

High Time? Legalizing marijuana / **Urban Angels** The Matthews' gift to Toronto / **Enchanted Evening** The officers' ball
Those Things We Do U of T's fave traditions / **Curbing Emissions** Recycling CO₂ / **Truth and Reconciliation** Taking action

UofT Magazine

SPRING 2016



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Spring 2016

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A group of dancing "dentettes" rehearse for the Faculty of Dentistry's Dentantics musical review in 1946

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Departments

Nobody wants the 'Marlboro-ization' of cannabis

— PhD candidate Jenna Valleriani on why the advertising and promotion of legal cannabis should be severely restricted or banned, p. 43



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48 Architect Monica Adair (March 2005) on how a student design contest provided a memorable lesson on the value of play



12 Demolition of the final section of U of T Mississauga's North Building was to begin in March, making way for the construction of a six-storey structure by Toronto architect Perkins+Will that will complete the renaissance of the northern end of the campus

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Letters



Bruce Kidd was, and is, an inspiration to me. He showed me that everything is possible.

DAVID BAILEY

BScPhm 1968, MSc 1970, PhD 1973, LONDON, ONTARIO

An Inspiration

“A Life in Blue and White” (Winter 2016) is a great article about a truly outstanding individual. I have known Bruce Kidd since his early athletic days when he set the world on fire with his amazing sporting achievements. He was, and is, an inspiration to me. He showed me that everything is possible. Bruce’s continued success as UTSC’s new principal is no surprise. It is just the way he always does things.

DAVID BAILEY

BScPhm 1968, MSc 1970, PhD 1973, LONDON, ONTARIO

A Great Canadian

The most important part about Bruce Kidd, one of Canada’s great achievers, is how he inspires others to get involved and make a difference in the world. As his running coach Fred Foot used to emphasize, you can beat anyone in the world – and Bruce has. I am sure his “followers” will do the same.

BRAD HILL

KINGSTON, ONTARIO

UTSC’s Great Leap

“A Life in Blue and White” is a wonderful account of the journey that Bruce Kidd has taken to his current position of UTSC principal. I recall the halcyon days at U of T PHE in the 1970s, when I travelled to Montreal with my “Politics of Canadian Sport” class, which Bruce taught, to interview Mayor Jean Drapeau and Premier Robert Bourassa.

Bruce helped us to understand the web of secrecy that existed during the building of the Olympic facilities – a real eye-opener. As a Scarborough lad, I appreciate the great leaps that UTSC has made in the past decade. It is a testimony to the work of Bruce and others that it is now a jewel of the university.

GERALD (GERRY) FEENEY

BPHE 1976, BED 1977, TORONTO

Track’s Heyday

Margaret Webb’s great article about Bruce Kidd brings back fond memories of my days at University College between 1960 and 1963 covering track and field for the *Varsity* – and of course writing about Bruce and Bill Crothers – during the real heyday of track in Canada. Wonderful stuff – and Bruce is the same person he was 50 years ago.

JUSTICE MARVIN A. ZUKER

BA 1963 UC, MED 1973, TORONTO

Stigma Is Destructive

Bravo Zulu, Mr. Wilson (“A Canadian Hero for Mental Health,” Winter 2016). I have had bipolar disorder most of my life. I’ve suffered when deep in depression. But when energized, I feel happy and blessed.

Nonetheless the stigma is destructive. My thoughts of suicide when I was in my twenties were not understood and imprecations to smarten up were just not helpful.

One doesn’t have to be sent to a mental health ward or be put on suicide watch or be homeless to know what this illness is like. Apparently 1 in 50 Canadians have bipolar disorder or schizophrenia – a shocking statistic.

RON ARMSTRONG

VICTORIA, B.C.

Brighter Days

It’s very encouraging to know that things are looking up for students with mental health issues (“Healthy Minds,” Winter 2016). With a master’s degree in psychology and a daughter at the university struggling with mental disorders, I am quite touched by the efforts the University of Toronto is making.

SADIA SIDDIQUI

TORONTO

Goodbye to Soccer?

The plan to revitalize King’s College Circle and get rid of the cars sounds great (“Goodbye to Cars!” Winter 2016). As a graduate of both U of T and Harvard University, I hope the excellence of the work on Harvard Yard can be duplicated here. One suggestion: Get rid of that soccer field in the central area. Restore the lush greenery. Transfer the soccer playing to the regular athletic fields where it belongs.

ROGER BONK

BA 1967 NEW, MIRAMAR BEACH, FLORIDA

Eliminate Parking Altogether

If the title “Goodbye to Cars!” is intended to be a joke, it is in very poor taste. I suspect the largest cost to the project is the creation of an underground garage for 500 cars. This is an invitation, not a goodbye.

The real question here is why we are spending so much to create a car park

in the centre of a large urban area that is very well served by mass transit. The municipal demand for more parking spaces is something that a progressive university, and one with a new focus on its relationships with the urban environment, should be fighting, not capitulating to.

PETER A. HURLEY

BSc 1979 UC, MSc 1983, BEd 2006, MEd 2010, TORONTO

This Hot, Crowded Place

Regarding University of Toronto president Meric Gertler's column "Toward a Greener Future" (Winter 2016), surely the issue is what to do to limit global warming, not what causes it. I would suggest that the actions required to *reduce* the contribution to warming made by humans are much cheaper and easier than dealing with the *effects* of warming, such as melting glaciers, massive storms, droughts and rising seas.

JOE JANY

BComm 1960, OAKVILLE, ONTARIO

Ending the Nightmare

Thank you to Michel Chikwanine for his campaign to end the use of child soldiers ("War Child," Winter 2016). I admire his determination to use education to end this horrible nightmare for all children. May he and the efforts of others, including Lt.-Gen. Roméo Dallaire, ultimately end this practice.

DR. C. JAMES INGLES

BSc 1964 TRIN, TORONTO

Being Truly Green Is Tricky

It's good to hear about U of T's conservation initiatives, including replacement of compact fluorescent lights with LEDs ("Double Value in Being Green," Winter 2016). But the conversion got me thinking about a possible error made by environmentalists like myself.

Compact fluorescent bulbs contain mercury. Now that we're dumping them, we have an enormous disposal problem. In retrospect, perhaps we should have avoided the fluorescent lights and stayed with old incandescent bulbs until LEDs were commercially viable. It was a difficult situation because incandescent bulbs are power-hogs and their elimination was part of Ontario's strategy to end coal-fired electricity – itself a source of mercury.

The rapid uptake of compact fluorescent bulbs offers a cautionary tale as we work to address climate change. Reducing greenhouse gases is vitally important but so is avoiding the creation of neurotoxic waste.

GIDEON FORMAN

BA 1987 VIC, TORONTO

The Birdman of Mississauga

As a child growing up in Lorne Park (now part of Mississauga) in the 1960s, I visited Roy Ivor several times with my mother at his bird sanctuary ("Namecheck," Winter 2016). I remember him as a soft-spoken, kind man who eagerly explained how he cared

for the injured and sick birds.

My family moved to Toronto in 1969 and I didn't visit the Windinglane bird sanctuary again. But I'm happy to learn that his dedication and love for birds is recognized by U of T Mississauga naming a residence after him.

CLAIRE OLANOW (NÉE WILLIAMS)

BA 1979 VIC, TORONTO

A False Comparison

Louise Murphy likens the "time-out" and calming rooms available for student use in Ontario to the solitary confinement found in prisons (Letters, Winter 2016). There is little that is inherently similar about these spaces. Solitary confinement is a punishment. The prisoner has no control over when the confinement will end. The spaces that have been set aside in schools for students to choose as a haven to limit external stimulation should not be equated with solitary confinement.

CAROL NASH

BA 1980 UC, BEd 1981, MA 1984, PhD 1989, TORONTO

Correction

Bruce Kidd is an officer of the Order of Canada. In "A Life in Blue and White" (Winter 2016) we inadvertently demoted him to a member of the order.

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Toronto's universities are working together to make the region an even better place to live, work and study



Universities compete to attract the best and brightest faculty, staff and students. But readers might be surprised to hear that they also sometimes collaborate to achieve the same goal.

Take, for example, Toronto's four universities. We share the great good fortune to be located in one of the most dynamic and liveable city-regions in the world. We also share the challenges presented by the region's transit deficit.

Long commutes are a fact of life for many students at OCAD U, Ryerson, York, and the University of Toronto. A large number rely on public transit to travel to our campuses. More than a few spend as much as three hours a day en route across the Greater Toronto Area. It can make their lives very complicated, and it undermines the quality of their educational experience.

As Aqsa Malik, a master's student who commutes from Markham to U of T's St. George campus, remarked recently, the bus is "sometimes my desk, sometimes my breakfast table and sometimes my bed."

So, at a time when civic leaders are considering how to improve public transit, Toronto's university presidents did something that had never been tried before: we brought together students and faculty from all four of our institutions to conduct a joint student transportation survey.

The survey, part of an initiative called StudentMoveTO, was launched last September at a student and faculty-led symposium held in the Council Chamber at Toronto City Hall. The event was attended by officials from the City of Toronto, York Region, the TTC and Metrolinx.

StudentMoveTO constitutes the first project springing from a new, ongoing collaboration among Toronto's university presidents that I initiated two years ago. The idea was inspired in part by London Higher – a group of post-secondary institutions in London, England, that was formed to raise awareness about the importance of higher education to London's economy and to encourage members to work together on matters of mutual interest.

In Toronto, we hope that our partnership will enable us to make more progress on common concerns than we could individually. And we want to raise awareness of the fact that, with a combined total of approximately 180,000 students

and 30,000 faculty and staff, Toronto's universities account for a substantial part of the region's population, and represent a vital asset to its present and future prosperity.

The transportation survey already shows the kinds of benefits such collaboration can produce. Matti Siemiatycki, a U of T professor of geography and urban planning who is helping to lead the project, says the survey attracted 15,000 responses – far exceeding expectations. The initial goal was to seek ways to help inform public policy and ultimately to improve the commuting experience for our students. But we believe the data will help improve the quality of life for everyone in the Toronto region.

The information we've gathered is also being used to create new graduate and undergraduate research opportunities, and will form the basis of research papers by faculty and students. In addition, we are planning to make the data accessible to community members online.

While there is still much more to come from the transportation survey analysis, the four institutions have been busy with another important initiative. Last year, led by Ryerson, we joined the urgent global response to the Syrian refugee crisis, setting a goal of sponsoring 75 Syrian families. As of mid-March, we had reached our objective, collectively raising \$3.7 million and attracting some 1,000 volunteers from among the institutions' staff, students, faculty and alumni.

The success of the student transit survey and the Syrian refugee response has energized Toronto's four university presidents to explore other areas for collaboration. Discussions have begun on a project to address the shortage of affordable housing in the city.

What's especially rewarding about these efforts is that their impact extends far beyond the borders of our campuses. By working with each other and with other local partners to improve transit, help newcomers succeed and provide more affordable housing, we can make the Greater Toronto Area a more attractive destination for students and faculty from around the world – and an even better place in which to live. That, ultimately, serves us all.

Sincerely,
Meric Gertler

Calendar

MORE EVENTS!

Check out the latest campus happenings at utoronto.ca.



U of T's 1961 senior rugby champions are one of this year's team inductees

JUNE 2

U of T Sports Hall of Fame Induction Ceremony

The Sports Hall of Fame honours U of T's greatest athletes, teams and builders. This year's inductees include two basketball teams, a "dynasty" rugby team, water polo Olympian George Gross and many more. Reception begins at 6 p.m. and includes a light dinner and cash bar. Induction ceremony begins at 7 p.m. Business attire.

\$30; free for children 12 and under. Goldring Centre for High Performance Sport, Kimel Family Field House, 100 Devonshire Pl. 416-946-5126, rachel.keeling@utoronto.ca or my.alumni.utoronto.ca/halloffame.

Alumni

April 11 Vancouver

U of T Where You Are:

Prof. Catherine Sabiston speaks on "The Impact of Physical Activity on Mental Health." Free. 6:30 p.m. Fairmont Waterfront Hotel, 900 Canada Place. For more information and to register, visit alumni.utoronto.ca/events/regional.

April 12 The Old Mill, Toronto

U of T in Your Neighbourhood:

Prof. Nick Rule speaks on "Snap Judgments: Understanding People in an Instant." Free. 6:30 p.m. 21 Old Mill Rd. For more info and to register: alumni.utoronto.ca/events/regional.

April 14 Mimico Centennial Library

U of T in Your Neighbourhood:

Prof. Robin Stremmler speaks on "Busting Sleep Myths." Free. 6:30 p.m. 47 Station Rd. For more info and to register: alumni.utoronto.ca/events/regional.

April 17 Montreal CCME Dean's Reception.

A reception for alumni and friends, hosted by Dean Trevor Young, during the Canadian Conference on Medical Education. Free.

6:30–8:30 p.m. Queen Elizabeth Fairmont, 900 René Lévesque Bl. W. medicine.rsvp@utoronto.ca.

April 18 The Westin, Ottawa

U of T Where You Are: Prof. Patrick Gunning speaks on "A Beginner's Guide to Killing Cancer Cells." Free. 11 Colonel By Drive. 6 p.m. For more info and to register: alumni.utoronto.ca/events/regional.

April 19 Washington, D.C.

U of T Where You Are: Prof. Joe Wong speaks on "Why China Should Democratize." Free. Hotel Palomar, 2121 P St. NW. 6 p.m. For more info and to register: alumni.utoronto.ca/events/regional.

April 25 Twenty Toronto Street

U of T In Your Neighbourhood:

Prof. Jeffrey Dvorkin speaks on "The Uberization of Canadian Journalism." Free. 5:30 p.m. 20 Toronto St. For more info and to register: alumni.utoronto.ca/events/regional.

May 2 Trinity College

U of T Senior Alumni Association Annual General Meeting. Speaker: U of T president Meric Gertler. Reception to follow. Free to attend, but registration is required. Space is limited. 1–3 p.m. George Ignatieff Theatre, 15 Devonshire Pl. Reception in the Buttery. senior.alumni@utoronto.ca.

May 4 Stratford, Ontario Senior Alumni Association Day Trip to Stratford.

Join SAA members on a bus trip to see *A Chorus Line*. \$169. Includes lunch at the Annex Restaurant. Book by April 8. 416-978-0544 or senior.alumni@utoronto.ca.

May 11 JJR Macleod Auditorium Physiology's Archibald Byron



Macallum Lecture and Alumni Reception. Prof. Tim Bliss speaks on synaptic plasticity and the neural basis of memory. Free. Lecture: 3 p.m. Reception: 4 p.m. Medical Sciences Building, 1 King's College Circle. RSVP: 416-978-7142 or my.alumni.utoronto.ca/2016_macallum_lecture.

Spring Reunion

**May 25
The One Eighty, Toronto
LGBTQ Spring Soiree.** LGBTQ alumni and friends are invited to a cocktail reception. Free. 6–9 p.m. Manulife Centre, 51st floor, 55 Bloor St. W. 1-888-738-8876 or springreunion.utoronto.ca.

**May 26
Toronto Zoo
SHAKER for Young Alumni.** Join fellow young alumni, including recent grads, for a night of mixing and mingling in the zoo's panda pavilion. 19 plus. \$10. 7–10 p.m. 2000 Meadowvale Rd. 1-888-738-8876 or springreunion.utoronto.ca.

**May 27
Convocation Hall
50th Anniversary Ceremony** honouring 1966 grads. 9:30–11 a.m. 31 King's College Circle. 1-888-738-8876 or springreunion.utoronto.ca.

**May 27
Convocation Hall
Chancellor's Circle Medal
Ceremony** honouring alumni marking their 55th, 60th, 65th, 70th, 75th and 80th anniversaries. 3:30–5 p.m. 31 King's College Circle. 1-888-738-8876 or springreunion.utoronto.ca.

