginning of a career for an academic. We need to be investing in flexibility in workplace arrangements and the access to child care services.

The solutions are multi-faceted. We can create the interventions—they help us to have a close—but really we need fitness of system over the long term.

Mr. Richard Cannings: Thank you. I'll turn to Dr. Johnson now.

I'm glad to hear it's raining in Burnaby—we need the rain—but hopefully not too much.

To go back to this situation with research faculty, there's a bigger gap there, and you mentioned the market forces. Is that because those faculty have more ability to negotiate salaries, and perhaps because there are some biases where male applicants have more of that ability, more traction in that regard?

Dr. Joy Johnson: Thanks for that question.

I think that's a really good point. Your base salary, where you come in, makes a big difference in terms of how your salary grows. I think, to make sure, from the very beginning.... We know there are biases in how people negotiate their salary and what they ask for. I think there is fairly good evidence that there are gender differences in how people operate in those types of negotiations. I think that's another thing that we really have to bear in mind.

At our university at least, there are no kinds of floors or ceilings. It really is important for people to negotiate a salary as they come in, because that's the salary that, obviously, will grow incrementally over time.

• (1705)

Mr. Richard Cannings: Does the same thing apply when faculty are looking for promotions? Are there more opportunities for male faculty members to get offers from elsewhere?

I'm just trying to say that this is a bigger ecosystem than just one university.

Dr. Joy Johnson: I think it's such a good point. As I think Professor Airini was also suggesting, there are all these other dynamics at play, and giving people more money on a one-off isn't going to correct the problem.

For example, at SFU at least, we see men going up for promotion. We go through different levels—assistant professor, associate professor, full professor—and you get jumps in your salary as you go through the promotion process. However, we do tend to see men going up earlier than women. There's this kind of confidence factor. There's a sense of being ready. We really do need to be coaching, facilitating, assisting women as well to make sure that they are going up in a timely manner for promotion because, again, it ultimately will affect their salary.

Mr. Richard Cannings: Finally, on the parental leave question, I think it's clear that women probably take parental leave far more often than men, although I assume it's offered to both.

You talked about data. Do we have data on that? How often do male faculty ask for parental leave versus female faculty? How can we somehow take that into account?

Dr. Joy Johnson: Again, I don't have data with me on that today, but I will say—and this is based on studies that were done probably five or six years ago—that when women do take parental leave, they tend to actually leave the university, care for their children, take care of their home and so on. Often when men take parental leave, they might do child care, but they also work on their papers and are very productive at home.

Again, that's a bias that's gets introduced through the system, and I think it's something to bear in mind in terms of how leaves get evaluated and how we think about them.

Mr. Richard Cannings: Mr. Chair, how much time do I have?

The Chair: You have 40 seconds.

Mr. Richard Cannings: I'll just ask both of you quickly to talk about the number of women versus men in STEM. We've been seeing data that shows how difficult it is. There are filters at every level against women, people of colour and people of low income to keep going in university because of funding for research. Could you comment on that?

Dr. Joy Johnson: I'll jump in and just say that it is a huge issue for us at SFU. We do not have as many women coming into our computing, science and engineering faculties as we do men, and we certainly do not have that gender representation and diverse representation that we would also like to see. It really means going back into the high schools to correct this problem.

The Chair: Thank you very much.

It's over to Michelle Rempel Garner for five minutes, please.

Hon. Michelle Rempel Garner: Thank you, Chair.

I want to home in on what recommendations this committee could make to the federal government that are within the federal government's scope. I know, Airini, you had started to suggest a few things, and Dr. Johnson as well. I think both of these were centred mostly around the federal levers of funding particular to research funding.

I think it's very important that we address this issue. To both of your points, it's important to highlight that I do think this is a talent competitiveness issue for Canada as well as an equity issue, but as you mentioned, Dr. Johnson, some of this is within the scope of provincial governments.

