What Toronto Needs An election primer / Factory Farms Are they unethical? / A Serious Plan Arts & Science looks ahead The Mobile Revolution Textbooks on phones / Islamic Finance Religion at Rotman / Hart Hanson Hitting the funny bone

Iof Magazine Autumn 2010

A Global Affair The Munk School takes on the world



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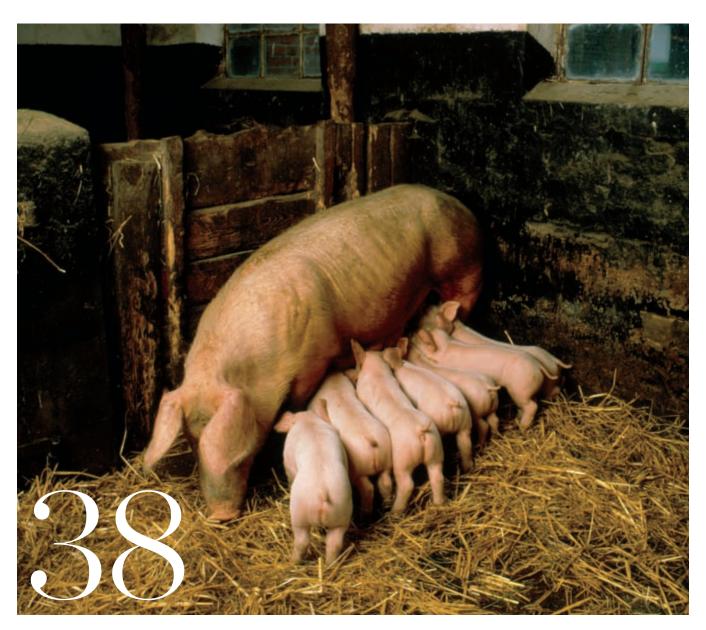


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Autumn 2010



The Lives of Animals

Is the way we treat creatures raised for food unethical?

by Stacey Gibson

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Departments

"I think we're at a tipping point"

Peter Clinton, U of T Libraries' director of IT services, on the growing popularity of digital books, p. 15



A behavioural scientist provides new criteria for how much is too much



Normand Labrie coped with sweltering heat and noisy classrooms to bring Canadian teaching techniques to India



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Letters

Write to us! Got an opinion about an article? Send email to uoft.magazine@utoronto.ca or mail to *U of T Magazine*, 21 King's College Circle, Toronto, Ontario, M5S 3J3. Letters to the editor may be edited for clarity and length.





"More should be done to tell older women about their 'actual' chance of becoming pregnant."

- Lynn Lavallée toronto

A Difficult Truth

I sincerely appreciated the summer cover story, "Parents – at Last!" by Marcia Kaye. In particular, I liked the highlighted box, "The Age Barrier," which stated that even with the best technology most women over 40 have little chance of getting pregnant. I went through five years of unsuccessful fertility treatment from ages 39 to 43. Several tens of thousands of dollars later, I feel that more should be done to tell older women about their "actual" chance of becoming pregnant. Kudos for stating the obvious!

- Lynn Lavallée TORONTO

Diverse Families

I noticed that the cover illustration for the article "Parents – at Last!" did not include queer families. I hope that, in the future, *U of T Magazine* can take a more inclusive perspective, especially when dealing with an issue that affects basically all queer families.

> - Zach Witte ROTMAN COMMERCE PRIDE ALLIANCE TORONTO

Life and Death

Your item on Wayne Sumner's enlightened approach to euthanasia was most interesting ("Ending It All," Summer 2010). It is strange that in Canada suicide is not illegal - not even the attempted kind - but helping someone to perform that very same not-illegal act is. People who desperately wish to die are usually not dissuaded by even their most caring friends and relatives. The state is not our friend; nor did it give birth to us. It should not be able to say to its citizens that they must cling to life whatever the circumstances. It can insist that we not hurt other people, of course. But it shouldn't play a role in keeping us alive if we choose, of our own free will and with a clear mind, to die.

Ethicist Margaret Somerville worries that euthanasia implies a lack of respect for "important societal values." On the contrary, euthanasia affirms these values by supporting the integrity of individual choice on an essential issue.

- Geoff Rytell BEd 1975 OISE TORONTO

The Right to Die

Thank you for publishing "Ending it All." The Right to Die movement has grown from one tiny American group, The Hemlock Society, to organizations in more than 40 countries and an international federation. There are now laws permitting assisted suicide in at least six countries and one American state.

So far, only Switzerland allows non-residents to come for assistance. Two excellent feature-length films have recorded the full journey from decision to final action: *The Suicide Tourist* and *A Short Stay in Switzerland*. Both programs are intensely honest and deeply moving, showing the support of spouse and children. There is absolutely no evidence to support the "slippery slope" argument. On the contrary, there are now fewer messy, sudden and hurtful (to relatives) suicide attempts where a doctor's assistance is legal.