**May 27
Toronto
PTOT Spring Reunion Wine and
Cheese Event.** Reunite with former classmates during a wine and cheese reception. Venue, time and price: TBA. For more info: medicine.rsvp@utoronto.ca.

**May 28
Convocation Hall/Front Campus
U of T Alumni Celebration,** sponsored by the U of T Alumni Association (UTAA). Program includes the presentation of the UTAA Alumni Award for Community Engagement, a keynote address by Dr. Mike Evans, and the UTAA annual general meeting. Followed by a BBQ lunch for alumni on front campus. Free. 11 a.m.–12:30 p.m. BBQ: 12:30–2:30 p.m. 31 King's College Circle. 1-888-738-8876 or springreunion.utoronto.ca.

**May 28
Toronto
Nutritional Sciences Spring
Reunion Luncheon** recognizing alumni celebrating a reunion year. Venue and time: TBA. For more info: medicine.rsvp@utoronto.ca.

**May 28
Hyatt Regency, Toronto
Engineering Spring Reunion
Reception and Dinner.** Join Skule alumni from the classes of '41, '46, '51, '56, '61, '66, '71, '76, '81, '86 and '91 for a reception and dinner. 6 p.m. 370 King St. W. \$100 before May 16th (\$120 after). 416-978-4941, meganm@ecf.utoronto.ca or uoft.me/SR2016.

**May 28
St. George Campus
Engineering Spring Reunion
Departmental Lunches.** Various engineering departments are hosting Spring Reunion alumni lunches. Free. 12:30–2:30 p.m. Various engineering buildings. 416-978-4941, meganm@ecf.utoronto.ca or uoft.me/SR2016.

Read about more Spring Reunion events at springreunion.utoronto.ca.

Exhibitions

**To May 28
Thomas Fisher Rare Book Library
"So Long Lives This": Celebrating
Shakespeare 1616–2016.** This

exhibition explores how Shakespeare's works shaped ideas of the world beyond England. Highlights include a selection of his printed plays and poems. Free. Mon. to Fri., 9 a.m.–5 p.m., Thurs. to 8 p.m. 120 St. George St. 416-978-5285.

Lectures and Symposia

**March 28–April 27
Carlton Cinema, Toronto
The Canadian Perspectives
Lecture Series** runs on five Mondays from 1–3 p.m., beginning March 28th, and on five Wednesdays from 10 a.m.–noon, beginning March 30th. Series of five lectures, \$55; Single lectures, \$15. 20 Carlton St. senior.alumni@utoronto.ca or uoft.me/saacp.

**April 8
Rotman
Behavioural Science Experts
Speaker Series @ Rotman:** Dr. Mike Evans, a professor of family medicine at U of T, is known for his YouTube videos on health. He talks about "Using High Quality 'Infectious' Social Media to Engage in Peer-to-Peer Healthcare." Free. 8–9 a.m. Desautels Hall, 2nd floor, South Building, 105 St. George St. Pre-register online. events@rotman.utoronto.ca.

**May 13–14
Alumni Hall, Old Victoria College
The Canada Milton Seminar XI,** organized by the Centre for Reformation and Renaissance Studies, features talks on Milton by scholars from Oxford, Boston College and more. Lunch included. The gathering ends with a banquet. Faculty: \$62.15. Student: \$28.25. Banquet: \$73.45. May 13: 3:30–6:30 p.m.; May 14: 10 a.m.–6:30 p.m. 73 Queen's Pk. Cres. Registration required. For info: Natalie.Oeltjen@utoronto.ca, crs@vicu.utoronto.ca or crs.ca/event/canada-milton-seminar-xi.

**May 18
Rotman
Behavioural Science Experts
Speaker Series @ Rotman:** Richard Thaler, a University of Chicago professor, talks to Amanda Lang, host of *Bloomberg North*, about his book *Misbehaving: The Story of Behavioral Economics*. 4–5 p.m. \$35.95 (includes one seat and one copy of *Misbehaving*). Fleck Atrium, ground floor, North Building, 105 St. George St. events@rotman.utoronto.ca.

**June 10
Chestnut Residence and
Conference Centre
Molecular Genetics Career
Symposium.** A career development symposium that offers learning and networking opportunities. Free. 89 Chestnut. Time: TBA. For more info: medicine.rsvp@utoronto.ca.

Music

**April 9
MacMillan Theatre
U of T Symphony Orchestra.** Conductor: Uri Mayer. Brahms, Symphony No. 3, Op. 90 in F Major. Shostakovich, Symphony No. 5, Op. 47. \$30 (\$20 senior; \$10 student). 7:30 p.m. Edward Johnson Building, 80 Queen's Pk.

**April 10
Walter Hall
Percussion Ensemble Concert.** Free. 7:30 p.m. Edward Johnson Building, 80 Queen's Pk.

**April 25
Walter Hall
Felix Galimir Chamber Music
Award Concert** featuring this year's prize-winning ensemble. PWYC. 7:30 p.m. Edward Johnson Building, 80 Queen's Pk.

For more info on Faculty of Music events: 416-978-0491, jessica.lewis@utoronto.ca or music.utoronto.ca/index.php.

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UNIVERSITY OF
TORONTO

Life on Campus

“Creative Destruction Lab sounds like a punk rock band”

Former lab director
Jesse Rodgers

p. 11

U of T students Alex Boross-Harmer (left) and Megan D’Souza at the new Mental Health and Physical Activity Research Centre



Lift Weights to Lift Mood?

U of T opens the Mental Health and Physical Activity Research Centre – one of the first in the world

THE UNIVERSITY OF TORONTO’s Faculty of Kinesiology and Physical Education has launched the Mental Health and Physical Activity Research Centre – one of the first research facilities in the world to integrate the study of physical activity and mental health.

Opened in February, this multidisciplinary centre will address the enormous burden of mental health issues. In any given year, one in five Canadian adults will experience a mental illness or addiction, according to the Centre for Addiction and Mental Health.

“Research shows that mental health is a serious issue on campus and in the community,” says Prof. Catherine Sabiston, one of the centre’s researchers. “We’re committed to reducing mental health challenges by promoting physical activity and reducing sedentary behaviour, and providing long-term solutions.”

While physical activity is one of the most effective ways to improve mental health, those dealing with mental health >



The first person to take the Oath of Citizenship was Prime Minister William Lyon Mackenzie King in January 1947

➤ issues are commonly the least physically active.

“The benefits of long-term physical activity are undeniable,” says Prof. Kelly Arbour-Nicitopoulos, also a researcher at the centre. “But the Canadian Physical Activity Guidelines might not be realistic for some people, especially if they have mobility issues. Our programs will meet the needs of diverse populations, including cancer survivors and people with spinal cord injuries.”

To further meet these needs, the team will study how to incorporate sustainable long-term exercise into peoples’ lives outside the lab.

“We want to develop programs that will not only work in the lab, but also translate to the real world,” says Sabiston. “For example, we’re partnering with the University of Toronto’s Health and Wellness Centre to help students exercise, set goals, self-monitor and manage stress. We want them to enjoy exercise and make it part of their lives.”

The centre contains seven suites where Sabiston, Arbour-Nicitopoulos and Prof. Guy Faulkner will study how exercise can improve patients’ quality of life. It features accessible cardiovascular and strength training, psychological assessment, and data collection and analysis. One of the suites includes space to develop web- and app-based technology for mental health and exercise training.

In the past, the team faced space limitations when collaborating with others, including the Centre for Addiction and Mental Health, Holland Bloorview Kids Rehabilitation Hospital and Princess Margaret Hospital in Toronto. This facility – located in U of T’s Athletic Centre – will now let them closely interact with local and international partners and create comprehensive programs. The centre was made possible by the financial support of the Canada Foundation for Innovation and the Ontario Research Fund.

“Now that we have this state-of-the-art centre, we can do our own cutting-edge research and also contribute to larger multi-site projects,” says Faulkner. “Sweat is the best antidepressant, and the Mental Health and Physical Activity Research Centre will allow us to discover and share knowledge about how best to get more people, more active, more often.” – **KATIE BABCOCK**

IN CASE YOU MISSED IT

Such a Long Journey

Almost 500 people become Canadian citizens at Convocation Hall ceremony



YASER NABIB, a first-year U of T student in civil engineering, was one of 487 people who became Canadian citizens at a ceremony at Convocation Hall in early February. Nabib came to Toronto five years ago from Bangladesh, and attended the event with his mother, Iftasum, who was also becoming a citizen. “I’m so proud of him,” Iftasum said. “He is a really good student.”

The event marked the first-ever swearing-in of new citizens at the University of Toronto’s downtown campus. John McCallum, the minister of Immigration, Refugees and Citizenship, administered the oath that the new citizens repeated, first in French, then English.

It was a day when waving tiny Canadian flags was done with enthusiasm and “O Canada” was belted out, not mumbled.

Speaking directly to the new Canadians, U of T president Meric Gertler said, “I am immensely optimistic about our future. Your ideas, your traditions, your perspectives will make our great nation more vibrant, more successful and a better place for us all.”

For Shirley Hoy, vice-chair of U of T’s Governing Council who was born in China, the ceremony brought back memories of when she became a citizen. She told the crowd she had also experienced “the undeniable challenges you have overcome to be here today.”

U of T chancellor Michael Wilson urged the new citizens to “learn more about your country, read our history, vote in elections and become engaged in your community.” In this way, he said, one gets “the full measure of being a Canadian.” – **ALAN CHRISTIE**



At First Nations House, U of T students can meet with elder in residence Andrew Wesley or traditional teacher in residence Lee Maracle for guidance



Jonathan Hamilton-Diabo

U of T to Take Action on Truth and Reconciliation Commission

There is a window open now – but it won't stay open forever, says James Bird, an indigenous student at U of T

A YEAR BEFORE JAMES BIRD came to U of T in 2010, he testified at the federal government's Truth and Reconciliation Commission about his experiences in a residential school in the Northwest Territories. Among other things, he spoke about running away and being returned by police. When the commission released its report last June, Bird read the 94 calls to action aimed at reconciling the relationship between Canada's indigenous and non-indigenous people with interest.

Now Bird is a member of a 14-person committee comprising staff, faculty, administration, students and elders charged with taking action on the commission's educational recommendations. "Starting this dialogue on reconciliation is so important not just to the university, but to the rest of Canada," says Bird, an Aboriginal Studies major who has

been studying part-time since enrolling at U of T through the Transitional Year Programme.

Jonathan Hamilton-Diabo, director of aboriginal student services at First Nations House – and co-chair of the committee with Munk School of Global Affairs director Stephen Toope – says U of T has a strong foundation of programs related to indigenous people. "Now it's time to look at the commission's calls to action and advance the work that's already happening here."

Hamilton-Diabo cites the support and outreach offered by First Nations House – established in 1992 – as one of the university's existing strengths, and believes it has contributed greatly to encouraging indigenous students to attend U of T. Since he began working at the university in 2000, he has witnessed a growth in indigenous faculty members, academic programming and research, and resources such as the Waakebiness-Bryce Institute for Indigenous Health. "The interest in indigenous issues has increased at all levels of the university, and it's opened a lot of doors for me as a staff member," he says. "It just wasn't on the radar for some people when I started."

But Hamilton-Diabo and Bird stress that there is much work to be done to meet the challenges presented by the commission. Many, but not all, faculties have expanded the representation of indigenous people in their curricula, teaching staff and student body. "It shouldn't be about adding one aboriginal course, or only setting up programs that are aboriginal-specific. It should be a constant presence of indigenous voices across the institution," says Hamilton-Diabo.

While they agree that the committee's work will be a long-term, complex process, they are optimistic about it. The group began meeting in February and will present an interim report by July 1. The final recommendations are due December 31. "There's a window for reconciliation now, and I don't think it's going to stay open forever," says Bird. "We're in an important time when we can do the work to make this real." – **MEGAN EASTON**



NAMECHECK

Creative Destruction Lab

The Creative Destruction Lab was named after economist Joseph Schumpeter's concept of economic growth as an activity in which older products and processes are continually destroyed and replaced by newer ones. Schumpeter, who coined the term "creative destruction," cast entrepreneurs in the central role of challenging the status quo.

"Given our focus on bringing university innovations to society through entrepreneurship, I thought the concept of creative destruction fit well with the spirit and nature of our work,"

says Ajay Agrawal, a Rotman professor and the founder of the lab.

However, Agrawal questioned whether non-economists would understand the name, and several colleagues resisted the term "destruction." He says, "Finally, I took the name to the then-director of the lab, Jesse Rodgers, who was deeply steeped in the entrepreneur community and was not an economist.... He responded: 'It sounds like a punk rock band.'"

They kept the name. – **SALLY CHOI**



Marc-Boris St-Maurice founded the Marijuana Party of Canada in 2000. Prior to that, he was the bassist in the punk band Grimskunk



Northern Renaissance

Demolition of the final section of U of T Mississauga’s North Building was to begin this past March, making way for the construction of a six-storey structure designed by Toronto architectural firm Perkins+Will that will complete the renaissance of the northern end of the campus.

Along with new active-learning classrooms and administrative space, the building – scheduled for completion in summer 2018 – will be home to the departments of English and drama, philosophy, historical studies, language studies, political science and sociology.

The structure, designed by Andrew Frontini, will feature a glazed, slightly metallic terracotta

cladding, in keeping with the look of the buildings around it. Frontini says the structure will also connect with the greenery and natural surroundings, and a “North Hall” public space will provide a place to socialize and lounge. “This is going to be a backdrop for campus life,” he adds.

The building will aim for LEED Gold status – a recognition of achievement in sustainable, energy- and resource-efficient buildings.

U of T Mississauga’s enrolment has doubled in the last 10 years, to more than 13,500 students. Current needs, combined with planned enrolment growth of up to 20,000 students, means a greater need for more and better learning spaces.

– NICOLLE WAHL

SOUND BITES

What does Hart House mean to you?

The place I told my best friends to meet me to eat, gossip, take a mental break and be among my loves (shout out to Sammy’s).

@nadiabakhtiari

It’s awesome! We are very lucky to have Hart House for the services and inspiring architecture.

@HealthSciOnline

Hogwarts!

@TurkanMehdipour

I went to Hart House for the first time during high school. As an MED grad and U of T employee, now I see it every day.

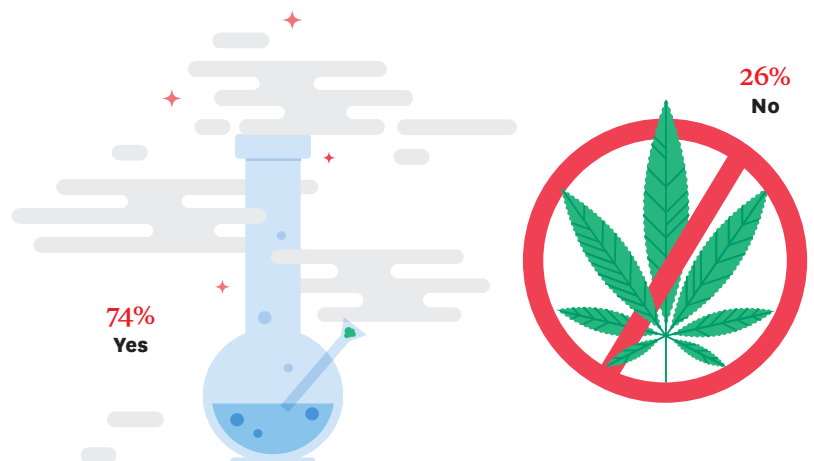
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Join the conversation at twitter.com/uoftmagazine.

Poll | Should marijuana be completely legalized in Canada?