I do want to put on the record that there's been a bit of discussion in one province on the Canada research chairs issue, particularly in Quebec. There was a history professor at Montreal's Dawson College who filed a human rights complaint against Laval University and the Canada research chairs program, alleging discrimination because of these changes. Then the Quebec Minister of Education put forward a motion in, I believe, December of last year that asked the National Assembly to express its concern regarding the exclu-

sion of certain candidates from obtaining Canada research chairs on the basis of criteria that are not related to competence.

This seems like a bit of a pickle to me. Are there ways that the federal government could perhaps aid this issue that aren't going to lead it into a fight with the provinces, particularly with Quebec, given some of the concerns that have been raised in the National Assembly?

• (1710)

Airini: To provide assurance to the committee members, anybody who is appointed to a Canada research chair must meet the competence standard, and they go through a multi-staged, rigorous process of assessment before actually being recognized by the federal funding authority as having met the standard of competence and in fact exceeding it. There is no compromise on the quality there.

It's an interesting argument, too, of being left out or excluded because of one's demographic profile. It can be made the other way as well, in terms of not having a seat at the table. The assurance that could be helpful from the federal level is that the steps taken to advance EDI in terms of science and research are entirely consistent with the legislative framework for the country itself. We see that similarly in terms of the United Nations Declaration on the Rights of Indigenous Peoples as well, so providing that assurance and that clarity is certainly helpful.

President Johnson may have a further remark.

Hon. Michelle Rempel Garner: Yes, thank you. I don't want to cut either of you off. I want to ask you, in your follow-up remarks, to comment on whether Canadian universities have been given any—or provincial governments, particularly.... Both of you are in coordination with your provincial governments on whether or not the new guidelines put in place for the Canada research chairs have met that sort of a legal test that you described.

Dr. Johnson, I will ask the same question that I asked earlier. How should the federal government be interacting on this issue, given some of these emerging dynamics?

Dr. Joy Johnson: I would refer you to the Universities Canada statement on inclusive excellence. I think it's an excellent statement. To be clear, we see similar dynamics playing out at our university from time to time, when certain groups are feeling excluded because of requirements around the Canada research chairs.

Things are changing, though, and people are being brought to the table who have not been brought to the table and people are being recognized who haven't been recognized in the past. I think this is good. It's actually good for research. It brings in a variety of different viewpoints. It really fosters excellence, and we know that, but there is a push-back. Sometimes it's a gentle push-back and sometimes it's a strong push-back. In the province of British Columbia, this has not been raised as an issue.

That said, there are certain elements within our own university who pushed back on this from time to time, but I think what we're seeing—

Hon. Michelle Rempel Garner: How do you handle that push-back? How does the university address those concerns?

Dr. Joy Johnson: Again, I point to the Universities Canada statement on inclusive excellence. All public universities who are part of Universities Canada have signed on to this. To make sure that there is diversity of viewpoints is part of what excellence looks like as well, and different scholars contributing. We can't be excellent without it. We can't be innovative without that kind of diversity. There's very good evidence. We've seen it at the board table. We also see it in research. It's very clear.

The Chair: That's great. Thank you very much.

We have Valerie Bradford for five minutes, please.

Ms. Valerie Bradford (Kitchener South—Hespeler, Lib.): Thank you so much, Mr. Chair.

Thank you to both witnesses for participating in this very important study. I really appreciate it. Your initial presentations certainly did answer a lot of the questions I had.

I want to look at the diversity pay gap in Canada compared to peer countries. Can each of you elaborate on how you think Canada is doing versus other comparable countries in addressing this situation?

• (1715)

Dr. Joy Johnson: It's a great question.

I actually don't have data on that ready to hand. My sense is that we are seeing similar pay gaps across European countries and the U.K. I don't have information on Australia and New Zealand.

Ms. Valerie Bradford: Dr. Airini, can you?

Airini: I can provide a succinct comparator there.

It may be helpful to know that in New Zealand currently, which is where my accent comes from, there is a rigorous debate under way for pay parity. It's differentiated, as President Johnson spoke of before. Within the female workforce, it's further differentiated by women of colour and those under-represented groups within the post-secondary sector as well. We're seeing internationally that a refined analysis of groups within groups is a key part of moving forward towards pay equity.

