STATCAN@100: FROM PAST TO PRESENT TO FUTURE

SEN. DONNA DASKO

This paper was adapted from remarks made during the panel "From Past to Present" at the conference, Statistics Canada – 100 Years and Counting, Ottawa, December 6-7, 2018.

Donna Dasko, PhD, is a member of the Senate of Canada and is former Senior Vice-President of Environics Research Group, a leading survey research firm. She is a long-time member of the Statistics Canada Advisory Committee on Social Conditions.

It is an honour to have been asked to reflect on the role and contribution of Statistics Canada (StatCan) on the 100th anniversary of its founding. We live in a time that offers great challenges — and opportunities — when it comes to how surveys are conducted.

As a former survey research professional, I believe that the most difficult issues today involve the sampling process, i.e., how we find people to survey, and whether those people will answer our questions. Developments in this area have changed the entire industry.

We all know that the random sample is the "gold standard" of survey research: if a sample is chosen randomly from a population, that sample will have the characteristics of that population, within a margin of error. When I began my career in the 1980s, we were able to get excellent random samples through random-digit telephone dialing. Almost every household in Canada had a land line, creating potential access to almost the entire population. Furthermore, response rates were high because people were interested in answering our surveys, especially those about public affairs. Conditions for practising our trade were well-nigh ideal, but this golden age was not to last.

The first warning signs came in the 1990s, when response rates started to drop with the growth of recorded messages, call display, fax machines and cell phones. Further declines occurred as the novelty of being wooed by pollsters wore off. I recall response rates of up to 80% in the telephone polls we did in the 1980s. A decade later, they had dropped into the 40- to 50-per-cent range. Today, response rates to traditional phone polls (i.e., with live interviewers) are 10% or lower.

The growth in the use of cell phones created a new

sampling problem. In 2017, according to Statistics Canada, only 67% of households had land lines, with 28% of households using cell phones exclusively. As a result, researchers no longer have the advantage of near-universal coverage from a single source. Granted, cell phone users can be added to the mix, but this increases costs significantly.

The rise of Interactive Voice Response (IVR) and Internet technologies have been a mixed blessing for the industry. IVR involves telephone interviews conducted by computer, using random-digit dialing. While it is dramatically less expensive than traditional interviewing, response rates are absurdly low — in the 2- to 3-per-cent range. Internet polling, as its name suggests, administers the questionnaire over the Internet, typically using panels of respondents assembled through cold calling, banner ads, list purchases from multiple providers, and so on — methods that bear no relationship to random sampling.

Statistics Canada has likewise faced the challenges heretofore described. Although StatCan's response rates have always been higher than those in the private sector, theirs have declined, as well. For example, General Social Survey (GSS) response rates that used to be around 80% now hover between 50 and 60% and, in fact, dropped as low as 38% in the latest (2015) cycle.

StatCan's response to these serious sampling challenges has been extensive. I remember the multi-mode experiments with the GSS in 2013, recruiting respondents by phone and then offering the option of online survey completion. That made good use of Internet technology while maintaining the crucial random sampling. Now, multiple-response channels are offered to respondents: paper, telephone and online. They can be combined to deal with various sampling issues. The record Internet response rate to the 2016 census (68.3%) is a prime example of the success of this strategy.

Statistics Canada now has better and more streamlined communications with respondents, in large part because of the following:

- Its messages are adapted to different segments of the population;
- It uses "nudging," i.e., applying insights from behavioural sciences to encourage more people to respond;
- It has reduced the burdensome household roster;
- It has increased the use of linkages of survey to census and administrative data so that only the information that cannot be found anywhere else is obtained by contacting Canadians. The census serves as a good example: its linkages to tax and immigration data have decreased respondent burden and increased the quality of the information.

These efforts need to be expanded in the future:

- Statistics Canada should continue to multiply response channels as personal computers become less and less relevant. Potential respondents need to be reached on tablets and cell phones with proper applications (apps). Canadians are already using apps to monitor such things as their vital signs, physical exercise, nutrition, time use and budget. StatCan

must develop ways to use such apps.

– StatCan must also find ways to tap into the information that Canadians publicly post on the web. The personal information available on the web presents its own methodological and ethical issues and will require the use of artificial intelligence (AI). StatCan will have to tread carefully, but there are opportunities here.