Many U of T students believe marijuana is less harmful than cigarettes or alcohol and should be legalized. But many also want the drug to be available only to those over 19. Under a legal framework, “there would be more control over who gets it, and it would be safer because it can be obtained by legitimate means rather than from sketchy dealers,” says Madeleine Barnes, a second-year kinesiology student.

Others are concerned that legalization will mean a rise in usage: “Demand will increase as it becomes more available,” says Berenice Alvarez, a second-year ethics, society and law student at Victoria College. – SALLY CHOI



This highly unscientific poll of 100 U of T students was conducted at Sidney Smith Hall on St. George Campus in January.



Students in Munk One: Global Innovation are also studying how South Africa went from one of the lowest-ranked countries in terms of registering births to one of the highest



A Lesson for the World

Students visit Brazil to learn how it has cut poverty rates so dramatically

U OF T IS REINVENTING undergraduate education, and Alexa Waud is already reaping the rewards. A third-year student majoring in peace, conflict and justice studies *and* environment and health, Waud enjoyed an exciting opportunity for undergrads: conducting field research abroad. While taking Munk One: Global Innovation, a small-group course focused on studying the world's problems, her professor, Joseph Wong, invited

her and two other course participants to join him and two graduate students to study poverty reduction in Brazil.

Over 11 days last December, Waud interviewed government officials in Brasilia about Bolsa Família, the highly lauded poverty-alleviation program that supports impoverished families through cash transfers. (Through Bolsa Família, Brazil has cut dire poverty by 28 per cent in a decade, according to the *Economist*.) Waud also interviewed social-assistance workers and members of a family-health team, and toured public health clinics and community centres in Belo Horizonte, a city renowned for its food security and urban revitalization programs. Finally, she and her teammates presented findings to the Brazil-Canada Chamber of Commerce in São Paulo. "Seeing the program in action and hearing Brazilians critique it made me realize that its complexity is enormous, which isn't obvious when you're reading about it in an academic paper," says Waud.

Wong, who is working on a policy-oriented paper about the research, says Waud's experience reflects U of T's commitment to making undergrad education more experiential, research-oriented and international. "The world is a much smaller place for young people these days," he says. "U of T wants to ensure we provide research and learning opportunities that reflect this reality." - **SHARON ASCHAIK**





One of John Monahan's interests is sketch comedy; in the early naughts, while serving as Ontario's consul in New York, he performed throughout the city

P.O.V.

Everyone's Campus Home

New warden John Monahan on the allure of Hart House



THIS PAST AUGUST, John Monahan (BA 1987 Trinity, JD 1998) was appointed warden of Hart House. He joins U of T from the Mosaic Institute, and talked to **Stacey Gibson** about his new role.

What does the Hart House warden do? I'm kind of the executive director – the chief cook and bottle washer – who provides general strategic, business and programming direction. I have overall responsibility for everything from fundraising to human resources to governance, and I try to make sure that all of the pieces are working together so that the end result is greater than the sum of the parts.

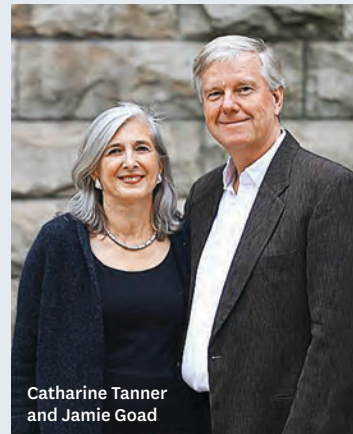
How do you see the role of Hart House in the lives of students and alumni? Hart House is a centre for lifelong co-curricular education. Whether you are a current or former student, a staff or faculty member, or a member of the general public, Hart House is a place to join in communities of interest that form around the arts and culture, politics and social justice, or health and well-being. People come here to strengthen their bodies, enrich their minds and refresh their spirits. It is no wonder that many of our alumni remain passionately committed to the house long after they graduate.

How would you like to see Hart House evolve? I would like us to devote more effort to inculcating a spirit of “giving back” in those students who are active at Hart House, and better enable them to go out into the world beyond the university and contribute meaningfully to the community. It already happens a bit now. For example, our farm committee runs a food security program with students from Flemingdon Park.

Also, because Hart House aspires to be an inclusive place where all students see themselves reflected, I would like to be far more intentional in creating opportunities for students to acquire intercultural competencies and learn how to navigate across differences of all kinds. I'd love to give international and domestic students more opportunities to know each other on a deeper level and to exchange perspectives about all manner of issues with truly global relevance. I think Hart House is perfectly situated to play host to those sorts of conversations because we have always been a place for the convergence of people and ideas.

What are your favourite things to do at Hart House? In addition to feeding my interest in dialogue and debate, and social justice issues, Hart House is also a great place to experience the arts. I'm a season ticket holder at the Hart House Theatre and I love going to performances. I'm also a huge huge fan of the Justina M. Barnicke gallery, one of the finest contemporary art galleries in the country, which is now happily federated with the U of T Art Centre under the banner of the Art Museum of the University of Toronto. I have not taken a ballet class yet but I was thrilled recently when Greta Hodgkinson, legendary principal dancer with the National Ballet of Canada, led a class. It's amazing the sorts of opportunities that present themselves here, and so far I've only just scratched the surface.

Why I Give



Catharine Tanner and Jamie Goad

As architects, **Jamie Goad** (BArch 1981), a partner at the Distillery District, and **Catharine Tanner** (BArch 1981), vice-president at Lord Cultural Resources, have both been intimately connected with urban development in Toronto. Recently, they gave \$25,000 to the Daniels Faculty of Architecture, Landscape, and Design to support its relocation to a renovated and expanded facility at 1 Spadina Crescent.

Jamie: The scope and vision for the Daniels Faculty is really important to architecture, to urban design and to the City of Toronto. For example, the Global Cities Institute, which aims to improve life in cities by looking at urban issues around the world, is exactly the sort of program a school of architecture should be developing.

The faculty's new home will also bring together under one roof the related fields of architecture, urban studies, and planning and visual studies, which makes a lot of sense. The proposed PhD program presents an opportunity to further build the school and its reputation.

All of this, including the new facility, will help attract the best and brightest faculty, students and visiting lecturers. There are so many positive attributes to what is being proposed for the expanded faculty. I've seen the design for the Daniels' building and it's going to be fantastic. Over the next few years, it will be exciting to see how all of this comes together and how it benefits the faculty, the university and the city.



Prof. Cheryl Arrowsmith

U of T Researchers Lead Cancer-Fighting “Dream Team”

“Our knowledge is at a turning point,” says scientist Peter Dirks

EIGHT MEMBERS OF U OF T’s Faculty of Medicine have joined a cancer-fighting “dream team” – a group of leading researchers who will tackle brain cancer by focusing on the stem cells that drive the growth of tumours.

“Our knowledge is at a turning point,” says Peter Dirks, a professor in the departments of surgery and molecular

genetics. “In the last number of years, there have been important genomics discoveries involving mutations in cancer, and greater understanding of the types of cells that cause tumours to grow.”

Dirks, who was the first to identify cancer stem cells in brain tumours in 2003, leads the dream team, which was assembled by Stand Up to Cancer Canada. The group’s aim is to develop new treatments to extend the lives of people with the brain cancers known as glioblastoma and posterior fossa ependymoma.

Glioblastoma is the most common form of brain cancer. The five-year survival rate for people with the disease is less than 10 per cent. The survival rate for posterior fossa ependymomas is 50 per cent.

Cheryl Arrowsmith, a professor of medical biophysics, is one of the dream team’s principal investigators. She aims to identify new ways to kill tumour stem cells or turn them into non-stem cells, which prevents the tumours’ growth.

“One of the problems with these diseases is that every cancer patient is different,” says Arrowsmith. “They have different mutations and drugs don’t work on all patients. The promise here is that we’re not only going to identify drugs or drug-like molecules that target the tumour stem cells; we’re going to be able to understand why they work.” - ERIN HOWE

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UNIVERSITY OF TORONTO

BOUNDLESS



Other Rhodes scholars from U of T include former president David Naylor, former Ontario premier Bob Rae and the late Canadian diplomat George Ignatieff

New Research Chair for Investor Rights Will Seek Better Protections for Canadians

A gift from the Honourable Hal Jackman establishes the J.R. Kimber Chair at the Faculty of Law



Prof. Anita Anand is the Kimber Chair

The new chair is funded by a gift from Hal Jackman (LLB 1956), a U of T chancellor emeritus and former lieutenant-governor of Ontario.

Named after J.R. Kimber, who is widely considered the architect of Canada's modern securities regulatory regime, the chair will enable Anand to pursue research into investor rights.

"We should not underestimate the importance of investor protection in today's capital markets," says Anand. "More than 50 per cent of Canadians are invested in our markets outside a registered retirement savings or similar plan. Ensuring that investors are adequately protected is fundamental to the well-being of our society." Studies have shown that, in addition to financial losses, victims of investor fraud can suffer from depression, anxiety and stress, and a worsening of family and personal relationships.

Technological advances – such as equity crowdfunding and growth in less-regulated private markets – have increased opportunities for investment fraud and, as a consequence, the need for new regulatory tools to protect investors, says Anand, whose research focuses on capital markets regulation and corporate governance. Since 2010, she has served as the academic director of U of T's Centre for the Legal Profession and led the development of its new program on ethics in law and business. She is cross-appointed to the School of Public Policy and Governance.

"Investor protection is based on an understanding of the public interest," says Anand. "Among other things, I plan to investigate whether new remedies for investors, including a remedy whereby investors gain back lost funds, are warranted given the potential contribution of these remedies to bolstering confidence and efficiency in our markets." – LUCIANNA CICCOCIOPPO

IN FEBRUARY 2015, a jury in Calgary found two men guilty of defrauding as many as 3,000 investors – a third of them Canadian – of about \$300 million. The RCMP characterized the crime as the largest Ponzi scheme in Canadian history.

One of the purposes of securities regulation is to protect investors from such schemes, as well as "pump and dumps" (encouraging investors to buy shares in a company to artificially inflate the price before selling one's own shares) and Internet fraud. Although Canada's regulatory system has made advances in recent years, it has also been criticized for ineffectively deterring these kinds of financial-market abuses.

To advance research into investor rights, Prof. Anita Anand has been named the J. R. Kimber Chair in Investor Protection and Corporate Governance at the Faculty of Law – the first research chair for investor rights in North America.

People



Three undergraduates from the Faculty of Arts and Science have been named Rhodes Scholars, and will be attending the University of Oxford in October. **James Flynn** (right), who majors in political science and economics at Trinity College, intends to pursue a master of science in social science of the Internet and a master of public policy degree. **Jessica Phillips** of University College – a specialist in ecology and evolutionary biology – plans to study penguins in Antarctica. **Kaleem Hawa**, an international relations and global health major at Trinity, hopes to acquire master's degrees in integrated immunology, and global governance and diplomacy.

U of T president **Merik Gertler** and four other faculty members have been appointed to the Order of Canada, one of the country's highest civilian honours. Gertler was named a member for his research in urban geography, notably for his studies of innovation, technology and development in cities. Prof. **Brenda Andrews** of molecular genetics was named companion – the highest level of the order – for her research in systems biology and for developing scientific communities in molecular genetics. Prof. **Frances Alice Shepherd** of medicine was named an officer for improving treatment options and outcomes for people with advanced lung cancer. Named members were **George Baird**, professor emeritus and former dean of the John H. Daniels Faculty of Architecture, Landscape, and Design, for his contributions to architecture as a scholar, teacher and practitioner, and Prof. **Kent Roach** of law for his defence of the rights of Canadians, both as a scholar and as a litigator.



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BOUNDLESS



Leading Edge

“With climate, we have to change the way we do almost everything”

Environmental law professor Jutta Brunnée, on the practical impact of the Paris Climate Agreement

p. 23



Could Carbon Dioxide Be the Solution to Climate Change?

Greenhouse gas could be harvested from the atmosphere and recycled into renewable fuel, says researcher

IN THE DRAMA OF CLIMATE CHANGE, carbon dioxide has long played the role of arch-villain.

Now, though, Geoffrey Ozin, a professor of chemistry, wants to recast the infamous greenhouse-gas scoundrel in the role of hero, placing it centre stage in the development of carbon-neutral, renewable energy.

“The public has heard of carbon capture and storage,” says Ozin, who holds the Canada Research Chair of Materials Chemistry and Nanochemistry. “They haven’t heard about carbon capture and utilization.”

Carbon dioxide, it turns out, plays many roles other than heating the planet. It’s used to manufacture industrial chemicals and polymers. It’s a key part of many fertilizers. And, it can be used to make methane and diesel fuels.

“Why not use it as much as you can?” says Ozin. “You could build a global economy on a resource that’s all around us. And if you happen to use gigatons every year, then you could keep atmospheric carbon dioxide levels at sustainable levels indefinitely.”

Ozin is leading a multidisciplinary team dubbed the “U of T Solar Fuels Cluster” on a quest to develop a process for converting atmospheric carbon dioxide into an energy-rich renewable fuel. Manufacturing the fuel would take as much carbon dioxide out of the atmosphere as burning the fuel would put back in. The net result is a carbon-neutral cycle.

Carbon dioxide is a stable molecule, which doesn’t react easily with other materials. But given the right catalyst, says Ozin, it can be broken up and transformed into carbon monoxide, methane, methanol and other highly useful chemicals. ▶

➤ Finding the right catalyst involves more than identifying substances that can coax reactions out of carbon dioxide. Ozin is researching how to shape materials on a nanoscopic scale, creating structures a few billionths of a metre in size. Nanostructuring can do things such as maximize the surface area where the carbon dioxide and catalyst interact. More surface area means more chemical reaction.

Ozin believes that the nanostructured catalysts he's developing can form the heart of large-scale, solar-powered refineries that convert carbon dioxide into fuel using processes compatible with existing industrial infrastructure. The resulting fuel could be used in vehicles, heating systems and anywhere else carbon-based fuels are currently used.

Ozin first turned his attention to this problem seven years ago when he was 65 years old. After a long career in basic science, he says it was strange to have to start building the needs and expectations of commercial enterprises into his research.

"For global industry, you have to create materials that are not just different from what already exists, but that do a particular job better," he says. "You have to boil things down to simpler, scalable components that are abundant, low-cost and stable under every imaginable condition – in varying sunlight levels, at different temperatures and under reaction."

Despite the challenges, he remains convinced that science and engineering can reform carbon dioxide into a productive part of global society. "CO₂ is an asset, not a liability. We should think of it as a chemical resource to be harvested and recycled into renewable fuel," he says. His mantra is "solar fuels from the sun not fossil fuels from the Earth." - **PATCHEN BARSS**

Northern Exposure

A U of T prof aims to better understand the needs of cancer patients in Nunavut



IN A CAREER that has taken her from an urban intensive-care ward to the farthest reaches of Canada, U of T Mississauga anthropology professor Tracey Galloway is helping to change health-care delivery in Canada's icy north.

As part of a three-year study, she will investigate how cancer care is delivered to residents in Inuit communities by collecting stories from 10 families who have experienced cancer. Galloway's team will use two methods to analyze responses – a traditional Western approach and a groundbreaking Inuit epistemology called *Piliriqatigiinniq*. Translated, it means "working in a collaborative way for the common good."

For northern residents, the experience of chronic disease takes place in a very different context than the one southern Canadians know. Twenty-five small communities are spread across Nunavut's vast expanse, making it challenging to deliver health care close to home. For diagnosis and treatment, residents with serious health issues must travel to Yellowknife, Edmonton, Winnipeg, Ottawa or Montreal. "We'll be asking people to share their experiences – what parts were positive and what supports could have made a better experience at home or in the referral centres in the south," says Galloway.