I joined the Hemlock Society at the age of 30. My opinion was considered weird at that time. I am now 77. Each year I see more and more public discussion of the right to die, and polls show a two-thirds majority of Canadians support permissive legislation.

- *John Alan Lee* BA 1956 UC PROFESSOR EMERITUS, U OF T TORONTO

The Stuff of Lives

One of the things I find frustrating about *U of T Magazine* is its unremitting interest in success. Why not focus more on student, alumni and faculty failure? I understand the donor-relations imperative and the need always to highlight

Letters

optimism and accomplishment. But stories on blind alleys, mistakes, missed opportunities and errors of all sorts would be welcome and entertaining. These, much more than achievement, are often the stuff of our lives.

- Gideon Forman BA 1987 VICTORIA

Trampling Rights

Given the evidence we have from the way the police handled the lawful demonstrations at the G20 Summit in June, it would seem fair to conclude that Toronto Police Chief Bill Blair (profiled in the Spring 2010 issue) wants to "break from the past" by arresting and beating dissenters and anyone who may happen to be in a given area, including children, denying civil liberties and free speech and deceiving and intimidating citizens through the use of non-existent laws. Blair is quoted in the article as saying that Toronto's safety "is not something we should take for granted." We didn't know what he had in mind.

> - Karyn Callaghan MEd 2001 HAMILTON, ONTARIO

The Problem with Air Travel

In the Summer 2010 issue, there are six fascinating pages on the commendable efforts to make the University of Toronto greener and more sustainable ("Blue and White and Green All Over," p. 34).

Ironically, the two pages immediately preceding them advertise the Alumni World Travel Program for 2011. While I understand the appeal of these amazing packages, I see them much differently than I used to.

The environmentalist and writer George Monbiot, among others, has stated that air travel, as we have come to take it for granted, is incompatible with a sustainable future. Jetliners burn massive amounts of fuel and generate significant greenhouse gases. Anyone who is serious about sustainability and about trying to reduce his or her environmental footprint must surely reassess whether flying for pleasure is acceptable in this day and age. Whatever the educational and cultural value of these trips, they are essentially holidays for the privileged and are in no way essential.

Will the university extend its growing environmental awareness to a more responsible view of its alumni travel program, I wonder?

> – *David Beattie* BASc 1968 RICHMOND HILL, ONTARIO

Correction

The article "Blue and White and Green All Over" (Summer 2010) stated that the Campus Agriculture Project is growing food near Robarts Library to test it for pollutants. Although this group was involved in selecting the plot, the research is being conducted by Prof. Clare Wiseman, of the Centre for Environment, in collaboration with FoodShare. U of T Magazine regrets the error.

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Start-Up U

U of T is helping to create a culture of innovation

DENTISTRY PROFESSOR PAUL SANTERRE UNDERSTANDS the world of start-up companies. Ten years ago, well before assuming his current role as director of the Institute of Biomaterials and Biomedical Engineering, Santerre discovered a way to control the adverse reactions of cells to medical implants. That idea sparked the establishment of Interface Biologics, a company that now employs 18 people, holds 10 patents and recently signed a deal with a multibillion-dollar health-care company specializing in dialysis systems.

Absent the regulatory hurdles of biotech, software companies can move even faster. Two U of T start-ups have both been sold recently. Bump Top, created by graduate student Anand Agarawala, was acquired by Google for an estimated \$30 million. Sysomos, the brainchild of computer scientist Nick Koudas and Nilesh Bansal (formerly a graduate student), has been sold to Marketwire, a public relations company.

These companies exemplify a growing trend. Today, the university and its hospital partners lead Canadian academe in the number of start-ups created. To sustain that advantage, U of T has created the Innovations and Partnerships Office (IPO), which works with the staff at MaRS Innovation, a new group created by 14 universities and hospitals in downtown Toronto to identify and leverage the commercial potential of discoveries made within the member institutions.

Basic research in all disciplines remains central to U of T's mission. It's the continuing source of breakthrough discoveries and ideas that change the world. But opportunities for application can emerge unexpectedly. This is one reason why U of T's innovations office is also building relationships with faculty members in all disciplines: to gain a better understanding of the range of research underway at the university.

Space is part of the equation. For example, several years ago the chemistry department converted five underused labs into state-of-the-art "pre-incubators" that have already

nurtured five spinoff companies. The university is now setting up additional incubator space in the Banting & Best buildings, where another successful U of T start-up, ViveNano, already resides.

