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Chair

Ms. Hélène LeBlanc

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● (1100)

[*Translation*]

The Chair (Ms. Hélène LeBlanc (LaSalle—Émard, NDP)): According to my Blackberry, the time is now 11:01, so I call the 52nd meeting of the Standing Committee on the Status of Women to order.

We are continuing our study on women in skilled trades and science, technology, engineering and mathematics occupations, and what an interesting study it is. We are pleased to have with us, today, Alison Hale, from Statistics Canada. She is the director of the Labour Statistics Division.

Ms. Hale, we are eager to hear what you have to say. You have 10 minutes for your presentation, after which we'll get into questions and answers. Over to you.

Ms. Alison Hale (Director, Labour Statistics Division, Statistics Canada): Thank you very much, Madam Chair.

● (1105)

[*English*]

I'd like to thank the committee for the opportunity to speak with you on information related to your study. Using data from the 1991 census of population and the 2011 national household survey, I'll provide information on the number and proportion of women holding a certificate in a skilled trade, mechanic and construction, or a diploma or a degree in a STEM-related field of study, also the change over time and the share of women working in skilled trades or an occupation requiring a STEM-related field of study diploma or degree, as well as labour market outcomes of women versus men in skilled trades or in occupations requiring a STEM-related field of study degree or diploma.

Young women are more likely to choose non-STEM fields of study and non-traditional trades. Generally, women's educational attainment has increased over the last decades. Based on the 2011 national household survey, women aged 25 to 34 were in the majority among college and university degree holders. As shown in this chart, young women—in this presentation we're considering young women 25 to 34—tend to concentrate in non-traditional trades, i.e., not mechanic and construction trades, and non-STEM fields of study at college and university. For example, the proportion of women in traditional or skilled trades, such as electricians and carpenters, was 18% compared with 36% for other trades. Women represent 22% of college STEM graduates and 39% of university STEM graduates.

As I realize the committee is interested in women who are in STEM-related occupations, I am now going to switch to look at women working in occupations that are STEM-related.

There has been progress in participation in STEM-related occupations by young women, so now we're looking at data over time, comparing data from 1991 to 2011. Women's higher education is reflected in the fact that they have increased their presence among most occupations that typically require college or university qualifications. Although young women aged 25 to 34 are still in the minority among college and university STEM occupations, making up 27% and 28% of the total employed in these occupations in 2011, their share has increased compared with 1991.

One thing I must point out is that, while there is a common definition of STEM-related fields of study in college and university, there is no equivalent definition of STEM-related occupations. However, for the purpose of this presentation, we used for occupation the group of natural and applied sciences and related occupations, because those in general are equivalent to STEM-related occupations since those are ones where you do require, generally, STEM-related fields of study.

Young women continue to represent a small proportion of young workers in skilled trades. Looking at data comparing 1991 to 2011, again I'm continuing through this presentation with young workers being workers 25 to 34. In both 1991 and 2011, women represented only 5% and 4% of the total young workers employed in mechanic and construction trades. Although the proportion of young women workers remains barely changed over the 20-year period, some occupations did show an increase in their proportion of women, namely cabinet makers, painters, and decorators. However, the proportion of women in occupations such as plumbers, electricians, and motor vehicle mechanics remained unchanged.

Similar to the previous slide, as I mentioned, there is no group called skilled trades in the national occupation classification. For this presentation we used the group mechanic and construction trades since this is what closely corresponds to a skilled trades group.

Going to the next slide, again looking at workers 25 to 34, the proportion of women in college STEM occupations almost doubled from 1991 to 2011. The portion of young workers who are women in college STEM occupations increased from 16% in 1991 to 28% in 2011. In some occupations, women were in the majority and also showed a large increase as a proportion of the total. This is the case for agriculture and fish product inspectors as well as biological technicians. For others, such as mechanical engineering technologists and electronic technicians, the proportion of women is still below 10% and showed little increase though this 20-year period.

One thing I should point out is that when I'm looking at occupations, I am looking at occupations where there was a substantial number of women working in them. I wasn't taking cases where there was only a small number who were working in occupations.

As mentioned earlier, there is no equivalent definition of STEM occupations, so we're using occupations in the group of natural and applied sciences and related occupations where the skill requirement is equivalent to a college-level skill requirement.

