

Onwards A president's valediction / **Eyes Everywhere** When governments watch / **First Contact** Life beyond Earth?
Duddy and Me The making of Ted Kotcheff / **Grousing with Grace** The art of complaint / **Flights of Peace** Aid from the air

UofT Magazine

AUTUMN 2013



A Better University

At the close of David Naylor's presidency,
U of T's standing has never been higher

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Autumn 2013

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Canadian filmmaker Ted Kotcheff (right), with actor Richard Dreyfuss (centre) and author Mordecai Richler in Montreal, 1973

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How a great book and an unlikely friendship shaped the career of a Canadian film master

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Departments

Owning a bike has always been as essential to me as owning a pair of shoes

– Ali Burke (MSW 2009), who is cycling 27,000 kilometres, from Alaska to Argentina, p. 64



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Letters



Until we put a price on damaging the environment, most of us won't make the tough choices necessary to do the right thing

ED WATKINS
BASC 1975, TORONTO

Varsity Pride

I have *never* been prouder to be a University of Toronto alumna than after reading the Summer 2013 magazine. Congratulations on a superb issue. The truly amazing range of projects described in this issue is important for Canada and the world-wide knowledge community. You have got a reader – and a donor – for life.

AMY SOLTYS PAGET
MLS 1978, LAFAYETTE, INDIANA

Faceless Workers

The article “Housing First” (Summer 2013) left me with some unanswered questions. Who were the community partners who did the face-to-face groundwork with the people who required counselling and housing assistance? Why is there no mention of the organizations involved with the At Home/Chez Soi study here in Toronto? This research is not possible without the hard work of faceless, poorly paid, mostly racialized front-line workers who deserve to at least be acknowledged with a reference to their community agency employers. U of T can and should do better.

YOLA GRANT
MSc 1980, TORONTO

Dr. Paula Goering, lead author of the At Home/Chez Soi study, responds:

It was an omission on my part not to

make sure that credit was given to the community-service providers and to the participants and persons with lived experience who have made the study possible. In Toronto, the service agencies included Community Occupational Therapists Associated, Toronto North Support Services, Across Boundaries, Housing Connections and the City of Toronto. A Persons With Lived Experience Caucus also contributed a great deal to the project. In each site there were similar partners who are too numerous to be named. Proper acknowledgments should also include the Centre for Research in Inner City Health and the leadership team from the Mental Health Commission of Canada: Cameron Keller, Catharine Hume and Faye More.

Unthinking

The illustrations accompanying your poll, “What are your plans after graduation?” (Summer 2013), feature a pregnant woman and a woman carrying a tray of coffee cups to represent the percentage of new grads with plans to do, respectively, “other” and “volunteer/do an internship.”

What were you thinking?

MARY-ELLEN BIETH
BSc 1975, BEd 1976, TORONTO

Traffic Troubles

I was interested to read about the

intelligent traffic system being developed by Prof. Baher Abdulhai's team at the University of Toronto (“Making Traffic Smarter,” Summer 2013), but I do not believe it will materially benefit Toronto or any other large city for a simple reason: every network with finite capacity has bottlenecks. There may be multiple bottlenecks, but an intelligent traffic system will simply move them. A simpler, greener and less expensive solution is to reduce the number of vehicles in Toronto.

DICK SWENSON
WALLA WALLA, WASHINGTON

Prof. Abdulhai responds:

Traffic congestion occurs when demand exceeds capacity, anywhere, any time. Yes, there are multiple bottlenecks, and, yes, a comprehensive solution must manage both demand (by encouraging transit use, as well as travel at less congested times using less congested routes) and supply (by enhancing the efficiency of existing infrastructure such as intersections and freeway on-ramps). The new MARLIN adaptive traffic signal control is but *one* of the supply management solutions. And although one technology can never be a panacea, our research has clearly shown that we can quite significantly reduce delays at intersections.

Memories of Regent Park

It was wonderful to read about the changes occurring in “The New Regent Park” (Spring 2013). In 1952, I was a recent graduate of U of T's School of Social Work and working at the Moss Park office of the Neighbourhood Workers Association. These were the days when many of the nearby houses had leaky pipes and bugs.

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Men sometimes deliberately broke store windows so they could be put in jail overnight, where they would get a good meal. There was no organized daycare, so mothers had to stay home unless a neighbour could help. The new residents' programs should certainly improve the quality of life in the neighbourhood. Thank you for the informative article; I thoroughly enjoyed it.

MORAGH STROUD
BSc 1952, WILLIAMSVILLE, NEW YORK

A Carbon Tax is Necessary

I read Ken Stouffer's letter to the editor about climate change (Spring 2013) with dismay. There is virtually universal agreement among scientists that human activities are affecting the global climate. Recent dramatic reductions in polar ice, the Greenland ice sheet and glaciers worldwide leave no doubt that change is occurring. All that remains to debate is the extent and speed at which future changes will occur.

I strongly recommend reading *Storms of My Grandchildren* by James Hansen, formerly the chief climate scientist at NASA. In his book, Hansen explores human-induced climate change in detail, and describes the American government's attempts to muzzle him as he tried to make people aware of the coming catastrophe. For a quicker, lighter read, I recommend Climate Central's *Global Weirdness*, which clearly sets out the facts about climate change and the range of possibilities that result from these facts.

Mr. Stouffer seems most concerned about a carbon tax because he doesn't want to pay it. The carbon tax in British Columbia was offset by a reduction in the payroll tax. This leaves individuals with the opportunity to reduce their tax burden if they take steps to reduce their carbon footprint. Until we put a price on damaging the environment, most of us won't make the tough choices necessary to do the right thing for future generations.

ED WATKINS
BASc 1975, TORONTO

Or Not...

Further to Ken Stouffer's letter in the spring issue, a critical climate fact that I have yet to see in articles by climate alarmists – but which is even acknowledged by the International Panel on Climate Change – is that the total load of carbon dioxide in the atmosphere is about 210 billion tonnes, of which a mere seven billion, or less than five per cent, is contributed by humans and other animals. And yet we're accused of being responsible for the climate. The alarmists have brought a whole new meaning to the term "political science." What has happened to scientific objectivity and truth?

While there may be at least anecdotal evidence of global warming, human contribution is marginal at most. Furthermore, even if we could affect climate we won't, because we're not going to give up electricity, gasoline and heating fuel, the vast majority of which is produced around the world with coal, oil and natural gas.

The scientifically uninformed public, journalists and politicians have been hoodwinked into wasting billions. As a taxpayer who hates to see my money go down a drain, a change in perception can't happen soon enough.

GERALD CRAWFORD
BASc 1956, MISSISSAUGA, ONTARIO

Murderous at Heart

Regarding "Nightmare in Nanking" (Winter 2013), perhaps Diana Tso's play could be shown in Tibet where Chinese soldiers have committed atrocities against the Tibetan people.

I say this seriously, not facetiously, as her work might encourage empathy among the soldiers with their victims and lessen the violence.

The playwright herself is aware of the universal nature of her play when she cites its relevance to Turkey and the Armenian genocide.

Alas, in the course of our human history, there are few nations who have not suffered atrocities and even fewer who have not inflicted them. There is clearly something murderous at the heart of the human psyche with which we have yet to reconcile.

G. VALERIE WHELAN
BA 1976 TRINITY, MA 1984, TORONTO

Corrections

On the back cover of the summer issue, honorary graduate Paul Krugman was incorrectly identified as an alumnus of the University of Toronto. In fact, he earned a BA from Yale University

and a PhD from MIT.

The sub-headline for "Supporting African Scholars" (Summer 2013) should have named MasterCard Foundation as the source of a donation to U of T, not MasterCard.

In the Q&A with David Berkal accompanying "Backpacking with a Purpose" (Summer 2013), his last answer, about his proudest moment, should have read: "Being selected by my peers as valedictorian of the Next 36 Entrepreneurial Leadership Institute."

U of T Magazine regrets these errors.

WRITE TO US! Got an opinion about an article? *U of T Magazine* welcomes letters at uoft.magazine@utoronto.ca. Not every letter can be published due to space constraints, and those that are published may be edited for clarity and length.



AMMAR IJAZ
Psychology Student
Hart House Employee
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Onwards

“I leave office feeling both fortunate and humbled to have been part of the stewardship of this great good place”



The view from the president's office is one for the ages. Three tall windows look over King's College Circle to the Romanesque architecture of University College. Between Simcoe Hall and UC, the front campus is sometimes a peaceful expanse but more often buzzes with activity. Summer brings a younger crowd from Camp U of T by day and friendly baseball games in the early evenings. Fall, winter and spring see students crossing the field on their way to and from classes, along with the seasonal cycle of intramural sports. And for three weeks in June, new graduates and family members gather joyously around the big white tent on the southwest corner of the field, celebrating one of life's great milestones.

As my term winds down this fall, I have been taking in that view with a few pangs of nostalgia. Mostly, however, I feel very grateful for the privilege of working with so many extraordinary people in the immediate and extended U of T family over the last eight years. There is no network in Canada – indeed, there are few worldwide – that can match the diverse backgrounds, roles, interests and talents of the 20,000 faculty and staff, 80,000 students, 525,000 alumni and countless other supporters and partners across the globe who are linked in some way to our university.

Today, Toronto is the clear leader among Canadian universities. And in one assessment after another, it is also Canada's strongest global contender in a world where the pipeline of well-educated people with great ideas is the most important natural resource of all.

Our standing has arisen from the efforts and accomplishments of successive generations who have been part of the university community in distinctive ways. Fortunately, U of T continues to be blessed with faculty who are boundlessly creative, with staff whose dedication is immeasurable

and with brilliant students drawn increasingly from every corner of the globe. It hardly needs stating, therefore, that any progress we have made in recent years is a function of distributed leadership stretching into every corner of the university's three campuses and all the other sites – not least many world-renowned hospitals – where faculty, staff, and students gather and learn.

None of that progress would have been possible without the loyalty and vision of so many alumni and friends. From them we have received untold hours of volunteer time and record-setting levels of philanthropic support. Indeed, philanthropy has lifted every part of U of T, and, perhaps most importantly, helped to keep the university open to meritorious students regardless of means.

This last thought takes me back to the president's office – and then back in time. In recent weeks, I have been boxing up books, organizing files and deciding what to do with the memorabilia that had spread from the mantelpiece to almost every flat surface in my office. Only one item of furniture, however, actually needs to be moved out: my father's small oak desk dating from the 1930s. Its presence there – and previously in the office of the dean of medicine – is not without some irony given the relevant history.

Thomas Lachowitz and Edna Aziz were both born in Ontario almost exactly 100 years ago. Edna's father had been part of the wave of Christian immigrants from Lebanon and Syria that began towards the end of the 19th century. He settled in eastern Ontario and worked between farms and stores as a fruit wholesaler. Tom's father was part of another group that sought refuge and opportunity in Canada. He came here from the Jewish ghetto of Lvov near the Polish-Ukrainian border, and eventually found work driving a horse-drawn milk cart in Toronto.

As was the custom in those days, Tom's and Edna's mothers were both homemakers. And as remained the norm, although Edna won top honours at her high school, university was never considered. In 2013, by way of happy contrast, 56 per cent of our students are women.

Tom was the only one of six siblings to attend university. He registered at UC, hoping to pursue a career in medical research. Along the way, he adopted a new surname. Short of cash and working full time, Tom failed a course in second year, managed to make it up over the summer and was admitted to medicine. He dropped out in his first year to stay afloat financially, and never returned – a story that, I am again happy to say, would have a very different ending today.

There was, in any case, another beginning. Tom and Edna eloped in 1940. All four of their children eventually earned PhDs and have taught at Canadian universities. Three came to U of T as undergraduates. One never really left – and is today somewhat baffled to be writing these words at 93 Highland Avenue, the residence of eight successive presidents of this nation's finest university.

I share this narrative precisely because it is unremarkable. With countless variations, many involving significant sacrifice and struggle, this story has been repeated through the decades in describing the intergenerational path of a high proportion of U of T alumni and their families. The ending – or beginning, if you will – plays out each year at Convocation Hall as thousands of our newest graduates come on stage before their proud family members, friends and spouses. And while these varied stories are especially poignant and uplifting in this nation of immigrants, a similar narrative of aspiration and opportunity recurs for students from every imaginable social, economic

and cultural background. Indeed, it recurs at universities and colleges around the world.

Therein lies the enduring magic of higher education. One sees it as undergraduate students grow from awkward teenagers into impressive young adults, and in the dazzling development of students in our graduate and professional programs. Listening to the reflections of our alumni, I have been struck repeatedly by the impact of their university years on the arc of their lives. And to affirm the power of this educational magic and its enduring relevance, one need only consider the stellar accomplishments of our alumni in more than 180 countries who are doing so much to make the world a better place.

This impact on the world will clearly continue for a very long time. Our university, founded in 1827, is a mere teenager compared to some sister institutions ranging from 500 to more than 800 years old. It is accordingly a very safe bet that, 186 years from now, the University of Toronto will still matter to Canada and the world – and it will continue to be lifted by the cycle of renewal and optimism that begins with each new wave of students, alumni, staff and faculty.

Part of that renewal, of course, is leadership succession. I look forward to supporting the university's 16th president, Meric Gertler – an outstanding individual who has been one of our best and brightest for over three decades. And as U of T's 15th president, I leave office feeling both fortunate and humbled to have been part of the stewardship of this great good place. For that privilege, and for a lifetime of wonderful memories, I will always be deeply thankful.

Sincerely,
David Naylor

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TO NOVEMBER 14

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Alumni

November 13 and December 11 Toronto

Skule Lunch and Learn Speakers Series is a monthly luncheon and talk for engineering alumni. \$30. 12–2:45 p.m. Toronto Plaza Hotel, 1677 Wilson Ave. Tom Vosper, 416-946-0566 or tomv@ecf.utoronto.ca. To register: alumni.utoronto.ca/skulelunchandlearn.

November 14

Toronto 2nd Annual University College Alumni of Influence Awards.

Awards gala in celebration of distinguished University College graduates – from artists and athletes to humanitarians and scientists. \$150. 6 p.m. The Fermenting Cellar, 28 Distillery Lane. For tickets and information, please phone 416-978-7416 or visit uc.utoronto.ca/aoi.

November 18

Calgary Calgary Skule Alumni Reception.

This reception allows Skule graduates and friends to reconnect and learn about the latest developments at Skule. There are more than 500 Skule alumni in Calgary. Free. 6–8 p.m. Calgary Petroleum Club, 319 5th Ave. SW. For more information, please contact kblanch@ecf.utoronto.ca.

November 22

Beijing

Special reception for alumni and friends, co-hosted by U of T president Meric Gertler and Guy Saint-Jacques, Canadian ambassador to China. Time TBA. Four Seasons Hotel, Beijing, 48 Liang Ma Qiao Rd., Chaoyang District. Michelle Poon, 852-2375-8258, ask@utoronto.com.hk or alumni.utoronto.ca/events/regional

November 23 to December 3

Asia Pacific

Skule Comes to Asia Pacific. Join Dean Cristina Amon and fellow Skule alumni for events in cities across Asia Pacific. For a schedule: jim.dawson@utoronto.ca or alumni.engineering.utoronto.ca.

November 24

Hong Kong

Asia Pacific Graduation Ceremony

for alumni who graduated in 2011, 2012 and 2013. 11 a.m. Ritz-Carlton, International Commerce Centre, 1 Austin Rd. W., Kowloon. 416-978-2368, teo.salgado@utoronto.ca or alumni.utoronto.ca/apgc2013

November 25

Hong Kong

President's Reception, hosted by

U of T president Meric Gertler, for alumni and friends. Time and location TBA. Michelle Poon, 852-2375-8258, ask@utoronto.com.hk or alumni.utoronto.ca/regional

December 14

Washington, D.C.

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Exhibitions

To Nov. 14; To March 8

UTAC

To Nov. 14: A Thousand Works in Eighty Spaces: The Art on Campus

Juan Zamora's "The dead pigeon with its shadow alive."
Part of the *You Cannot Kill What Is Already Dead* exhibition at UTSC's Doris McCarthy Gallery



Program. This program enlivens the university's public spaces with artworks from the U of T Art Collection. The exhibition highlights works within the collection. **To March 8: Framing Narratives: Renaissance to Modernism** features works by major artists within the Western canon, from the 1500s to the 1940s. Drawn from UC, the Malcolme and U of T art collections. Free. Tues. to Fri., 12–5 p.m., Wed., 12–8 p.m., Sat., 12–4 p.m. 15 King's College. 416-978-1838, utac.info@utoronto.ca or utac.utoronto.ca

To December 20
Thomas Fisher Rare Book Library
"Chevalier du Bracelet": The Illustrations and Designs of George Barbier. An exhibition of books drawn from the Thomas Fisher collections. Free. Mon. to Fri., 9 a.m.–5 p.m., Thurs, 9 a.m.–8 p.m. 120 St. George St. 416-978-5285 or library.utoronto.ca/fisher/exhibitions/current.html

To January 25
Doris McCarthy Gallery, UTSC
You Cannot Kill What Is Already Dead features works based on fear of the unknown and the paranormal, with a focus on the zombie phenomenon. Free. Mon. to Thurs., 11 a.m.–4 p.m., Wed. to 8 p.m., Sat., 12–5 p.m. 1265 Military Trail. 416-287-7007, dmg@utsc.utoronto.ca or utsc.utoronto.ca/~dmg

Lectures and Symposia

November 4
Donnelly Centre
Partnership for Excellence: Medicine at the University of Toronto and Academic Hospitals by Edward Shorter. Attend the launch of Shorter's new book, which details the Faculty of Medicine's history. Followed by book signing. Free admission, but RSVP required at alumni.utoronto.ca/booklaunch. 5:30–7 p.m. Atrium, 160 College St. 416-978-7142 or medicine.rsvp@utoronto.ca

November 6 to 27
Faculty Club
Senior College Weekly Program runs September through April. One-hour presentations followed by Q&A. **Nov. 6: Milton Charlton** on natural nerve toxins. **Nov. 13: Jon Cohen** on new ways to measure technical change. **Nov. 20: David Foot** on demographics. **Nov. 27: Bernie Frolic** on political developments in China. Free, but RSVP. 10 a.m. 41 Willcocks St. 416-978-7553, senior.college@utoronto.ca or faculty.utoronto.ca/arc/college

November 22
UTM
2nd Annual Countdown to Success. Speaker: Amanda Lang, anchor of the *Lang & O'Leary Exchange* on CBC and author of *The Power of Why*. Free. 5–9 p.m. (Speaking portion from 6:45–8 p.m.) RAWC, 3359 Mississauga Rd. N. Register at utm.utoronto.ca/management.

Music

November 1, 8, 15, 22 and 29
Hart House
Music events. Nov. 1: The Gabriel Palatchi Band plays a mash-up of jazz, tango and Klezmer. **Nov. 8: Tuluum**, featuring steel-pan player Hameed Shaqq, delivers a unique jazz experience. **Nov. 15: Jazz singer Carlo Berardinucci. Nov. 22: Jim Lewis Orchestra.** Lewis is a trumpet player and lecturer in the U of T jazz studies department. **Nov. 29: Hart House Jazz Ensemble** performs big band music, new commissions and jazz arrangements. All events are free (no advance tickets). 9 p.m. Arbor Room, 7 Hart House Circle. 416-978-2452, inquiries@harthouse.ca or harthouse.ca

November 14
Walter Hall
Nimmons'n'90. A musical bash to celebrate the 90th birthday of Phil Nimmons, director emeritus of the jazz program. Featuring the U of T Jazz Orchestra, Nimmons

and David Braid. Admission by donation. Proceeds to benefit the Noreen and Phil Nimmons Entrance Scholarship in Jazz Performance. 7:30 p.m. 80 Queen's Pk.