Toronto is also home to a growing suite of educational programs designed to nurture the next generation of entrepreneurial leaders in Canada. During the school year, the MaRS convergence centre offers "Entrepreneurship 101." These weekly seminars cover topics such as how to make an effective pitch to potential investors or create a sales strategy. More than 1,800 people – mostly U of T faculty and students – took part in the 2009-10 sessions. Recent graduates looking for a more intensive experience can sign up for a three-week summer boot camp in "technopreneurship," led by chemistry professor Cynthia Goh, herself a veteran of three start-ups.

More initiatives are in the pipeline. The Faculty of Applied Science and Engineering will launch an engineering business minor in 2011. And another program still in development will bring together 36 top students from across Canada for a summer of intensive work with business experts.

Why does all this matter? To me, it's about a culture shift. The usual indexes of "technology transfer" – new enterprises with university roots, patents filed or licensing revenues – are far too narrow, not just from a disciplinary perspective but in what they measure.

Think back to the early 1920s. The university's approach to patenting and licensing insulin had far more to do with ensuring the quality of the product and protecting the reputation of the university and the inventors than generating revenue. Fast-forward to this century. While the vast majority of new enterprises in Canada will not have tight ties to academe, they are almost always led and staffed by people with a university education.

That's the key. Successful societies depend on successful enterprises – be they investor-owned, non-profit or publicly administered. And successful enterprises depend on people who have not only the requisite knowledge or skills, but creative minds coupled to an innovative outlook. That's why your university believes that education goes hand in hand with research, and that a culture of innovation is important in every discipline we teach.

Start-up U isn't just about new companies. It's ultimately about new ways to think.

Sincerely, David Naylor

Calendar of Events

─ MORE EVENTS! Check out the latest campus happenings at www.utoronto.ca

NOVEMBER



U of T's Asia-Pacific Graduation Ceremony

in Hong Kong will honour 2008, 2009 and 2010 graduates. The ceremony allows alumni to celebrate this milestone with family and

friends, and to network with others from across the region. Those who have already attended convocation in Toronto are welcome to come to this ceremony. 11 a.m. Grand Ballroom, Grand Hyatt Hong Kong, 1 Harbour Rd., Hong Kong. To register and for more info, contact Teo Salgado at 1-416-978-2368 or teo. salgado@utoronto.ca or Michelle Poon at +852-2375-8258 or michelle.poon@utoronto.com.hk.

For more info: www.alumni.utoronto.ca/apgc2010.

ALUMNI

September to November Soldiers' Tower

The Memorial Room museum in the Soldiers' Tower is open to visitors on select dates in September, October and November. There will also be carillon recitals on select dates. 7 Hart House Circle. (416) 978-0544, www.alumni.utoronto.ca/ tower or soldiers.tower@utoronto.ca

September 23 New York

Canadian Association of New York 16th Annual Canadian Universities Alumni Reception. The

Roosevelt Hotel, Madison Avenue and 45th Street, New York. For info and to register, www.alumni. utoronto.ca or contact Teo Salgado at (416) 978-2368 or teo.salgado@ utoronto.ca.

September 30 Toronto

Rotman Commerce welcomes the Class of 2010 into the alumni community with the Rotman **Commerce Young Alumni** Celebration. Enjoy food, drinks, music and a festive atmosphere. 6-9 p.m. Skylounge, InterContinental Toronto, Yorkville. 220 Bloor St. W. RSVP by Sept. 24 at https:// portal.rotmancommerce.utoronto. ca/home.htm.

November 11 Soldiers' Tower

Service of Remembrance.

10:15 a.m.-11 a.m. 7 Hart House Circle. (416) 978-0544, soldiers.

tower@utoronto.ca or www.alumni. utoronto.ca/tower

November 15 Calgary

The Calgary Skule Alumni Chapter Fall Reception. Speaker: Prof. Doug Reeve, chair of the department of chemical engineering and applied chemistry. 6-8 p.m. The Calgary Petroleum Club. 319 Fifth Avenue South W., Calgary. (416) 978-4274, lindsay@ecf.utoronto.ca or http:// alumni.utoronto.ca/fallreception2010

EXHIBITIONS

To December 5 U of TArt Galleries Traffic: Conceptual Art in Canada c. 1965-1980 is the first major account of the development in

Canada of an important 20th-century art movement. It is being held at U of T's four galleries: Blackwood Gallery at U of T Mississauga, Doris McCarthy Gallery at U of T Scarborough, and the Justina M. Barnicke Gallery and U of T Art Centre on St. George Campus. Traffic: Conceptualism in Canada conference will be held at Justina M. Barnicke Gallery at Hart House on Nov. 26-28.

For the **exhibition**, check gallery websites for dates specific to each venue. For the conference, contact the Justina M. Barnicke Gallery. Blackwood Gallery: www.blackwoodgallery.ca. Doris McCarthy Gallery: www.utsc.utoronto.ca/dmg. Justina M. Barnicke Gallery: www. jmbgallery.ca. U of T Art Centre: www.utac.utoronto.ca.