Ms. Valerie Bradford: If you could each undertake to see if you can find out a little more, and if there's one country in particular that seems to be doing a better job on this and we can learn from it, that would be great.

Dr. Airini, I have a couple of things. President Johnson mentioned that UBC actually wasn't keeping track of data with respect to race, indigeneity, disability, etc. Are you doing that at the University of Saskatchewan? Are you tracking that data at all?

Airini: Yes, we are.

Ms. Valerie Bradford: Okay.

Airini: We've been able to begin that work this year, because we have the *deybwewin-taapwaywin-tapwewin* truth-telling policy in place, which makes it possible now to have a verification of membership or citizenship in place. Rather than self-identification for our indigenous colleagues, it's through the verification of citizenship and membership.

We have begun revisiting the data as a result of the policy coming into place. The reason that I suggested it—and I appreciate the question—is that it's a reminder of how important policy is in order to create the conditions for the right work to happen and to get us to where we want to be. That's the vital role this committee plays.

Ms. Valerie Bradford: Thank you.

In your opening statement, you said that there are “pay discrimination actions” at play. Can you elaborate on that, please?

Airini: Could you remind me of what I said?

Voices: Oh, oh!

Ms. Valerie Bradford: You mentioned that there were some things that were operative. Basically, you were trying to address why there is this pay discrimination and the gender gap. You said that there are some pay discrimination actions. Based on some of the other testimony, I thought that maybe we'd want to hear a little more on that.

Airini: Thank you for listening so closely to what I was saying. I appreciate it.

Ms. Valerie Bradford: Yes, no worries.

Airini: These are recurring points, although I have one new one to add in there.

The recurring ones are around full professor ranks: who gets there and in what time.

Another is around starting salaries themselves. We know the cumulative effect that the starting salary has. This committee is looking at the long-term impact of the pay gaps.

Another one that we're seeing come through, which is a very important one to keep an eye on, is the impact of COVID on the research trajectory of the women faculty members.

My colleague Dr. Scott Walsworth, along with other colleagues, actually looked into the impact of COVID. They found that there was evidence of a steeper perceived productivity decline for women during the pandemic, steeper than that of men.

One of the key causes there was who was being the primary carer—not necessarily the number of children, but the primary carer in the household. The research, which is very helpful for setting the scene for further studies and further monitoring of this issue, is asking us to rethink, potentially, the 10-year promotion criteria, to think again about what it takes to actually have a career as an academic, to be active within science and research and to also be involved in primary care itself. We have some examples internationally of how there is a more inclusive view that's helping with moving their performance recognition forward.

The Chair: Thank you. If there are any details we can get that will help our study, that would be wonderful.

We'll go to Monsieur Blanchette-Joncas for two and a half minutes, please.

• (1720)

[*Translation*]

Mr. Maxime Blanchette-Joncas: Thank you very much, Mr. Chair.

I would like to continue talking about possible solutions. We have seen the overview of the situation, and the data in some studies show that there really is a problem with the wage gap.

Ms. Johnson, earlier you said that mechanisms were already in place, including federal funding for granting agencies and research chairs, to reduce the wage gap or respect pay equity.

Do you think the problems related to everything involving federal funding have been resolved? Do you think there are still disparities in the wage gap, both for research chairs and for the three granting agencies? Today, can we say that it has been resolved and move on to something else? Can we now focus on policies that directly affect universities, the Government of Quebec or those of other provinces?

[*English*]

Dr. Joy Johnson: Thanks for that. I don't think that the problem has been solved through our Canada research chair program, because all that the program has done is ensure that we have a diversity of representation of Canada research chairs. That has not addressed the pay issue.

It's interesting. I'm sitting here racking my brain to think about what could be done federally, and one thing I will say is that universities have to apply and be recognized as an institution that can hold tri-council dollars. Usually that recognition is based on whether you have good audit functions, can manage the funds and all those kinds of things, but there are other levers that could be utilized to indicate that a university is eligible for funding from the federal government for tri-council dollars. For example, they would have certain policies and practices in place.