The team will collect similar data in a related study about end-of-life care. "Many people die from chronic diseases while they're in treatment in the south and away from family members," Galloway says. The team will collect information about the experiences of patients and families, which health-care agencies will use to improve pain management, end-of-life care and family supports. "At any moment, there is some elderly Inuit person in a southern treatment centre who is hearing a stranger tell them that they might die far from home and family," she says. "We have to make those experiences better." - **BLAKE ELIGH**

LINGO

Uberization



Uber connects drivers with passengers in real time through a smartphone app. Like Airbnb, which matches travellers with rooms or apartments, Uber puts resources to use that might otherwise sit idle.

In a big-picture sense, this "Uberization" of the economy – a buzzword for technological disruption – is a positive development,

says economics professor Jonathan Hall, because it allows people to earn more from assets they already own. Why leave your car in the garage all day when you can earn money by driving it?

The downside, says Hall, is that although this allows students, stay-at-home parents and other part-time workers to bring in extra cash, taxi drivers (and full-time

employees in other industries being Uberized) risk being put out of work. The process creates winners and losers. But Hall adds that using our resources more optimally should make society as a whole better off. "In New York City alone, matching passengers with vehicles by using an app such as Uber could increase efficiency by \$1 billion a year," he says. - **STAFF**



In 2013, some 3,500 Canadians were on a waiting list for a kidney transplant



that it prevents the use, in Canada, of plasma imported from the U.S., where payment is legal.

Lacetera’s study concluded that if consumers receive specific information about the benefits of establishing a price on “repugnant” items, they are more likely to support the existence of those markets. He and his study co-authors conducted two experiments involving surveys, which asked U.S. residents specifically about prostitution and kidneys.

“We wondered what would happen if we gave people more information about how these payments would work,” Lacetera says. “Or asked people how they could overcome [their] aversion.” Researchers have estimated that if the price for a transplanted kidney is in the \$30,000 to \$50,000 range, the price would appeal to enough qualified donors to drastically reduce the shortage of suitable organs. When respondents were provided with the additional information,

and the result, their distaste for the idea ebbed. “The baseline support goes up when there’s additional information.” Still, 30 per cent of respondents remained opposed. (In the case of prostitution, some respondents, especially women, became even more adamant with their objections after receiving additional information about the benefits of a regulated sex trade.)

Lacetera also debunks the notion that there’s currently no economic activity associated with kidney donations. Even if there’s no price tag on the organ itself, the medical procedures associated with a transplant produce earnings for surgeons and other health professionals. “They’re all compensated for performing a transplant and that’s considered OK.” He points up a discomfiting contradiction in current practice: “If some of that money goes to the donor, then it’s not OK anymore. One might even argue that *not* paying donors is even less ethical than paying them.”

It might be possible to further shift public attitudes if regulators took steps to design the market in such a way as to directly confront qualms about coercion, medical safety and perverse incentives – specifically, the prospect of very poor individuals either offering up, or being pushed to donate, their organs simply to survive.

“But the moral opposition may still persist even if these issues are addressed,” he admits. “Economics can help us understand the trade-offs people make between their understanding of the value of a transaction and their moral beliefs. But we also need insights from a broad range of disciplines, including ethics and psychology, to fully understand the nature of these beliefs.” - JOHN LORINC

THE BIG IDEA

Pssst, Wanna Buy a Kidney?

Most people recoil at the thought of selling human organs. But supplying the right information can change attitudes, a U of T study finds

IT’S BECOME A TRUISM OF THE DIGITAL AGE that one can purchase almost anything online. But there are still many goods and services that cannot be legally bought and sold. Dealing in these so-called “repugnant” markets, such as prostitution and illicit drugs, is often prohibited for moral reasons. Yet there are some banned goods for which a market mechanism could actually help solve societal problems.

Case in point: human kidneys. While the demand for kidney transplants among individuals with acute renal failure far outstrips the supply of donated organs, lawmakers and many citizens still balk at the suggestion that the shortage could be alleviated if individuals were allowed to sell their kidneys.

The repugnance about trade in human material isn’t limited to kidneys, notes Nicola Lacetera, a professor of strategic management at U of T Mississauga and co-author of a recent international study on repugnant markets. In most countries, for example, people cannot be paid for giving their blood or plasma. But, Lacetera adds, the repugnance isn’t so strong

STARTUP

Data in Search of Scientists

With the U.S. facing a shortage of data analysts, a company led by a U of T grad is looking to bridge the gap



services informed by the trends that this analysis of “big data” can help them uncover. McKinsey Global Institute suggests that by 2018 the U.S. alone could face a shortage of up to 190,000 data scientists.

“Academics fit nicely in those roles,” says Klamka. “They’re skilled at working with data but not 100 per cent ready to step into a tech job.”

Insight fellows complete a data science project over the course of seven weeks. Some dig into problems inspired by their own research or personal interests; others work on projects suggested to them. Topics range from the serious (tools for analyzing stock volatility) to the fun (recommendation “engines” for recipes or travel). All have “a strong relevance to industry,” Klamka says.

Alumni of the program, mentors and the Insight team help fellows through the process Klamka describes as, “intense, but social.” In Insight’s final weeks, fellows can present their projects to potential employers before interviewing for a job – a plus for companies wary of gambling on a new hire without hands-on experience.

Grads from the Silicon Valley program have landed at LinkedIn, Facebook and Netflix. Insight’s New York alumni have scored placements with the *New York Times*, Bloomberg, MTV and NBC. Companies pay Insight when they hire its fellows, and Insight reports that the vast majority of fellows who pursue a data-related job search find a placement within four months.

Insight continues to grow from its Silicon Valley roots. It recently launched a data engineering module in New York and is expanding into other American cities. Last year, Insight kicked off a fellowship in health-related data science in Boston, a city known as an innovation hub for medicine and pharmaceuticals. “We’re hearing from biomedical companies eager to hire data scientists for genomics, for personalized medicine,” says Klamka. “The potential for impact is huge.” – **BRIANNA GOLDBERG**

TECHNOLOGY IS ALLOWING BUSINESSES

to gather vast amounts of data about their operations – more than ever before. And, as the flow of information grows, so does the need for analysts who can deftly interpret it.

To help meet this need, Jake Klamka (BSc 2005 UC, MSc 2006) launched Insight Data Science, a fellowship designed to help PhD graduates from any discipline adapt their research expertise into a skill set suitable for a career in data science. The program, which doesn’t pay its fellows, guides academics as they transition from analyzing data for scholarly purposes to making sense of industry trends, customer preferences and market dynamics – mining social media to predict trends in the news or in real estate, for example.

Companies across the tech, entertainment, medical sectors and more are keen to develop strategies and

Findings

Testing Tumours



A team of U of T engineers has developed a way to grow cancer cells in the form of a rolled-up sheet that mimics the 3-D environment of a tumour, yet can also be taken apart in seconds. The platform offers a way to speed up the development of new therapies.

There are drawbacks to studying cancer cells in a traditional, two-dimensional petri dish. Cells in the centre of a tumour have less access to oxygen and nutrients than those growing near the surface, close to the blood vessels. These subtle, location-dependent differences have a big impact on cell behaviour, but have proven difficult to replicate in a dish.

The sheet method solves this problem, and the single-layer design makes it easier for other lab researchers to adopt the process. – **TYLER IRVING**

Getting to Hospital Faster



North Americans can count on an ambulance to arrive quickly when they need one – in Toronto, the average response time is six minutes. But in Dhaka, Bangladesh, there is no emergency medical-services system, no centralized ambulances and no 911 service. Justin Boutilier, a PhD candidate, and Prof. Timothy Chan – both of mechanical and industrial engineering – hope to close this health-services gap in developing countries.

Boutilier spent three weeks in Dhaka conducting research with local collaborators. Among their findings: the average response time for ambulances was 60 to 80 minutes and some patients spent more than five hours getting to hospital. Boutilier aims to vastly improve these numbers – and save lives – by developing software that pre-positions ambulances at the best locations to reduce response times, and provides route-optimization information to drivers based on current traffic conditions. – **LIZ DO**



The world's top five emitters of carbon dioxide are China, the U.S., India, Russia and Japan. Canada is eighth. Together, China and the U.S. account for 44 per cent of the world total

Q&A

Cooling Off

Will the Paris climate accord succeed where Kyoto didn't?

Representatives of 195 countries made an historic deal in Paris last December to reduce worldwide carbon emissions and ultimately limit global warming to less than two degrees Celsius over pre-industrial levels. Will the Paris Agreement succeed? **Scott Anderson** asked **Jutta Brunnée**, the Metcalf Chair in Environmental Law.

Let's start with the Kyoto Protocol. Why didn't it work?

By design, Kyoto set carbon-emission targets only for developed countries – in recognition of their greater capacity to reduce emissions and the greater pressure their economies had placed on the atmosphere up to that point. This was intended only as a first step, but it was read by developing countries as reinforcing their claim that they didn't have to reduce emissions.

Kyoto also set fixed targets for countries ahead of time, without sufficient information for how to achieve these goals. For example, Canada agreed to reduce its emissions by six per cent below 1990 levels by 2012. But by the time the protocol took effect for Canada, in 2005, emissions were already 30 per cent *above* 1990 levels. It's extremely difficult to predict how economies and technologies will develop so it can be problematic to have an obligation cast in stone.

How is the Paris Agreement different? First, *every* country is now expected to have an emissions-related commitment. Whereas Kyoto included countries that accounted for only a small share of global carbon emissions, the Paris Agreement already has commitments from 187 countries responsible for 95 per cent of total emissions.

Second, the binding part of this agreement requires countries to have a commitment to reduce emissions, to update their goals regularly and to tighten them over time. Unlike Kyoto, the treaty does not enshrine specific targets for what Canada, or any other country, has to do. What you have now is a bottom-up treaty architecture in which each country indicates what it is prepared to do. As a result, the targets can be updated much more easily, because changing them doesn't require altering the treaty itself.



Countries incur no penalties if they don't comply. So what's the incentive? Each party will have to measure their carbon emissions, report what action they're taking to reduce them and have their reports reviewed. This approach to compliance is a bit like Weight Watchers. Nobody will put you in jail or fine you if you emit more carbon than you should, but the whole world will know and there will be pressure from climate experts and NGOs to meet your commitment.

What if reducing emissions proves more difficult than we thought? Does a change in public opinion put the agreement at risk? I don't think any form of an agreement could insure us against that. This is always an issue with environmental measures: you have cycles of concern. The difference now is that there is very little room for scientific disagreement. The science tells us that unless we take action soon, we'll be in deep trouble. Governments have a responsibility to lead. If they do, we've seen that they can get people to come along.

Has Canada committed to anything yet? The Canadian government said that within 90 days of the end of the Paris conference it would have a federal-provincial meeting to come up with a plan. This meeting occurred March 3.

What are the biggest changes the average Canadian will see as a result of this? We'll likely see higher prices on carbon and incentives to shift to alternate forms of energy and away from fossil fuels. The irony right now is that the oil price is so low it sends the wrong signal; it says, "Hey, drive some more."

How do you feel about our prospects for success? This is not an easy problem to solve. Acid rain and ozone depletion were discrete processes that we could isolate. With climate, we have to change the way we do almost everything. Germany has cast the coming change as part of the next industrial revolution. In Canada, we lost a number of years, but there will be opportunities. We need to take advantage of them.



According to Lloyd's of London, tornadoes cause damages of more than \$400 million a year, on average, in the U.S. – almost as much as hurricanes

Words of Freedom



Soviet *samizdat* poet
Oleg Okhapkin

Under Soviet Union state censorship, publications required the Communist Party's stamp of approval. But that didn't stop people from sharing ideas in ways that circumvented the party apparatus – often at great personal risk. From the 1950s to the 1980s, artists and rights activists in particular used *samizdat* – a low-tech alternative form of publishing, often typewritten and passed from hand to hand – to communicate with each other and spread information.

One such artist was Oleg Okhapkin, a religious poet shown at left in an undated photo in his kitchen. Ann Komaromi, a professor of comparative literature who has curated the world's largest digital collection of Soviet *samizdat* journals (142 issues), says Okhapkin's writing is interesting partly because he foresaw a return to traditional religious values in Russia following the collapse of communism.

None of these homemade *samizdat* documents, including Okhapkin's, reached more than a few hundred people. But some became quite famous. The *Chronicle of Current Events* documented human rights abuses in the Soviet Union from 1968 to 1982, despite numerous attempts by the KGB to suppress it, and became a major source of unofficial information for readers abroad.

Komaromi is reluctant to ascribe much political clout to the literary and artistic journals in the U of T collection, but she believes they served a vital societal function. "These were alternative communities creating a culture of artistic freedom," she says. And now they're available for the world to see. – **SCOTT ANDERSON**

Why Do Tornadoes Form?

UTSC researcher uses 30 years of climate data to understand what causes these devastating storms

EACH YEAR, mainly between March and July, tornadoes kill dozens of people in North America, injure many more and cause hundreds of millions of dollars' worth of damage.

But what if we could forecast the intensity of tornado activity months, even seasons, in advance? That's the ultimate goal of researchers at U of T Scarborough, who have developed a new model of tornado formation. "The eventual aim is to predict ahead to the following year or subsequent years about whether we'll get above or below average tornado activity in a given area," says Vincent Cheng, a postdoctoral fellow in UTSC's Ecological Modelling Lab. "The first step

is to fully understand what has caused these storms in the past."

The model, developed by Cheng and professors George Arhonditsis and Bill Gough in UTSC's Climate Lab, along with colleagues at Environment Canada, employs large-scale atmospheric variables such as those used by weather forecasters. The researchers examined variations in monthly and seasonal tornado activity over a 30-year period relative to changes in atmospheric conditions over the same time frame.

Cheng says the model explains how different conditions in the atmosphere during a thunderstorm affect the risk of a tornado. Key variables include the instability of the atmosphere and vertical wind shear, which is the change in wind speed and wind direction at different heights above the ground. It turns out there's a much higher risk of a tornado when air is able to rise quickly, coupled with strong vertical wind shear.

Canada is second only to the United States in the number of tornadoes experienced, with more than half of them taking place in the Prairies and Northern Ontario and a third in Southern Ontario. – **DON CAMPBELL**

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SATURDAY, MAY 28, 2016



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(UTAA)

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ALUMNI CELEBRATION

11 a.m. – 12:30 p.m.
Convocation Hall, 31 King's College Circle

FEATURING:

- Presentation of UTAA's Alumni Award for Community Engagement
- Keynote address by Dr. Mike Evans, staff physician at St. Michael's Hospital, Associate Professor of Family and Community Medicine and Lead, Digital Preventative Medicine at the Li Ka Shing Knowledge Institute. "Dr. Mike" is known for his innovative health education YouTube videos that have been viewed by millions worldwide.
- UTAA AGM (brief business meeting)

ALUMNI BBQ

Immediately following the Alumni Celebration
12:30 – 2:30 p.m. on the front campus

Celebration and BBQ are
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YENA LEE

Neuroscience and Physiology student
Vice-President of the Students'
Alzheimer's Alliance
Student researcher at the University
Health Network

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STEP 2

Get a Stress-Free Degree. Here's a sample of our fascinating lecture line-up. For more details, please check our website.

FRIDAY, MAY 27

12:30 p.m.

- Nutrition, Genetics & Athletic Performance—Ahmed El-Sohemy
- Disruption Ahead: Technology for Aging & Healthcare—Alex Mihailidis
- LGBTQ Youth in 2016: New Challenges & Persistent Old Ones—David Rayside

1:45 p.m.

- Toronto: Physical Culture Capital of the World—Peter Donnelly
- How Green are Green Roofs?—Liat Margolis
- Aboriginal Knowledges: Improving Education for all—Suzanne Stewart
- Nature vs Nurture: The Future of Computing—Daniel Wigdor

6:15 p.m.

