

The Empire Club Presents



**DR. MERIC S. GERTLER,
DR. RHONDA L. LENTON,
DR. DANIEL WOOLF AND
SHELDON LEVY**

***WITH:* UNIVERSITY PRESIDENTS' PANEL: THE FUTURE OF EDUCATION**

**Welcome Address, by Barbara Jesson, President of Jesson +
Company Communications Inc. and President of the Empire
Club of Canada**

April 13, 2018

Good afternoon ladies and gentlemen. From the Arcadian Court in downtown Toronto, welcome, to the Empire Club of Canada. For those of you just joining us through either our webcast or our podcast, welcome, to the meeting.

Before our distinguished speakers are introduced formally, it gives me great pleasure to introduce our Head Table Guests.

I would ask each Guest to rise for a brief moment and be recognized and then be seated as the other directors and guests are called. I would ask the audience to refrain from applause until everyone has been introduced.

HEAD TABLE

Distinguished Guest Speakers:

Dr. Meric Gertler, President, University of Toronto
Dr. Rhonda Lenton, President and Vice-Chancellor, York University
Mr. Sheldon Levy, Chief Executive Officer, NEXT Canada
Dr. Daniel Woolf, Principal and Vice-Chancellor, Queen's University

Guests:

Mr. Jim Leech, Chancellor, Queen's University; Senior Advisor, McKinsey & Company
The Honourable Mitzi Hunter, Minister of Advanced Education and Skills Development, Government of Ontario
Mr. Colin Lynch, Vice President, Strategy and Growth, Greystone Managed Investments; Director, Empire Club of Canada
Mr. Bill Morris, President, Accenture Canada
Ms. Blake Oliver, Fourth Year Bachelor of Health Sciences Student, McMaster
Ms. MJ Perry, PhD Candidate, Theology (University of Toronto); Vice President and Owner, Mr. Discount Ltd.; Director, Empire Club of Canada
The Honourable Michael Wilson, Chancellor, University of Toronto; Chairman, Barclays Capital Canada Inc.

My name is Barbara Jesson. I am the President of Jesson + Company Communications and the President of the Empire Club of Canada. Ladies and gentlemen, your Head Table Guests. Canada was recently named by the OECD as the world's most educated country, with an astonishing 50% of its population completing post-secondary education.

This story is, in large part, due to the quality of our public schools and universities which increasingly attract students from across the globe.

In a world where we are exponentially changing—today we are thinking about artificial intelligence and robots—there are those who believe that, as human beings, we are actually evolving into something else, and certainly there are people who are suggesting that we are doing genetic engineering, neural implants and all of these things already, and so, as our universities prepare to deal with this new, challenging generation of students that lies ahead, it is important that we all understand how they are preparing for this future that is before us.

Our panel consists of Dr. Gertler, the President of the University of Toronto. He has been a professor of geography and planning and the Goldring Chair in Canadian Studies. He is widely known for his work on the role of institutions in shaping innovation and local economic prosperity.

He has advised governments in Canada, the United States and Europe, as well as international agencies such as the OECD and the EU. He has authored and edited nine books and has held visiting appointments at Oxford; University College, London; UCLA; and the University of Oslo.

In December 2015, President Gertler was appointed to the Order of Canada.

Dr. Lenton, President and Vice-Chancellor of York University, joined York in 2002 as Dean of the Atkinson Faculty of Liberal Arts & Professional Studies. A dedicated champi-

on of community engagement and innovative partnerships, she has played an instrumental role in the creation of the York University–TD Community Engagement Centre and in expanding York’s institutional collaborations with other postsecondary education partners.

She is a sociologist by training and her teaching and research expertise include gender, family conflict, research methods and, more recently, higher education.

Dr. Woolf became Principal and Vice-Chancellor of Queen’s University in 2009. He is also a professor in the Department of History at Queen’s. Dr. Woolf is a Fellow of the Royal Historical Society, of the Society of Antiquaries of London and of the Royal Society of Canada (RSC). As a scholar, he specializes in early modern British cultural history and in the history of historical thought in both Britain and around the world.

He serves on the board of directors of Historica Canada and is a past member of the Executive Committee of the Royal Society of Canada. He assumed the role of Chair of the Council of Ontario Universities in 2017 for a two-year term.

Our moderator, Sheldon Levy is CEO of NEXT Canada, which helps promising young Canadian innovators start and scale their own ventures. A longtime champion of innovation and a builder of startup ecosystems, Mr. Levy also serves on the Advisory Board of the Brookfield Institute for Innovation + Entrepreneurship and on the Leadership Council of Scale Up Ventures, Inc. Mr. Levy served from 2015 to 2017 as Deputy Minister of the Ontario Ministry of Advanced Education and

Skills Development, where he helped drive innovation and entrepreneurship through the Ontario’s postsecondary education and training system.

Ladies and gentlemen, please, join me in welcoming this very distinguished panel to our podium.

Drs. Gertler, Lenton and Woolf with Moderator Sheldon Levy

SL: Let me begin by thanking everyone for being here today.