November 25
Walter Hall
World Music Concert. An evening of Balinese gamelan and dance led by Putu Evie Suyadnyani and Vaughan Hatch, founders of the Mekar Bhuana Conservatory in Bali. The concert will include traditional court, ritual and entertainment repertoires, and will feature U of T's Gamelan Semar Pegulingan orchestra. Free. 7:30 p.m. 80 Queen's Pk.

November 28, 29 and 30 and December 1
MacMillan Theatre
Gaetano Donizetti: Don Pasquale. A Faculty of Music première of the popular comic opera. This production is set in Toronto's Little Italy. Sung in Italian with English Surtitles. \$40 (Seniors, \$25; students, \$10). Nov. 28–30: 7:30 p.m. Dec. 1: 2:30 p.m. 80 Queen's Pk. Box office: 416-408-0208

Special Events

November 16, 23, 30
Galbraith Building
Jr. DEEP Saturdays: Students in grades 3 to 9 explore the world of science and engineering through hands-on activities. \$175 for 3 weeks. 1–4 p.m. 35 St. George St. 416-946-0816, outreach@ecf.utoronto.ca or outreach.engineering.utoronto.ca

November 17 and December 15
Hart House
Family Sundays. Bring your family to Hart House one Sunday a month for interactive events that explore cultural diversity through storytelling, music, food, arts and crafts. **Nov. 17: Santa Claus Parade Warm-Up. Dec. 15: Cookie decorating.** Free, and all materials provided. 11 a.m.–1 p.m. East Common Room,

7 Hart House Circle. Registration required: familysundays@eventbrite.com.

December 17, 18, 19
Hart House
Hart House Winter Buffet. Celebrate the season with Chef Marco Tucci's selection of locally sourced dishes including stuffed turkey, slow-roasted beef, sustainable seafood, vegan entrées, desserts and more. \$35 plus HST (students, \$26 plus HST). Seating times: 11:45 a.m. or 12:45 p.m. (Buffet ends at 2:45 p.m.) Great Hall, 7 Hart House Circle. 416-978-2452 or inquiries@harthouse.ca. Tickets: uofttix.ca

Sports

November 7 to 10
Varsity Centre
2013 CIS Women's Soccer Championship. Universities from across Canada will compete for the national championship. 299 Bloor St. W. All day. varsityblues.ca

November 29 to December 1
Athletic Centre
2013 OUA Water Polo Championships. Varsity Pool. 55 Harbord St. All day. varsityblues.ca

Theatre

November 6 to 23
Hart House Theatre
Twelfth Night. Shakespeare's beloved comedy begins with a shipwreck and ends with marriages, reunions and some good old-fashioned revenge – with plenty of hijinks in between. \$28 (seniors, \$17; students, \$15). Students, \$10 every Wed. Alumni, \$17 every Thurs. Wed. to Sat., 8 p.m. Matinee on Nov. 23 at 2 p.m. (Post-show chats: Nov. 7 and 9. Pre-show chat: Nov. 23 at 1 p.m.) For tickets: 416-978-8849 or uofttix.ca. For info: harthouse.ca/twelfth-night.



Which technology is driving forward, unnoticed, in the global market?

answer: **Biotechnology**

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P. Blaney
Peter Blaney,
MBA, Chief Executive Officer
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Life on Campus

“We might not be changing the world, but we are changing one woman at a time”

Prof. Beatrix Dart,
of the Rotman School
of Management

p. 17

Dr. Howard Hu,
dean of the Dalla Lana
School of Public Health



Public Health Gets a Promotion

The Dalla Lana School becomes the university's newest faculty

FROM THE MOMENT HE ARRIVED on campus a little more than a year ago to become director of the Dalla Lana School of Public Health, Dr. Howard Hu believed the school had the potential to rank among the world's best. Its faculty members are leading experts on tobacco, air pollution and occupational disease, among other areas, and they attract more than \$30 million annually in research funding. And with Toronto's diverse population, Hu saw an opportunity for the school to adopt

a truly international perspective – one of many features to distinguish it from other top-ranked institutions.

This past July, the Dalla Lana School became U of T's newest faculty – a move that Hu, who is now its founding dean, says will position it better to compete with the world's leading schools of public health and help attract the best students and professors. “It shows we have an institutional commitment to public health, a critical mass of researchers and a clear, strategic plan,” he says. His goals include expanding student enrolment to meet a rising demand for public-health professionals, recruiting new faculty, inaugurating new research programs and creating new senior leadership positions.

Hu, who came to U of T from the University of Michigan, is a physician-scientist and an expert in environmental >



YouTube's Favourite Doctor

Prof. Michael Evans' videos on health are viral sensations



THE CARTOON FACE SPORTS A GAP-TOOTHED GRIN and hardly any hair. "I look like Skeletor!" laughs Dr. Michael Evans, a professor in the department of family medicine and public health. This is his alter ego: Dr. Mike, whose short videos on exercise, smoking, stress, acne and more have become YouTube sensations.

Dr. Mike sprang from Evans' research at U of T: he conducted trials on how to summarize medical evidence for a general audience. "We found that multi-faceted approaches work best," he says. "So I started Mini-Med School in 2003." The U of T lecture series features experts explaining medical

epidemiology. He is particularly interested in building the faculty's strengths in three overlapping areas of scholarship: healthy cities, global health and the integration of public health with primary-care medicine.

He believes Toronto serves as an excellent model for a "healthy" city in terms of walkable neighbourhoods, easy access to fresh fruits and vegetables, healthy work environments, comparatively low air pollution and community-based partnerships for health. He hopes the school will find ways to translate these conditions to other parts of the world – and that it will learn from other cities as well.

The Dalla Lana School's reputation in global health stems primarily from the work of its faculty, who are conducting research into important health challenges in low-income countries and promoting greater health equity internationally through research, analysis and the creation of relatively low-cost innovations. Hu wants to build on these strengths.

He describes his third priority as designing the "sustainable health-care system of the future." What will be crucial, he says, is developing effective prevention strategies that keep people healthy for longer. "For years, medicine has emphasized

topics for a lay audience – with interactive elements such as question periods or interviews with actors playing patients.

The advent of social media provided a new creative outlet. In 2011, he hired a professional artist and film producer and, in December, uploaded *23 and 1/2 Hours: What is the single best thing we can do for our health?* Charming comic book-style illustrations race across the screen as Dr. Mike's laid-back voice-over makes the case for exercise. "I had no social media plan," says Evans. "I sent it to my hockey team. We had 340 views and I was feeling pretty proud, and then a few days later it went to 17,000 views."

Although Evans can't pinpoint why the video took off so quickly, he did do "a bit of an autopsy" on his viral hit. Visual learning seems important, plus the storytelling approach. "And I'm not ramming it down people's throats, that they *have* to do this. It's sort of like, well, here's the evidence."

The dozen films at youtube.com/DocMikeEvans now get upwards of 600,000 views a month. Along with cartoons and charts, sound effects add to the mix: teens scream as an acne monster stalks the land, while crunching and munching underscore a comment about diet. Other topics include concussions, diabetes and smoking, and he has plenty more planned: "back pain, weight, memory..."

"I used to brag that 400 people attended Mini-Med School," marvels Evans. With *23 and 1/2 Hours* way past three million views, this benign and friendly Skeletor is clearly master of the YouTube universe. – **JANET ROWE**

treatment. In fact, investing in prevention is where the biggest payoffs are likely to be," he says.

Many of the faculty's strengths are grounded in its history. The University of Toronto's School of Hygiene began in the 1920s as one of the first three public-health schools created by the Rockefeller Foundation. (Harvard and Johns Hopkins were the others.) It quickly became a leader in public-health issues of the day: vaccinations, sanitation, nutrition and epidemiology.

Then, says Hu, funding dropped away. Universal health care came to Canada, and it seemed as though immunizations and antibiotics might solve the most pressing public-health problems. The university disbanded the school in the 1970s, only to re-establish it three decades later, with the help of a \$20-million gift from entrepreneur Paul Dalla Lana.

"It wasn't until 2003 and SARS that people saw the urgent need for a co-ordinated approach to public health," says Hu. "And U of T, which is right at the geographic, political and institutional nexus of public health, is the ideal home for a place like the Dalla Lana School."

– **SCOTT ANDERSON AND LLOYD RANG**



Librarian Jacqueline Whyte Appleby and student Tony Ding

Drexel University,” she says. In addition, the John M. Kelly Library at St. Michael’s College, which has run a similar project for several years, shared data.

During last year’s pilot project, Vine and Appleby matched 1,000 incoming students with 10 librarians who work across St. George Campus – from Trinity to Robarts Reference Department to OISE. About 200 students took up the offer of help, says Vine. “That ranks among the highest levels of take-up [among similar programs] that we’re aware of.”

The librarians explained everything from how to read a call number and write a citation to how to find non-academic services on campus. All contact was through email. “A lot of the time I didn’t know where to start at all,” says Rudnicki.

“I was able to give the librarian a topic and she would help me narrow it down, give me places to look and [teach me] how to search.”

“Students may not even know that they *can* ask for help,” says Vine. “By creating an intentional connection to a librarian, we’re helping them meet one more person in the university who cares about their academic success.”

Vine wants to grow the program, but “we don’t have enough librarians on St. George Campus to reach out to all 7,000 first-year students in Arts and Science,” she says. “We’ll require more administrative and librarian resources.” In the meantime, 2,000 frosh were emailed this fall, and approximately 24 librarians are participating.

For students who haven’t been assigned a personal librarian, Vine offers an insider secret. “One of my favourite ‘hidden’ resources is a set of bibliographies on many subjects,” she says. “Prepared by experts, each item has an abstract that can help you figure out if the article is suitable for your assignment – a big time-saver for busy students. The trick is to look under ‘Oxford Bibliographies Online’ in the library catalogue.” Bonus: many paywall-protected articles are free when accessed through the library website. – **JANET ROWE**

At Your Service

Personal librarians help first-year students understand U of T’s libraries

LAST FALL, FIRST-YEAR STUDENT HELEN RUDNICKI received an email at her brand new utoronto address. Signed by librarian Jacqueline Whyte Appleby, the message welcomed Rudnicki to U of T and offered her something special – personalized help coming to grips with St. George Campus’s 42 libraries.

“I thought that was pretty cool,” says Rudnicki, an archeology major who attends New College. “A lot of my friends didn’t go to the library at all, but I always had books. There’s a lot of material you can’t get online.”

That’s exactly why U of T started the Personal Librarian Program, says Rita Vine, faculty liaison and information literacy co-ordinator for University of Toronto Libraries and administrative lead for the project. First-year students just didn’t seem to be using the library. “I came up with the idea after doing research on similar programs at Yale and

NAMECHECK

Onoscatopoeia



The Hart House Jazz Choir – better known as Onoscatopoeia – has been performing scat singing since the group’s inception in 1998. The technique is used in jazz music when a vocalist substitutes an instrumental solo or a song’s words with improvised, wordless syllables. Think of Stevie Wonder’s “Shoo-Be-Doo-Be-Doo-Da-Day,” or vocalist Ella Fitzgerald’s famous scat rendition of “One Note Samba.”

Hart House’s 24 choir members pride themselves in using only one instrument: their

voices. What may sound like a trumpet or violin can be a soprano busting out melodic harmonies. “The actual term ‘*onomatopoeia*’ means the imitation of sound,” says Kurt Sampson, the choir’s former music director. “Aside from scatting, our group can also imitate instrumental sounds – so the name ‘Onoscatopoeia’ seemed to fit well.” – **NADIA VAN**

Listen to Onoscatopoeia perform “scat singing” at magazine.utoronto.ca.



U of T Mississauga's Innovation Complex

A Home for Innovators

The next generation of innovators and entrepreneurs will soon have a new home at U of T Mississauga: the Innovation Complex, which is set to open in September 2014.

The four-level, \$35-million complex will house the Institute for Management and Innovation, a cross-disciplinary institute that opened in July. Students in the program combine management studies with another discipline of their choosing – from biotechnology and accounting to sustainability. The institute's inaugural director is Hugh Gunz, a professor of organizational behaviour and HR management.

The building will provide space for several other facilities: the Li Koon Chun Finance Learning

Centre; the registrar's office; a rotunda that will serve as a social-gathering area; and expanded accommodation for the economics and management departments.

"The Innovation Complex and its signature institute will help our students to develop the outlook and analytical capacity they need to compete and win in today's tough economic climate," says President David Naylor.

The 6,300-square-metre complex, designed by Moriyma & Teshima Architects, meets LEED silver green-building standards. Fully integrated with the two-storey Kaneff Centre, it will feature an underground pedestrian tunnel that connects to the William G. Davis Building. – **JANE STIRLING**

SOUND BITES

Why did you choose to attend U of T?

I chose U of T in 1955 because it was one of the world's top universities. Almost 60 years later, it still is.

Elizabeth Bream

The internship offered in the master's of biotech program is unlike any other.

Jeffrey Tam

At the time, it was the only Canadian university that offered an undergraduate degree in neuroscience.

Shawna Scale

For all the amazing research opportunities!

Natasha Elena

Join the conversation at twitter.com/uoftmagazine.

Poll | What athletic activities are you involved in at U of T?

With 43 men's and women's teams in 25 different sports, and gyms and fitness programs at all three campuses – as well as clubs that run the gamut from archery and curling to jiu-jitsu – every student is bound to find their athletic niche at U of T. When second-year student Kwesi Kwarko-Fosu isn't delving into economic theories, he is competing on the Varsity Blues track-and-field team or working out at one of U of T's gyms. "The Athletic Centre has a lot of equipment and machines, so there is always something to do there," says Kwarko-Fosu.

Seven per cent of students enjoy taking their activities outdoors – from playing sports with friends on front campus to practising tai chi on U of T's grounds. Others participate in student and alumni sports groups, including Eric Okawara (BA 2006 UTM), who is a member of the triathlon club. "The university has one of the few 50-metre pools in Toronto, and the club has access to it," says Okawara. – **NADIA VAN**

This highly unscientific poll was conducted on St. George Campus in July.



3%
Sports team



11%
Fitness class



55%
Gym workouts



9%
Athletic club



7%
Other



15%
None



Only one woman made the list of 100 highest paid CEOs, published by the Canadian Centre for Policy Alternatives in 2012: Nancy Southern of ATCO. She ranked 85th, and earned nearly \$4.8 million



Geeta Sheker (left) and Beatrix Dart

Making Boardroom Equality a Reality

Rotman's programs for women help bolster careers and leadership abilities

IN 2008, Geeta Sheker and Beatrix Dart of the Rotman School of Management were troubled by the dearth of women in MBA programs and upper management, and the hurdles women face in the male-dominated corporate world, such as salary discrepancies and family planning challenges.

So they established the Initiative

for Women in Business (IWB), a slate of professional development programs for women. The first of its kind at a Canadian business school – and unique in its breadth of programming, small class size and faculty expertise – the IWB helps professional women bolster their careers and leadership abilities.

“Women receive the majority of college degrees, control more than 80 per cent of consumer purchases and have many natural leadership attributes,” says Sheker, director of IWB. “But if you look at Canada’s *Report on Business* rankings or the Fortune 500, only a handful of women are CEOs and board directors at leading firms.”

“Most companies are supportive of equality,” says Dart, associate dean of executive degree programs at Rotman. “Where the whole wagon is stuck in the mud is in the mindset. Women are not socialized to be aggressive or push for what they want.”

IWB’s offerings range from the Judy Project – a week-long forum aimed at launching more women into executive and CEO roles – to classes for women transitioning back into the workforce. There are also programs geared toward lawyers, entrepreneurs and internationally educated professionals, as well as a host of networking events.

Victoria Sopik, co-founder of the nationwide daycare business Kids and Company, participated in the Next Steps program for women entrepreneurs who want to grow their business – in April 2011. In 2012, she and partner Jennifer Nashmi won an Ernst and Young Entrepreneur of the Year Award. “It was invigorating to meet other women entrepreneurs and [the program] gave us tactical tools to use in our business,” she says.

“Seeing the rise in women’s confidence makes me proud,” adds Dart. “We might not be changing the world, but we are changing one woman at a time.” – AMY STUPAVSKY

People

Heather Boon



Bob Rae, former premier of Ontario and interim leader of the federal Liberal Party, has brought his political expertise to U of T: he joined the School of Public Policy and Governance as a distinguished senior fellow in July.

Heather Boon was appointed interim dean of the Leslie Dan Faculty of Pharmacy in July. She was previously the faculty’s associate dean of graduate education.

Judith Wolfson has been reappointed vice-president, university relations, until June 2015.

Sioban Nelson, former dean of the Lawrence S. Bloomberg Faculty of Nursing, began a new role as vice-provost (academic programs) in August.

The following U of T faculty members have been named to the Order of Canada. Named officers are **J. Edward Chamberlin**, professor emeritus of English, for his scholarship in the humanities and advancement of indigenous issues. Prof. **Thomas J. Hudson** of molecular genetics and medical biophysics was recognized for his breakthroughs in genome science and leadership in cancer research. **Joseph Macerollo**, professor of accordion at the Faculty of Music, is a musician and educator who brought the accordion to Canadian concert halls. Dr. **Arnold Noyek**, professor of global health at the Dalla Lana School of Public Health, helps those with hearing loss and contributes to peace through health-care partnerships in the Middle East. Named members are **David Ross Beatty**, Conway director of the Clarkson Centre for Business Ethics and Board Effectiveness at the Rotman School of Management, for developing corporate governance and ethics standards. Professor emerita **Alison Prentice** of OISE has advanced the field of women’s history and the history of education.



Undersea explorer Jacques Cousteau helped put a stop to the underwater dumping of nuclear waste, during a 1960 campaign against the French government



Path of Excellence

Outgoing provost Cheryl Misak on U of T: “We need to preserve this gem”

THIS FALL, U OF T WILL UNDERGO a presidential transition. But the change in leadership extends to another senior and respected member of U of T’s executive team: Cheryl Misak recently completed her term as provost, the university’s chief academic and budget officer.

Misak began her U of T career teaching philosophy at the Mississauga campus, and later became chair of the tri-campus department of philosophy. “I never set out to be an administrator,” she says. “But I found that if you care about something and it turns out you can be effective at nurturing and making it better, it’s hugely rewarding.” That stint as

chair marked the beginning of a series of administrative appointments, including dean and vice-principal, academic, at U of T Mississauga. She became provost in 2009.

One of Misak’s great gifts as provost is her capacity to understand what’s important in a system, says Donald Ainslie, principal of University College and a fellow philosopher. “She has a really deep understanding of the systems that make the university what it is and the elements that will take it to the next level. Her use of the budget model, for example, has been brilliant,” he says. “She’s used it to connect undergraduates with graduate students and strengthen the first-year experience and students’ transition into U of T.”

Misak credits a strong team of vice-provosts, deans and principals with helping to ensure that all students reap the benefits of attending a top-flight research institution. “U of T is Canada’s research powerhouse. It’s the only university in Canada that consistently makes it into the top 20 in the world across a vast range of disciplines. We need to preserve this gem for the country,” she says.

Keeping U of T on this trajectory of excellence isn’t easy, though. “U of T has remained one of the best universities in the world even though others are much better funded,” she says. “People don’t really understand that we run almost on fumes.”