- Attachment: The Science of Closeness & Trust—Geoff MacDonald
- Life, Death & Sacrifice in the Ancient Andes—Edward Swenson

SATURDAY, MAY 28

9:45 a.m.

- How *Star Wars* Matters—Anne Lancashire
- Food Trucks in Museums: Dining with T.rex—Irina D. Mihalache
- Art Nouveau: Decadence & the Limits of Form—Natalie Ribkoff

2:45 p.m.

- Engineering Today with Speakers from the Faculty of Applied Science & Engineering
- Why do Whales Breach? How Whales Respond to Human Activity—Christoph Richter
- What's the Story with your Home?—James Thomson

4:00 p.m.

- Smokestacks & Tailpipes: Air Pollutants & Their Impacts on Canada—Greg Evans
- Children & Caring: Improving Pro-social Behaviour & Reducing Violence—Tina Malti

Please note that the lecture schedule is subject to change and additions. Visit springreunion.utoronto.ca for up-to-date information.

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THURSDAY, MAY 26

SHAKER for Young Alumni
Panda Pavilion at the Toronto Zoo
2000 Meadowvale Rd.

FRIDAY, MAY 27

- 50th Anniversary Ceremony
- Chancellor's Circle Medal Ceremonies for 55th to 80th Anniversaries

SATURDAY, MAY 28

- Campus Bus Tours
- Kids' Passport to U of T - a family event

STEP 4

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11 a.m. – 12:30 p.m.

U of T Alumni Celebration
Convocation Hall
31 King's College Circle

Featuring:

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- Keynote address by Dr. Mike Evans
- UTAA AGM (brief business meeting)
See ad on page 25.

12:30 – 2:30 p.m.

Alumni BBQ
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Life after Grad School

As more PhD graduates seek work outside of academia, U of T is creating opportunities for these highly knowledgeable students to develop professional skills

GROWING UP IN QUEBEC, Vincent Nadeau wanted nothing more than to be a scientist. Fascinated by cystic fibrosis research, he embarked on a PhD in biochemistry at U of T. “Like most grad students I had in mind doing research, being a professor,” he says.

Near the end of his seven-year journey, though, Nadeau had a change of heart. He went to a small conference in his field, and found his project wasn’t attracting enough interest. He lost the drive to do research, but had become intrigued by how science is commercialized. So the question arose: Was he going to stay in academia?

For him – and for the majority of the students who’ve recently completed PhDs in Canada – the answer was no.

Nadeau is now happily employed as an analyst with Bloom Burton & Co., an investment bank concentrated in the health-care and biotech sectors. There, he performs due diligence on public and private companies for prospective investors – a task he’s uniquely suited for, given the analytical, leadership, presentation and interpersonal skills and highly specialized knowledge he picked up along with his PhD.

“It’s a unique kind of training,” he says, noting that many of his colleagues also have PhDs. And given their rising numbers – there are about 210,000 PhD holders in Canada, and 7,000 new ones graduating every year (one in eight of whom are from U of T) – it’s not surprising that PhD holders are employed in industry and many other sectors, including government, health care, education, the arts and social services.

Like students at the bachelor’s or master’s level, PhD candidates complete reports and conduct research; they also teach and manage large projects on their own. It is a long journey, averaging from five to seven years (often with another two or three years spent in a post-doctoral fellowship). But its rewards are many.

First among these is the chance it offers for students to pursue their passion: learning. “People do this degree for personal reasons,” says Suzanne Akbari, director of U of T’s Centre for Medieval Studies and special adviser to the dean of the School of Graduate Studies on graduate program innovation. “Whether they love Old Norse sagas or bench work in the lab, passion is always at the centre of what they’re doing.”



“As a graduate student, you have to start building your professional network from day one, within academia and outside of it”

Stephannie Roy agrees. Now a senior projects officer and recruitment co-ordinator at U of T, she earned a sociology-in-education PhD in 2004 – and thoroughly enjoyed the experience. “It’s a privilege to have that time: to think big thoughts, make a project your own and contribute to knowledge in your field. You meet great people in that process, too – smart people, who are making things happen. Of course,” she laughs wryly, “you don’t have furniture either. So you have to weigh these things out.”

But is a PhD marketable in the world outside of academia? Some recent news reports have suggested that holders of master’s degrees are better off financially. Roy, however, offers a different view. “It’s true that you defer *lifetime* earnings,” she says. “My father did a PhD and he was an academic; he always joked that if he’d worked in the mill, he’d have earned more money. But he’d also have had to work in the mill. It’s really a question of whether you’re doing what you like to do.”

And in many offices, her own included, having a PhD is advantageous. Among Roy’s administrative colleagues at the university are a historian, an anthropologist and a philosopher. “People with this degree like universities, because they understand the mission and the culture,” she says. They’re also uniquely positioned to perform knowledge translation in the outside world, in order to build bridges with industry and other partners.

Nadeau adds that a PhD is not only a prerequisite for professors, but in some other positions as well; he cites intellectual property lawyers as an example. In some fast-growing areas (such as data analysis, engineering and health care), an advanced degree is also considered highly beneficial.

Having a greater number of workers with advanced degrees is also thought to make countries more competitive. “The evidence suggests that countries producing a lot of PhDs have more innovative economies,” says Locke Rowe, dean of the School of Graduate Studies. A report by the not-for-profit group Mitacs (which is dedicated to fostering partnerships between academia and industry) suggests that Canada – which in 2013 ranked 18th among OECD countries in the percentage of GDP spent on research and development – could improve its performance in this area if it produced more, not fewer, PhD grads.

For individuals with a PhD, though, the transition from university to workplace isn’t always easy. “The number 1 issue we find with our students is the inability to communicate their passion for research to a non-expert,” says Professor Reinhart Reithmeier, a former chair of U of T’s department of biochemistry who is now special adviser to the dean, graduate skills development and engagement, for the School of Graduate Studies.

To remedy that, Reithmeier and lecturer Nana Lee (PhD 2000) started the Graduate Professional Development initiative within biochemistry in 2012. Over the course of six two-and-a-half hour classes and a session about rehearsing presentations, graduate students (including master’s students) learn, among other things, networking, entrepreneurship and resumé-writing skills, and how to summarize their research for a lay audience. They discuss the importance of mentorship and learn from an array of successful alumni speakers. The full-credit course is mandatory now for immunology students, and is being strongly considered in other disciplines within the Faculty of Medicine. “We give the message that as a graduate student, you have to start building your professional network from day one, within academia and outside of it,” Reithmeier says. “PhDs are thought leaders, researchers, innovators, problem solvers. They have the high-level skills and attributes employers are looking for.”

Reithmeier’s course follows in the wake of numerous career-building workshops, non-credit courses and seminars (in areas such as teaching competency, time management and communication) offered by the School of Graduate Studies since 2009, under the Graduate Professional Skills program.

Masha Cemman, who expects to defend her thesis in molecular genetics this summer, has taken many of the school’s offerings. She speaks with particular enthusiasm about the roster of alumni speakers offered in the Professional Development program, which have included a publishing executive, a lawyer and a governmental science adviser. “It’s so inspiring to see people just a few years older than you are, doing what you want to be doing. You say to yourself, ‘If they can do it, so can I.’”

Career workshops have also played an important role in Cemman’s PhD journey, since she realized as far back as



A Guiding Hand

The thesis adviser plays a big role in every grad student's life. Alice Hutton Sharp, who defended her thesis in medieval studies at U of T last year, writes about how to make the most of this complex relationship

One night, while preparing the initial draft of my first dissertation chapter, I had a dream in which I was a student at the 12th-century school that was the focus of my research. My adviser was Anselm of Laon, the school's director (d. 1117), and my anxiety was rooted in the fact that I was forbidden from telling incoming students how to avoid being accused of heresy. I was convinced we would all be condemned.

This is an extreme and medieval example, but this efflorescence of anxiety is a shared experience in academia. This is one of the burdens of agreeing to supervise a dissertation: no matter how approachable, you are destined to figure as a primary character in an advisee's psyche. It's unavoidable, and it can also distract both students and advisers from the primary purpose of their professional relationship: mentorship and guidance while producing an independent work of scholarship and preparing for life after the degree. I can't offer advisers any fail-safe ways to avoid inciting stress dreams, but there are a few keys to making the most of this complex position.

Programs and disciplines differ widely in the degree to which an adviser is involved in the students' initial choice of research topic and subject. However, most advisers will be asked to help a student form the scope and parameters of their project, according to the expectations of their discipline and the amount of work that can be done in the time permitted. This stage is crucial – both to helping the student learn how to present research interests in a compelling way, and to lay the groundwork for the future working relationship.

From the beginning, clear communication of expectations is key. This includes the basic details of academic life – for example, how often do you expect drafts or results? How long will it take you to return

an edited draft? Should the student feel free to submit very rough work, or does the adviser expect writing to have a certain polish? Graduate students will likely not know that they should be thinking through these questions, and it will be to the benefit of both if the adviser sets an example by describing how she understands her role – particularly as the student advances, and the adviser may want to step back a bit to encourage more independent work.

There are so many skills involved in pursuing an academic degree and transitioning from graduate school – whether to an academic or non-academic career – and no adviser will be able to provide counsel on everything. It is hard for one person to offer the best information on every aspect of a career, particularly as students approach the job market. This is especially true as students choose whether or not (and in what way) they wish to approach a career outside of academia, or in a very different university setting. The adviser should see this as an opportunity, helping the student build a network of support.

I defended my dissertation on a cold January morning. My adviser was on sabbatical, and for a while I thought he might not make it by phone, as it turned out nobody had his number. I sat at the head of the table as a committee member called our department secretary, thinking about past stress dreams.

The number was found. The call went through. While we both regretted that he couldn't be present in person, the forced distance emphasized that an adviser's role, in some ways, is to become superfluous. Through his mentorship, I was confident in presenting and defending my work – on my own.

Alice Hutton Sharp is now a Mellon post-doctoral fellow in the history and classical studies department at McGill University.

“If you think about what’s essential to the PhD – managing large amounts of information, framing questions, answering them, communicating them – those skills are always going to be useful”

her second year of undergrad that she might do a PhD and *not* become a professor. Her particular interest lies in global health, and she used her networking skills to obtain an internship at the World Health Organization. (A new company started by a U of T alum, Insight Data Science, offers fellowships to PhD grads interested in working as data analysts. See p. 22.)

Along with building skills, the School of Graduate Studies is currently helping PhD candidates grapple with some of the psychological difficulties that can arise over the course of degree completion. Akbari says that humanities students, for example, frequently contend with isolation. “If you’re working in the sciences or a lab-based field, you’re probably more likely to have a strong sense of community. You’re physically in a shared space; you’re interacting with people on a constant basis. In the humanities it’s less so, particularly now; how often are people writing and researching from home?” The School of Graduate Studies has sought to deal with this by drawing humanities students together through roundtable workshops, including one that discussed whether experimenting with the “lab model” within the humanities could serve to alleviate students’ sense of isolation.

In order to address other personal concerns, an embedded counsellor is now available at the school to address problems unique to graduate students. As well, trained peer-

to-peer help in the management of disputes is now being provided for graduate students through the new Conflict Resolution Centre.

In sum, the PhD degree of 2016 is not only about the acquisition of knowledge, but about how that knowledge can be used. It is a full apprenticeship largely unavailable in the workplace – one that involves not only learning, but personal improvement on every level. The long list of Canadians who’ve earned doctorates at U of T, then gone on to great things outside of academia, attests to its value in the world outside: There are astronauts (Roberta Bondar and Ken Money), theologians (Mary Jo Leddy), and pioneers in human rights work (Dan Hill Sr.) and computing (Calvin “Kelly” Gotlieb). Even an associate producer of the film *Ghostbusters* – Joe Medjuck – earned a PhD in theatre studies before going Hollywood.

And while it’s a permanent fact that there aren’t nearly enough tenure-track teaching jobs for everyone who might want one, consensus is growing that the PhD can be reconsidered, reimaged and rechampioned in the public imagination. “If you think about what’s essential to the PhD – managing large amounts of information, framing questions, answering them, communicating them – those skills are always going to be useful,” says Akbari. “I think there is cause for optimism. The shifting landscape is a challenge, but it’s also an opportunity.”

Cynthia Macdonald is a Toronto writer.

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THOSE THINGS WE DO

They are some of the most beloved memories of university – the sometimes weird, often wonderful traditions that only happen at U of T: camping in the Mississauga fields, UTSC's Rez Cup, racing a "chariot" around King's College Circle. Read on for some of the most popular – and offbeat – U of T pastimes, but don't expect a complete list. We're counting on you to tell us about ones we missed!

BY JANET ROWE



UC's Fireball

UNFORGETTABLE DANCE

“Fireball is amazing,” says Matthew Mohan, a fourth-year criminology student and the person responsible for co-ordinating this year’s formal dance at University College. “I’ve never heard of something similar at any other university.”

More than a thousand students dance into the wee hours each year in six rooms across UC. There’s dinner, dessert, a DJ, ballroom dancing, live bands and sketch comedy by the UC Follies troupe. And there’s always a theme. “Midnight Circus, Alice in Wonderland, Olympian Nights,” says Mohan. “And this year it was the Magic of Fiction.” Each room’s decor evoked classic literature, from *Charlie and the Chocolate Factory* to the *Harry Potter* series.

The popular romantic event is always held around Valentine’s Day – for a surprising historical reason that also explains the dance’s name. On February 14, 1890, as UC prepared to host the annual “Conversazione” – featuring music, artifact displays and scientific demonstrations – a tray of flaming kerosene lamps was accidentally dropped down the wooden stairs. Everyone got out unharmed, but half the building was completely gutted. And almost a century later, students, ever irreverent, renamed their dance the UC Fireball.

FARCITY NEWS



Give students a newspaper, and they will sometimes publish silliness. The *Varsity* has often been a vehicle for fun, from jokes about lab mice in the second-ever issue in 1880 to upside-down headlines in the '20s and a hoax in the '50s about final exams being postponed by two weeks.

The tradition continues to this day with the annual April publication of the *Farcity*, says editor Alec Wilson, though not everyone always gets the joke. “We have intentionally avoided posting the satirical back pages to the online archive in recent years,” he says, “to avoid having them confused with actual news.”

HAPPY CAMPERS

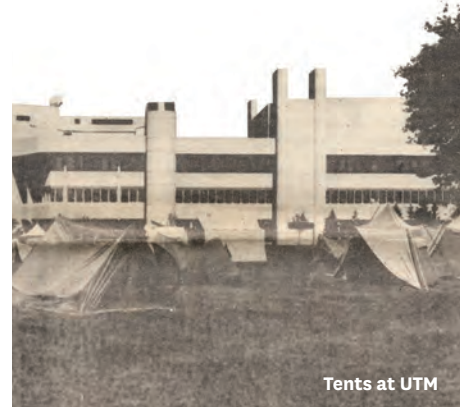
Everyone remembers the tents. They sprang up on the fields of U of T Mississauga (then Erindale College) every September throughout the 1970s and '80s. Was UTM stashing students in truly temporary housing? Nope. It was just the start of orientation.

“In those days, a very large percentage of the students were commuters,” says Arthur Birkenbergs, who was in first year in 1972, eventually graduating with a BA in 1982. He remembers students bringing and pitching about 30 tents on the field where the McLuhan Court residences now stand. “Many students stayed overnight for the three nights of orientation, and there was pub night. There were outings downtown. There was a real kind of a family feel.”

“It was a lot of fun,” says Frank MacGrath (BA 1986 UTM). “There would be all sorts of tents there, from little pup tents to fairly elaborate tents. The whole point was to get the frosh to meet fellow students, and get to know the campus. They’d be doing scavenger hunts, for example – they’d have to find a certain classroom or find a prof.”