Going to slide 6, from 1991 to 2011 the proportion of young workers in university STEM occupations who are women increased from 18% to 26%. Now, looking at university STEM occupations, for some occupations women were in the majority of young workers and showed a large increase over the 20-year period from 1991 to 2011. This is the case for landscape architects and biologists, in addition to mathematicians and actuaries.

Others, such as mechanical and mining engineers, have a relatively small share of women but showed some increase over the 20 years. However, some, such as computer engineers, remained relatively stable over the 20-year period. Similar to what I mentioned in a previous slide, in this case there's no definition for STEM occupations, so we're using occupations in the natural and applied sciences where the skill requirement is equivalent of a university level.

Going to slide 7, partly due to their choice of field of study, young women with a STEM diploma or degree have higher unemployment rates than other women. Often, the better labour market outcomes of young graduates with a STEM degree are used as motivational factors to encourage students to choose a STEM program. Of course, this will vary depending on individual circumstances. Holding a college STEM diploma or a university STEM degree does not necessarily guarantee young women an advantage in terms of unemployment rates. For example, in 2011, young women—again here we're looking at women 25 to 34 who are employed with a STEM qualification from either college or university—had a higher unemployment rate than their counterparts with a non-STEM qualification.

I know there's a lot of information on this slide but the relatively higher unemployment rate of female STEM graduates can be explained at least in part by their program choice. For example, the most common field of study for men with a STEM university degree was engineering, while for women it was sciences. The unemployment rate for men in engineering in May 2011 was 4.3%, while the unemployment rate for women in sciences was 6.6%.

Going to the next slide, another labour market indicator, contrary to young men, there was no difference in the skill mismatch for young women university degree holders whether or not they had a STEM degree. The proportion of young women holding a university degree but working in an occupation requiring a high school diploma or less, i.e., those who have a mismatch between their education and the skill level of their occupation, is not different whether they had a STEM degree or not. This proportion was 18% in both situations.

On the other hand, young women holding a university stem diploma had a mismatch of 12%, considerably less than the 22% for young men with a non-STEM university diploma.

● (1110)

Going to the next slide, young women in STEM occupations, however, do have higher employment incomes than other young women, but not higher than young men. Despite the results in terms of unemployment and skill mismatch rates, young women working in STEM occupations have higher employment incomes than do their counterparts working in non-STEM occupations. For example, when they are in college STEM occupations, their employment income is 19% higher, whereas for men the equivalent gap is 12%. So there is a benefit, from an employment income point of view, to working in STEM occupations. Women in a university STEM occupation earn 12% more than their non-STEM counterparts do. For men the gap is slightly higher at 15%.

That was just a bit of information.

The Chair: Thank you very much. You did great.

Ms. Alison Hale: I think that's the first time I've ever managed that.

The Chair: That's good. I appreciate it.

[*Translation*]

We'll now move on to questions.

Ms. Truppe, you may go ahead for seven minutes.

[*English*]

Mrs. Susan Truppe (London North Centre, CPC): Thank you for being here today for our study.

I'm not sure what other statistics you have with regard to programs that are available for women pursuing either skilled trades or STEM. Maybe I should ask a different question first.

When you ask all these questions to get your data, how is that done in the first place? Is it through a census or a questionnaire that goes to just college and university students? How do you actually get that feedback?

Ms. Alison Hale: Basically, it's part of the national household survey and part of that was in the long form census. Everybody was asked about their highest level of schooling and what field of study they took. That was across the board, for anything they'd taken. The responses were then classified according to what they reported. Then for the job they were doing in the reference week, they reported what their major duties were. That was all classified according to a standard classification and then comparisons were made across various occupations.

● (1115)

Mrs. Susan Truppe: This goes up to 2011. When approximately would information for 2012, for example, normally come out?

Ms. Alison Hale: Basically we're using the national household survey and the census, so those are every five years, and the labour force survey collects occupation data on a monthly basis. In order to do this sort of study in which you're looking at both field of study at a very detailed level and occupation data at a very detailed level, you need the depth of information that you can get only from the national household survey, which is done every five years.

Mrs. Susan Truppe: Okay.

In your position do you summarize and evaluate information specifically for STEM and skilled trades, or do you have knowledge of it just because you're here and you have the statistics in front of you? I just want to know what type of questions to ask.

Ms. Alison Hale: The interest of the committee gave us an opportunity to dig into the data. We have produced studies previously—and I believe the committee may have seen these—looking at field of study information, looking at what sort of fields people had based on their level of educational attainment, but we hadn't actually pursued looking at STEM-related occupations, so it was an opportunity for us to dig into the data bit.