Misak, who received a DPhil from the University of Oxford, is a Rhodes Scholar and a Fellow of the Royal Society of Canada. And apparently she plays a devastating game of tennis. “Cheryl is very competitive,” says Ainslie. “She wants U of T to win. She wants the university to be recognized as not just the best in Canada but one of the world’s leaders.”

Misak’s latest book, *The American Pragmatists*, was published in April. This fall, she is teaching a graduate course at New York University in the history of philosophy. “Cheryl Misak has made a huge contribution to the university as provost,” says President David Naylor. “She has a dazzling analytical mind and a profound understanding of the mission of the modern university.” - **JENNIFER LANTHIER**

Promise to Future Generations

Civil engineering PhD students Marianne Touchie and Ekaterina Tzekova were undergrads when they were introduced to Jacques Cousteau’s *Bill of Rights for Future Generations*. Inspired by the conservationist’s document – an appeal to leave an

“uncontaminated and undamaged Earth” for our children and grandchildren – the students drew up their own contract in 2009, calling it A Promise to Future Generations.

Those who sign the document agree to make informed environmental choices, and to act as trustees for future generations by using resources responsibly. This past June, more than 30 students participated in the ceremony – which took place at the Galbraith building following the civil engineering convocation. While many signatories are engineering grads,

students from throughout the university – as well as faculty, staff and alumni – have also taken part.

“The ‘promise’ is an active choice and duty to protect the Earth for those inheriting it,” says Tzekova. “It’s not something you tuck away after – we encourage participants to frame the document as a reminder of our personal commitment.” - **NADIA VAN**

To learn more about the Promise to Future Generations, visit ptfg.org.

WHY I GIVE

Athletic Champion

Kevin Reed supports the Goldring Centre for High Performance Sport because he believes in the life-altering benefits of athletics



“MY MOM, DAD AND SPORTS HAVE GIVEN ME everything in the world. As a young person, sports allowed me to leave my hometown of Belleville, Ontario, to play hockey in Austria. When I came back to Canada, I attended the University of Ottawa and played varsity hockey. Playing on a team allows you to learn things that, at the time, you don’t even realize you’re learning. You learn how to play a role, how to get along with others for a common cause – and sometimes you get to lead. It’s an excellent way of getting experience for the real world.

“Eight years ago, when I moved back from the U.S. to Canada to start my own company, I was introduced to some Olympic athletes at a fundraising lunch. They inspired me so much that I wanted to help them with their training. Most of these athletes live at or below the poverty line; at one point I was helping to support about a dozen. They give so much to our country and ask for so little in return. They’re tremendous role models for youth.

“I love what the Goldring Centre for High Performance Sport stands for. Montreal, Calgary and Vancouver all have an important legacy from their Olympic Games. Ontario has never hosted the Games, so there’s a lack of great venues for high-performance athletes. The Goldring Centre will help fill this void – and help young athletes fulfil their dreams.”

Kevin Reed is the chairman and CEO of Blue Goose Capital and the campaign chair for the Goldring Centre for High Performance Sport.

Incentive for New Donors

Ottawa recently made charitable giving much more attractive for first-time donors

IF YOU’VE EVER THOUGHT OF MAKING A DONATION TO U OF T, but so far haven’t, now might be the time to act: the federal government has made charitable giving a more attractive proposition for first-time donors – and for those who haven’t made any kind of charitable donation since 2007.

In its 2013 budget, Ottawa announced that first-time donors would be eligible for a temporary “super credit” on charitable gifts up to \$1,000. For gifts up to \$200, donors will receive a credit of 40 per cent. The credit rises to 54 per cent for the portion of donations between \$200 and \$1,000.

This means that for someone who has never previously given to a charity, a \$500 gift to U of T in 2013 would yield

a \$242 credit on next year’s tax return. (The existing charitable donations tax credit would yield a benefit of just \$117.)

Dean Hughes, executive director of annual and leadership giving, encourages members of the U of T community to make their first donation in support of the university’s historic Boundless campaign. “You can designate the U of T faculty, college or program that means most to you,” says Hughes. “You will be making a real difference to our students – and making the most of your donation dollars.”

Support for scholarships is particularly welcome. Chancellor Michael Wilson observes that almost 50 per cent of U of T students depend on financial aid to continue their education, and that donations allow U of T to offer enriched learning experiences through a wide variety of co-curricular activities. “Today, more than ever, it is up to U of T’s community of alumni and supporters to ensure that our university remains at the forefront of academic excellence,” he says.

For more details about the first-time donor super credit and how your gift can help U of T, visit cra-arc.gc.ca.



J.N. Patterson Hume (left) and Donald Ivey on *The Nature of Things*

IN MEMORIAM

J.N. Patterson Hume

As a co-founder of the computer science department, Hume helped usher in the Information Age

J.N. PATTERSON “PATT” HUME, who died last May at the age of 90, not only witnessed the rise of the Information Age – he actually helped create it.

As a U of T student in the 1940s, Hume (BA 1945 UC, MSc 1946, PhD 1950) spent agonizing hours performing complex physics functions using hand-cranked calculators. All that changed in 1952 when he was a physics prof, and the university purchased a hulking Ferranti computer. Canada’s first electronic computer, Ferut (as it came to be known), cost upwards of half a million dollars and broke down constantly. But it was to revolutionize Hume’s career.

Alongside project assistant Beatrice Worsley, Hume created software known as Transcode for the curious new machine.

One of the earliest computer languages, it paved the way for better-known successors such as Fortran and Java. It also enabled Hume to direct the world’s first long-distance use of a computer (he used Ferut to process research data from the University of Saskatchewan, then sent the calculations back by teletype).

In 1964, Hume was one of three physicists who founded the computer science department at U of T; he was chair from 1975 to 1980. “But long before there was a department, we taught computer courses, including a non-credit course at night school – to actuaries and insurance people, mostly,” recalled Calvin “Kelly” Gotlieb, a fellow computing pioneer and the department’s first chair. Gotlieb and Hume began to write extensively on the burgeoning subject, and the pair ultimately coined 11 terms that are now in the *Oxford English Dictionary* (the most famous is “loop”). In the end, Hume wrote or co-wrote some 19 books; his textbooks on computer science are still used by high school students today.

Physics, however, was Hume’s first love, and making the subject accessible was a huge part of his life’s work. In 1960, he and fellow U of T physicist Donald Ivey complemented their teaching careers by becoming the first hosts of CBC’s long-running *The Nature of Things*. Their approach was hilarious, all the more so for their buttoned-down “professorial” appearance. The pair demonstrated natural laws by popping balloons, hurling paper airplanes and devising wacky camera tricks.

Hume, who also served as master of Massey College in the 1980s, had an unusual ability to translate complex new ideas, and inspired generations of students to embrace the once intimidating world of computers. Says Sven Dickinson, current chair of U of T’s computer science department: “Professor Hume made an indelible mark on computing in Canada and beyond. His work focused on creating the programming and operating systems that allowed computers to become everyday tools, paving the path for computer science’s universal role in the world today.” – **CYNTHIA MACDONALD**

IN MEMORIAM

Roxana Ng



At the age of 19, Roxana Ng emigrated from Hong Kong to Canada with her parents and two brothers. And, as a professor at OISE, her work shaped the field of immigration studies.

Ng, who died in January, was the director of the Centre for Women’s Studies in Education and a professor of adult education and community development. Her research focused on the experiences of immigrant women, including the experience of exclusion in the labour market; the lives of garment workers in Canada; and race, gender and class.

Her focus on human rights and social justice

extended beyond her professional life: Ng (PhD 1984) co-founded the Vancouver Women’s Research Centre in the early 1970s, and helped establish immigrant women’s organizations in several other provinces. She was also on the board of Inter Pares, which promoted social justice in Canada and overseas.

Even as Ng’s body weakened from cancer, she continued to help those around her. She shared her research findings about foreign-trained professionals with her caregivers (many of whom were immigrant nurses) – encouraging them to study for their certifications while she napped.

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Leading Edge

“A government agency with the power to monitor all of our communications is a real threat”

Prof. Ron Deibert on recent revelations about the U.S. National Security Agency
p. 27



An “A” for Teamwork

You’ve heard of crowdfunding. With crowdmarking, a U of T prof hopes to change how students are evaluated

A MATHEMATICS PROFESSOR HAS 5,280 EXAMS TO MARK. The exam is 16 pages long and divided into three sections – each of which must be graded by a different person. Each exam is stapled together, meaning sections can’t be separated and graded concurrently. A total of 100 volunteers – teachers, graduate students, professors – have agreed to help with the marking.

Question: How long will it take to mark all the papers?
Prof. James Colliander did the math on the above scenario.
His answer: Too long.

In 2011, U of T partnered with the Canadian Mathematical Society on a student competition that resulted in the marking

scenario above. “We had the logistical nightmare of trying to shuffle these papers in front of the right eyeballs. I saw all kinds of inefficiencies – people waiting for their section while other people were marking theirs,” recalls Colliander, a professor of mathematics. “And I realized this problem was not isolated – it was a general problem.”

This experience inspired Colliander to create Crowdmark, a cloud-based software service that makes collaborative marking easier, and leaves more time for teachers to provide thoughtful feedback and commentary.

Here’s how Crowdmark works: Suppose 30 students will be taking a 10-page exam. The teacher scans and uploads the 10 pages. Crowdmark adds unique Quick Response codes to generate machine-trackable versions of the exam for each student. The teacher prints the 300 pages of encoded exams, students complete them, and the papers are scanned and re-uploaded to Crowdmark.

The QR codes allow the pages to be sorted and displayed online. The interface makes it simple and fast to mark the ►



One of the first textbooks on human anatomy was *De humani corporis fabrica*, written by Andreas Vesalius in 1543. It used woodcuts and engraved copper plates to create finely detailed illustrations

➤ same question on 30 exams, or to mark a single student's work from start to finish. Many graders can respond to the same student's work, and compare their remarks to find the most effective feedback. Teachers can leave comments for students, parents or for other teachers – with privacy settings so that each group only sees comments meant for them.

Crowdmark has gone through two major proof-of-concept tests, one of which was the 2011 student competition. It took about 700 hours to mark those exams with pen and paper. The next year, graders used Crowdmark to reduce that time by half.

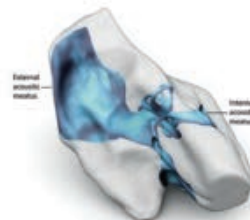
A second test, at Golf Road Junior Public School in Toronto, yielded similar results. "Teachers were able to navigate the tests much faster than if handling them physically," says Joseph Romano, the school's lead information and communications technology teacher. Romano adds that he is already developing plans to build Crowdmark into the school's day-to-day practice, despite the fact that it won't be commercially available for another few months.

"I often mention efficiency as the first benefit, but in talking with instructors, I have learned of possibly greater benefits that I didn't anticipate," says Colliander. "The archive of feedback, for example, is extremely important. With Crowdmark, a student's essay and the teacher's feedback are both stored. So the teacher can prompt the student at exam time, 'Please look back at the comments on that essay.'"

Colliander plans to start selling the service to individuals and institutions later this academic year. He knows he has work ahead of him to sell Crowdmark, but his confidence is buoyed by the fact that he's doing what mathematicians do best: solving a problem. – **PATCHEN BARSS**

The Augmented Body

A learning tool that combines gaming software, 3-D modelling and a CT scan could change how students learn anatomy



MEDICAL ILLUSTRATIONS aren't what they used to be – the delicate line drawings of yore. Andréa Zariwny, a master's student in biomedical communications, has used gaming software, 3-D modelling and a CT scan to create a technology that could change the way medical students learn anatomy. As a first step, she has designed a tablet-based guide to the ear that highlights its intricate inner structure.

Traditional illustrations don't begin to suggest the ear's internal complexity. The semicircular canals, which are responsible for balance, operate in three separate planes. The cochlea, which is crucial to hearing and usually described as snail-shaped, is actually more space than structure – a tiny spiral tunnel, only four millimetres at its widest, that is inseparable from the bone that contains it.

Zariwny's solution is a 3-D model of the bone containing the inner and middle ear, which she had "printed," based on a high-resolution CT scan, using a 3-D printer. She paired this with an app that allows users to display the ear's internal structure. Students point a tablet at the model and press onscreen buttons to see more or less detail. Push one button and you can see all the internal space; push another and you see only the bony labyrinth that contains the cochlea and the semicircular canals. Labels pop up on command and the ear's inner spaces are rendered as brightly coloured 3-D graphics. Crucially, you can also hold the physical model while viewing an augmented version of its image onscreen, thus providing the ultimate in hands-on learning.

So far the device has been tested for usability on a small number of students, but Zariwny's content adviser, Prof. Patricia Stewart, says there's no doubt it will help medical students learn. "Any anatomist looking at it would think it is such a quantum leap from a flat two-dimensional illustration." – **BRENT LEDGER**

LINGO

Nanofabricating



This portmanteau word combining "nanotechnology" and "manufacturing" describes the process of product fabrication at the molecular level. Applications range from making golf clubs lighter and stronger and garments more water repellent to squeezing several billion transistors into a computer chip the size of a fingernail.

The global industry continues to grow, having exceeded about \$20 billion last year, but, according to Geoffrey Ozin, a University of Toronto professor of chemistry and a pioneer in nanotech, Canada lags in "nanofabricating" compared to Korea, China, Singapore and Taiwan. Reasons include a lack of venture capitalist

funding, high levels of risk aversion and a weak culture of innovation. "With the emerging nanotechnology revolution upon us, we have to make professors more aware of, and receptive to, entrepreneurial opportunities for themselves and their students," says Ozin.

– **SCOTT ANDERSON**



As of June 2008, 49 countries had confirmed cases of extensively drug-resistant tuberculosis. By 2013, that number had risen to 84



THE BIG IDEA

When Germs Get Tougher

An Internet-based surveillance system gives physicians the ability to track dangerous new strains of tuberculosis in real time

TRACKING INFECTIOUS DISEASES HAS BECOME MORE COMPLEX and more crucial than ever before. It used to be enough for individual health units in Canada simply to count the number of reported cases of tuberculosis or norovirus or E. coli in their area. That was sufficient when people worked, socialized and vacationed close to home. But today, with worldwide travel, changing immigration patterns and the frightening rise of drug-resistant strains of disease, this tracking system falls short.

Dr. Frances Jamieson, a professor in the department of laboratory medicine and pathobiology, has designed and created a new Internet-based surveillance and alert system called the Ontario Universal Typing of Tuberculosis Surveillance Program, or OUT-TB Web. So far, it's just for tuberculosis, but it has the potential for expansion to other infectious diseases, other provinces and other countries.

Jamieson started with tuberculosis because the lab at Public Health Ontario, where she's a medical microbiologist, was already identifying TB strains by their molecular "fingerprint" when requested by public-health units. "But the information was getting more complex," says Jamieson. Most strains of

TB are treatable by a six- to nine-month course of four anti-microbials, with a cure rate of 97 per cent. But the multi-drug-resistant strains, which are on the increase, require a very different regimen, lasting up to two years and with a cure rate of 70 per cent. There's also a new, extensively drug-resistant strain, which requires yet a different course of treatment.

"We wanted to be able to provide the capacity to visualize and track cases and clusters in real time, as the cases were identified in the laboratory," Jamieson explains. With OUT-TB Web, a sample from every newly diagnosed TB patient is sent to the lab for genotyping. When layered with confidential data and maps on where patients live, work and travel, patterns clearly emerge. Public-health units with access to the secure site can then see each case, including information about drug resistance, which helps determine treatment strategy.

OUT-TB Web can also help determine what constitutes an outbreak and what doesn't. For instance, until now, four cases of TB in a single apartment building would likely instigate a large, costly investigation to confirm or refute if an outbreak is occurring. But OUT-TB Web could find the answer much more quickly. If the four strains match, it could be an outbreak, requiring changing the ventilation system, installing air filters or adding UV lighting (which kills tuberculosis) to dramatically reduce the transmission of this airborne pathogen. If the four strains are all different, it suggests it's not an outbreak. This allows for better control of the disease and a smarter use of public-health resources.

With about 1,600 new cases a year in Canada, tuberculosis isn't the concern it is in Asia and Africa, with more than eight million cases; at least, not yet. "TB is not a problem – until it is," says Dr. Michael Gardam, a professor of medicine and director of infection, prevention and control at the University Health Network in Toronto. "All it takes is one case, and then it can get away from you." TB is second only to HIV-AIDS as the largest killer worldwide due to a single infectious agent, killing one person every 20 seconds. "Most diseases are still tracked purely by adding up the number of cases by region, and one of our biggest challenges is that provinces don't share data well. With this OUT-TB concept, we're getting much more detailed information, which helps determine our intervention strategies."

Jamieson, who has led the laboratory response in Ontario to many recent outbreaks, including SARS and the Walkerton water tragedy, says that other provinces and the United States have already shown interest in OUT-TB Web. Jamieson hopes to expand it to include E. coli and norovirus cases, layering on restaurants and agricultural and socioeconomic data, as well as sexually transmitted infections such as syphilis, whose rates in Toronto alone have skyrocketed 18-fold over the past decade. – **MARCIA KAYE**



Last January, a monitor atop the U.S. embassy in Beijing recorded an air-quality index of 755. Any reading above 300 is considered hazardous

PROTOTYPE

The Geography of Pollution

A PhD candidate's low-cost sensors could be deployed across cities to gather highly local air-quality data



detectors that can measure the concentration of fine particles and the pollutants mentioned above, will eventually be powered by lithium batteries and small solar panels. She estimates the total price of the components can be kept to less than \$300, and she says the monitor can be adapted for indoor sites.

Mykhaylova, who works in the Southern Ontario Centre for Atmospheric Aerosol Research in U of T's Faculty of Applied Science and Engineering, says her vision, as yet unrealized, is to connect the monitors wirelessly to a data network so the measurements can be fed into a central database in real time. Potentially, she says, such a network would allow users to go to a website to check pollution levels in specific neighbourhoods with an eye to adjusting their travel patterns or pressuring public officials to deal with local pollution sources.

At the moment, Mykhaylova and her team have placed a dozen of their homemade pollution monitoring stations in backyards near highways around the city and are trying to determine the traffic's impact on nearby air quality. In fact, she lives near the Gardiner Expressway as well as a large industrial facility, so she is keenly aware of the potential health consequences of living close to highways – something a growing number of Toronto condo dwellers now experience.

Mykhaylova is keenly aware of the potential health consequences of living close to highways

The ultimate goal is to encourage local governments to deploy commercial versions of these low-cost devices in large numbers around urban areas as a way of generating a much more nuanced and up-to-the-minute picture of the invisible geography of pollution. "The government needs to have this data out there for people to know what the levels are," she says. – JOHN LORINC

EPIDEMIOLOGISTS IN RECENT YEARS have developed an increasingly precise understanding of the relationship between exposure to airborne pollutants and a range of health conditions, such as cardiovascular disease and asthma. What's less well known is precisely where the air is most polluted.

Toronto, for example, has only four air-quality measurement stations providing real-time data, even though research shows that the concentration of pollutants such as nitric oxides, volatile organic compounds and carbon monoxide can vary by orders of magnitude within an area spanning just a few city blocks.