At the end of orientation, senior students would gather the assembled campers for a group photo – then sneak up to the roof of a nearby building and rain down water balloons or even Jell-O when the photographer asked them to “Say cheese!”

As UTM grew, the “tent city” became unwieldy. It’s no longer a part of orientation – a lost tradition now, as ephemeral as the tents themselves.



Tents at UTM



VIC WALKS

Most new U of T graduates gather in University College to be sorted and gowned before crossing Front Campus to Convocation Hall. Not Victoria College students. They make their own way from Old Vic on Charles Street, across Queen's Park, led by their own bagpiper. Police stop traffic for them. How did this unique tradition come to be?

It all started in 1986, says Vic registrar Susan McDonald, when U of T had just started to group graduands by college instead of by program. Alexandra Johnson, who was Victoria's principal at the time, wanted to create a memorable day for her college. She inaugurated a new schedule: a Vic awards ceremony, lunch in the quad, then the 15-minute, 800-metre procession across Queen's Park. "We have now been doing this for 29 years, and we have never been late to Con Hall!" says McDonald.

Bagpiper Rory Gus Sinclair has been leading the group for more than 20 years. Behind him floats a colourful gonfalon that was created in 1986 to celebrate Vic's sesquicentennial. Vic officials in gala academic dress come next, then the stars of the show – the students themselves.

"I CAME WITHIN AN ACE OF BEING EXPELLED"

David Sowby (MD 1951) on his participation in Daffydil Night, the annual variety show put on by U of T medical students

ON WITH THE SHOW

Maybe one of the most anticipated traditions across the university is the annual "show" – from the relatively new Bangladeshi Students' Association's Annual Cultural Show to the antics of the 130-year-old UC Follies, the troupe that launched Lorne Michaels of *Saturday Night Live* fame.

Dentantics burst on the scene in 1921 to an appreciative crowd of 1,500 in Convocation Hall, and a rapturous review in the *Varsity*, which called the show "a scream" with "up-to-the-minute original jokes." They even praised "the admirable way the scenery was shifted." In recent years, the show doubles as a fundraiser for the Faculty of Dentistry's Access to Care Fund, which subsidizes dental care for patients in the faculty's clinics.

Also in 1921, engineering's Stunt Night Committee put together an 11-skit show called "Ngynyr in SPaSmS." That was the first Skule Nite – now a beloved annual four-night extravaganza of musico-theatrical mayhem, and the longest-running show at Hart House Theatre.

February's Law Follies show lets U of T's hard-working student lawyers cut loose at least one night of the year. In that spirit perhaps, no one knows when the self-deprecating sketch comedy satire was first performed – but never mind. "It teases law students, it teases professors, it makes fun of the profession," says second-year law student Rona Ghanbari, this year's director. "It makes fun of thinking that being a lawyer is so high and mighty."

Medicine's Daffydil Night, which launched in 1897, had an on-again-off-again run until 1945; to this day it has raised more than \$600,000 for the Canadian Cancer Society. Not that the evening is earnest. David Sowby (MD 1951) shared this memory with the university in 2002: "I came within an ace of being expelled. In my year's skit I was assigned the role of dean of the Medical School. Part of the trouble was that Dr. Macfarlane was depicted as a hospital orderly, constantly sweeping the floor, saying nothing except 'Yes, sir' and 'No, sir.'" The irate dean wanted heads to roll; fortunately, he was talked down from the brink.



Dentantics cast members, 1946

A TRIUMPH OF ENGINEERING

To the engineers of a century ago, even the simplest objects held untold possibility. Take the humble chamberpot. Sturdy, smooth-bottomed, with two convenient handles. Thread a cord through those handles, seat one imperious rider on the throne, and have two hapless freshmen haul pot and rider up and down the hallowed corridors of the School of Practical Science. Add a second pot, and you had yourself a chariot race. It was a hugely popular sport.

Time passed, engineers invented indoor plumbing and chariot races became extinct. Or did they? It was Monday, Feb. 2, 1948, and a short notice appeared in the *Varsity*: “Skule Throws Gauntlet.” It was a challenge to enter a chariot race that Wednesday, on front campus. Entries were not required to look like bathroom fittings.

By the next day, the gloves were off. “Inform those spiritless peasants that Vic welcomes the opportunity of defeating Skule in anything, any time, any place!” wrote Keith Davey, the Victoria spokesman. That was mild compared with the rhetoric in Wednesday’s paper, with 11 teams competing for newsprint inches to egg on the other challengers. Oddly, the *Varsity*’s own team was ranked best bet by impartial handicappers; “Don’t waste your money” being the verdict on the rest.

And who won?

Skule, according to the engineers. But “they are the only ones on the campus who agree with the decision.”

Despite the confusion – or because of it – the raucous race instantly became a popular tradition. Ever since 1953, it’s been open to engineering students alone, in a vain attempt to contain the chaos. Watch them on Front Campus in January. And yes, the trophy is a steel chamberpot.



Front-campus chariot race

“VIC WELCOMES THE OPPORTUNITY OF DEFEATING SKULE...”

The front-campus chariot race instantly became popular

U of T vs. York



FALL COLOURS

Every fall, it’s game on as U of T’s Varsity Blues men’s football team meets the York Lions in the Red and Blue Bowl. The long-standing tussle has taken place since 1970, but didn’t get an official name until the 1980s, when York alum Angelo Kioussis was working as event promotions manager for the Blues. “I’ll never forget those years,” he says, of the time when it was his job to stoke the rivalry.

“I just loved having people enjoy the festivities and the competition,” Kioussis adds, remembering 10,000 students packing Varsity Stadium, 3,000 of them bussed down from York. While a few colourful names were tried out – Kioussis remembers the “Bud Grudge,” after the sponsors, or “Football Mania ’86” – the Red and Blue Bowl was the one that stuck.

In 1992, Nick Volpe, who had been named most valuable player in the 1950 Grey Cup, persuaded the Toronto Argos to donate a trophy. The Blues are 29–17, and hoisted last year’s cup with a 40–3 victory.

CUPPA CUSTOM

The University College Union’s living room at 79 St. George St. looks a bit like Victorian china – all robin’s egg blue walls and moulded, arched white ceiling – so maybe it’s not a surprise that one of U of T’s most gentle and genteel traditions takes place here:

Tea and Cookies. Offered to UC students every Monday through Thursday afternoon during the school term for at least 30 years, the sipping is spiced with stimulating conversation. But rules are rules – two cookies per person!



THEY BEGIN BY LISTENING

Dr. David McKnight's students tell him he mustn't change how he begins his speech to the incoming medical class. So ever since 2010, he's started it the same way: "Who has ever seen an episode of *House*? *Grey's Anatomy*? *Scrubs*?"

"I have sad news," McKnight goes on. "This is real life and this is a real medical school. Brilliance does not excuse any behaviour. Boundaries exist, and sex is not the primary motivator. There are professional expectations."

While some universities inaugurate new medical students with a "white coat ceremony," U of T's Faculty of Medicine instead holds a stethoscope ceremony. Students, proud as punch, invite their families. McKnight, who is a past associate dean, gives a short talk on professional behaviour, then McKnight and four other faculty members welcome the new students by draping stethoscopes around their necks.

The goal is getting students started on the right foot for an ethical, compassionate professionalism, says McKnight. He ends each speech with a few words about the symbol of the stethoscope. "It is only functional if there is a person at *each* end," he says. "And it is all about listening."

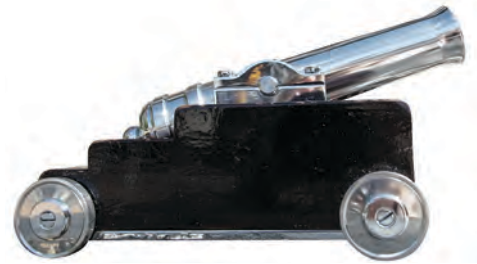


HALL'S WELL

From September to April, the Rez Cup – a friendly competition-cum-social event – brightens the lives of students in residence at U of T Scarborough. Students help organize the events, says Jordan Mak, an undergrad who is this year's residence engagement co-ordinator for UTSC. Favourite events – participation points count! – include September's Cheer-Off, October's Haunted Halls decorating competition, a January dodgeball tournament and an April carnival.

"It's a reason for hallmates to come out who might not have similar personalities," says Mak, "so we end up having a mingling of various types of students. So far, it's been working very well."

BANG!



It's unexpected. It's loud! And in January 2004, five fire trucks showed up after it accidentally set off fire alarms at Sandford Fleming. Ye Olde Mighty Skule Cannon, as the engineers like to call it, has been shaking things up on campus since the 1920s.

Mighty, that is, in sound, not size – the cannon is usually less than a foot long. But its bang has also been measured at 113 decibels, louder than a power saw.

Some early cannons were stolen (for example, from the Royal Canadian Military Institute); others were little more than homemade explosives in a steel pipe. In the interests of safety, in 1936, university machinist W.H. Kubbinga created a real, if tiny (it was 10 inches long) firearm.

Stealing the cannon was an irresistible challenge to other faculties – and ownership changed hands many times over the years, including 1967, when the fearsome weapon was actually heisted to England before being stolen back. Hence, the cannon's now-secret location and the now-traditional black-helmeted guard, chained to their beloved blunderbuss at all official firings.

Enthusiastic use at campus events from Orientation to engineering's Godiva Week means the lifespan of cannons is short, and new ones have been machined every decade or so. But the 2013 version has many bangs left.

JOIN IN!

What U of T traditions do you remember from your time at the university? Share with us at uoft.magazine@utoronto.ca.



By Marcia Kaye
Illustration by Oliver Hibert

High Time?

Or a period for sober second thought?
When it comes to legalizing marijuana,
U of T drug and public health experts
caution that “the devil is in the details”

ALMOST HALF OF ADULT CANADIANS say they have tried marijuana, a drug that has been illegal for almost a century. Nevertheless, many of us aren't really sure what to think about the Trudeau government's plan to legalize it. Public surveys show solid support for the use of marijuana for medical reasons. But for recreational use, views are mixed. While two-thirds of Canadians agree that the current laws need to change, there's uncertainty about how that should happen, concern about the public health and societal implications, and much misinformation fuelling the debate.

Other jurisdictions around the world have reformed their cannabis laws: in 2013 Uruguay became the first country to fully legalize marijuana, the Netherlands has long allowed it in designated “coffee shops,” and four states – Colorado, Washington, Alaska and Oregon – have changed their laws to legalize pot sales and possession. Canada already has a system involving legal growers and medical marijuana users,

and now we're going to not merely expand that to recreational users but create an entirely new legal and regulatory apparatus. While that gives us a rare opportunity to design the best possible framework, it's also a hugely complex undertaking.

“Legalization will help us minimize health risks and social harms,” says Jürgen Rehm, who is chair of addiction policy at U of T's Dalla Lana School of Public Health and a professor of psychiatry. But with each province likely to be responsible for its own regulations, he warns that “the devil is in the details.” Rehm, who is also director of social and epidemiological research for the Centre for Addiction and Mental Health (CAMH), was involved with the creation of a policy framework featuring several “basic principles” – seen as minimum requirements – that aim to protect the public health in the event that cannabis is legalized. Here, we take a closer look at these principles.

#1 Establish a government monopoly on cannabis sales. Set up control boards with a mandate for social responsibility to effectively control consumption and reduce harm. Limit availability by restricting the number of retail outlets and the hours of sale.

“Cannabis should be distributed through government-regulated retail outlets,” says Jenna Valleriani, a U of T doctoral student in sociology who studies legal and illegal cannabis markets in Canada. She suggests a retail model based on Ontario’s government-run LCBO liquor stores, where employees are trained to deal with a regulated product and to ban access to underage or impaired people – as opposed to over-the-counter access at a convenience store, as with cigarettes. This would help ensure that the product is quality-tested, consistent in THC content (tetrahydrocannabinol, one of the main chemicals that produces the cannabis “high”), and supplied only by government-licensed and regulated growers.

The premiers of Ontario and Manitoba support allowing provincially run liquor stores to expand their mandates and inventories to include marijuana, but Valleriani disagrees with selling both substances in one retail outlet. “I would be worried that people – particularly inexperienced users – would think it’s appropriate to mix them,” she says.

#2 Establish prices that are high enough to curb demand but low enough to deter the continuation of a black market. Prices should also help steer buyers to lower-harm products.

We probably won’t be seeing weed on store shelves anytime soon, says Valleriani. It will take time to determine the optimal “Goldilocks” price point: not so low that recreational users will purchase it too frequently, and not so high that buyers will pursue cheaper product on the black market. Ontario’s experience with illegal cigarettes suggests that finding the right price for marijuana will be crucial to impeding illegal sales.

#3 Set a minimum age for buying and using cannabis. Implement penalties for those who sell or supply cannabis to underage youth.

Despite the fact that marijuana is currently illegal, a UNICEF report in 2013 found that 28 per cent of Canadian children aged 11, 13 and 15 admitted to having used marijuana at least once in the previous year – the highest rate of all 29 developed countries in the study. “Cannabis is the easiest drug for young people to get their hands on, easier than alcohol or tobacco,” says Valleriani.

The new regulations will need to include several measures to help ensure that legalization doesn’t lead to greater access for youth. One of these is a minimum legal age to buy pot, which will probably be set somewhere between 18 and 21. Each province will likely determine its own age standards, but some research suggests older is better – even as high

as 25. “An important goal for minimizing harm to youth is to delay use,” says Pat Erickson, a U of T professor in sociology and criminology who has studied the cultural and legal implications of cannabis policy for 40 years. “With a standard in place regarding minimum legal age, parents and teachers can speak to that standard.”

Why is it important to keep cannabis away from youth? Researchers have found a potential link between young people who use cannabis frequently and psychosis – an acute loss of contact with reality that can include delusions and hallucinations. “There is a very strong epidemiological association between cannabis use under the age of 16, heavy use and an increased risk of psychosis in vulnerable individuals,” says clinician-scientist Romina Mizrahi, director of the Focus on Youth psychosis prevention program at CAMH and a professor of psychiatry at U of T.

Vulnerable people include those who have a personal or family history of psychosis, but often there’s no way to tell who may develop psychosis. Mizrahi says that in an extremely sensitive individual, even occasional use may trigger an episode. “Since it’s difficult to know who will become psychotic and who will not, and since the brain is still developing during the teenage years, it makes sense for young people not to mess with the system where cannabis acts in the brain,” she says.

As for those who are caught selling marijuana to underage youth, Valleriani comments that penalties similar to what exist in Ontario for supplying minors with alcohol would seem appropriate – up to a \$200,000 fine and one year in jail for individuals, and up to a \$500,000 fine and suspension of the license to sell cannabis for companies.

She adds that penalties bring up other questions, too. For example: to what extent is the host of a party responsible for ensuring that underage guests don’t consume cannabis? Or, if adult guests consume it, that they don’t drive home? “There’s a lot to sort out,” she says.

#4 Display product information clearly. In particular, products should be tested and labelled for THC and CBD (cannabidiol) content. Curtail higher-risk products, such as those with high THC formulations and products designed to appeal to youth.

Ruth Ross, chair of pharmacology and toxicology at U of T and senior scientist at CAMH’s Campbell Family Mental Health Research Institute, is a leading authority on how the body reacts to cannabis. She has conducted extensive research into the body’s endogenous cannabinoid system, which controls mood, memory, appetite and pain perception. As Ross explains, THC is the psychoactive ingredient in cannabis that, through its effect on the endogenous cannabinoid system, creates the “stoned” feeling. THC causes euphoria, increases appetite (“the munchies”), and mitigates pain and nausea; depending on the dose, it can also induce feelings of fear and paranoia. Ross says there is some evidence

“Nobody wants the ‘Marlboro-ization’ of cannabis”

to indicate that CBD, another compound in cannabis, reduces some of the unpleasant effects of THC. CBD also has distinct pharmacological effects of its own.