The job that we put ourselves to was called “The Future of Universities.” You could imagine we could be here a very, very long time on that topic. Well, in advance, we broke it up into three parts. I have asked each of our colleagues to be able to address one of those parts. The parts that we have chosen—and I am sure you could have broken that up in many other ways—are: 1) The research agenda of our universities, including how it moves into the commercialization, the innovation part of the economy; 2) To deal with education skills development and a particular reference to the gender ratios within programs; and 3) The universities’ role in an inclusive economy, the changing nature of work and the universities’ role in supporting a competitive economy.

You could understand that these are not mutually exclusive, and they overlap all over the place. If there is time at the end, we will take questions from the audience, but, to begin with, I have asked Meric if he could take number one for us. Over to you, Meric.

MG: Thank you, Sheldon, and let me thank the Empire Club for hosting such an important conversation about Canada's future prosperity.

I am going to make four points on the theme of research, innovation and commercialization. I am going to begin with, I think, an obvious point that, throughout history, curiosity-driven research has reshaped societies and economies from insulin to artificial intelligence. Ideas and discoveries from research universities have transformed our world. Today, advances in research provide the very foundation for the knowledge of the learning economy and continue to drive it forward.

While we tend to point more readily to advances in science, technology, engineering, math and medicine, other kinds of disciplines, of course, are also important. Advances in economics, political science, urban studies, sociology, the humanities, and various creative and artistic fields have played a vital role as well. Indeed, Facebook's recent troubles remind us that, as powerful new technologies, such as social media and artificial intelligence, become pervasive, we badly need philosophers, ethicists and legal specialists to help us define some reasonable limits to the application and reach of such technologies.

Moreover, the continued success of Canada's urban regions will depend on the insights arising from research on immigration and social inclusion as well as environmental systems and infrastructure. My first point is really that the prosperity and the success of our society depends

directly on the scholarly work of our universities.

My second point is that these ideas do not just materialize instantly out of thin air overnight. Scientific progress requires sustained investment in research over time and lots of patience. This can be a challenge in modern democracies in which electoral time horizons are notoriously short. It takes time and wise investments guided by rigorous peer review.

Let me give you just two prominent examples from the University of Toronto. Stem cells were discovered by Jim Till and Ernest McCulloch in 1961. And Geoff Hinton worked out the fundamental principles of machine learning in the early 1980s. It is only now, following decades of sustained support from our public research councils that the full commercial potential and range of applications are becoming viable.

The recent Fundamental Science Review led by David Naylor, President Emeritus of the University of Toronto, has very convincingly documented Canada's long-term decline relative to our competitors when it comes to research funding, a theme that, by the way, has been repeated in a recent report by the Council of Canadian Academies. Thankfully, the major investments in this year's federal budget have started to move the needle in the right direction, and the federal government really deserves credit for taking these decisions. We still have more work to do because the rest of the world is not standing still. We are playing catch up.

Moreover, there are some other compelling reasons to double down on research investments. This brings me to my third point. Our research enterprise is an increasingly important factor in attracting investment to Ontario and Canada. Since 2015, firms like Thomson Reuters, Johnson & Johnson, Bayer, Fujitsu, Google, Uber and Autodesk, to name just a sample, have all announced new or expanded R&D investments here in Toronto alone. As you know, Toronto is the only Canadian city on Amazon's short list for its HQ2 project. In all of these cases, the quality of our graduates, the quality of our research and the presence of world-leading scholars are the primary motivators for their decision to locate here.

Recent initiatives such as the Vector Institute for Artificial Intelligence have also been pivotal, and I want to acknowledge the leadership of the Ontario government in making that happen.

It is about science and talent, not tax breaks. It is also about the quality of our rapidly maturing local innovation and entrepreneurship ecosystem. This brings me to my fourth and final point about how research sparks innovation and entrepreneurship. Toronto and, indeed, Southern Ontario, are witnessing a huge surge in startup activity. The burgeoning local innovation ecosystem, I think, helps to explain much of what is going on here, whether it is the Creative Destruction Lab or the engineering Hatchery at the University of Toronto, the Queen's Innovation Centre or LaunchYU at York, Ryerson's DMZ or NEXT

Canada, entrepreneurship is booming. Faculty members are increasingly opting for what I call both-hand career paths, realizing that pure research is not at odds with innovation and commercialization, but really part of a continuum, and they want to excel at both.

Growing numbers of students are also getting involved. They are seeking entrepreneurial experiences as part of their education. In fact, what they have figured out is that starting a firm is the quintessential of experiential learning. The kinds of competencies that one develops from problem solving to teamwork skills and resilience are invaluable, whether the startup succeeds or fails. This is one reason why universities like the University of Toronto, Queen's and York are so keen to encourage innovation and entrepreneurship. Quite apart from the inherent social and economic value of translating new technologies from the bench to the bedside or from the library to the living room, entrepreneurship and innovation are essential parts of a research-intensive education. Perhaps, this is a good segue to my colleague, Daniel Woolf.

DW: Thank you, Meric. Great segue, indeed. I, too, am very grateful for the opportunity to address the Empire Club today.