To more precisely gauge pollution levels, Natalia Mykhaylova, a PhD candidate in chemical engineering, is developing an inexpensive air-quality monitor that could be deployed on utility poles across a city. The shoebox-sized device, which is packed with sensors and

Findings

Food Insecurity



A new report by U of T researchers shows that almost four million Canadians are struggling to put the food they need on the table. "The impact of this situation on children, families, communities, the health-care system and our economy cannot be overstated," says Dr. Valerie Tarasuk, a nutritional sciences professor at the Faculty of Medicine and principal investigator for PROOF, an international team of researchers committed to the reduction of household food insecurity.

The report found that of those who went hungry in 2011, 1.1 million were children. Nunavut and Prince Edward Island had the highest prevalence of children living with food insecurity at 57 and 27 per cent respectively.

Until now, the main window into the problem of food insecurity has been food bank utilization statistics. However, the report's findings show that the extent and distribution of food insecurity is far greater than food bank use indicates. – SUNIYA KUKASWADIA

Canada's Electric Car



Olivier Trescases, a professor in the Edward S. Rogers Sr. Department of Electrical and Computer Engineering, is collaborating with Toronto Electric – the maker of the world's only entirely Canadian-made electric car – on battery management and hybrid energy storage systems. He recently struck a deal with the company to bring the one-of-a-kind vehicle to U of T.

Trescases' research group has access to the vehicle's hardware and software system, giving them an opportunity to modify the car and test the results. "It's an open platform to us, and that's what makes it incredibly valuable," says Trescases. The department's rooftop solar installation can even be used to charge the car's battery and turn it into a true zero-emission vehicle. – MARIT MITCHELL



56 per cent of Americans say the National Security Agency's program of tracking the telephone records of millions of Americans is an acceptable way for the government to investigate terrorism, according to a June report by the Pew Research Center

Q&A

Eyes Everywhere

Recent revelations about governments spying on their citizens should have us all concerned about abuse of power

Earlier this year, details of top-secret surveillance programs run by the American and British governments were leaked to newspapers. Under these programs, government security agencies gather metadata about millions of private telephone calls, emails and text messages. **Scott Anderson** spoke recently with **Ron Deibert**, a professor of political science at U of T and director of the Citizen Lab, whose book *Black Code* (2013) addresses this issue, among others.

After 9-11, the Patriot Act expanded the American government's ability to monitor its citizens. What's new about recent revelations? The broad contours were already known to some people, but we didn't have the level of detail that we do now. We now know the code names of the programs, and we know specifically which companies are handing over data to the government.

If you're an American citizen, what is the most worrisome aspect of this? The apparent wholesale collection of domestic communications data in violation of the constitution – an activity that has been approved by all three branches of government and is overseen by a court whose deliberations themselves are secret.

Is there anything the average citizen can do about this? They can use the legal process and try to influence lawmakers. Groups such as the Electronic Frontier Foundation and the American Civil Liberties Union have launched legal proceedings against the U.S. government.

Do Canadians have reason to be concerned about this activity? Yes, very much so – and for a variety of reasons. First, because of how global communications are structured, most of our Internet traffic is routed through the United States. Therefore, our email, web browsing, text messaging and even some phone calls are all quite open to American interception. Secondly, the restrictions on the National Security Agency



(NSA) don't apply to foreigners, and Canadians fall into that basket. Given what the NSA is able to do in the U.S. *with* existing restrictions, this should be of concern to us. Lastly, we have a counterpart organization called the Communications Security Establishment of Canada (CSEC) that works very closely with the NSA and operates in this country with even *less* oversight.

What do we know about the Canadian government's monitoring activities and how it is co-operating with the NSA? That's a good question that Canadians need to ask their government. CSEC has a very large budget. It's building an \$800-million complex outside of Ottawa. It's been around for decades and has just one retired judge overseeing it. It issues an annual review and in all the years that the oversight body has been doing its job, it has only once found a problem, this year. But it is not accountable to Parliament; it answers to the minister of defence and ultimately to the prime minister.

What's your response to people who say "I don't have anything to hide so why should I be concerned?" This misses the real problem. A government agency with the power to intercept and monitor all of our communications – when so much of how we communicate involves broadcasting data about ourselves – is a real threat in a liberal democratic society.

Is diminished privacy in exchange for improved security something we should accept? It's a compromise I'm willing to make. We need security agencies to protect us and to protect our right to communicate in the first place. Without them, these rights would evaporate because there are nasty organizations and autocratic regimes that would prefer a world in which these rights didn't exist. But we don't want security agencies to be able to vacuum up data without constraints because this could lead to an abuse of power. When we talk about security, we can't lose sight of what we're securing in the first place, which is a liberal democratic society.



In 1961, radio astronomer Frank Drake presented a controversial formula (now known as the Drake Equation) that estimated the number of potential intelligent civilizations in our galaxy at 10,000

First Contact

Prof. Shelley Wright
of the Dunlap Institute



For decades, astronomers have been attempting to answer one of the biggest questions in all of science: Is there intelligent life beyond Earth?

At U of T's Dunlap Institute, Shelley Wright (left) is leading a team that's building an instrument to detect brief, intense pulses of infrared light that a potential alien civilization might send our way to communicate with us.

The detector she's holding is a component of the instrument, which she expects will be deployed next year at the Lick Observatory near San Jose, California. At the same time, Wright is developing a strategy for which parts of the sky to search for a signal.

Although astronomers have experimented with instruments to detect pulses of light from space, no one has tried to do so in the *infrared* spectrum – because the technology didn't exist to do so. Wright explains that pulses of infrared light are less affected by interstellar gas and dust, which means that an infrared signal can be detected at greater distances than other optical signals. She surmises that intelligent aliens would know this.

And how will Wright feel if the instrument she's designing successfully picks up an alien signal? She demurs: "It's hard to say how anyone would feel about such a pivotal moment for humanity." – **SCOTT ANDERSON**

Garbage into Gas

An idea developed at U of T would help turn polluting oilsands waste into clean-burning hydrogen gas

IT LOOKED LIKE A SHINY, black pile of asphalt, it was three storeys high – and it was growing. When residents of Windsor, Ontario, and Detroit protested a mountain of petroleum coke, an oilsands byproduct, accumulating near a refinery along the Canada-U.S. border, the company removed it – temporarily. But this particular petcoke pile was not the only one affecting Canadians. The Alberta oilsands produce heaps of the stuff annually and there are already tens of millions of tons stockpiled in Alberta.

What's going to happen to it?


The answer may lie in research by Heather MacLean, a professor of chemical engineering, and her former student Jennifer McKellar (PhD 2012), who recently completed a post-doc jointly at the University of Toronto and the University of Calgary.

McKellar's doctoral thesis outlined a model to determine the most environmentally sound and economically sensible options for dealing with a petcoke stockpile.

The problem with the substance from an environmental perspective is its high carbon content. "You don't want to just combust it," says MacLean, "because it would be similar to combusting coal." It's possible to process petcoke into natural gas, which burns relatively cleanly, but "gasification systems are expensive and not widely used," says McKellar.

MacLean and McKellar's model suggests a third option: processing petcoke into hydrogen. Currently, hydrogen plants make hydrogen from natural gas. The model that MacLean and McKellar devised suggests that it will be cheaper in the future to process hydrogen from petcoke than from natural gas. As well, it's possible to make hydrogen from petcoke resulting in overall lower emissions than making it from natural gas – as long as carbon capture and storage technology is used. Not only is hydrogen an important component in oil refining (it helps remove sulphur), but it can also be sold to the chemical and electronics industries.

"There has been quite a lot of industry interest in the idea," notes MacLean, who helps lead the Life Cycle Assessment of Oil Sands Technologies Project. – **JANET ROWE**



“Law school is a full-time commitment. The Ivy Maynier scholarship lets me give it my full-time attention.”

Aman Dhillon
JD Candidate, 2013

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Disclaimer: Tribute Communities received the highest numerical score in the Greater Toronto Area (GTA) in the proprietary J.D. Power and Associates 2010 Canadian New Home Builder Customer Satisfaction StudySM. Study based on 1,864 responses from homeowners in the GTA, measuring 8 home builders and measures opinions of consumers who purchased a new home in January-December 2009. Proprietary study results are based on experiences and perceptions of consumers surveyed in April-June 2010. Your experiences may vary. Visitjdpower.com. Tribute Communities was honoured with the coveted 2010 Desjardins Business Excellence Award, marking the first time a homebuilder has been given the distinction. As co-winners with De Beers Diamond, this award acknowledges "Best Large Business" as recognized by the Ontario Chamber of Commerce. Prices, terms, and specifications are subject to change without notice. Renderings are artist's concept only. E&O.E.



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Soldiers' Tower was built in 1924, funded by donations from alumni of the University of Toronto. This Remembrance Day, our community will gather under a fully restored Soldiers' Tower, thanks to the generosity of our alumni and friends. Once again, alumni like you have helped raise more than \$1M to return the Tower to its original glory. Thank you!

Preserving the Soldiers' Tower and the memory of the 1,185 alumni, students, staff and faculty who gave their lives in the two world wars continues to be a sacred responsibility. With your help, we will ensure this monument to bravery and sacrifice continues to stand strong for many years and many generations to come.

Please make your gift to the Soldiers' Tower Fund today. We hope you will join us on Monday, November 11th 2013 for our annual service of remembrance.

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By Scott Anderson
With files from staff

A Better University

At the end of David Naylor's term as president,
the student experience is stronger, research and innovation are booming
and the global impact of Toronto alumni is greater than ever



David Peterson has no trouble summing up U of T's progress under the leadership of its 15th president. "It's a better university after David Naylor's eight years at the helm," says the former Ontario premier and U of T chancellor emeritus. Those who've worked closely with Naylor agree, emphatically. But they're all quick to add – perhaps following Naylor's mantra, without realizing it – that it's been a team effort.

Richard Nunn, who recently completed his term as chair of U of T's Governing Council, puts it this way: "David has a passion for excellence that comes through clearly in his leadership and his ability to inspire. The vice-presidents and the broader leadership team really have responded to his vision and have given their best to help realize it." That vision, says Nunn, has been to strengthen the University of Toronto as "a global university, both in reputation through scholarship and teaching and in the composition of its faculty and students, attracting the best from around the world."

Peterson captures the sense of momentum of the last several years, reflecting on his involvement as chancellor: "I had the feeling I was part of a great enterprise. U of T has a responsibility to students and the community but also to the country, to be a force for good. David Naylor has led us in fulfilling that responsibility, with great distinction."

The end of a presidency is an opportunity to take stock. Concrete measurements are necessary, and in these there is much that is encouraging (see infographics and maps, pages 35–41). But Naylor himself would measure U of T's progress ultimately in terms of the people who make up the university community, their experiences and accomplishments. Accordingly, here follows a triptych of stories to illustrate some of what it means today to be a student, a faculty member, or a graduate of the University of Toronto.

The Student Experience

As a first-year student entering life sciences at U of T, Jelena Savic knew she would have some large classes – and it made her nervous. Like many incoming students, she worried about making new friends and wondered if she'd get a chance to interact with her professors.

Now in her final year of a bachelor of science degree at Victoria College, Savic says her actual U of T experience bore little resemblance to what she had imagined. Yes, she had a few large classes, especially in first year. But through Vic One, one of the U of T programs designed to deliver first-year students a more personal education, she also had two small,

seminar-style classes, where she found it easy to meet classmates. "I was able to get to know them, and it was a really impressive group of people," she says.

Professor David Cook was a driving force in establishing Vic One during his tenure as principal of Victoria. He says support from U of T's senior administration was crucial in enabling the program to go forward. "I had little doubt that the president would support a proposal for a new way of teaching a portion of our first-year students. Indeed, we embarked on the program because we knew that we would be supported by the president and the provost."

With encouragement and budgetary backing from U of T President Naylor and former provost Cheryl Misak, Vic's example has been adapted in varied forms by every college on the St. George campus and by U of T Mississauga and U of T Scarborough. Victoria University President Paul Gooch observes that the One model helps "to deliver a personal education, particularly in first year. [It helps] students connect to a community, to learn how to learn, and to develop good habits of research and writing. In a small group you have to speak up, and it makes it difficult to be anonymous."

At the same time the university increased small-class learning opportunities such as the One programs, it invested heavily on other fronts to transform the undergraduate student experience. It has turned its size to students' advantage – providing even more opportunities for undergraduates to learn from world-class researchers and emphasizing superb teaching, particularly in the largest classes.

Clare Hasenkampf, a professor of biology at U of T Scarborough and a recipient of the President's Teaching Award, is familiar with the challenges of teaching in a large lecture hall. With 500 to 1,000 students in each of her introductory biology classes, Hasenkampf finds simple ways to make the room feel smaller: for example, she has students break into groups at regular intervals to solve problems related to her lecture material. But what's most important, regardless of class size, she says, is for students to understand that they will be able to apply what they're learning outside the university. "I want students to think of themselves as scientists in training, not students in science courses."

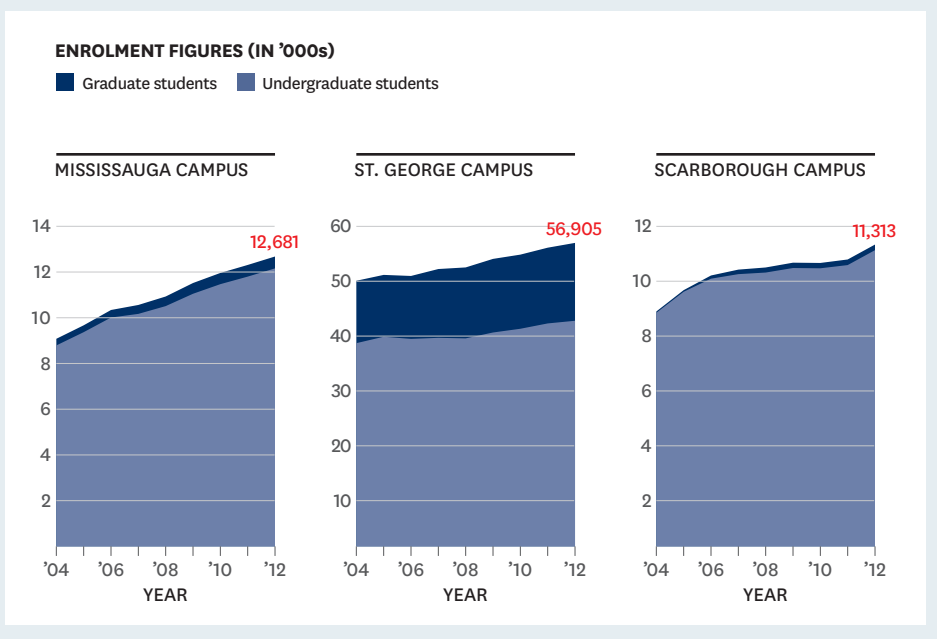
Hasenkampf belongs to U of T's Teaching Academy, a group of President's Teaching Award winners who advocate for best practices and innovation in teaching across the university. The academy reflects a "culture shift at U of T that places a high value on excellent teaching," according to Carol Rolheiser, director of the university's Centre for Teaching Support & Innovation and an OISE professor. How does U of T define "excellent teaching?" Rolheiser argues that it must include fostering an understanding of how to connect disparate ideas, how to apply learning, and how to continue learning on one's own. "I want my students – five, 10, 20 years from now – to see that what they learned at U of T affected them profoundly and in an ongoing way," she says.

It's a theme Naylor has emphasized throughout his term, starting with his installation address in 2005. Rolheiser says, "President Naylor's leadership in launching the President's Teaching Award in 2006 is one example of his unwavering commitment to excellence in teaching."

In addition to more small-class options and renewed support for great teaching, the university has worked hard to strengthen undergraduate education in other ways – such as providing more research experiences, internships and study abroad sessions. Samah Rahman recently completed a BA with a double major in sociology and criminology at U of T Mississauga. In third year, she worked with Professor Erik Schneiderhan on a research project she proposed (but which they designed together) – to determine what barriers immigrants to the Toronto area face in adapting to life in Canada. The following year Rahman worked with Schneiderhan on

Enrolment Growth

In 2012–13, 80,899 full-time and part-time students attended U of T, up 20 per cent since 2004–05. In that time, U of T Mississauga and U of T Scarborough have grown into mid-size universities with distinctive programs. Graduate student enrolment has surged, reflecting greater demand for graduate education.

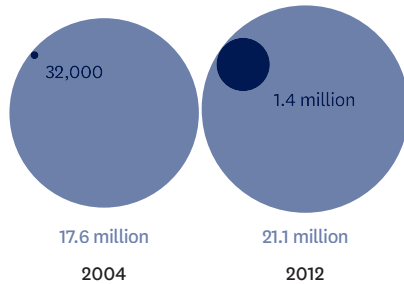


A World-Class Library System

U of T has the 3rd-largest academic library system in North America. With its 44 libraries, the university continues to make strategic investments in the academic resources – both print and digital – and the dedicated staff on whom students and faculty rely.

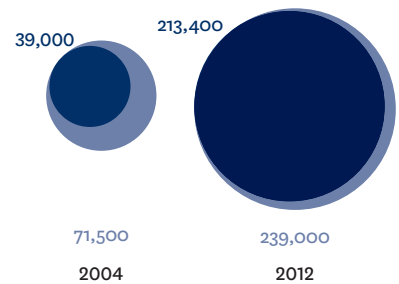
HOLDINGS

■ Total holdings ■ Digital holdings



SERIALS

■ Total serials ■ Digital serials



Unparalleled Choice

Drawing on an academic enterprise that is the broadest and strongest in Canada, U of T offers more than 915 undergraduate, master's and doctoral level programs, including more than 60 professional graduate programs. The course catalogue is immense: more than 10,000 courses on everything from Acoustic Phonetics to Zen Buddhism.



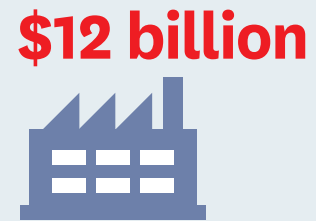
Winning at Sports

Over the past eight years, U of T's intercollegiate teams have won 45 national and provincial championships; individual athletes have won 363 national and provincial medals.



Economic Impact

U of T and its partner hospitals employ 23,377 people in the Toronto region – more than Chrysler and General Motors employ in Canada, combined. The university contributes \$12 billion to the Ontario economy directly through employment, research and increased alumni earnings.



Assistance for Students

Since 2005, for every \$1 that tuition has increased per domestic undergraduate at the University of Toronto, the university has increased its needs-based student aid by \$1.07.

About half of all full-time, domestic undergraduate students at the University of Toronto received OSAP and other non-repayable, needs-based financial assistance in 2011–12. In turn, they paid, on average, about half the regular tuition.



An Employer of Choice

U of T has hired 5,479 faculty and staff since July 2005. For these positions, it received a total of 434,237 applications from around the world. In that time, the university has also recognized 396 faculty and staff for service of 40 years or more.





Few universities in the world can match the cultural diversity of the University of Toronto. In 2012, its three campuses welcomed first-year undergraduate students from 111 countries and more than 900 municipalities. Together, these students bring a remarkable array of traditions, histories and perspectives to Toronto, already the world's most multicultural region.

his research, culminating in a trip to England to conduct interviews with visible minority groups. Now considering grad school, Rahman describes these experiences as among the highlights of her university education.