A problem, says Ross, is that most of today’s recreational users cannot accurately determine the potency of the product before they use it. Nor can they be assured of its purity; it may contain contaminants such as pesticides and toxic fungi, says Ross. While the ratio of THC to CBD a generation ago hovered around 1:1, with a relatively low percentage of each, today there’s a plethora of different ratios and percentages, she notes, some of them with much more powerful effects on the brain.

With a legal market, cannabis users may gain better understanding of what they’re buying. Still, there is some evidence to suggest that adolescents who are frequent users of potent cannabis may be more likely to develop mental health problems and may perform worse in school, so keeping all products away from youth is a good idea, says Ross. She adds that, due to the small number of good-quality, controlled research studies, it is difficult to make “robust statements” about the potential risks of cannabis use in adults.

#5 Ban marketing, advertising and sponsorship. Products should be sold in plain packaging with warnings about health risks.

While provinces may be thrilled at the extra revenue from a marijuana sales tax, they must guard against the temptation to maximize profits, says Valleriani. We need to avoid the glamorization and commercialization of cannabis through advertising and promotion, she adds. “Nobody wants the Marlboro-ization of cannabis.” A portion of cannabis revenues should go toward public education as well as toward health care and support for harm-reduction services and rehabilitation, she says.

#6 Develop a comprehensive framework to address and prevent cannabis-impaired driving. This should include prevention, education and enforcement.

Pot slows reaction time and alters distance perception, although some users deny it. Jürgen Rehm, who conducted a study involving U of T students who smoked marijuana and then underwent driving tests, says, “You would not believe

how many people say they drive better after using cannabis. But we did objective measures and we showed very clearly their reaction time got worse. Nobody was better.”

In fact, impaired driving is the number 1 cause of cannabis-related mortality and is much more widespread than we might realize – likely causing hundreds of deaths and thousands of injuries in North America every year. Rehm says that in a recent study he did of people coming into the emergency room of Toronto’s downtown St. Michael’s Hospital with traffic-related injuries, more were impaired by cannabis than by alcohol.

Just as it took years to develop accurate breathalyzer tests for alcohol-impaired drivers, it will take time to create effective devices to test for cannabis impairment. This won’t be a blood test – “We don’t want police out there at the roadside with needles,” Rehm says – but most likely a saliva test. This can be done now, but research still needs to determine exactly what THC content indicates a person is unsafe to drive or to operate machinery. “We have to make sure the device is precise enough to withstand potential challenges in court,” he says.

#7 Enhance access to treatment for cannabis use disorders and expand treatment options to include everything from brief interventions for at-risk users to more intensive interventions.

A little-known harm of marijuana is dependence. Although physical addiction has not been proven, about one in 10 users will develop what’s called a cannabis use disorder, manifested by a dependence that adversely affects their quality of life or functioning. (While 10 per cent is significant, the dependence figures for other drugs are much higher: 21 per cent for cocaine, 23 per cent for alcohol and 68 per cent for nicotine.) Each year, at least 75,000 Canadians seek treatment for cannabis use disorders – and that number may rise after marijuana is legalized.

Benedikt Fischer, a senior scientist at CAMH and a U of T professor of psychiatry, says treatment options for cannabis dependence are mostly limited to cognitive-behavioural therapy and other types of counselling. Unlike with alcohol, nicotine and opioids, there are no medications for cannabis dependence. “There are quite a few promising drugs, but we really have to ramp up research because we need more and better treatment options,” he says.

At the other end of the spectrum, Fischer says brief, evidence-based interventions are needed, particularly for young people who may begin experimenting with cannabis and may be at risk for problematic use. These interventions could be discussions with a knowledgeable professional at a doctor’s office or in a community setting or printed materials that provide information about the drug’s risks. Fischer notes that he and colleagues developed guidelines for lower-



“We need prevention campaigns for all age groups around cannabis and driving”



risk cannabis use, similar to those that exist for alcohol, which have been endorsed by the Canadian Public Health Association and other organizations. These include recommendations to use the drug less frequently than three times a week, avoid deep inhalation and not drive within four hours of using cannabis.

#8 Invest in education and prevention programs. These should include general programs, such as to promote guidelines around lower-risk cannabis use, as well as targeted initiatives to raise awareness of the risks to specific groups, including adolescents and anyone with a personal or family history of mental illness.

Prohibition has meant that government funding for cannabis issues is directed much more to the criminal justice system than to health and education to create public education campaigns or harm reduction programs. This often leaves young people to experiment on their own without access to accurate information about cannabis – and youth, especially, are often uninformed about the risks of marijuana use.

The few campaigns that exist typically demonize cannabis use and focus on complete abstinence, says Fischer. What's needed are educational materials that provide proportional information about cannabis use. “If you are using occasionally and you're not driving, then this drug is not likely to cause you any serious harm,” he says. Fischer adds that it's also important for youth to understand the *relative* risks of cannabis compared to, say, alcohol. “The impact of alcohol on brain development in young people is more severe than the impact of cannabis,” he says. “Few people talk about that. The impact of brain damage to young people in Canada from hockey-related injuries is extremely high. Few people talk about that. These relative risks need to be communicated broadly so young people are educated consistently and can make informed decisions.”

Fischer strongly supports the idea of using a portion of the money raised through taxes on marijuana sales to fund interventions and educational campaigns. “We need prevention

campaigns for all age groups around cannabis and driving,” he says. “Most people still don't understand the risks.”

Regulations will also need to cover the supply side of the equation. There are now 27 providers licensed by the government to sell to the 30,000-plus registered medical users. That market may jump dramatically; Health Canada has suggested it could reach half a million over the next decade, especially if covered by insurance plans. The recreational market is also expected to grow significantly. With hopes for an early foot-in-the-door into what will surely be a profitable

industry, there are currently 1,400 applications from would-be producers, such as tech startups, waiting for Health Canada to sort through. The new regulations will need to limit how much influence the licensed companies will have. “It worries me to have only entrepreneurs at the policy table,” says Valleriani. “They are an important stakeholder, but not the only one.”

And what will happen to unlicensed growers, such as individuals who grow a few pot plants for their own use or to give or even sell to friends? That's still a crime under the current laws, which is why some activists are calling for immediate decriminalization. Otherwise, some people may end up with criminal records while waiting for the promised legalization to happen. As it is, upwards of a million Canadians are estimated to be saddled with criminal records for marijuana offences, with tens of thousands of new cases every year (though only a fraction of these result in a conviction at trial or a fine). Enforcing cannabis laws costs Canadians an estimated \$1.2 billion annually.

Not everyone is sold on the benefits of legalization, of course. Dr. Harold Kalant, a U of T professor emeritus of pharmacology and toxicology, has issued a 16-page critique of the CAMH policy framework, questioning, among other things, whether prohibition of marijuana has actually failed, whether it imposes serious harms on Canadians that would be removed by legalization, and whether legalization would eliminate the illicit market in the drug.

Nevertheless, by designing a comprehensive regulatory system for cannabis along with legalization, Canada looks set to become a trailblazer. But the change won't happen all at once, and even after it happens, likely toward the end of the federal government's term, there could be a long period of modifications and amendments. “I doubt we'll get it right the first time, so we should be prepared to evaluate whatever policy the government puts in place and modify it,” says Erickson. “It's going to be interesting times ahead.”

Marcia Kaye (marciakaye.com), of Aurora, Ontario, is an award-winning writer.

All About Alumni

“I bet none of you can trap or skin a muskrat!”

Elizabeth Cranston
p. 51



Tarek Ibrahim

The Air Up There

Tarek Ibrahim wants to make personal flying machines a reality

“SO MANY PEOPLE HAVE CALLED ME CRAZY,” says Tarek Ibrahim (BA 2003 WOODS), chuckling almost non-stop as he speaks of his project to build an inexpensive, personal aircraft for everyday use. “I don’t mind. It’s doable, it really is.”

Ibrahim has hired about a dozen others, mainly engineers and designers, to consult on the project, and they are currently working toward launching an unmanned prototype into the air by this summer, for testing and then assessment by Transport Canada’s regulators. “What surprises me actually is that it hasn’t already been done. When Igor Sikorsky first

tested a helicopter in 1910, he dreamed it would be used as an everyday mode of transportation.”

Last October, at a well-attended TEDx Toronto talk, Ibrahim, 34, articulated the basic aims for his one-person airship: that it be cheap to build and run (about the cost of a car), compact, safe (of course), and take off and land vertically. “This one we’re working on is six feet wide and could fit in your driveway. It also doesn’t need a runway, since its two blades, going in opposite directions, are enough to get it up and down.” In this way, his project differs from the most well-known ones out there: even the tiniest micro-planes need a runway – the pair who famously used jet packs to fly around Dubai last May got a mid-air launch from a helicopter.

Ibrahim’s consistently jokey affect conceals an underlying relentlessness – and the way this dream grew in him and now won’t let him go. His favourite book when he was a boy was *The Way Things Work*, and he used a spare room in his ►



Seventy per cent of new Alzheimer's patients will be women, according to the Women's Brain Health Initiative

Making Women's Grey Matter Matter

Lynn Posluns wants more brain-disease research to focus on females



Lynn Posluns

The organization holds awareness-raising events, and its website and annual magazine share research findings and wellness tips. It also recently held an event aimed at millennials, since, Posluns says, “the earlier you start looking after your brain health, the better the outcome.”

Brain Health is currently partnering with similar organizations in the U.S. and U.K. to support more research into women's brain-aging diseases. Says Posluns: “Looking at this issue by sex and gender is a first for Canada, and it's really exciting, because what that means for women – and for men – is more answers about treatment options and potentially healthier outcomes.” – **SHARON ASCHAIK**

SOON AFTER LYNN POSLUNS (BCom 1981, MBA 1983) began volunteering in 2009 for the foundation of Baycrest Health Sciences, a hospital specializing in geriatric care and brain health, she learned a startling fact: many brain diseases occur more often in women, but most research focuses on men.

Indeed, women are more likely than men to experience depression, stroke and dementia. But no one really knows why because, historically, neuroscientists haven't investigated how sex differences in the brain affect these conditions. “I thought this was worthy of people knowing about, and of raising money to level the research playing field,” Posluns says.

Posluns, who is currently managing director of CedarPoint Investments, launched Women's Brain Health Initiative in 2011.

OVERHEARD



Not everyone can be a ‘Flying Wallenda’ – performing on a tightrope without a net. It can be horribly lonely up there.



Anne Steacy (BA 1976 TRIN), who has donated \$1.5 million to establish the Anne Steacy Counselling Initiative to support students in the area of mental health at Trinity College. *Trinity College News*, Dec. 11



➤ family's Kuwait home as his workshop, dismantling his toys. “We fled during the [first Gulf] War, then I came to Canada at age 16, to study engineering. Instead of going to classes, I built a model airplane in my apartment,” he says. Not surprisingly, he failed out (of St. Mary's University, in Halifax), but did well a couple of years later, when he attended Woodsworth College and specialized in architectural studies. “But many of the buildings I designed were moving, with lots of mechanical parts, like big machines.”

After graduating, he worked for his family's business, building factories around the Middle East – a job he left in late 2014. “This idea, the plane, wouldn't leave me alone. I built a car from scratch, and I thought, ‘If I can do that...’” To date, he's worked with an industrial designer to mock up three iterations and with assorted engineers (aeronautics,

mechanical) to do up specs for the necessary parts. He knows there are challenges, both technical and regulatory, ahead: “I don't believe existing air traffic control systems will be able to handle the extra traffic. Zones will need to be developed outlining altitudes, boundary areas and pathways.”

In aviation terms, he's got minimal financing – just under \$200,000 of his own and his family's money – but maximal tenacity. “I can't let a problem go until I've researched a solution. I never can.” If existing technologies can be combined into an everyday flying machine, why haven't we done so yet? “I've thought and thought about that. I think we've gotten used to big companies like Boeing and GM doing things for us,” he says. “There are challenges ahead – ones I know about, and ones I don't. But we can do this.” The audacity of it all makes him laugh again. Of course. – **ALEC SCOTT**



In the 1970s, Guy Gavriel Kay helped in the editorial construction of J.R.R. Tolkien's posthumously published *The Silmarillion*



Ben Mehl

All the Light We Cannot See

As New York actor Ben Mehl deals with vision loss, he finds brightness amongst the shadows

BEN MEHL (BA 2007 UC) discovered two life-changing things about himself in his graduating year as a drama major: he was likely a good enough actor to make a living at the craft, and he had a genetic disease that could prevent him from even trying.

"I had a role in my first Hart House musical, and it was a magical experience," says Mehl, 31, now a theatre and film actor in New York. "It was where I realized that I could bring joy to people, and that I should keep doing it." But during those performances of the spoof hit *Reefer Madness* something

strange was happening with his eyes. "It was like when a flash goes off and you have that dot in your vision. Except mine never went away."

Diagnosed with Stargardt, a rare form of macular degeneration that causes unpredictable vision loss, Mehl was afraid he would never act again. But he eventually attended New York University's graduate acting program. At the time, he was coming to terms with losing much of his central vision. "I started on a journey of learning what it means, practically and artistically, to be an actor with this disability."

Before grad school, Mehl had also developed blind spots in both eyes. He learned to look an inch above a person's head and use his peripheral vision – which is intact – to see their face and eyes. Mehl keeps a tablet on hand to enlarge text so he can read scripts – and, more important,

he stopped looking at his disease as a liability. "It's actually valuable currency in terms of what an actor's job is – to connect to what it is to be human."

These adaptive skills have helped Mehl land roles in off-Broadway productions, in theatres across the U.S. and in several independent films. He has also conducted drama workshops in prisons and homeless shelters, and, through the 52nd Street Project, created original theatre with inner-city kids – using the beatboxing skills he refined as a member of Onoscatopoeia, the Hart House Jazz Choir.

This year, Mehl hopes to make his directorial debut in a small New York production of a Shakespearean comedy. His sight has been relatively stable for several years. "I don't know how it will progress, but I'm no longer fearful," he says. "I don't have this idea of the way my life is supposed to go, and that my disease is something that will prevent me from achieving that. I'm curious about the infinite spectrum of possibilities." – **MEGAN EASTON**

Children of Earth and Sky



Guy Gavriel Kay (LLB 1978) has a penchant for using fantasy to reimagine famous historical periods, from the political turmoil of the Tang dynasty in ancient China to the religious strife in medieval Spain. His upcoming novel, *Children of Earth and Sky* (which will be released in May), turns to the tumultuous period of the European Renaissance – where people from very different backgrounds find their lives entwined in the face of war.

Kay travelled across Europe – from Venice and Prague to Dubrovnik, Croatia – to explore and research the book's setting. In *Children of Earth and Sky*, the small coastal town of Senjan – which

is notorious for its pirates – was inspired by Kay's time in Croatia and by a friend (and his Croatian publisher), whose remarks about pirates on the Dalmatian Coast during the Renaissance helped set the stage.

The genre of "historical fantasy" allows Kay to incorporate his fascination for a time period with his writerly imagination – and he hopes that his fantastical world will keep readers awake at night, anxious to see the story unfold. But, he adds, "I want them to remember the books long after they've read them. I want to entertain them and stay with them."

– **NADIA SIU VAN**



The largest model railway in the world is Miniatur Wunderland – with 15.3 km of track – in Hamburg, Germany

LOOKING BACK

Monica Adair (MArch 2005)

What was your defining moment at U of T? For one architect, it was a design competition that taught her the importance of play



WHEN I WAS IN MY LAST YEAR at U of T, the Daniels Faculty of Architecture, Landscape, and Design’s café held a design competition. My now-husband Stephen Kopp (MArch 2005) and I were in the same year but had never worked together, and we thought: Let’s try this out. Mugs were always scarce at the student-run coffee shop, so we decided to create “Your Mug Wall” – a grid of cubbyholes, each containing a student’s mug shot, along with their personal mug. We wanted to create a sense of ownership, and of being part of a community.