Mrs. Susan Truppe: I was wondering when we were looking at the slides—I think it was the one showing that mechanics and construction had barely changed in 20 years and then we were using different names, because there was no skilled trades name and no STEM name—whether you see that changing in the future in order to collect data for those specific industries. How would we get that changed?

Ms. Alison Hale: Basically I think it's not so much that we would need more information. It would probably be a matter of doing more investigation as to how we would want to classify the occupations we already have into those that are truly STEM occupations and those that are not. There could be more investigation into what is truly a STEM occupation. Internationally there has been a certain amount of work on that, but it's not clear cut what is truly a science. For engineering it's fairly clear cut, but for scientific technology occupations, it isn't. There is no international definition of what those are, but as much as these things are hot topics, that's very much a hot topic.

Mrs. Susan Truppe: Do you see that changing, so that it would be an add-on on the questionnaire at some point—

Ms. Alison Hale: There's not really any issue—

I'm sorry. I apologize for cutting you off.

Mrs. Susan Truppe: —just to get the correct skilled trade jobs or the correct STEM jobs? I know it is hard. You are right about engineering. Math is a little more difficult. You could have a list that's three or four pages.

Ms. Alison Hale: I would say that we have all of the jobs correctly identified. It's about classifying those jobs as STEM jobs or not. It's more a theoretical exercise of saying, is that truly a STEM job? It's much more of a research issue of determining what you would consider. For example, is teaching physics a STEM job or not? It's a bit of a philosophical issue.

Mrs. Susan Truppe: It must make it somewhat difficult to take the information off the sheet you have and know where to put it or what to do with it.

I don't have the questionnaire here. Were there questions asked that may help us with what other courses or careers would help them go into STEM or skilled trades? For example, say somebody wanted to pursue a skilled trade but didn't know how to go about it or wouldn't have any information about skilled trade there because they may not be in that position at that point. Is there a question there that would say “Where do you see yourself in the future?” or “What type of career would you like to go into in the future?” so that we know if people are even thinking about that going forward?

Ms. Alison Hale: There have been some studies using other information. There are some international studies that have looked at how well schoolchildren at 15 years of age are doing in math and science and where they end up later. I can send you some actual examples. For instance, one study found that young men with lower marks in high school were more likely to choose a STEM program than young women with higher marks were. That's actually produced, and I can forward it to the researchers. I think you may be aware of that. There are a few like that that are out.

● (1120)

Mrs. Susan Truppe: Sure, that would be great. Thank you.

Did you say that was an international study? What was that study?

Ms. Alison Hale: It's a program for international student assessment, but it was looking at Canadian results, so equivalent information. It's taking advantage of an international evaluation.

The Chair: Thank you.

[*Translation*]

Ms. Freeman, your turn for seven minutes.

Ms. Mylène Freeman (Argenteuil—Papineau—Mirabel, NDP): Thank you, Madam Chair.

[*English*]

Thanks to our presenter.

The data that you've used sourcing for this presentation comes from the 2011 national household survey, as you mentioned. The government decided to cancel the mandatory long form census in 2010, which means that this data from 2011 was under the new ways of collecting data that we have. Is that correct?

Ms. Alison Hale: Yes.

Ms. Mylène Freeman: The long form census did provide detailed sex-disaggregated data on issues like division of labour, poverty, and differences between populations in Canada. It has been replaced by this voluntary national household survey.

Do you see a difference in terms of what questions can be addressed and what kind of gender-disaggregated data you have access to in order to build this presentation, as compared to the kind of data that would be available in the mandatory census?

Ms. Alison Hale: For this presentation, the national household survey data is an excellent source of information for national level data to look at information by occupation, gender, and field of study, which is why we were able to do that comparison of 2011 data to 1991 data. It's still a very rich source of data. It's very good quality, and it's excellent for this type of presentation.

Ms. Mylène Freeman: One thing I know we have sort of stopped tracking is the share of unpaid work. The Status of Women representative who was here yesterday, Linda Savoie, mentioned that there are reasons, such as juggling child care and things like that, which do make it more difficult for women to enter into these fields of employment.

Do we have any data around that?

Ms. Alison Hale: Yes, unpaid work was originally put on to the census of population in the early seventies, because that was actually the only vehicle available. Since then the generalized social survey has a module on time use, which is a much more appropriate way of looking at unpaid work and general time use.

There is data that came out in 2011 and there's another cycle coming out in 2016.