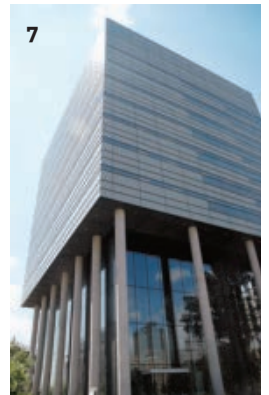
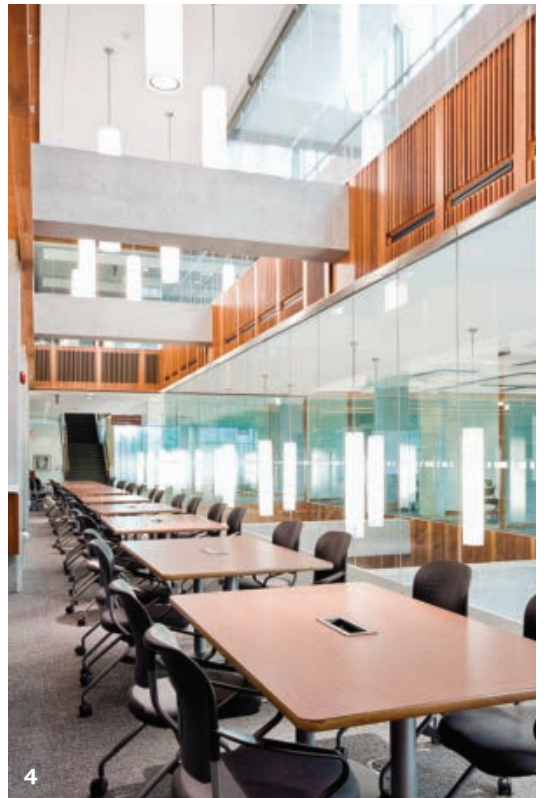
Of course, life outside the classroom is a crucial part of the student experience. Jill Matus, vice-provost, students and first-entry divisions, says that with more than 800 clubs and student-run organizations across the three campuses, there are extra-curricular opportunities that match almost any student's interests. This fall, U of T launched the co-curricular record, which provides graduates with an official document to track their activities and to complement their academic transcript. Matus points to recent investments in world-class athletics facilities – such as Varsity Centre, the UTSC Aquatics Centre and Field House and UTM's Recreation, Athletics and Wellness Centre – to better serve the university's varsity athletes and thousands of faculty, staff and students, both undergraduate and graduate.

The university has also made changes aimed specifically at strengthening the experience of graduate students. Brian Corman, dean of the School of Graduate Studies, says his team has provided increased guidance on graduate

supervision for faculty. The school has developed tools for its students, such as workshops on English-language writing and a Graduate Professional Skills program that offers non-credit courses and co-curricular activities. The efforts seem to be paying off: A 2010 survey of almost 5,000 grad students found a high level of satisfaction with their U of T experience; 70 per cent rated it “excellent” or “very good.”

Jasdeep Saggar is one of those satisfied students. She came to U of T from Winnipeg in 2006 to do her master's in nutritional science because, she says, she was impressed by the variety of programs, the availability of funding for grad students and the quality of research conducted here: “You can find leading experts in whatever field you're looking for within a few kilometres of the St. George campus.”

Saggar stayed for her PhD – in medical biophysics – not just because she found a supervisor in her field of interest (cancer research). She also appreciated initiatives such as the Graduate Professional Skills program. “The university recognizes that in order for grad students to excel they need to develop skills in such areas as business, communication, networking and giving effective presentations,” she says.



BUILDING BOOM

U of T is in the midst of a massive capital renewal. Since 2005, a total of 37 major building projects worth \$1.2 billion have been completed or are now underway across the three campuses. (This figure includes all new construction and renovation projects valued at \$2 million or more.)

These state-of-the-art facilities for faculty, staff, students and visitors (a selection of which are pictured above) have won awards for

sustainability and architectural excellence. All complement U of T's historic architecture and add considerably to the university's presence in the Toronto region.

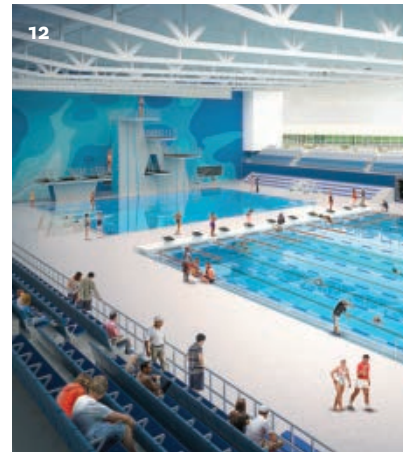
Philanthropy has played a crucial role in making these projects possible. U of T's visionary donors are supporting successive generations of Canada's strongest scholars and students.



10



11



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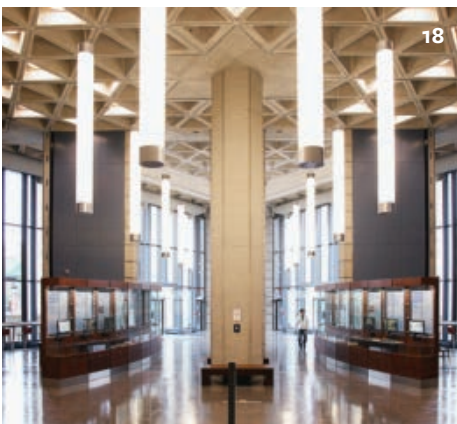
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19



20

1 Munk School of Global Affairs **2** Goldring Student Centre, Victoria University **3** Jackman Law Building* **4** Hazel McCallion Academic Learning Centre, UTM **5** Jackman Humanities Building **6** Goldring Centre for High Performance Sport and Kimel Family Field House (inset)* **7** Leslie L. Dan Pharmacy Building **8** Max Gluskin House **9** Varsity Centre and Pavilion **10** John H. Daniels Faculty of Architecture, Landscape and Design* **11** Rotman School of Management **12** Toronto Pan Am Sports Centre*, UTSC **13** Environmental Science and Chemistry Building*, UTSC **14** Dr. Eric Jackman Institute of Child Study **15** Lassonde Mining Building **16** Elmsley Place, St. Michael's College **17** Donnelly Centre for Cellular and Biomolecular Research **18** Robarts Library renovations, supported by Russell and Katherine Morrison **19** Terrence Donnelly Health Sciences Complex, UTM **20** Communication, Culture and Technology Building, UTM

*under construction or approved for groundbreaking

Research and Innovation

Paul Young, U of T's vice-president of research and innovation, rejects the commonly made distinction between basic and applied research. In his view, research exists along a continuum, and the role of a university is to generate new knowledge at one end and to help find uses for these insights and discoveries through social and technological innovation at the other.

Over the past several years, the University of Toronto has boosted its research enterprise along the entire spectrum, from pure scholarship to market-ready invention. U of T ranks second in the world after Harvard University in the annual number of academic publications produced, and first in Canada in both publications *and* citations – the latter a measure of the impact of the research being published. With its partner hospitals, U of T now brings in \$1.2 billion a year in research funding, up 40 per cent since 2005.

Increasingly, U of T faculty undertake scholarship that is multidisciplinary, collaborative and international, and which brings together researchers from a variety of fields, institutions, companies and countries. “Collaborating with

other top-ranked research institutions around the world, including in the private sector, has become a major priority for the university,” says Peter Lewis, associate vice-president of research and innovation, global research partnerships. A prime example: U of T has been involved for several years with the Structural Genomics Consortium, a partnership that has involved leading universities in Sweden and England and that supports the discovery of new medicines through open-access research into human proteins. More recently, U of T has led a consortium of universities collaborating with IBM on a \$210-million project to develop data models for improved public services, such as the provision of drinking water, public transit, traffic logistics, health care and energy. These are but two examples of some 8,000 research collaborations between U of T faculty and peers at other universities around the world – in 2012 alone.

When researchers make a discovery, how quickly and effectively it finds its way *out* of the university is important to society. On this front, U of T is now a continental leader. Between 2009 and 2011, the number of startup companies



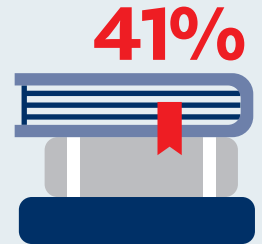
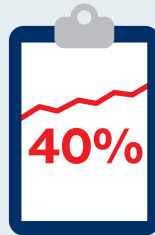
University of Toronto faculty, staff and students collaborated on publications with scholars from over 8,000 institutions around the world – in 2012 alone. The map shows only those collaborations that resulted in publications with at least 25 citations between January 2012 and August 2013; these collaborations involved over 1,200 institutions in more than 950 municipalities spread across the globe.

Research Scope and Influence

U of T and its nine partner hospitals form Canada's largest research cluster. In 2011, U of T and its partner hospitals received \$1.2 billion in research funding, an increase of 40 per cent over seven years.

The University of Toronto ranks second in the world, behind Harvard University, in publications, and first in Canada in total publications and citations.

Since 2008, 41 per cent of the top 100 most influential publications from Canadian universities included a University of Toronto author.



Flourishing Entrepreneurship

Since 2004-05, U of T faculty, staff and students have created 121 startup companies. Between 2008-09 and 2010-11, U of T ranked third among North American universities in the number of startups created, with 53. As a result, among research-intensive institutions, U of T anchors the fastest-growing entrepreneurial cluster on the continent.

Two-thirds of inventions at U of T include a student or post-doc as a co-inventor.



Awards and Honours

Since 2004, University of Toronto faculty have earned 232 of the most prestigious national and international awards and honours. In this time frame, U of T faculty have won Canada's top annual science and engineering prize five times. They have won two-thirds of the Guggenheim Fellowships for the arts awarded to Canadians. As well, U of T's share of Canadian fellows of the American Association for the Advancement of Science has risen from an eighth to a third.

U of T faculty account for eight per cent of Canada's total faculty complement and earn about 20 per cent of Canada's top academic awards and honours. When measured against international competition, where the highest standards of peer-review are practised, U of T's share rises: U of T faculty earn about 35 per cent of the top international prizes awarded to faculty members at Canadian universities.





emerging from U of T almost tripled, putting the university in third place in North America, behind only the Massachusetts Institute of Technology and the University of Utah.

Many observers credit the creation of MaRS in 2001 with catalyzing this transformation. The brainchild of former U of T president John Evans, MaRS rapidly developed 1.5 million square feet of office and laboratory space near the university dedicated to accelerating innovation. MaRS CEO Ilse Treurnicht says, “U of T was there from the very beginning, as part of the planning team and providing critical seed funding earlier than any other institution. The partnership continues to strengthen, with growing impact on the innovation economy of the region and Canada.” Scores of U of T companies have been incubated at MaRS and advised by its startup veterans. Thousands of U of T students now take Entrepreneurship 101 at MaRS, many of them online.

As MaRS expanded, U of T President David Naylor and Treurnicht (who are husband and wife) floated the idea of a new Toronto regional consortium that would bundle great ideas and inventions and bring them to market. Leaders from MaRS, U of T and a core group of partner hospitals developed the concept. Tony Redpath, then MaRS’ vice-president, partner programs, was involved from the beginning. He highlights Naylor’s “vision and leadership” in “convincing 16 academic institutions and research hospitals to work together” in what became known as MaRS Innovation. “His public commitment and persuasive powers led to the rise of what is now acknowledged as the leader in the federal government’s Centres of Excellence for Commercialization and Research program and a completely new approach to academic entrepreneurship,” says Redpath.

U of T was now in a good position to refocus its own efforts internally. Young and Lewis developed the university’s single,

integrated Innovations and Partnerships Office and gave it three objectives: to promote consideration of downstream applications as discoveries occur; to make it easier for investigators to take part in industry-sponsored research as a complement to independent research; and to foster a stronger culture of entrepreneurship among students.

Cast Connex is a good example of what the university has been promoting. The company was co-founded by U of T engineering grad Carlos de Oliveira in 2007, based in part on his master’s thesis. De Oliveira had developed the idea for a new kind of steel joint that could reduce construction costs while also making buildings more earthquake-resistant.

After finishing his thesis, de Oliveira worked with the university’s technology transfer office, which provided crucial mentorship and advice. He and other startups received guidance on everything from applying for government grants to filing patents, and were given workspace, where they often learned from each other. “Sometimes just hearing how someone else spoke with a potential vendor on the phone was instructive,” says de Oliveira. Today, the company’s products are used in structures around the world, among them, the new World Trade Center.

University officials appreciate the benefit to society in harnessing the ideas of 80,000 students, many of whom are technologically adept and entrepreneurial in outlook. Derek Newton, who became executive director of the Innovations and Partnerships Office in 2012, says he has observed a “huge surge” in the number of students involved in invention disclosures – two-thirds now include a student as co-inventor. “In the past, you went to university so you could get a good job at a good company,” he says. “Students still do that, of course, but now we’re doing a lot more to help them create their own job in their own great company.”

Alumni Leadership

In his recent three-year posting in Beijing, David Mulroney (BA 1978 St. Mike's), Canada's former ambassador to China, heard tales in many small cities of one of the university's better-known alumni: Norman Bethune, who performed emergency surgery and provided medical training in China in the 1930s. Mulroney also encountered fellow alum Mark Rowswell (BA 1988 UC), who performs in China under the stage name "Dashan" and is one of the country's favourite comedians. These were just two ways Mulroney realized U of T's global reach – and the impact of its alumni – while he was abroad, he says. As ambassador, Mulroney also needed to keep close tabs on Canadian culture and public debate. Many of the most prominent names – Canada's voices in the world, in a sense – were U of T graduates. "U of T really is connected with the very best of Canadian life," he observes.



While the university often touts the achievements of its professors and students – and their contributions to research and innovation in Canada – the university's 525,000 graduates living in more than 180 countries are also making a huge impact around the world. Some have achieved international renown: five Nobel Prize winners are U of T graduates, for instance, including Lester B. Pearson, who was awarded the 1957 Nobel Peace Prize and went on to become Canada's 14th prime minister. Many others, though not as well known, occupy leadership positions in every field of endeavour.

In recent years, U of T has expanded its efforts to engage alumni, not only in the Toronto area, but increasingly through local and regional networks abroad. "We wish to strengthen our alumni's sense of connection, and to continue to bring them the best of what the university has to offer, wherever they are," says Barbara Dick, assistant vice-president, alumni relations.

Paul Cadario (BASc 1973) is one of the university's most prolific alumni volunteers. The former World Bank executive credits President David Naylor with helping catalyze these new engagement initiatives. "David's articulate and energetic advocacy for the university, and for public policy to make Ontario and Canada stronger, got alumni worldwide all fired up about U of T. He was an engaging, tireless – and very persuasive – ambassador at alumni events everywhere." As both the first openly gay president of the U of T Alumni Association and the first to live outside the Toronto region, Cadario emphasized Naylor's "commitment to inclusion and to expanding the reach of alumni engagement."

The university is holding more alumni events, and featuring academic speakers at many of them, partly to remind graduates of the university resources that are available to them. At last May's Spring Reunion – which drew record crowds – the Stress-Free Degree lecture series (featuring professors and alumni), counted as one of the weekend's most popular

Boundless Mission

The university's current fundraising campaign will create a legacy for tomorrow's students, faculty and staff – and for Canada

In 1958, U of T's president, Claude Bissell, convinced the board of governors to launch the university's first institution-wide fundraising campaign, with a goal of \$12.6 million (worth about \$101 million in today's dollars).

More than half a century later, the university, with David Naylor at the helm, officially launched its fifth major fundraising campaign. With a goal of \$2 billion, the most ever for a Canadian post-secondary institution, U of T's Boundless campaign aims to help the university achieve two main goals: to address international challenges through the support of pioneering research and breakthrough innovations; and to prepare students to succeed in a rapidly changing, global knowledge economy.

This fall, the campaign reached the \$1.35 billion mark, thanks to the support of more than 80,000 alumni and friends. John Cassaday (MBA 1981), a member of the Boundless executive committee, believes that this achievement, midway through the campaign, reflects the sense of a shared mission among members and friends of the university community. "U of T has reached this important milestone because there are few other institutions whose impact and vision resonate so directly with individuals and organizations wishing to make a difference in the world," he says. It's a mission that truly is "boundless."

programs. “Shaker” events bring together young alumni for career and social networking in a casual setting, while the Next Steps conference allows graduating arts and science students to receive hands-on advice from career experts and fellow alumni.

Many U of T alumni engage with the university by serving as mentors – and even by hosting dinners at their home. For several years now, “Dinner with 12 Strangers” has brought together U of T students, alumni and professors for informal dinner parties. The idea was to make a large campus seem smaller, especially for students. Harvey Botting (BA 1967 VIC, MBA 1985), an alumni governor and former alumni association board member, was an enthusiastic early host;

he liked the idea of encouraging interaction among *all* members of the university community. “It is remarkable how much energy and connectedness comes out of these evenings,” he says.

David Mulroney himself recently returned to campus – as a distinguished senior fellow at the Munk School of Global Affairs. Like many grads who come back to U of T, he has assumed a mentorship role, helping students understand how they might interact with a government partner on an international project. Not surprisingly, he’s also noticed a few changes on campus: “I am absolutely overwhelmed by the buzz – all the new buildings, the activity, the people – it’s electric,” he says. “It’s a great place to return to.”

Electric might be a good way to describe the University of Toronto during David Naylor’s eight years as president. Those who know U of T’s 15th president describe him as smart, determined and almost literally indefatigable. “A pragmatic visionary,” is how Jack Petch, chair of the Governing Council during part of Naylor’s term, puts it.

Chancellor Emeritus David Peterson concurs. “I marvelled at his capacity both as a strategist and as a tactician. And he has an absolutely dazzling intellect. With two questions he will go to the heart of any matter. This is a huge, complex organization but he understands what’s going on virtually everywhere.”

Peterson also praised Naylor’s management style, noting that he brings out leadership qualities in others. “David Naylor works extremely well with people, building them up.

He has the rare gift of being able to work with difficult people, too. He gets a little testy and you can see smoke coming out of his ears. But he has the capacity to bite his tongue, which does not come naturally to him.”

Rose Patten was chair of the Governing Council in the early years of Naylor’s presidency, and chair of the search committee that recommended his appointment. “We all know David’s brilliance is the starting point for his outstanding leadership,” she says. “But it’s his most rare and powerful combination of humility and resolve that distinguishes him.”

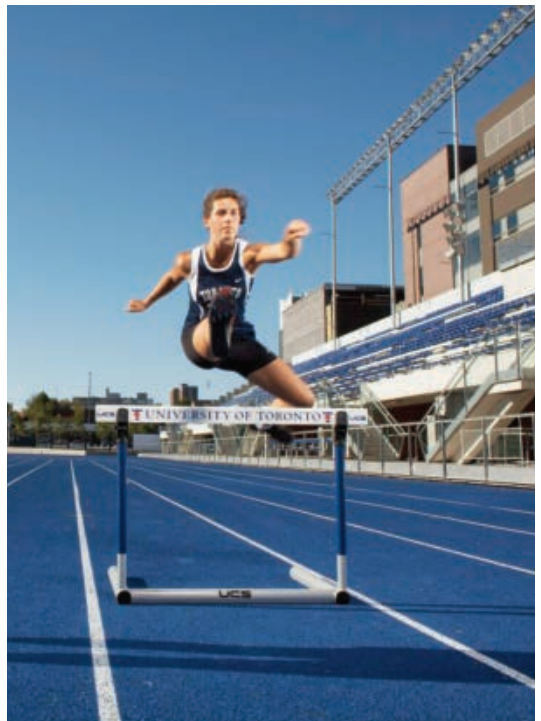
That combination might explain Naylor’s ability both to drive a coherent and comprehensive plan, and to see it realized, through the engagement and leadership of countless others, from the senior administrative team to the staff, faculty, students, alumni, and friends of the University of Toronto.