We came second, but we had fun. The competition provided a lesson in play, and showed us what you can accomplish when you’re enjoying yourself. We’ve both carried this into our practice, Acre Architects in Saint John, New Brunswick, which we launched in 2010. Our first project was a colourful art installation at a bus stop, meant to shine through the frequent fog.

At architecture school, you spend long hours together – not only talking about ideas, but getting the chance to be critical and supportive, so you get to know people in depth. I think that’s unique. And it’s really nice that our partnership, in life and in business, was founded on a simple moment at U of T.

Small is Beautiful

Civil engineer David MacLean (BASc 1985) designs and develops roads, bridges and even stadiums – and you could tour everything he’s built in about five minutes. That’s because MacLean creates small-scale models – and right now, he’s designing a tiny Toronto; his first step to miniaturizing the entire country.

Our Home and Miniature Land will capture Canada’s most well-known buildings and geographical features through interactive 3-D displays. The goal is to open as a museum in Toronto in the summer of 2017 – Canada’s 150th birthday – with exhibits of Toronto, Hamilton, Ottawa and Niagara, and to eventually grow into a 20-exhibit, 12,000-square-foot display. The project is under construction at a warehouse in Mississauga. “The fun part is dreaming this up – making something that’s interesting, educational and visually appealing, but that is also buildable,” says MacLean.

MacLean and his team of model-makers, illustrators, engineers and carpenters have already created a three-metre tall CN Tower with moving elevators, a Rogers Centre with a retractable roof, and landmarks such as the Air Canada Centre, St. Lawrence Market and Distillery District. “[The museum] will be something this country has never seen,” says MacLean.

– SHARON ASCHAIK

Read a longer version of this story at magazine.utoronto.ca.



Alumnus David MacLean is creating a miniature Toronto



Maggie Helwig has been in jail five times and arrested approximately 100 times for her social activism, according to the *Globe and Mail*



Maggie Helwig

FIRST PERSON

On Art and Faith

Artists often understand more about sacrifice than many religious people, writes Maggie Helwig

SOMETIMES PEOPLE ASK ME WHY I decided to become an Anglican priest relatively late in my life (I was ordained a priest in 2012, when I was 50 years old), but that’s not really a question I can answer in the form in which it’s asked – not only because I’m not sure I ever *decided*, as such, to do this but mostly because I was aware of the drawing towards this, the vocation to priestly ministry for about three decades, since I was baptized at the age of 19. The only thing I’ve been aware of for longer is my vocation as a writer, which has been a part of me from the earliest point at which I could form coherent thoughts about myself, and which was my first and most important occupation for most of my life.

And I think that none of this is accidental; I think that being a priest and being a writer are vocations which have some deep similarities. First of all, both are the occupations of generalists; they require you to know a little bit about everything. As a writer, I have had to learn about simultaneous interpretation, the physiology of gunshot wounds, international criminal law, how much teenage girls used “random” in 2002, and how to climb onto the roof of Toronto’s City Hall. As a priest, I have needed to know about basic first aid, contemporary trends in postmodern theology, the best route

to the wildlife hospital, patristic Biblical interpretation, how to get wax off a shirt, the poetry of Philip Larkin, the locations of all the emergency shelters in downtown Toronto, and how to anchor a bronze statue in the ground, among many other things.

But more significantly, both are a calling to profound responsibility, to a stringent discipline of attention and accuracy; it is essential to notice the world, in all its complicated detail, and to notice those around us, in their even greater complexity. And both are governed (or should be governed) by deeply countercultural values that require us to set aside ideas about success or “importance.” Both link us to communities that exist across space and time, communities of language, thought and faith. And both will compel us to go into some of the darkest places of the street and the psyche, knowing that we can probably do little good there, but that we must, at the very least, bear witness.

I have often thought in fact, that writers – artists in general – understand much more about sacrifice, about what you must give up to answer a calling, than most religious people in our society these days ever do. Voluntary poverty, obscurity and the daily hopeless struggle to create some kind of meaning out of the random fall of particles; this is what being an artist is, almost necessarily, about. It should be what being a Christian is about, but I’m not sure most modern Christians are very comfortable with that idea. Maybe we should take some lessons from the artists in this.

Sometimes I think I’m best known not as either a priest or as a writer, but as a social justice activist. It shouldn’t be newsworthy that someone who’s involved in faith and the arts is also working on issues of urban poverty or environmental justice or violations of indigenous treaty rights. It ought to be perfectly usual, because none of these things are separable from faith, or from that care about the world which art involves. It should flow necessarily out of the careful attention that both writing and faith demand: Writers – and priests – are committed to a discerning and precise sort of mindfulness which implies responsibility. We must be aware of the world and its languages, both spoken and unspoken, and because of that we can’t help but be aware of the pain of the world. Some writers address that pain through their writing only, through the attempt to preserve some kind of vision in the ruins, to construct something upon which to rejoice out of the wreckage. For some reason I’ve always needed to address it through political action as well. Being a priest, too, takes you into the heart of that pain, and the need to speak to it, whether that speaking is comfort to the afflicted, or affliction to the comfortable, or a bit of both.

Rev. Maggie Helwig (MDiv 2011 TRIN) is the rector of the Church of St. Stephen-in-the-Fields in Kensington Market. Her most recent novel is *Girls Fall Down*.



Judy Matthews' great-grandfather, E.J. Lennox, designed Casa Loma, Old City Hall and the Bank of Toronto

60 SECONDS WITH

Urban Angel

Judy Matthews talks about her and her husband's \$25 million gift to the Gardiner



SHE'S BEEN CALLED both “bulldog” and “urban angel.” When **Judy Matthews** (BA 1978 TRIN) gets tough about transforming Toronto, the results appear heaven-sent. An urban planner, activist and fundraiser, Matthews – along with husband Wilmot (BA 1958 TRIN) – has been a driving force behind such philanthropic projects as the Evergreen Brick Works, ArtScape and the beautification of St. George Street. Recently, the couple donated \$25 million to transform a 1.75-kilometre stretch underneath the Gardiner Expressway into a linear park. Matthews recently spoke with **Cynthia Macdonald**.

A park running below an expressway – sounds like a novel concept! Because of the growing population in cities, there's no land available for parks. More and more, cities are finding neglected, vacant spaces and reimagining them. Has it been done before? Yes, in Miami, San Francisco and Washington, as well as Toronto. New York's just identified 700 miles of “under-elevated” space that can be developed. It's a whole new

spatial ecosystem, and we're just figuring out how to use it.

Urban spaces can either draw people together or divide them. What elements make the former happen? You need spaces with sun and places with shade, as well as wind protection. Also, places to sit are very important. Food is always a wonderful thing, and a real connector. These spaces don't have to be green. Many great gathering places are more hard-edged and urban, but can still be welcoming. So this project, which is still to be named by the public, will have all those elements and, in addition, will have some fabulous programming. We want to hear from surrounding communities about how they would like to use this space and what they would like to find there. There are over 70,000 residents in the area, and this will be their living room.

You're involved in so many aspects of urban renewal – donating, fundraising, design and consultation. What have you learned along the way? I've learned it's crucial to have an ongoing advisory group to these types of projects, to ensure that the same high standards are maintained after the initial work is done. And it's important to have a clear completion date in mind. This seems to sharpen people's focus and sense of purpose. With St. George Street, we said it would take a year, and it did. The Gardiner project is on a much bigger scale, but by July 1st 2017 – Canada's 150th birthday – we want it to be substantially complete.

Milestones



David Yee

David Yee, who graduated from U of T Mississauga's theatre and drama studies program in 2000, is the winner of the 2015 Governor General's Award for Drama. The actor and playwright won for his play *carried away on the crest of a wave*, which focuses on people affected by the 2004 Indian Ocean tsunami. Yee is also artistic director of fu-GEN Asian Canadian Theatre Company.

Several U of T alumni have been named to the Order of Canada, this country's highest civilian honour. Two alumni were promoted to the highest level of companion: **Margaret MacMillan** (BA 1966 TRIN) – provost emeritus of Trinity College and author of such books as *The War That Ended Peace: The Road to 1914* – was honoured for her work in international relations history. **Atom Egoyan** (BA 1982 TRIN), director of *Ararat* and *Exotica*, was promoted for his groundbreaking contributions to film and for mentoring and showcasing Canadian artists. **Brian Levitt** (BASC 1969, LLB 1973), vice-chair of Osler, Hoskin and Harcourt, was named an officer for his service to the legal and business communities, and for his support of the arts. Named members were novelist **Rohinton Mistry** (BA 1982 WOODS), author of *A Fine Balance* and *Such a Long Journey*, **Patricia Cranton** (PhD 1976 OISE) for her work in adult education and transformative learning, and **Douglas Ward** (BA 1961 TRIN) for his contributions to radio broadcasting and for his efforts to improve food security in developing countries.

IN MEMORIAM

Elizabeth Cranston

“Lib” made excellent use of her 102 years, serving as a professional social worker



Elizabeth Cranston, second from right, at her U of T graduation in 1934

SOME PEOPLE MERELY LIVE through their times, but Elizabeth “Lib” Cranston (BA 1934 UC) did what she could to change hers. Whether sourcing clothes for families during the Depression, volunteering for the Red Cross during the Second World War or helping to establish a workshop for adults with cerebral palsy in the late 1940s, Cranston made excellent use of her 102 years. Yet even though she was a professional social worker, Cranston’s valuable work went largely unpaid; in those days, the workforce was often inhospitable to married women.

Not to say that in any other way, Cranston was at all typical. Her father, a graduate in mining from U of T, worked at the silver mines in Canada’s North. Cranston grew up in Ontario’s

backcountry, snaring forest animals for pocket money and skiing to school. At a society dinner party many years later, she discomfited guests with the statement: “I bet none of you can trap or skin a muskrat!”

She went on to attend U of T at a time when the majority of undergrads were male, graduating in 1934 with a degree in mathematics. Though she also earned teaching certificates from the Ontario College of Education, Cranston eventually found her true purpose volunteering for Toronto’s Neighbourhood Workers Association – originally a private charitable organization. Studying when she could, she next became certified as a social worker.

At the height of the Depression, Cranston found temporary work for families, and helped in other ways too. Her daughter Ann Blair recalls: “One family wanted to sing at church, but didn’t have any decent clothes – so my mother got her boyfriend to give one of his suits to the man.” She also found other clothes so that the family could both attend choir and take their children to Sunday school.

While her husband, Fred, fought overseas during the Second World War, Cranston collected blood for the Red Cross, and obtained her chauffeur’s license to work as a driver with the St. John Ambulance service. After Fred’s safe return, the family (including son James) settled in Toronto, where Cranston – in conjunction with old friends from U of T – helped set up Corbrook, a workshop for adults with disabilities that continues to this day. She later volunteered with the Victorian Order of Nurses, as well as Ottawa’s May Court Club.

“Every time she left a volunteer job, they had to pay someone to do it after her,” says Blair. “I said, ‘Why didn’t you ask to be paid?’” Back in the day, it was not Lib Cranston’s expectation. But if she did not profit, countless others most certainly did. – **CYNTHIA MACDONALD**

IN MEMORIAM

Jack Hallam



Jack Hallam (BA 1952 UC, MSc 1954, PhD 1974) was one of the first gay “grown-ups” I met. It was 1968. I was 24, recently out of the closet and a noisy gay liberationist. He was 40 (which seemed ancient), and careful. He had to be – he was a teacher when we met, and it was an unforgiving era. Still, he did his best to create a space for young firebrands like me. He gave me a rent-free room in his apartment. Helped make me aware that gay life existed before 1968 – was full of stories, hosted the occasional party that I and another young friend would attend. We were always privately amused at the sight of men in their forties and fifties actually slow dancing together, like in high school. We didn’t realize he was opening the door for us to the social history of older, closeted gay men.

I think he was frustrated that he couldn’t be as public with his sexual politics as he could with other social issues dear to his heart. And then suddenly, he could. Retired, the beneficiary of a large estate, living in a supportive environment on Salt Spring Island, he became the activist’s activist, gleefully funding causes ranging from his \$100,000 gift to the Mark S. Bonham Centre for Sexual Diversity Studies at University College to a bequest to the Canadian Lesbian and Gay Archives to scholarships for indigenous students in northern Ontario.

Jack Hallam, in the last decade of his life, finally had the resources to do what grown-ups should always do: open the door to the past, while keeping a keen and generous eye on the future. – **GERALD HANNON**



Hart House's COTC Ball was called "the finest formal dance on campus"

SOME ENCHANTED EVENING

C. 1948

How the COTC Ball brought sparkle to Hart House

The advertisement was enthusiastic: "Grand March! Pipe Band! Monte Carlo!" In what is believed to be January 1948, the student cadets of the U of T chapter of the Canadian Officers Training Corps (COTC) dressed in their formal best to parade past a floodlit tank display, play roulette with fake money and dance the night away at Hart House. This was no ordinary celebration. It was the first time U of T's COTC had gathered socially for six years.

The COTC had been launched in 1912 as an army reserve program; members trained as officers while completing their university studies. The U of T chapter followed two years later and, in 1931, cadets began throwing a lavish ball each winter at Hart House – featuring military traditions such as buglers to announce the dances. But in

1943, as the wartime mood grew more serious, the dance was temporarily cancelled.

The COTC subsidized the balls to keep costs low. In the '30s, members' tickets were \$2 per couple – the same price as a tuxedo rental and less than a pair of fancy evening gloves. The schedule was formal – foxtrots and waltzes – though in 1938, the *Varsity* reported, students snuck in the latest dance craze: they were "granted the dancing floor to indulge in an orgy of 'Truckin' and Shag.'" Other entertainments, such as square dancing, comedians and even a synchronized swimming exhibition, were featured in the '40s and '50s.

The last dance was called in 1968, when COTC was disbanded, ending the ball tradition along with the regiment. – JANET ROWE

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Please note that lecture programming is subject to change and additional lectures may be added. For the most current Spring Reunion Stress-Free Degree lecture information, please visit the events page at springreunion.utoronto.ca.

Friday, May 27

12:30 p.m.

Nutrition, Genetics and Athletic Performance
Dr. Ahmed El-Soheby

Disruption Ahead: Technology for Aging and Health Care
Prof. Alex Mihailidis

LGBTQ Youth in 2016: New Challenges and Persistent Old Ones
Prof. David Rayside

1:45 p.m.

Toronto: Physical Culture Capital of the World
Prof. Peter Donnelly

How Green are Green Roofs?
Prof. Liat Margolis

Aboriginal Knowledges: Improving Education for All
Prof. Suzanne Stewart

Nature vs. Nurture: The Future of Computing
Prof. Daniel Wigdor

6:15 p.m.

Attachment: The Science of Closeness and Trust
Prof. Geoff MacDonald

Life, Death and Sacrifice in the Ancient Andes
Prof. Edward Swenson

Saturday, May 28

9:45 a.m.

How Star Wars Matters
Prof. Anne Lancashire

Food Trucks in Museums: Dining with T. Rex
Prof. Irina D. Mihalache

Art Nouveau: Decadence and the Limits of Form
Natalie Ribkoff

2:45 p.m.

Engineering Today
With speakers from the Faculty of Applied Science and Engineering

Why Do Whales Breach? How Whales Respond to Human Activity
Prof. Christoph Richter

What's the Story with Your Home?
James Thomson

4:00 p.m.

Smokestacks & Tailpipes: Air Pollutants and Their Impact on Canada
Prof. Greg Evans

Children and Caring: Improving Pro-social Behaviour and Reducing Violence
Prof. Tina Malti