That's a more appropriate way of collecting that information, so that's available.

Ms. Mylène Freeman: Are you able to draw statistical links between spending time taking care of children, spending time doing household work, spending time taking care of other family members, and ability to move up in STEM fields? Is there enough to look at there?

Ms. Alison Hale: That's a survey I'm not at all familiar with, so....

Ms. Mylène Freeman: Is that not being examined at all?

Ms. Alison Hale: It's not my area of expertise at all.

Ms. Mylène Freeman: Okay.

I do want to ask you specifically about your presentation.

On slide 3, we're looking at 1991 to 2011. I want to ask you specifically, are you able to say what may be contributing factors to the increase in participation or holding STEM jobs by women between those years?

Ms. Alison Hale: As I mentioned, there are definitely more women participating in post-secondary education. Looking at data from the labour force survey, women are participating more and more in post-secondary education, so there's a natural movement in that.

● (1125)

Ms. Mylène Freeman: Is the proportion with which women have increased in studying STEM fields equivalent to the proportion in which they've been employed? Can we make that comparison?

Ms. Alison Hale: It's not something we've looked at as part of this presentation.

Ms. Mylène Freeman: Okay. So we don't know whether there's a direct effect between increased education and increased employment.

Ms. Alison Hale: No, we can't....

Ms. Mylène Freeman: Okay.

Slide 7 indicates that partly due to their choice of field of study, young women with STEM diplomas or degrees have higher unemployment rates than other women. Do we know why that is? Do we have any kind of data around what the reasons are for higher unemployment rates of women who choose to go into these fields?

Ms. Alison Hale: Basically, right now it's an observation. There are different unemployment rates. One thing to note is that these unemployment rates are generally relatively low in and of themselves. At this point it's an observation. We'd have to do more studies to disentangle as to why.

Ms. Mylène Freeman: That would be interesting. Could you suggest some kind of indicators that could be looked at to assess what might be causing that sort of disjunction?

Ms. Alison Hale: It wouldn't be appropriate just to speculate.

Ms. Mylène Freeman: It's not your job.

Ms. Alison Hale: Don't ask statisticians to speculate without data.

Ms. Mylène Freeman: Okay, so you can't talk about different indicators or something like that.

Ms. Alison Hale: It wouldn't be appropriate.

Ms. Mylène Freeman: In 1993 Canada did a violence against women national survey that had a lot of data about how women experience violence. We haven't done that survey since 1993. We did it once. It's an international standard and it's amazing work that StatsCan was able to do. It's too bad that we don't have any more recent data, but do we have anything in there that may relate to how violence at home, domestic violence, and violence that women are living is affecting their ability to perform in their jobs?

Ms. Alison Hale: That's an area I'm not familiar with, but we could get you a quick update on the status of that.

The Chair: Thank you very much.

[*Translation*]

Thank you very much.

Ms. O'Neill Gordon, you have seven minutes.

[*English*]

Mrs. Tilly O'Neill Gordon (Miramichi, CPC): Welcome. We're very happy to have you. We thank you for your time that you're giving to us because this study is very important to us, and we certainly like meeting with different witnesses to get their ideas and to learn what they have been doing.

Throughout our study and through our meetings with different witnesses, we always talk about different ways and new initiatives to encourage women. Can you tell us what initiatives you see that are now in place that weren't in place during those years of our survey? What initiatives are in place to engage women to pursue skilled trades and STEM studies, and are there others that you'd like to see put in place as well?

Ms. Alison Hale: That's not something Statistics Canada could comment on. I believe that's something that ESDC would have commented on when they were here.

Mrs. Tilly O'Neill Gordon: Okay.

You also mentioned that one thing for sure is that higher unemployment is an issue. Do you see this as being one reason that girls don't go into these studies as much as they go into the other studies? What can we do to improve this?

Ms. Alison Hale: Again, I can't comment on that.

Mrs. Tilly O'Neill Gordon: The questionnaires you send out, have there been many changes to them over the years?

Ms. Alison Hale: Not in this area. We're using standard—

● (1130)

Mrs. Tilly O'Neill Gordon: Not in this area, you say. They all remain the same.

Ms. Alison Hale: Basically the way in which the labour data is collected is by using the International Labour Organization standard for employment and unemployment over time. It's the same questions over time.

Mrs. Tilly O'Neill Gordon: Okay.