The long view and the big picture

“I have known every president of the University of Toronto since Sidney Smith. I have watched the work of Dr. Naylor in his time as president of the University of Toronto. He has been part of and provided leadership for the changes that are taking place in post-secondary education in this country and elsewhere. He has recognized the need for the University of Toronto to improve the students’ experience as they enter that university. He has been involved with the maturing of both the Scarborough and Mississauga campuses, which institutions have become almost full-fledged universities themselves. He is a man who has shown great leadership, great sensitivity and the intellectual ability to adjust to the changes in the post-secondary system. Dr. Naylor will be missed not just by the University of Toronto, but the education community in a broader sense.”

*The Honourable William G. Davis, P.C., C.C., Q.C.
18th Premier of Ontario
Former governor of the University of Toronto
BA 1951 UC; LLD 1967*



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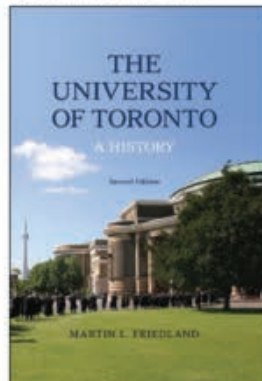
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U of T - Then & Now

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by Edward Shorter

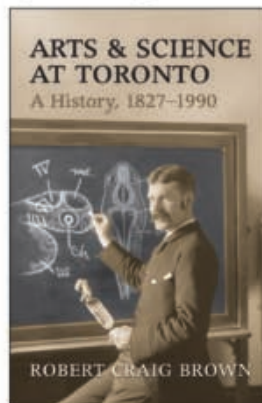


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A Great Cause

“What could be more inspiring than to be engrossed 24/7 in a place focused on higher education and advanced research?”

As his term as president of the University of Toronto comes to a close, David Naylor talks about the past eight years and what he plans to do next.

What has brought you the greatest satisfaction during your eight years as president of U of T? No one thing trumps the others. Mostly I feel a tremendous sense of gratitude to many fine people – faculty, staff, students, alumni and friends of the university – who pulled together to make a great deal of positive change in a difficult fiscal climate.

A list of recent priorities at U of T might include student experience and accessibility, research and innovation, the tri-campus system, alumni engagement, fundraising and capital renewal. Are there other, less visible, things that have mattered to you? Celebrating our faculty and staff is one. There has been a sustained effort across the university to nominate our faculty for both national and international awards in teaching and research. The results have been excellent, and Vice-President Paul Young and his team in the office of research and innovation have been particularly effective

with nominations for international research prizes. Similarly, from the office of Angela Hildyard, vice-president, human resources and equity, and throughout the entire organization, there has been an overdue push to recognize the commitment and creativity of non-academic staff.

We've been fortunate to get several new schools up and running in key areas such as global affairs, public health, public policy and the environment.

Cheryl Misak, former provost, and Jill Matus, vice-provost, students and first-entry divisions, catalyzed a complete overhaul of our student recruitment strategies. Our story is better, we're telling it better and the results are better.

I could go on, but mentioning just a few names already feels wrong. The basic point is that literally thousands of great people inside and outside the university put their shoulders to the wheel with a view to moving the whole enterprise forward. It's been an amazing collective effort.

Many measures suggest that U of T's global standing has risen in recent years. From your perspective, what is the university's most important measure of success? There isn't one. A big research-intensive university like ours has a multi-dimensional mission. Focusing on one measure ignores too much of what we do. There's also no easy or widely accepted way to synthesize those dimensions into a single measure – notwithstanding all the league tables and rankings that get published these days.

What are the biggest challenges facing U of T? Have they changed while you were president? I'll start with a caveat. All three levels of government have taken some bold decisions in recent years that were very helpful to the university and our partners, such as the academic hospitals and MaRS. I'd be remiss not to thank our friends in government in Ottawa, at Queen's Park, and in the city halls of Toronto and Mississauga for their support. And let me also acknowledge the very fine work done by Judith Wolfson, our vice-president, university relations.

That said, the biggest challenge we face is short-termism in policy-making by modern governments. This isn't a partisan issue. Politicians are responding to what the polls tell them. And there's something amiss when the ticket to public office seems to be a combination of wedge politics, quick wins for interest groups and frenetic activity on social media.

We still lack a coherent plan for higher education in Ontario, with corresponding revisions to funding mechanisms. We still need new policies for tuition and student aid that focus on evidence and results.

As well, unlike in many OECD countries, research operating grants to Canada's major universities leave a substantial fraction of the costs uncovered. We urgently need a co-ordinated federal-provincial strategy for research and innovation. That strategy should include a commitment to independent basic and applied research, ongoing infrastructure renewal,

coverage of the actual costs of research grants, more research fellowships for domestic and international graduate students, and, ideally, an excellence fund to support globally competitive universities.

Frankly, other nations and sub-national jurisdictions have done far better on all those fronts. And it is only a matter of time until Canada pays a serious price for this ongoing and apparently wilful neglect.

Improving the undergraduate student experience at U of T has been one of your priorities. Are you happy with the progress thus far? Yes, with some riders.

There's been a concerted effort to address the student experience at all levels of the institution, and obviously students themselves have played a big role in shaping change. We've seen reliable evidence of improvements: excellent domestic applicants and more out-of-province students; dramatic growth in the numbers of highly qualified international students; growth in participation in small classes; more use of technology in pedagogically rich ways; better results on student survey data; fabulous participation in extra-curricular activities; and high retention and completion rates.

On the other side of the coin, we desperately need more residence beds on all three campuses. That's in the works, but we lost time with the fiscal crisis. Overall staffing for student services is too thin, and we need more faculty in the undergraduate-intensive divisions.

In short, the progress is very encouraging, but there is a lot left to do.

While you were president, the percentage of the university's revenues derived from tuitions and private sources exceeded government funding for the first time. What does this signify to you? First, a reality check: The university has developed and implemented a budget model that was recognized in 2013 with a gold medal for public sector leadership by Deloitte and the Institute of Public Administration of Canada. Vivek Goel, former provost, and Safwat Zaky, former vice-provost, planning and budget, were among the key architects. The success of this model has depended on the ongoing efforts of every academic division and the excellent central teams led superbly by Scott Mabury, vice-president, university operations, and, until very recently, by former provost Cheryl Misak. There's no doubt that, at all levels of the institution, we're now squeezing more value out of every dollar of revenue from every source.

The real problem is simple. Governments aren't doing their share. Ontario's spending on health care and K-12 education tracks closely to the national average of the other nine provinces. Not so for higher education. We're still dead last in per-student funding in Canada, and in the lowest decile for all provinces and states in North America.

As I mentioned earlier, we're also heavily subsidizing peer-reviewed research grants in a way that universities in

“U of T has worked hard to ensure that rising tuitions do not bear heavily on lower-income students”



other countries and even in this country are not. The details are convoluted, but as matters stand, small universities make a profit by hosting federal research grants, while strong performers such as U of T lose out thanks to a bizarre funding formula that punishes excellence. In fact, U of T subsidizes federal research grants to the tune of about \$75 million per year – a costly penalty for our success.

How do you respond to the continuing concerns about tuition levels and student debt? This is a perpetual hot button issue. As I’ve said, Ontario’s universities receive the lowest level of per-student public funding in Canada – about half the level of support in Alberta or Saskatchewan, even after their recent sharp cutbacks. This institution and the student experience would be in free-fall without increases in tuition revenues.

Roughly half of the domestic undergraduates at U of T receive assistance that does not require repayment from the province or from U of T. As a consequence, the average tuition paid by this group is less than half the posted rate. Much of that internal aid comes from tuition dollars recycled from those who can afford to pay full tuition, in the same way that government grants are funded by progressive taxation.

This explains why freezing tuition or eliminating tuition is hugely regressive. It’s counter-intuitive, I know. But that’s the reality.

Fortunately, per-student debt levels in Canada are much lower than in the United States. Half of U of T’s undergraduates finish without owing a cent to the government of Ontario. Average debt levels for those who do graduate with student loans from the province are at the lowest level in a decade. And yes, it’s not fair for some students to graduate with very high levels of student debt, even if the averages are falling. But that won’t be remedied by freezing tuition fees.

U of T has also worked hard to ensure that rising tuitions

do not bear heavily on lower-income students. Since 2005, for every \$1 that tuition has increased per domestic undergraduate, the university has increased its needs-based student aid by \$1.07. The number of students receiving needs-based aid has also increased. In other words, we’re still meeting our commitment to access and to enrolling all qualified students, regardless of means.

Last, I should warn that this tuition-recycling model will be sustainable and equitable only if the government of Ontario meaningfully enhances its bursary system. And at some point, provincial politicians must bring levels of per-student funding closer to the national average. That’s the real key to letting students and universities break out of the ongoing cycle of tuition increases.

We’re still dealing with the aftershocks of the financial crisis of 2008. Locally, one thing that happened was a change in the way U of T handles its investments. How have these changes positioned the university to respond to potential future shocks?

U of T Asset Management (UTAM) was incorporated as a U of T subsidiary more than a dozen years ago. The idea was to emulate structures and strategies at private universities with much larger endowments. However, UTAM never had the scale to do what it was trying to do; nor, in recent years, was it taking full account of interlocking risks in its portfolio. The result was an unacceptable level of loss during the 2008–09 fiscal crisis.

Following an expert review led by the Hon. Hal Jackman and Larry Wasser, the university greatly streamlined UTAM’s governance, and, guided by Cathy Riggall, former vice-president, business affairs, added various checks and balances. For example, the actual investment strategy is shaped by a blue-ribbon investment committee that works directly with the university’s president. The allocation of assets is more appropriate, leverage has been eliminated, interlocking risks

are closely monitored and contained, management fees have been trimmed and the net returns have improved. There's more to be done, but we're in a better place now.

UTM and UTSC have grown tremendously in recent years.

Can you comment on the evolution of the tri-campus system?

Over the past 25 years, as UTM and UTSC have expanded, their impact and autonomy have grown apace. Those campuses today each have more than 11,000 students, and combined they have several hundred graduate students in a range of disciplines. Thus, as the *Towards 2030* report emphasized, the east and west campuses are no longer outposts of Arts and Science on the downtown campus – a fact underscored by the inception of a full-fledged medical academy on the Mississauga campus in 2011 and the new PhD program in environmental science at UTSC.

“We’d be in a real straitjacket without philanthropy as a catalyst for excellence and innovation at the university”

Massive investments have been made in new facilities to catch up with enrolment growth. Each campus has many distinctive programs, with more in the works at both the undergraduate and professional master's levels. Major governance changes are being implemented, again with a view to more autonomy while maintaining tri-campus co-ordination. Led very effectively by Vice-Presidents Franco Vaccarino and Deep Saini, and Saini's predecessor Ian Orchard, the faculty and staff have kept both campuses moving forward brilliantly.

Today, I believe there is much wider recognition that the tri-campus system is a strategic asset that benefits the entire university community.

U of T is in the midst of a historic \$2-billion fundraising campaign. Why is private support important for the university?

I've already noted the indefensible levels of per-student funding provided by the government of Ontario. In that context, we'd be in a real straitjacket without philanthropy as a catalyst for excellence and innovation at the university. Of course, philanthropy has been part of the university's fabric for well over a century, but the need and impact have never been greater. Vice-President David Palmer and his team in university advancement have worked tirelessly to mobilize fundraising all over the institution. And the \$1.35 billion raised to date has accordingly improved every part of the university. Student scholarships and bursaries, research programs, endowed chairs and professorships,

student services, scores of big and small capital projects, extra-curricular activities and athletics – anywhere you look, philanthropic support from our alumni and friends has made a significant difference. I'm deeply grateful to our donors for their vision and generosity, and I've really enjoyed working with them over the last eight years. Of course, the hardest part of the campaign is the last 30 per cent, but I am confident that, before too long, we'll see President Gertler announcing the achievement of that \$2-billion milestone.

Can you share some thoughts on academic leadership?

I have only one thought and it's hardly original. In a place as strong as U of T, much of a dean's or president's role is to set a broad framework and tone, and then work like crazy to cheer on and support people who want to do good things – or at least mitigate disincentives and try to remove obstacles in their way.

The *Towards 2030* exercise turned out to be very helpful in framing an agenda. And early on, we implemented a new budget model that yielded huge dividends for distributed leadership. It gave academic divisions better information and stronger incentives to reward creativity and fiscal discipline. That model also generated enough central funding to reinforce university-wide priorities and support exciting initiatives that bubbled up on a more *ad hoc* basis.

One other thing: When you end up in some role with a fancy title, it's often more important to be lucky than smart. I can't say enough about my good fortune to work throughout the eight years with such great vice-presidents and an excellent team extending from Simcoe Hall into the entire university. I also won the lottery every day that the outstanding staff in the president's office put up with me.

What will you miss most about being president? As the cliché goes, it's all about the cause and the company. What could be more inspiring than to be engrossed 24/7 in a place focused on higher education and advanced research? There are sometimes ugly things to manage, but it's easy to keep going when the ideals of the organization are so high and so important to successful societies. I've also had the privilege of meeting literally thousands of exceptional individuals who are part of the university's community – faculty, staff, students, alumni, supporters and partners. It's their company above all that has made the presidency such a wonderful journey over the last eight years. I'll miss those daily interactions a great deal.

What's next? Back to the ranks as a professor of medicine... I'll retool in one or two new research areas, and pick up some time-limited assignments in different sectors and places. I've loved the open-ended and totally unpredictable challenges of the last eight years. But I'm looking forward now to what some might call a balanced-portfolio life rather than all-consuming responsibilities centred on one role.



Richard Rinn

U of T alumnus is making a difference year after year

Annual Gifts

Thousands of U of T alumni like Dr. Rinn make annual gifts to areas of the University that are important to them. Their support has an impact on students, faculty, programs and facilities every day.

To learn more about how you can make a difference in the lives of U of T community members, please visit giving.utoronto.ca/support.

The Soldiers' Tower was very much in the midst of things when Richard Rinn arrived at U of T in 1971. The native of Thunder Bay was enrolled at University College. He lived at the Sir Daniel Wilson Residence. He ran at Hart House.

"You can certainly see it as you walk around campus," Rinn recalled in his office at the Southlake Regional Health Centre in Newmarket, Ontario, where he has worked as a pathologist since 1985. "It's such a familiar landmark, and a beautiful building – beautiful architecturally, and very simple, compared to a lot of things today." But the monument had more than aesthetic merit to Rinn. His father, Angus William Rinn, had served in the First Special Service Force, the Canadian-American combat unit formed in 1942 and known colloquially as the Devil's Brigade.

His mother, Marion Jean Rinn, was a clerical worker in the Department of Munitions and Supply in Ottawa. Two great-uncles were infantrymen at Dieppe. One became a prisoner of war. "All that generation of my family decided to serve in World War II," he said. "I can certainly appreciate that some guys went off and didn't come back."

Rinn expresses that appreciation with an annual gift to the campaign to preserve the Soldiers' Tower. It's a natural thing," he explains. "It fits nicely."

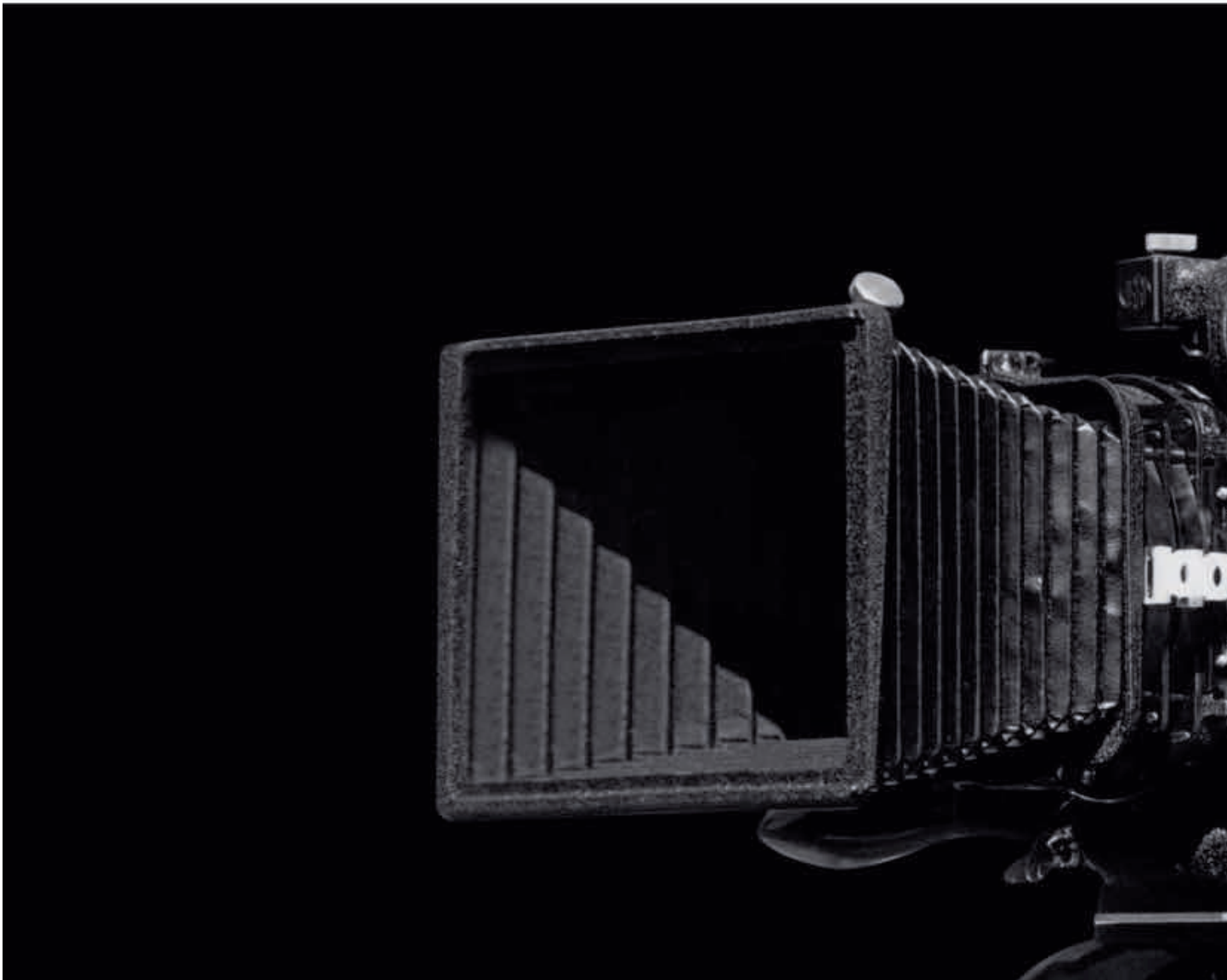
And it fits nicely for a few reasons. Although neither of Rinn's parents attended university, they gave their son every encouragement to apply to U of T. "Both highly valued education" he recalled. "I got lots of financial and psychological support from my parents."

That support gave Rinn the opportunity to enter medical school after two years of undergraduate work. He earned his MD in 1977. He met his wife, Mary Elizabeth Tweeddale (MD 1978), a fellow resident at Toronto Western Hospital.

Dr. Rinn emerged from his medical residency almost debt-free. "Clearly, many students are not able to do that today," he says.