For many of you in the room, when you think back to your university or college days, this familiar scene probably pops into your mind: A professor in front of a class giving a lecture, standing at a podium as I am now, maybe using a whiteboard or a chalkboard. Perhaps, there

are a few slides or overhead transparencies, and students are curiously writing notes. There is some question and answer, but mainly it was one person talking and others listening, for the most part.

Today, that picture is different. While lectures are still part of the learning environment, they are fewer in number. Learning now happens by students accessing course material through an online management system, interacting with professors and fellow students in online discussion, and managing to increase amounts of group work, as Meric alluded to, to gain teamwork and collaboration skills as well as the knowledge gained through the course material.

I do not think anybody in the room needs convincing that digital is turning the learning environment upside down as it has for almost every other aspect of society. Not only has how we teach changed, but students' expectations have changed as well as their learning styles. Unlike people of my generation, our students are digital natives, who are much more information literate, and they are accustomed to learning by doing, or through 'experiential learning' as we call it, as this, frankly, is happening in education at all levels beginning in kindergarten.

Professors still transfer knowledge, but more and more that is done through facilitation as opposed to strictly lecturing.

The 'sage on the stage' has turned into the 'guide by the side'. Students are no longer passive learners observ-

ing information. They are active learners. This is an important distinction because we need to create graduates who embrace lifelong learning, as their education simply does not come to an end when they cross the stage with that degree.

To be successful in a career that will include many different jobs and disciplines, today's students must accept that their training and education will continue throughout their lifetimes. We are seeing more and more adult learners at our institutions, and we are changing our curriculum and our course delivery to meet the demands and needs of these students.

Digital delivery and flexible classroom time over the weekend or week-long residential programs to accommodate full-time work and busy schedules are becoming the norm for many different programs we offer. Program content, itself, is changing to reflect the needs of the new workplace.

Data analytics, machine learning, and working with big data are all common themes we are seeing being woven into our curriculum across pretty much all disciplines. Let me give you an example from home. In September, Queen's will welcome its first students in a new Master of Management in Artificial Intelligence program, which is, I believe, North America's first graduate business degree in AI, but surely not the last.

There is also an increasing emphasis on teaching human skills—sometimes called 'soft skills', but I prefer

‘human skills’—that will help graduates succeed. These are things we have heard of before like ‘critical thinking’, ‘collaboration’, ‘creativity’, ‘teamwork’, ‘problem solving’, ‘organization’ and the like. More and more employers want to hire people not only for their technical skills, but for how well they can demonstrate these human skills.

There is an emphasis on teaching these skills through experiential learning opportunities like co-op terms, internships and also participation in student government, clubs and societies, and I heartily agree with my friend Meric that starting your own firm may be one of the best possible opportunities for that of all. It is also happening within the course curriculum as students are often graded on how well they participated in group work and collaboration.

Now, where I think universities do need to improve is on measuring how these skills are being transferred and in ensuring that the experiences are accessible to all students. The Higher Education Quality Council of Ontario, which is an arms-length agency funded by the provincial government, supports the Learning Outcomes Assessment Consortium, of which Queen’s is a member. We are currently in the final year of a study that measures students’ skills development.

There is a lot of discussion in the sector around what the learning outcomes for skills development would look like. I, personally, do not believe that it will, in the longer

run, involve standardized testing of the sort that we are used to as our experience has shown, first of all, that students do not favour such tests; secondly, they do not tend to take them seriously when no grade is involved. We may, however, see a very different type of transcript or portfolio that demonstrates that students have mastered specific competencies. This is an area that we will continue to see a development in change.

I am going to leave my opening comments there for now and look forward to discussing further if there is time for questions, but I think that, similarly, is a good segue to my colleague, Dr. Lenton.

RL: First of all, let me also thank you very much for having the opportunity to address you today at the Empire Club. The email advertising this event notes that Canada was recently named by the OECD as the world’s most educated country with an astonishing 50% of its population completing post-secondary education.

Maybe I will just give a moment for the folks to—you can see that a few of my colleagues from York University have joined me. The university has a labour disruption that is going on right now. I do want to share, nevertheless, a few comments with you.

The 50% that was put out by the OECD around the percentage of Canadian students who have higher education actually is a little bit misleading because people sometimes interpret that that is the percentage that have a university degree. That percent is actually—

[Interruption, as people affiliated with York University speak out: “We are here, today, to say that the students and workers at York are the future of education! The business future of education does not include us. That labour disruption is showing disrespect to both the major constituencies of York University. The students are suffering. Their semester is going to waste. The workers are suffering. We are on the picket lines every day being ignored by this administration and by President Rhonda Lenton. What we are fighting for is a future of education where it is free, and there is quality education for students. There should be good jobs for academic and non-academic workers to make university a progressive place to push forth a society that is progressive, that meets human needs, that is good for people, not for profit.]

RL: I am going to suggest that I depart because I think it is really important that all of you who have paid tickets can enjoy the rest of the event. With apologies, I will depart.

Concluding Remark, by Barbara Jesson

This meeting is now concluded. Thank you for joining us.