What support is in place now to assist women pursuing skilled trades? Do you see any at all, even though it might not be in your field? Do you see any, or do you hear of any women talking about some of the support they're getting?

Ms. Alison Hale: Again, that's not something I see at Statistics Canada.

Mrs. Tilly O'Neill Gordon: You don't see that. That's fine. Never mind.

The Chair: To complete the question of Mrs. O'Neill Gordon, because I don't know all of the questionnaire by heart, are there questions to address a little bit the questions that were raised? I don't mean questions about programs but maybe about what prevents people from going into those trades. Are there questions such as that?

Ms. Alison Hale: There are none in the national household survey.

The Chair: No, the national household survey is really basic questions that are asked. From those answers you can aggregate it to classify.

Ms. Alison Hale: Yes.

The Chair: I think that's the difficulty of being able to answer the questions that are more about....

Ms. Alison Hale: Yes, you mean some of the barriers, the reasons they did not. I could go back to see if some of the specific education surveys do that. You're sort of looking at reasons why people didn't do things, which are a little bit harder because what you need to do is find people who thought about a career choice and then decided not to do it. It's a little bit harder from a statistical point of view.

Mrs. Tilly O'Neill Gordon: Yes. My point is that this is from 1991 to 2011. I just think that there would be a lot of changes that could have occurred over that time. If the questionnaire is not addressing those changes, then we're probably not getting a true picture of how the women feel out there. That was mainly my point of view. I thought in our study it would be important that we have an idea of where we could go in line of changing this information and this questionnaire, if that was of any help to us.

Ms. Alison Hale: The national household survey is really looking at taking a snapshot of the population at different points in time. There's a lot of value in the sort of surveys you're looking at. The snapshot is one thing. The other sort of survey you're talking about is looking beyond that snapshot and learning what the underlying issues are that are driving the decisions people make. Is that right?

Mrs. Tilly O'Neill Gordon: Yes. That's what I think is very—

Ms. Alison Hale: I could do a little bit of digging to see if there are some surveys that we've done in the past that may inform that.

Mrs. Tilly O'Neill Gordon: Okay, maybe I wasn't making myself clear in my questions, but that's where I was headed, to see if there should be changes to the questionnaire to focus...and if there is anything we should be looking at in our study.

The Chair: If I can add, which I don't do that often, maybe to answer your question or your concern, as Ms. Hale was mentioning, it's kind of a snapshot and they have to have the same question in order to be able to see the trend.

I think Status of Women has looked at some of the questions or has done a study that could answer some of your concerns, if I'm not mistaken, but I might be. Thank you for opening up the discussion. I think it's great.

[*Translation*]

Ms. Duncan, it is now your turn. You have seven minutes.

[*English*]

Ms. Kirsty Duncan (Etobicoke North, Lib.): Thank you, Ms. Hale, for coming today.

My concern is the data that's been presented today is only for ages 25 to 34. I would like to see that data to 60 because women are working to 60 or 65, or much later at the university. I think that once we see those numbers over 34 and we see the disparity at the 25 to 34 age, they're going to be much higher as you go up.

Could that be tabled with this committee, please, for each age cohort? I'd like to see it in five-year cohorts, but if we don't have that data, I'd like to see it at 10-year cohorts.

● (1135)

Ms. Alison Hale: As I was explaining, this is not an existing dataset.

Is that an official request of the committee to have it come out?

Ms. Kirsty Duncan: I think it's an important issue.

Ms. Alison Hale: This is a very rich dataset.

Not surprising, as people know, if you look at older cohorts to younger, as this committee has seen, the younger cohorts have higher participation in the labour force and so it was—

Ms. Kirsty Duncan: I know that. Is it possible to have that data? I think it's important that we have it.

Ms. Alison Hale: Yes.

Ms. Kirsty Duncan: In my next question I'm going to talk specifically about university researchers. We know that while young women are 51% or 52% at the undergraduate level, and it's much less if we look at computer science, engineering, etc., we know we lose young women from the undergraduate level to the graduate level, and then we lose our professors at the assistant, the associate, and the full professor rank.

We know that women don't progress through at the same rate. While there may have been 52%, the older data was 20% at the assistant level, and 13% at the full professor level.

If we're talking about science and technology, can we have data on this?

Ms. Alison Hale: You're going to a very specific level of granularity here. You're getting to an individual level where I'd be sort of....

Ms. Kirsty Duncan: University research is—

Ms. Alison Hale: It's a level of confidentiality because then you start divulging personal information about individuals. It's a caveat on it that....