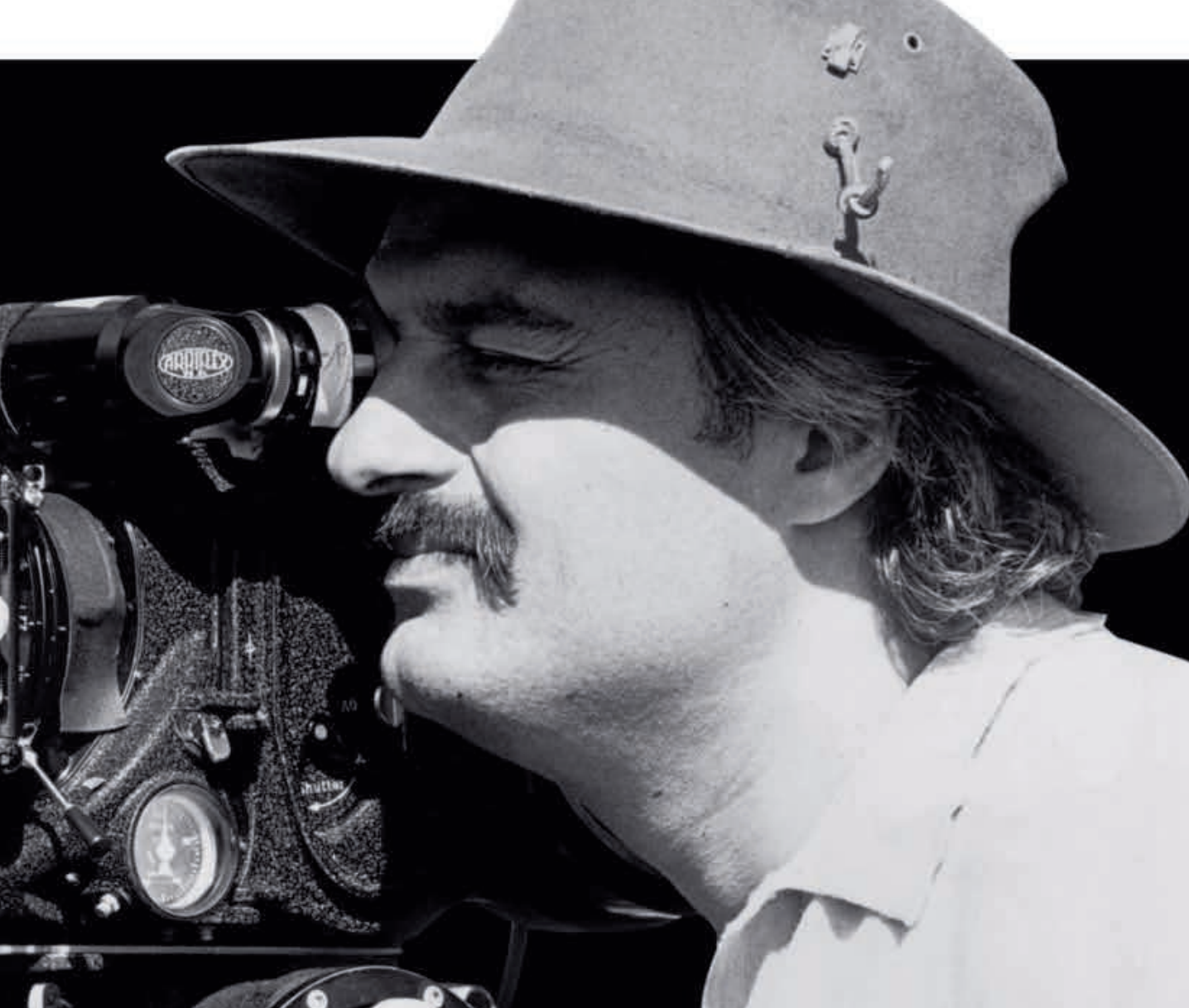
This is why Rinn also contributes annually to support students at the Faculty of Medicine.

"I was very fortunate," Rinn says. "So I feel a sense of obligation. I give because I know my gift will go back into the hands of future doctors."



By Alec Scott

Daddy and Me



Ted Kotcheff made almost 20 movies during a career that took him around the world for six decades

But it was a pair of small films – including the first Canadian feature ever to win an international award – that really got critics to take notice

ONE EVENING LAST SPRING, the Toronto International Film Festival's Bell Lightbox played host to the homecoming of a Canadian-born filmmaker. After six decades in show business, working mainly abroad, Ted Kotcheff (BA 1952 UC) was screening a beautifully restored and digitized version of his main Canadian-made success, *The Apprenticeship of Duddy Kravitz* – based on the book by his great friend Mordecai Richler. Kotcheff shot and produced the film in 1973 during an interlude in Canada after more than a decade working in London and before moving to Los Angeles, where he lives now. He told the crowd how hard it was to raise enough money to make the movie.

I wasn't there but Kotcheff recounted a version of the story to me when I visited him for an interview at his retreat in Mexico, north of Puerto Vallarta. "I found a Hollywood producer who was interested in making the movie. He thought the book was great. But he said Montreal was too parochial. Why not move it to Pittsburgh? And maybe we could make Duddy a Greek boy. It was my friend's book, I couldn't do that to him. Duddy – a Greek boy? In Pittsburgh?"

As it turned out, funds were found in Canada, and Kotcheff's movie was set in and around Montreal – on a gritty St. Urbain Street, in the mansions of Westmount, on McGill University's idyllic campus and in the nearby Laurentians. It starred a young, twitchy Richard Dreyfuss, then relatively unknown, as a decidedly un-Greek Duddy.

The movie did well at the box office: it earned back its small budget and then some. It also won critical plaudits. All in all, Duddy's fictional coming-of-age story provided an actual coming-of-age moment for Canada's nascent cultural scene. Both book and movie grab you by the lapels. In both versions, Duddy is brash, lovable, treacherous, part mensch, part schemer – and impossible to ignore.

This past spring, the Cannes Film Festival named *Duddy Kravitz* a "classic" and invited Kotcheff to a screening of it. The designation is an honour best measured by the quality of the other films included among this year's classics: Alfred Hitchcock's *Vertigo*, Bernardo Bertolucci's *The Last Emperor* and Jacques Demy's *The Umbrellas of Cherbourg*. In 2009, another film Kotcheff directed in the 1970s – the harrowing *Wake in Fright*, set in the Australian outback – was also screened at Cannes. Although directed by a Canadian, it's considered one of the best Australian films of all time.

These two early films, both hits on the festival circuit, put Kotcheff on the international radar. In addition to significant theatre and television work, he has shot 19 feature films. He's directed such A-list actors as Gregory Peck, Ingrid Bergman, Jane Fonda, Nick Nolte and Gene Hackman. His most well-known movies are a pair he did for big Hollywood studios in the 1980s: the Sylvester Stallone vehicle *First Blood* (the original Rambo movie), and the comedy *Weekend at Bernie's* – both major commercial successes that spawned franchises. Kotcheff spent the 10 years before retiring – roughly the first decade of the new millennium – running the popular TV

series *Law & Order: Special Victims Unit*. (To find good actors for the show, he estimates he watched more than 23,000 auditions.)

And now, with an old University of Toronto chum's help, the former literature student has finally had time to realize a dream of his youth: to produce a collection of poems, revisiting key scenes and relationships from his past. Getting the chance to engage in some sustained contemplation after a life of lights, camera, action has been sweet enough in its way. But sweeter still: in the years after he took himself off the active-for-hire list, his standing as a filmmaker hasn't declined, but risen, and risen dramatically – in large measure because of *Duddy Kravitz* and *Wake in Fright*.



he photos of a young Kotcheff on set generally show him in a battered hat, gesticulating – sometimes angrily – at some well-known actor or his crew. His unruly, then-brown hair, sometimes hippie length, pokes out in all directions. Now in his early 80s, he's changed some, but there's still a fair bit of thatch up top even if it's no longer brown and down to there. Under a strong brow are eyes that are friendly, but that pay close attention. He moves gingerly these days, sometimes stifling a wince: his back is playing up – and surgery is only a few days away, something he doesn't once mention.

Kotcheff's second wife Laifun Chung is an award-winning landscape designer, also a Canadian and the mother of two of his five adult children. She's the more practical one of the pair, the driver, and the one who chose their apartment's lush Frida Kahlo colours. She and Kotcheff also share a house in Beverly Hills that friends describe as a light-filled minicastle with a panoramic view of the city.

All of this is a far cry from what Kotcheff calls the slum house in Cabbagetown where he started his life. But his family's relatively financially straitened existence had its compensations. In the pre-television era, Kotcheff and his father went to lots of movies – "sometimes four or five in a single week" – and both he and his younger brother Tim, later a Canadian television producer, caught the moving-picture bug. But he wasn't particularly close to either parent. "They worked hard. They were both immigrants from Bulgaria, she was of Macedonian descent, and they met over here around the time of the stock market crash. When I was born, they were just trying to make ends meet."

Kotcheff remembers them distilling moonshine in the house – hooch they sold for extra income during the lean years of the '30s. "It was a different Toronto. When my parents got married they had to do it on a Sunday, every other day they were working. And their good Protestant neighbours called the police to shut the music-filled party down."

In a moment right out of *Cinema Paradiso*, Kotcheff used to sit backstage at a community hall while his parents and their emigrant friends put on a weekly theatrical in Bulgarian. "They'd write their own scripts. Often the actors, working

other jobs, didn't have time to learn the lines. So there'd be a huge amount of prompting, but still with all the pauses, the overacting, the underacting, you'd see the rapt faces in the audience, the crying, the happiness. They couldn't get enough."

Although money was tight, his parents found enough for violin lessons for Kotcheff, and under the tutelage of a young Slavic immigrant, he became one of the best young violinists in the country, winning a gold medal at age eight for his playing at the Canadian National Exhibition. But the tutor came back from fighting for Canada in the Second World War with a crushed hand, and Kotcheff, under a less inspiring teacher, dropped his aspirations to become a professional musician. But all the music-making had an impact: he still marks film scripts with musical pacing and mood notes. "This scene is andante, this one allegro, that one is largo."

In the course of his arts degree at U of T – he had previously dropped out of a science degree – he took classes with two of the biggest intellectual lions at the school then, Marshall McLuhan and Northrop Frye. It was in Frye's graduate seminar, a class Kotcheff snuck into, that he met Francis Chapman, a fellow student who would become a lifelong friend. Chapman, who became a TV and film director, producer and writer, recently helped Kotcheff get his poems into shape, and Kotcheff has given minor characters in his early films variations on his friend's name.

Chapman's family house in Rosedale became the young Bulgarian's second Toronto home. "When you don't find

what you're looking for in your home, you go for it elsewhere," Kotcheff observes. The Chapman matriarch was a concert pianist who enjoyed playing chamber music with the talented Kotcheff. He used to flirt with her outrageously, notes Chapman, "saying if she'd only been a bit younger...."

The two young men both started at CBC Television, just as it was coming into existence. "Ted was passionate, smart, ambitious, and he flew through there from one job to the next," says Chapman. Initially on stage crew, Kotcheff heard about a job helping documentary head Sydney Newman produce a series on great thinkers at U of T. "Having worked with two of them, I thought I could do it. Inexperienced as I was, he let me try." After a time, Newman, who would famously go on to create the first *Doctor Who* series in Britain, gave Kotcheff an ultimatum. "He said, 'You're a good writer, but not a great one. If you're willing to try directing, I think that might be a better fit. But if you do it and fail, you can't have your old writing job back.'"

Kotcheff took the directing job, and remembers the period fondly: "We did everything – comedies, dramas, documentaries. It was live television, a new medium." He became a versatile filmmaker, and attributes his desire to work in different genres to his beginnings at the CBC. He also started to entertain the idea of leaving Canada. "After a while, I wanted to try my hand at film – and theatre. There was no film industry in Canada and not that much theatre. In London, I could do all three." Politics also played a part. Kotcheff's participation in a left-leaning book club had gotten him

barred from an America then seeing reds under every bed – and on every incoming train and boat. "They stopped me in St. Alban's, Vermont, and held me there, for this book club I'd belonged to for six months a long time before."

And so Britain looked doubly desirable, and, in the 1950s, Kotcheff went there, soon landing some solid TV work. Before the decade was out, he won the British equivalent of an Emmy. He also started to direct theatre. These were his glory days. One night, he took in an early Rolling Stones show at a small club, with novelist friends Penny and John Mortimer, the latter the author of the *Rumpole of the Bailey* series. "Penny said I had the sexiest lower lip in all of London – a compliment you don't forget." His first film gig came his way in 1962: *Tiara Tahiti* starring James Mason. It's a meditation on class, with Mason playing a swell who falls on hard times; its credits indicate that a certain Mordecai Richler worked on the script.

Ted Kotcheff (right) on set with Sydney Newman (seated) at the CBC in 1956, during Kotcheff's first year of directing live television.



The partnership that produced one of Canada's best movies was not merely a professional one. But their first encounter seemed unpromising. Introduced by a mutual friend, they met for a meal in the south of France. Kotcheff chatted away, and a suspicious or moody – or something – Richler said next to nothing. “But then he apologized later for that, and anyway, something about it worked.”

The two would live together for nearly five years in a seldom-locked run-down flat in Swiss Cottage, London, with the Canadian expat community wandering in and out. Kotcheff was there when Richler completed *Duddy* in the late '50s, read it, and knew at once it was something special. “I said someday I'd film it, and we both laughed at how unlikely it sounded.” An outsider in WASPy Toronto, Kotcheff felt for Duddy, a Jew who didn't fit into a Quebec divided between Catholic francophones and Protestant anglos.

Kotcheff was in the apartment when the advance copies of *Duddy* arrived. A unexpectedly dramatic scene ensued. “Richler's first wife, Catherine, came in, opened a copy and saw the dedication – to another woman,” he recalls. “She went hysterical.” The woman the book is dedicated to, Florence, became Richler's second wife, and they remained married for the duration of his life.

Both Kotcheff and Richler had big, often operatic relationships with women, but in a curious way, their relationship with each other often took precedence. They were so inseparable in London that sometimes they'd be suspected of being a couple. “Mordecai would play it up,” Kotcheff says. “He'd say, ‘In the early days with Ted, it was all cognac and cigars, but now what does he bring me? Nothing!’ and I'd play along saying, ‘Oh, shut up darling.’”

Richler's eldest son Daniel remembers the drinking buddies' Yuletide ritual: “The Richlers and Kotcheffs used to alternate Christmases at one another's London homes. I'm not sure how much fun the wives had – our mom did all the cooking and Ted's first wife, English actress Sylvia Kay, did most of the smoking at the window – but the men partied hearty. One especially boisterous year...I watched with nervous interest as Dad poured a slug of Scotch into his champagne. Ted called out, ‘My God, Mordecai, that's a potent drink!’ and Mordecai said in the mock-boastful voice he liked to use, ‘A potent drink for a potent man.’” (Kotcheff's best movies focus mainly on men, on the moments, like this one, when they feel powerful, and those when they feel anything but.)

As Kotcheff's list of stage, film and TV credits grew, he began to think more seriously about filming *Duddy*. After the Hollywood producer's ill-conceived proposal to transform the story out of recognition, Kotcheff approached the newly established Canadian Film Development Corporation. It decided to make *Duddy* one of its first big investments – providing \$300,000 toward a \$750,000 budget (the film went over budget to a total of \$900,000). A Montreal property developer funded and arranged the rest, notwithstanding that Duddy himself makes a shady property development

deal. At first, Kotcheff retained a lawyer-turned-writer named Lionel Chetwynd to draft the script. But it needed additional work, so Kotcheff brought in Richler, a novelist with a great ear for dialogue.

The film was a big critical success and a moderate one at the box office – it earned back its production budget in its first two weeks, and another \$1.1 million to boot. Kotcheff, then permanently back from Britain, in Canada, hoped to build a film career here, on the strength of *Duddy*. “But nothing happened. I worked for a year on what I thought was another viable project. Nothing. So when they called from Hollywood, I went.”



In his poems, Kotcheff has revisited key moments in his past – an English teacher at Runnymede Collegiate who turned him on to Shakespeare, his violin teacher's war injury – and a few are dedicated to deceased friends. Only Richler merits two poems – and both are moving. In one, he's written: “You knew the curse of my life/That haunted me from childhood... Your look dispelled it forever.”

I don't expect Kotcheff to answer when I ask him what that curse was. But he does: “There was lots of good in our household growing up, music, fun; they were fine people. But there was,” a long, long pause. “There was...When my father came home, my mother would tell him what I'd supposedly done that day, and I'd get it. He'd...I was convinced there was something in me that wasn't lovable, that couldn't possibly be loved. And Mordecai changed that for me.”

There's not the slightest bit of self-pity in his voice. His youth was, it happened. He made friends and found mentors and other families to get what he needed. By today's standards, Kotcheff's films are not particularly violent. But the beatings he took growing up explain something about his art: the violent bits don't have much musical highlighting or extreme lighting. Violence is a part of life, not anything particularly out of the ordinary.

As he surveys the Mexican coast, Kotcheff points out the birds flying along it, the pods of pelicans skimming the waves. After a long interview, he says, by way of summary: “I was happy those films came back [to Cannes]. It helped make me feel...like I've done something solid.”

He's promised his papers, in due course, to U of T, and some of the biographers of the stars he's worked with will no doubt pore over them. Perhaps his own biographer will, too. In the meantime, he's not quite done, he has two unrealized ambitions: to direct an opera, and to find funding for a film about Bulgaria's King Boris III, and how he worked to stop the Nazis from killing many of his country's Jews.

“I may not get there, but so many of the things I wanted to do,” he says, “somehow I've done them.”

Alec Scott (LLB 1994) splits his time between Toronto and San Francisco. He writes frequently about the arts and travel.

Achieve more.

Hana Zalzal

Student, **Creative Writing**, is the Founder of CARGO Cosmetics and a University of Toronto alumna (BASc 1988)

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All About Alumni

“The entire environmental movement needs to be reinvented. Raising awareness isn’t enough”

Eco-activist Emily Hunter

p. 65



Flights of Peace

Antoine Pappalardo's airline takes on UN aid missions – from Liberia to Afghanistan

IN 2009, AFGHANISTAN WAS EMBROILED in a brutal war marked by gun battles, suicide bombings and civilian deaths. But what Antoine Pappalardo remembers most about that time and place is what was missing: the country's women.

“To go around a large city [Kabul] where all women are absent from plain sight is very depressing. You feel that half of humanity is being hidden and suppressed,” says Pappalardo, CEO of the Toronto-based charter airline Trans Capital Air.

So what was an airline boss doing in a war zone halfway around the world? Establishing an operating base for Trans Capital, which was participating in a United Nations

peacekeeping mission in the country. The work involved flying in food, medicine and supplies for troops and civilians, evacuating patients, and transporting UN staff and international dignitaries. And Pappalardo (BA 1997 VIC) isn't the kind of CEO who just delegates dangerous fieldwork. “I wouldn't ask any colleague of mine to work in a troubled country where I wouldn't be prepared to go myself,” he says. “It's important to put my skin in the game.”