We cannot turn back the clock on technological change. However, I believe that the survey vehicle will continue to be a vital part of the research process because, thus far, no one has found an adequate replacement.

From my many years on the Advisory Committee on Social Conditions, I have seen — first hand — how Statistics Canada has moved forward on the measurement of social issues and phenomena. It has been a leader in developing new definitions, standards and topics in so many areas; a number of examples come to mind from my time on the Committee:

– In 2000, StatCan embarked on a landmark survey to measure Internet use among Canadians — at a time when nobody knew what we might even call this new thing: Was it the World Wide Web, the Internet, or something else?

– StatCan grappled with the measurement of ethnic ancestry and ethnic identity in the 2002 Ethnic Diversity Survey, in concert with considerable analysis of census data. We have learned that ethnic identity — and Indigenous identity, especially — are fluid and changeable, subject to societal influence and even to the wording of questions on the census.

– New content accounts for 25% of each cycle of the GSS, and new themes have been launched throughout the years, including the 2016 theme, "Canadians at work and home."

– StatCan led the way in creating significant longitudinal surveys on health, children, youth, labour and income. These were innovative but also challenging, both analytically and in terms of retention of respondents. What happened to those surveys? Can linked administrative data nowadays provide longitudinal views?

– I recall much discussion on the concept of disability, which is very difficult to measure in a reliable and standard way; it can vary considerably with question wording. As a participant in the United Nations *Washington Group* since its inception at the end of the 1990s, StatCan has been a leader in the development of a standard survey instrument to measure disability rate by type and level of severity. In 2017, the Canadian Survey on Disability (CSD) included the full implementation of a new set of Disability Screening Questions (DSQ) used to identify persons with disabilities; this was the culmination of many years of work.

– The measurement of sex and gender is now more complicated. In the old days, sex was the easiest and simplest variable on any survey: there were just two categories. Today, four concepts have emerged: sex, sexual orientation, gender identity and gender expression. With the recent additions of gender identity and gender expression to the Canadian Human

Rights Act and the Criminal Code, as well as some sources of administrative data changing from sex to gender, StatCan has adopted new definitions and standards on the concepts of sex, gender identity and gender expression for use in its surveys. It has also created a new Centre for Gender, Diversity and Inclusion Statistics, which will act as a gender-based analysis data hub to support future, evidence-based policy development and decision-making.

Even the small subset of topics listed above indicates that Statistics Canada has evolved in its research program to reflect significant social change. In my view, it has done well, as indicated by:

- Its solid reputation for the quality of its statistics;
- Its perfect record of protecting the confidentiality of its respondents;
- Its continuous innovation throughout its history;
- The success of the 2016 Census, with its return to the mandatory requirement of the long form (which itself garnered an impressive response rate of 97.8%);
- And changes to *The Statistics* Act to reinforce the independence of the Chief Statistician in determining the most appropriate methodology for sound statistics.

As we move forward, let me suggest some areas that will require special attention:

- There are significant challenges in forging a "Nation-to-Nation" relationship with Indigenous peoples who want to own and control the information collected about them. Can StatCan be a partner that transfers knowledge and expertise to Indigenous organisations? Or are the cultural differences and lack of trust just too difficult to overcome?
- How can StatCan make it easier for the public to understand its data? In today's world of fake news, skepticism vis-à-vis scientific evidence, polarization of society on many issues, and cynicism vis-à-vis the government, can StatCan assist in promoting a more evidence-based environment?
- On a related topic, how can StatCan make its information even more accessible to all? The web site remains somewhat difficult to navigate, and access to micro-data is still cumbersome for researchers.
- How can StatCan help better illuminate environmental and climate change issues? Its project on the Transition to a Low-Carbon Economy is a first step; it will address the need for information on the role of clean technology in Canada as the country develops policy in this area. StatCan needs to track the evolution of this sector, along with its social and economic impacts. Social impact will be a key component of the project because the success of the transition will require the mobilization of society as a whole.
- Can StatCan develop better equity indicators? Particularly with respect to income inequality, to help keep track of the more vulnerable segments of the population?

– And, finally, how can StatCan be more timely? This is a world that does not want to wait long for information.

It is my hope that StatCan will continue to lead the way in this rapidly evolving environment. With sufficient resources to innovate and experiment, I am confident that it will.