The information we gave in this presentation, because of the level of detail and the richness of the data, can be done at five-year age groups or ten-year age groups. The equivalent presentations could be done quite easily.

What you are talking about is looking at a very specific level of granularity.

Ms. Kirsty Duncan: In academia, if we look at the Canadian Association of University Teachers, this is a huge number across the country and we need to make sure that our women are progressing through the ranks at the same rate as our men.

The Chair: If I understand the exchange, Ms. Hale will see if that is possible from a Statistics Canada point of view and if not, then if I may suggest, perhaps as a recommendation, a future study.

Is that okay?

Ms. Kirsty Duncan: Yes.

The Chair: Thank you.

Ms. Kirsty Duncan: Thank you, Madam Chair.

I know you've worked really hard because this hasn't been done, as you said, and these are approximations. I know you can't ask about recommendations, but the concern of course is that what gets measured gets acted upon, and if we're not collecting that data and we have approximations for each of these areas, it's a concern.

Ms. Alison Hale: These aren't approximations. They were measured within the survey.

Ms. Kirsty Duncan: But we don't have STEM being collected on its own.

Ms. Alison Hale: It's how it's defined, so we've given a definition of STEM so that people can say, “Okay, I agree with that definition.” It's a variable that we've derived, so someone can say, “I derive it differently.” It is there, so I wouldn't want people to think that....

For instance, someone could say they want to use ages 25 to 28. That's a choice. Someone could say they would include physics teachers as part of STEM, and someone else would say they wouldn't. But we have physics teachers identified.

Ms. Kirsty Duncan: I'm going to move on then. Maybe we need to actually start to identify what needs to be measured.

Ms. Alison Hale: Yes, how you want to identify....

Ms. Kirsty Duncan: Yes, okay.

The last thing I want to ask is whether there has been any attempt to drill down as to why men are still earning more than women in STEM fields. When I used to be at the university, a young woman at that time would earn on average $6,000 less when she left than the young man sitting beside her for the same degree. I'm going to ask what your dream study would be to really understand the issue of women in STEM and the equal pay gap.

● (1140)

Ms. Alison Hale: I haven't actually thought of what that would be. It's not really my area of expertise. We have done a number of studies into gender wage gaps. The last one that was done, and we came to this committee—

Ms. Kirsty Duncan: In STEM?

Ms. Alison Hale: Not recently in STEM, specifically. When you control for a number of issues, there are some things you can't control for because there are choices made.

Ms. Kirsty Duncan: Right, I understand that. When was the last time that was done, looking at the wage gap in STEM?

Ms. Alison Hale: I don't know if it's ever been done specifically in STEM, but it might have been.

Ms. Kirsty Duncan: Thank you.

The Chair: Thank you.

[*Translation*]

Thank you very much for that great discussion.

Mr. Barlow, your turn for five minutes.

[*English*]

Mr. John Barlow (Macleod, CPC): I know it's difficult when we ask opinion questions of a statistician, and I appreciate you're doing the best you can. I'll try to ask you as many non-opinion questions as I can, but you can by all means try to steer me in a different direction.

The first question I want to ask is about page 8 of your submission, where you had the skill mismatch rate for young women with a university degree as pretty much even. Can you explain that a little bit? I was really surprised to see that and I want to make sure that I'm right. Maybe you can explain this to me a little bit.

That means if she has a university degree, say in sociology, but she's working at Starbucks. Is that what you mean?

Ms. Alison Hale: It basically is working in an occupation that doesn't require a university degree; it requires high school or less. It's the same for whether it's STEM or non-STEM.

Mr. John Barlow: What were the questions? Do you know how you got that?

Ms. Alison Hale: It's just based on the occupation they're in versus their level of education, so it's a straight....

Mr. John Barlow: The other question I wanted to ask was regarding...and whether this had a difference. I was just looking at the first couple of pages, for example, and you kind of touched on it a little bit.

It's on page 4. You were talking about young workers in skilled trades. You said that there is not a category specifically called “skilled trades”. It was called “mechanic and construction trades”. Is that how the questions were asked? Were you asking the young women, “Are you in the mechanic or construction trades”?

The reason I ask is that we are trying to be a little bit more modern and I'm just wondering how that question was asked, because I think “mechanic and construction trades” is much too narrow.