Trans Capital's first UN aid assignment was 13 years ago in East Timor, as the country struggled for independence against Indonesian occupation. “The place was completely devastated, and people were getting massacred by the military,” recalls Pappalardo. Since then, his company has participated in UN peacekeeping missions in countries such as Liberia, following the resignation of President Charles Taylor and the conclusion of the Second Liberian Civil War; Nepal, during the disarmament of Maoist rebels and the transition to a democratic system; and Haiti after its devastating 2010 earthquake. ➤



Song and Dance

At Derrick Fung's site, fans buy more than music – they buy musical experiences



“THE FUTURE OF THE MUSIC BUSINESS is *not* in selling music,” says Derrick Fung (BBA 2009 UTSC). He isn’t saying anything revolutionary; the rise of online piracy has been hurting sales for years. What is new is his solution: he sells musical *experiences*, which are created in part by fans.

Fung is the co-creator of Tunezy, a music-focused crowdfunding platform for up-and-coming artists. Launched last year, the website promotes musicians by recommending their videos to its tens of thousands of subscribers, based on user preferences. Fans can then make wishes for musical encounters with artists,

who can respond with personalized experiences for sale. Some recent packages have included a private guitar lesson, pre-show dinner, Skype chat, photo shoot and living room concert. Artists, which have included Grammy Award-winning American hip-hop band Naughty by Nature, keep all the revenue generated minus a 15 per cent cut to Tunezy.

The idea for Tunezy – which won Billboard’s Innovator’s Showcase in 2012 – was sparked by Fung’s longtime passion for music. Fung, 25, started playing the piano at age four and trained at Toronto’s Royal Conservatory of Music, and today also plays guitar and sings for fun. In high school, he created the largest free site for sharing sheet music. His U of T education, which included an internship at Microsoft, helped him develop his business savvy, as did post-graduation jobs at Merrill Lynch and CIBC World Markets.

“We’re empowering musicians to give something great to fans and at the same time make money,” says Fung, who mentors students on entrepreneurship as a UTSC executive in residence. “Fans can have an experience with artists they’ll never forget.” - SHARON ASCHAIK

OVERHEARD



It can be as critical to reject advice as to follow it. My Grade 10 physics teacher, when describing a concept that was the least bit complex, would say, ‘The girls need not listen to this.’ Despite this absurd dismissal, I loved the subject.



Astronomer Wendy Freedman (BSc 1979 UC, MSc 1980, PhD 1984), who received an honorary doctor of science at Convocation Hall in June.



➤ The aviation business is in Pappalardo’s blood: in the 1970s, the Montreal native witnessed his father climb the corporate ladder at the Quebec airlines Nordair and Quebecair. After the family moved to Toronto in the mid-1980s, his father ran his own passenger airline, City Express, until 1991. That’s where Pappalardo junior cut his teeth in the business, working 60-hour weeks during summers.

What Pappalardo always found most captivating was his father’s globetrotting for business in the Middle East, Africa and the Americas. “It opened my mind to the possibility of working anywhere,” says Pappalardo, 41.

After graduating with a degree in political science in 1997, Pappalardo decided to combine his interest in global affairs

with the family business, and approached his father – who was then involved in aeroleasing – about refocusing on international work. Together, they grew Trans Capital into a company that has approximately 75 employees, including about 30 pilots. Its nine aircraft fly out of Billy Bishop Toronto City Airport on Toronto Island. While initially an ad hoc charter flight service, Trans Capital now solely serves the UN and continues to operate in Afghanistan, Haiti, Liberia and South Sudan.

“This work really puts you in touch with your own humanity,” says Pappalardo. “It increases your resolve to enable peace, reconstruction and social development in these countries.” - SHARON ASCHAIK



During the Second World War, 557 U of T community members died in active service; 628 died in the First World War



Taylor Lew at Juno Beach Centre

Tour de Force

In Normandy, U of T students teach visitors about Canada's role in the Second World War

COURSEULLES-SUR-MER, Normandy, France. A young man dressed as a Canadian soldier in the Second World War stands before a group of British schoolchildren. "I was 16 years old when the war broke out," he begins. "I'm originally from Montreal, Quebec, and I remember that day well..."

The scene takes place at the 10-year-old Juno Beach Centre, in the Canadian sector of the D-Day landing beaches. Here, tourists learn about the 14,000 Canadians who took part in the Allied invasion of June 6, 1944, as well as more than one million other Canadians who served elsewhere in

the war. Over the past decade, four U of T students have been hired as guides at the centre, leading fact-studded tours of the museum, a German bunker and part of Juno Beach itself. For groups of schoolchildren, the guides also portray period characters such as the young Canadian soldier.

Ian Beacock (BA 2010 VIC) served as a guide in the summer of 2009. Family history led him to apply for the job. "My grandfather's brother was killed in the Battle of Normandy," says Beacock, a PhD candidate in modern European history at Stanford University in California. "I was looking for a more profound engagement with his story, and to learn more about Juno Beach's landscape and history." He also found it moving to be there during the summer that he was 21 – the same age as his grand-uncle when he was killed.

Taylor Lew (BA 2013 TRIN), who was a guide in the summer of 2011, had his interest in the Second World War sparked by a U of T course in 19th- and 20th-century European history. Training for the job, he says, went beyond the detailed history of what Canadian forces did on and after D-Day: "We got into the personal aspects: what soldiers felt as they faced battle, how young a lot of them were – our age or younger. That was touching," says Lew, who is now in the Ontario Legislature Internship Programme.

The student guides took their work seriously. "We felt the responsibility of being good Canadian ambassadors," says Lew. "We realized we were representing Canada and the Canadian war effort for visitors from around the world."

- DAN CARLINSKY

Remembrance Day services will take place at U of T's Soldiers' Tower at 10:20 a.m. on November 11. Visit alumni.utoronto.ca/soldierstower.

Silver Screen Gangster

Derek Tsang plays criminals in movies, but directs films about love and family



Derek Tsang

Derek Tsang (BA 2001 UTSC) may be a popular Hong Kong actor known for his gangster roles, but his first love is filmmaking.

Born in Hong Kong and raised in Canada since the age of 10, Tsang pursued a degree in sociology from U of T Scarborough with aspirations of becoming a screenwriter and director. "To become a good scriptwriter, you have to approach a story from various angles," says Tsang, 33. "Sociology broadens your understanding of the world by offering different perspectives on how people and society function."

Following his studies at U of T, Tsang returned to Hong Kong and made his acting debut in *Men Suddenly in Black*, a parody of Triad films (crime flicks featuring Chinese secret societies). He's played several roles in Triad movies, including *The Thieves* – an action-comedy that is the second highest-grossing movie in Korean

film history. "People tend to romanticize the Triad way of life, which is why I like acting in dark comedy gangster films," says Tsang. "They highlight some of the menial, and even ridiculous, things that Triad members do."

Tsang's filmmaking takes on a different tone. He co-wrote the script for his directorial debut, *Lover's Discourse*, which depicts relationships about love and affliction – and for his next feature, he hopes to shoot a film revolving around a dysfunctional family.

Tsang also hasn't stopped striving to become a better actor. "It's easy to be a mediocre actor in this industry – but to become a top-notch, respected actor?" he says. "That is the hard part." - NADIA VAN

The Thieves can be purchased on Blu-ray or DVD at Amazon.ca, or viewed on Netflix.



Fire stations in Central and South America have a tradition of taking in cyclists overnight. Other free places cyclists sleep? Ranchos and police stations

THE TWO OF US

Francesca Valente and Branko Gorjup

For Francesca Valente (MA 1977), an Italian cultural mediator, and Branko Gorjup (MA 1977), a Croatian scholar of Canadian literature, shared passions have resulted in a truly international love affair.



FRANCESCA: After graduating with a BA from Ca'Foscari University in Venice, I earned a scholarship to U of T where I studied with Northrop Frye and Marshall McLuhan. During my first week, I met Branko in Robarts Library when I asked him where my class was and he offered to show me. It's challenging when you come from a different university and different country, and Branko helped me figure everything out – from directions to academic concerns. I wouldn't say that he's eager to please, because he has a very strong personality, but he has a very generous nature. Also, he was always smiling. After earning an MA in Canadian literature, I went

back to Italy, changed my suitcase, and returned to Toronto to be assistant director of the Italian Cultural Institute. I've been promoting Italian contemporary art for 30 years, in Toronto, Vancouver, Chicago, San Francisco and Los Angeles.

Although Branko is Croatian, we come from the same Mitteleuropean matrix – which includes meeting in cafés and the cult of the *aperitivo*. Our mothers even cooked the same Sunday soup when we were children.

BRANKO: Francesca and I started working together when we came up with the idea for a poetry series in the early '90s. I selected the Canadian poets and wrote introductions, and Francesca translated and chose contemporary Italian artists to provide the images. We pursued this work for almost 20 years. We also organized trips of Canadian poets and writers, including Northrop Frye, to our home countries. We've always worked in the same sphere and it's wonderful. I consider her one of the best translators of English into Italian. She has incredible confidence and attention to detail, and she is a great second pair of eyes and ears. We're often apart – we have homes in both Italy and Canada – and it's been that way for the last 40 years. We also have a son in Switzerland who graduated from Victoria College at U of T and is working as an architect and designer. I think the reason we're still together might be because we've created these overlapping and separate spaces.

Ali Burke in southern Ecuador



Breaking Away

“Owning a bike has always been as essential as owning a pair of shoes,” says inveterate cyclist Ali Burke. And in April 2012, Burke (MSW 2009) began a two-year biking adventure: she and her partner, Glenn Rivison, quit their jobs to cycle from Anchorage, Alaska, to Ushuaia, Argentina.

In July, the couple was in an alpine region of Ecuador, nearing Peru – roughly two-thirds of the way through their 27,000-kilometre journey. “Ecuador is the land of the mountains, and not a day of cycling has gone by here without a big climb, or two, or three,” says Burke, a social worker who is raising money for the Canadian Mental Health Association.

The journey has been filled with awe-inspiring moments, such as cycling along the Stewart Cassiar Highway in northern British Columbia – an almost 900-kilometre stretch of road with plenty of bears and scenic mountains. Perils have included the scorching temperatures of Mexico's Baja peninsula, which rose above 40 degrees Celsius on most days. “My brain felt like it was melting,” she says.

Burke marvels at how they've been treated by strangers along the way. She recalls a family stopping to give them directions in Honduras; several hours later, the father returned to take them to their home for the night. “I might spend the rest of my life paying forward people's kindness,” says Burke, “but I am very OK with that.” – **STACEY GIBSON**



Another environmental trend on the rise, according to Emily Hunter, is a sharing economy. This includes Toronto's first Tool Library, and bike and car sharing



Emily Hunter

Environmentalism needs to evolve, much like species

to think outside our own activism box. This was a hard pill for me to swallow, as activism was literally my life.

I was born into the environmental movement. My father was the founding president of Greenpeace and my mother was the first woman to save a whale by using her body to block a harpoonist at sea. In the 1970s, my parents, along with a small group of Greenpeace co-founders, had won many battles – such as ending Russian and Australian whaling *and* the Canadian seal hunt (for a time).

But my parents also failed on occasion and had to reinvent themselves time and again. In fact, it was through failure that Greenpeace began – after the U.S. detonated a nuclear bomb on a vulnerable Alaskan island during underground testing. A small group of activists known as the Don't Make a Wave Committee travelled by ship to put their bodies in harm's way yet could not stop the blast. But with the attention their campaign stirred, they rebranded themselves as Greenpeace – now an international organization.

Perhaps now the entire environmental movement needs to be reinvented. Often we rely on the tried-and-true strategies of our parents (myself included), expecting similar victories. But in the face of climate change, we are at an impasse. Raising awareness isn't enough. Today, it will take a new kind of activism appropriate for this generation if we are to effect significant change yet again. Call it Activism 2.0.

For me, Borneo proved this. Like my parents, I failed and had to reinvent myself. I decided to become a storyteller, focusing on a new narrative – how my own generation is redefining what environmental activism means. I wrote a book entitled *The Next Eco-Warriors*, and am now adapting it into the documentary *Activist 2.0*.

I've met women and men from around the world who aren't your typical activists. More tech-savvy than their parents, they're using online tools to mobilize on scales never seen before. For example, 350.org is a youth-led group that organized the Global Day of Action on climate change and used social media to spark 7,000 events held in 188 countries. And this past summer, a group called The Black Fish used drones armed with cameras, not guns, to track illegal drift-netting operations off the Mediterranean coast.

For me, what I have learned across two generations is that environmentalism needs to evolve, much like species. But will activism evolve in time to effect significant change yet again? I can only hope.

One thing is certain: failure creates a great opportunity for transformation.

Emily Hunter's (BA 2011 UTSC) film is scheduled for release in 2015. Visit www.Activist2.com.

FIRST PERSON

Activism 2.0

While on a mission to save the Borneo rainforest, Emily Hunter realized environmentalism needs a rethink

I DREAMED OF A LUSH, GREEN RAINFOREST. The type you see in a Disney movie with an explosion of flora, orangutans climbing the heights of the jungle and a host of dangerous critters. But on the island of Borneo, where I was campaigning against deforestation, this is a fantasy.

I woke from my dream at 6 a.m. in the back of a pickup truck. Our activist group had arrived at a village in West Kalimantan. We walked a beaten path, banners and cameras in tow, to support a fight to protect the remaining local forest. The palm oil industry had been encroaching on the land of a Dayak community without consent. We thought if we could garner enough attention, we could save what was left of this 130 million-year-old rainforest. We were wrong.

Walking past the village, I looked through the haze of the dewy mist onto the land. A harsh reality sank in: The forest had already been taken. Nothing left but the stumps of fallen great giants and the buzzing of insects. In its place, crudely planted palm oil saplings in rows of a vast monoculture plantation. It was a ghost of a rainforest.

It became clear to me then that I was failing as an activist. Despite gaining media attention and banner-waving in solidarity with local activists during the autumn of 2011, it wasn't enough. It was not just bad timing, but our inability

60 SECONDS WITH
Amy Fish

Grouching With Grace



Amy Fish (MHSc 1993) is the queen of complaining. Not only has she been standing up for herself since the day she insisted on fresh lettuce at a Toronto sub shop, but as a manager and ombudsman at hospitals in her native Montreal, Fish has received – and resolved – thousands of complaints. Fish recently wrote *The Art of Complaining Effectively*, and she talks to **Janet Rowe** about getting a gripe on.

What is the best way to get a complaint resolved? It's a very personal art. I recommend writing down everything you're complaining about, and then crossing off what's

least important. Focus on the most important items. Also, be prepared to try different methods to get resolution. If you try in person and that doesn't work, then try by letter, then email, phone and Facebook.

You say it's crucial to stay calm when complaining. How do you do that? First, timing. Sometimes you have to let a little water pass under the bridge until you calm down. And then breathe before you complain.

I recently had a problem with my phone company. I waited on the line for 40 minutes, then they went through all their scripts and I didn't get anywhere. Next time, hang up. So you have to call and go through it again? Yep. Sorry. Phone and cable companies are extremely difficult to deal with, in my experience. Also, the call centres are very large, so it's luck of the draw. If you hang up, you might get someone more helpful next time. **Do you take on complaints for other people?** I do get requests for that, but my message is motivating people to stand up for themselves. Complaining is the first step toward social justice: You're not only complaining for yourself, but for everyone in line behind you.

No one wants to be seen as a complainer. How do you decide when it feels right to complain? A measure would be: If I don't complain now, am I going to regret it later? A woman in one of my workshops raised her hand and said a doctor was rude to her... 13 years ago. I don't want people to carry that around.

Tell me a crazy complaint story. I was out for dinner and a cockroach – which had clearly seen *Mission: Impossible* one too many times – fell from the ceiling onto our food. So gross! They offered us a dessert, and I said, "I don't think that's going to work, because we really don't want anything else from your kitchen. So we're going to have to ask you to pay for our meal." I was very calm, and all I had to do was ask. And produce the offending roach.

You mean you carried it over... Yes, I did! And unceremoniously showed it to the manager.

Your pet peeve? People are often afraid to complain: they don't want to make waves, they don't have the energy, they give up. And I find that very sad. My alternate title for the book was *Pass Me a Hanky*, because the story of not complaining is the saddest story ever.

Milestones



The following alumni have been named to the Order of Canada, the country's highest civilian award. Named officers are **William Breukelman** (BASC 1955), chairman of Business Arts and co-founder of Imax, who was recognized for his entrepreneurship as head of pioneering imaging companies. **Denise Chong** (MA 1978) is the author of such books as *Egg on Mao* and *The Concubine's Children*, and supports human-rights efforts and the arts. **Dafydd Williams**, a physician and retired astronaut, has contributed to space exploration and enhanced astronaut health and welfare. Williams completed a residency in emergency medicine at U of T in 1988, and was formerly a lecturer in the department of surgery.

Named members of the order are **Elizabeth Baird** (BA 1961 UC) for promoting Canada's diverse food heritage as an author and former food editor of *Canadian Living* magazine. **N. Murray Edwards** (LLB 1983), co-founder and chair of Canadian Natural Resources, was honoured for his entrepreneurial contributions and philanthropy.

Anne Sado (BASC 1977, MBA 1981), president of George Brown College, was recognized for her leadership in post-secondary education and for her community engagement. **Jodi White** (BA 1969 VIC), a distinguished senior fellow at Carleton University, contributes to Canadian public policy and to the voluntary sector. **William J. Young** (BA 1977 TRIN), president of Social Capital Partners, is a social entrepreneur and philanthropist.

The Writers' Trust of Canada has honoured **Laura Clarke** (MA 2010) with the RBC Bronwen Wallace Award for Emerging Writers. She earned \$5,000 for her collection of poems, *Mule Variations*. The award is given to writers under 35 whose work has not been published in book form.

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DOMESTIC DOYENNES

November 1947

Household Science students learn the art and science of cooking

At identical cooking stations – equipped with Bunsen burners, pudding bowls and graniteware pie plates – Faculty of Household Science students strive to perfect a recipe in November 1947.

The faculty – which had existed as a household science department since 1902 – focused not only on cooking and home life, but also on the scientific study of food and nutrition. While many graduates became homemakers, others taught in high schools or became dietitians in institutions such as hospitals.

The school was housed in the neoclassical Lillian Massey building, which officially opened in 1913, at Bloor Street and Queen's Park. Principal Annie Laird and Clara Benson, secretary and head of the food chemistry department, were driving forces behind the faculty – and were U of T's first female professors.

The Faculty of Household Science, in its early years, was unabashedly of its time, preparing women for a domestic life. Students planned, shopped for, cooked and served a day's meals. They learned about cleansing agents and studied home nursing.

But the faculty also expanded the traditional woman's role by teaching students the science behind housework. Undergrads conducted dietary studies, performed lab research in food chemistry and, as part of their degree work, studied everything from biology and economics to history.

In 1962, the school was renamed the Faculty of Food Sciences to reflect its growing role in science and dietetics. The faculty was dissolved in 1975 – and the kitchen lights were turned out three years later, after the last class graduated. – **STACEY GIBSON**



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2013 Arbor Awards

When no thanks are expected, they are often the most deserved. Congratulations to the 2013 winners of the Arbor Awards for volunteer service.

Winston Churchill once said: “What is the use of living, if it be not to strive for noble causes and to make this muddled world a better place for those who will live in it after we are gone.” From the recent grad who volunteers with Hong Kong alumni to the Second World War veteran who leads our Remembrance Day ceremony, Arbor Award winners epitomize this spirit of volunteering. Since 1989, the Arbors have recognized extraordinary individuals for their generosity and service to the U of T community. The 2013 recipients are no exception. We salute them for their loyalty. We thank them for enriching the U of T experience for our students and faculty, alumni and staff. Congratulations to all the recipients.

To learn more about the Arbor Awards and this year’s winners, please visit: alumni.utoronto.ca/arbor-awards