That has not been taken up to any great degree. Some of my presidential colleagues will hate me for suggesting this, but I do think that we do need to look at both carrots and sticks, and this would be a stick that potentially could be utilized and thought about.

Again, that's what I'm thinking through. What are the regulatory levers that can be pulled federally to help us address this issue?

[*Translation*]

Mr. Maxime Blanchette-Joncas: Thank you very much, Ms. Johnson.

Professor Airini, do you have anything to add about potential solutions that the federal government could implement to improve pay equity?

Airini: Thank you for your question.

[*English*]

I'm speaking to the three areas of investment, influence and implementation. The investment piece is exactly as President Johnson has described. It's looking for where it's possible to have leverage through government granting.

The influence piece is this report itself. It's not only to have recommendations come from it but also to ask the sector to report regularly on progress towards those recommendations, whatever they may be, that will come from this important report.

The third piece is around information.

The Chair: Thank you.

I have stretched the time because that was an important chunk to get, and I appreciate that.

Now we will go to Mr. Cannings for the final two and a half minutes, please.

Mr. Richard Cannings: Thank you.

I would like to follow up with Dr. Johnson on my last point. This is perhaps one step removed from the issue at hand, which is the pay gap, but it's this idea that one thing the federal government does and one thing it could do better is fund the students—the master's students, the Ph.D. students and the post-doctoral students—who are in the process of becoming researchers and working at universities that we're talking about today, and properly fund the scholarships and fellowships that have been frozen for the last 20 years.

This is the big filter, I think, that filters out women who are trying to advance their education, because they are doing the things that you have talked about, such as taking care of families. It filters out people of colour and people with low incomes.

I'm wondering if that could that have some bearing on this issue.

Dr. Joy Johnson: Thank you so much for raising that point.

Graduate student support is an absolutely essential point for us here in Canada. As you have said, it has been frozen for 20 years, and I am deeply concerned about the barriers that exist for people to enter into graduate school, graduate education. They simply do not have the support. We're hearing this from our graduate students all the time, and I think, as you have said, particularly from women who might have child care responsibilities. For other groups, that funding really makes a difference.

This is something we have been asking for a long time to be addressed, and I think we do need to look at that whole pipeline, as you have said, to make sure that we have the talent coming through the system. Again, that would be an area where there could be requirements around representation, and there should be.

• (1725)

Mr. Richard Cannings: If there is time, I would like Professor Airini to comment on that as well.

Airini: I also appreciate your reflection in making this point. Thank you for that.

I'm thinking as I listen to this about the economic analysis I've read about the opportunity costs for those from under-represented groups to take on university studies, and succeed and how important it is that as they transition into an early researcher career path, there is actually an equity framework applied. It's not an equality framework but an equity framework. The unfreezing of the awards could certainly be, if framed correctly, an important step for ensuring that there's an equity-based launch point.

The Chair: Thank you.

Mr. Richard Cannings: Thanks to you both.

I'll leave it there.

The Chair: You read my mind. On the last one, I was thinking of early-stage researchers and equity around that, because we know that's an under-represented group as well. The ones that get funded tend to be the ones that get funded, but the early-stage ones quite often are overlooked.

Thank you for a very engaging discussion, Dr. Airini and Dr. Johnson, and for your participation in this study on the long-term impacts of pay gaps experienced by different genders and equity-seeking groups. If there's any more information that can help inform us, I think one of the great values of this committee is to be able to bring these discussions together so that other universities can also see what it is we're talking about. Of course, they could also submit comments and briefs.

We will be meeting on Wednesday, September 27, to resume both these studies. As a quick reminder, there is advocacy on the Hill right now. The Support Our Science group is meeting at 306 Valour until seven o'clock. They would like to see people who are interested in science, if you have time.

Apart from that, I'm looking for adjournment.

Mr. Maxime Blanchette-Joncas: I so move.

The Chair: Thank you, Maxime.

Thank you, everybody, for a great meeting. We'll see you on Wednesday.

The meeting is adjourned.

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