Ms. Alison Hale: No. We asked, “What were you doing?” They described their job, and then their job was classified into an occupational standard. For instance, someone would say, “I'm a bricklayer” or might say, “I lay bricks for a living”, and then there's a standard occupation description that is bricklayer, and everybody who says something that's related to laying bricks gets the same code. They'll describe however they've determined how they describe their work, and then it gets a code, and that code has a standard skill level applied to it.

Mr. John Barlow: Okay.

The other one I was interested in was on page 5 of your submission. You have some of the differences from 1991 to 2011. I have two questions there.

The first one deals with the high increase in agriculture and fish products inspectors. I'm wondering if you can be a bit more specific. Being from an Alberta riding, the feedback I'm getting from people in the agriculture sector is that they're having a really difficult time keeping young people involved in that industry, whether it's actually on the farm or in some of the subsidiary businesses that are part of that. Is there any way for you to be more specific on what those jobs are or what would entail agriculture?

Ms. Alison Hale: No, I don't have that with me.

Mr. John Barlow: Okay.

That brings me to my second question. It is a 10-year gap between these two studies. Is there any way of finding out what the trend is? I ask that—and I think all of us in this room could agree—because of the opportunities in the skilled trades, in the actual jobs that weren't there 10 years ago that have come in the last few years. I'm thinking of oilfield technology, agribusiness, and agri-innovation. Is there any way to see the trend? Did it kind of go like this for five or six years, and then we're seeing...? Are we on a good trend that way? Is there any way to find that out?

● (1145)

Ms. Alison Hale: No. For this particular comparison, it was basically just doing two points in time. As you pointed out, occupations have evolved over time. We used a method that had been done in a previous study where we took the occupations of 1991 and did some work to basically make them comparable with 2011. It's really just two points in time. It would be interesting to map them through, but some of them go one to many and some of them go many to one.

The Chair: Thank you.

Mr. John Barlow: I just want say it's nice to have Mr. Kellway and Mr. Zimmer here. I don't feel so alone today. Thanks, guys.

The Chair: There we go.

Actually, if I may add, you talked about agriculture, which is one of my passions. I'm wondering, Ms. Hale, if you've seen a trend. A lot of agriculture has also moved towards environmental protection, and there's a lot of related environmental fields that are related to agriculture, or even when we look at biology and everything. I don't know if there's a trend of having more women, such as myself, who want to study agriculture and environment.

Anyway, let's move on to Mrs. Freeman.

[*Translation*]

You have five minutes.

[*English*]

Ms. Mylène Freeman: I, too, will try not to ask your opinion. I'm really bad at not doing that, though.

Can you tell us what sectors have seen the most growth since 1991? Can you talk about the most growth in terms of women's participation, that is, specifically?

Ms. Alison Hale: Sorry, not off the top of my head. We definitely have that information, but....

Ms. Mylène Freeman: If you do have that information, you could submit it to the committee through the chair.

Ms. Alison Hale: When you say sectors, are you interested in occupations—

Ms. Mylène Freeman: I would like to see—

Ms. Alison Hale: —or industries or...? We do the labour force survey every month and we have all of that information.

This is just a plug for one work we are doing. The women in Canada publication, which I know this committee is quite interested in, is in the midst of being updated. This committee probably would love to see it all come out next week, but the first chapter is coming out next week, and over the next few years, every few months a new chapter will be coming out. We are updating that. I know you'll be quite anxious to see that and look forward to that coming out. As you can appreciate, it's quite a substantial work, but it's time well spent.

I just wanted to let this committee know that was happening.

Ms. Mylène Freeman: That's good. We'll look forward to getting that at the committee, I'm sure.

I would like to see the comparison with the increase, specifically in university and skills—I see you've disaggregated it by university and by college education—and to see also the proportional increase in non-higher educated trades and things like that. If we could break it down into larger categories, but not too specifically either, just to see where—

Ms. Alison Hale: In the labour force survey we put out data every month by employment/unemployment by educational attainment. I could send it.

Ms. Mylène Freeman: Is it disaggregated by gender?

Ms. Alison Hale: Yes. I could send the link to the researcher.

Ms. Mylène Freeman: That would be helpful.

Do we also know the proportion of part-time work and whether the part-time work is being filled by women or men? If we could also have that data, it would be really useful, I think.

Do we know if the rate of education to employment is affected by the type of work conditions, if it's flexible shift work, or part-time, or a unionized environment, or if it's sending people into more rural, remote areas? Do we have data around that type of work?

● (1150)

Ms. Alison Hale: Some of it's about flexibility, part-time versus....

Ms. Mylène Freeman: If we could have that data, that would be really useful as well.

There's one other thing I'd like to know. Do you have data around whether the women in STEM jobs are the primary or the secondary family earner, more proportionally? If that has an effect, it would be interesting to look at.

If you have any or all of that data and we can look at it, I think that would be helpful for the committee.

That's about it for me.

[*Translation*]

The Chair: Thank you, Ms. Freeman.

It is now over to Ms. Truppe for five minutes.

[*English*]

Mrs. Susan Truppe: Madam Chair, I'll be sharing my time with my colleague as well. I only have a couple of questions.

I don't know if I missed it or not, but is there data, when you're talking about the skilled trades and STEM, whether they're in it or not in it, that further defines the women in terms of religion or race? Would you know that?

Ms. Alison Hale: Yes. there is a lot of information in the NHS about religion as well as visible minority status that you could cross-classify. In applying some of the information, it might be better to produce some tabular rather than try to do....

I don't know how. I guess we could contact the researcher for the committee and talk in a bit more detail about some of the information we could provide.

Mrs. Susan Truppe: Right. I think it would be interesting to know that as well, and know who is interested in STEM and who isn't interested.

In your reports, it was just the percentages of STEM and skilled trades, etc., not necessarily drilling down even further. That would be interesting too, to have those stats to see if there is a difference.

The types of questions on the survey, and we've talked about the fact that we probably need to update the survey at some point, in your opinion—and I know statisticians don't like to offer their opinion—based on your knowledge of the questions that are on it, is there anything you think that should be added to the next survey that might help increase girls entering skilled trades or STEM? I'm sure a lot of different questions are missing. You're the expert, and certainly I'm not. Even if I had the form in front of me I probably wouldn't know what the appropriate questions would be. Based on your years of experience, in your opinion is there anything you think should be added but is missing in there, just so it's in the report, that would help get more girls into the skilled trades?

Ms. Alison Hale: The issue isn't so much changing the existing sources of data. I think it's important to have those time slices that are consistent over time. It's what other information is missing that you'd like to have to complement the existing sources, which I guess would come back to the committee.

I can look at some of the information we have that's complementary. If you find there are areas you don't see, then you could say that you would like to have that information.

Mrs. Susan Truppe: Thank you. That would be helpful.

I'll pass my time to my colleague, if he has a final question.

Mr. John Barlow: Thank you.

The Chair: You have two minutes.

Mr. John Barlow: Thank you.

I want to go back to page 7 again, Ms. Hale. I want to make sure I'm clear on this. Again, it surprises me significantly that the unemployment rates are higher in either STEM and non-STEM for women.

Does the college diploma include, say, the skilled trades? I am thinking of electrical, construction. Or is the STEM more on the academic side, for lack of a better description? Do you know?

Ms. Alison Hale: This would be that they responded that their highest level of education is a college diploma or degree.

● (1155)

Mr. John Barlow: Okay, it doesn't specifically say what—

Ms. Alison Hale: If they have a skilled trade or a registered apprenticeship, that wouldn't be included in there.

Mr. John Barlow: Okay, so they're not very specific on what area their college diploma was in.

Ms. Alison Hale: They would have given that as a field, but that would be a separate question when they talk about this specific.... They basically have said that their highest level of education was a college diploma, certificate, or degree.

Mr. John Barlow: I don't know if you can answer this one either, but just since we've had the Canadian apprenticeship grant and the Canada apprentice loan program in the last few years, is there any data that has correlated with an increase in women going into some of those trades? The reason the apprenticeship grant and loan were put in there was to allow people who were not completing their apprenticeship programs because they were paying a mortgage, taking care of family, forgoing wages to complete their apprenticeship...so we brought in that program.

Is there any data on whether that is correlating to an increase of people accessing some of these skilled trades?

Ms. Alison Hale: When did that program come into—

Mr. John Barlow: The Canada apprentice loan program has been in place for a few years and the grant has been—

Ms. Alison Hale: There is an annual registered apprenticeship information system. We get data from that system, and you would have that coming in. That is separate from this, but it's administrative data that Statistics Canada has and produces information on—

Mr. John Barlow: That would be available.

Ms. Alison Hale: Yes.

Mr. John Barlow: Thank you.

The Chair: Ms. Hale, thank you very much for your time. Thank you very much for the valuable information you have shared with us.

We will suspend the meeting to go in camera.

[*Proceedings continue in camera*]