October 12 to January 14 Thomas Fisher Rare Book Library Foreign Latitudes and Unknown Tomorrows: 300 Years of Ukrainian Émigré Political Culture will draw on the library's collections of Ucrainica - books, maps, documents, photos and more - to situate Ukraine, illustrate the diversity of its peoples and show the depth of Ukrainian political activity abroad. Monday to Friday, 9 a.m.-5 p.m. 120 St. George St. http://fisher. library.utoronto.ca/events-exhibits/ upcoming-exhibitions

LECTURES AND SYMPOSIA

September 23 Rotman School of Management Leadership Expert Series @ Rotman. Dean Roger Martin will interview Bill Downe, president and CEO of BMO Financial Group, on the topic of innovation and productivity. Reception will follow. 5-6 p.m. Rotman School of Management, Fleck Atrium, ground floor. 105 St. George St. Online registration

UofT Alumni Events / Exhibitions / Festivals / Music / Sports / Theatre

Cheer on Varsity Blues football players at home games on Oct. 2 and Oct. 16



required at www.rotman.utoronto. ca/sept23. (416) 978-4193 or events@rotman.utoronto.ca

October to November St. George Campus Canadian Perspectives Lecture Series. The Senior Alumni Association offers lectures to alumni and non-alumni over 55 years of age. U of T professors speak on an eclectic mix of topics. \$70 for nine lectures, through October and November. (416) 978-0544, senior. alumni@utoronto.ca or www.alumni. utoronto.ca/senior

October 14 George Ignatieff Theatre S.D. Clark Memorial Lecture: Money and Intimacy. Prof. Viviana Zelizer, department of sociology, Princeton University, shows how economic activity helps people create, maintain and renegotiate important ties in their daily life. 6 p.m. George Ignatieff Theatre, 15 Devonshire Place. (416) 946-5899 or lilia. smale@gmail.com

October 16 Knox College and the Art Gallery of Ontario

Sacred Art. Learn about sacred art: how it evolved and what it means to Christian spirituality. Speakers: Father Dan Donovan of St. Michael's College and Gillian McIntyre of the Art Gallery of Ontario. Presentations, lunch and a reception at Knox College, and a visit to the AGO. \$65-\$85. Space is limited. 9:30 a.m.-5:30 p.m. (416) 978-6228 or http:// www.utoronto.ca/knox/

October 21 Victoria College 46th CRRS Erasmus Lecture. The Book Trade in the Italian Renaissance: Structure and Regulation. Speaker: Angela Nuovo of the University of Udine.

4 p.m. Alumni Hall, room 112. (416) 585-4484, crrs.vic@utoronto. ca or www.crrs.ca/events.

October 27 Edward Johnson Building Keys Lecture: The Origin of Life and the Emergence of Darwinian Evolution. Dr. Jack W. Szostak, Nobel Prize winner and professor of genetics, Harvard Medical School. 2 p.m. Walter Hall, Edward Johnson Building, 80 Queen's Park. Reserve a seat at (416) 946-3346.

November 15 George Ignatieff Theatre Wiegand Memorial Lecture. Speaker: Prof. David Sloan Wilson

of biology and anthropology, Binghamton University. 6 p.m. George Ignatieff Theatre, 15 Devonshire Place. (416) 946-5937 or events@ artsci.utoronto.ca

MUSIC

October 8 MacMillan Theatre

U of T Symphony Orchestra.

David Briskin, conductor, Megan Chang and Megumi Okamoto, piano. 7:30 p.m. MacMillan Theatre, 80 Queen's Park. \$15. Seniors and students, \$10.

October 12 MacMillan Theatre

The Music of Kenny Wheeler,

U of T Jazz Orchestras. The jazz trumpeter performs with the U of T Jazz Orchestras as part of his 80th birthday tour. \$25. Seniors or students, \$15. 7:30 p.m., MacMillan Theatre, 80 Queen's Park.

November 25-28 MacMillan Theatre Hansel and Gretel. This opera comes alive under Engelbert Humperdinck's spellbinding score. Sandra Horst, conductor, Michael Patrick Albano, director. Tickets: \$25. Seniors and students, \$15. Nov. 25-27: 7:30 p.m., Nov. 28: 2:30 p.m. MacMillan Theatre, 80 Queen's Park.

For tickets to music events, (416) 978-3744. For more info, www.music.utoronto.ca.

SPECIAL EVENTS

October 2 St. George Campus Scotiabank Nuit Blanche @

U of T. Toronto's all-night celebration of contemporary art returns to St. George Campus. Projects include Canadian artist Gerald Ferguson's glistening mound of 1 million pennies, and Marina Abramovic and Ulay's "Imponderabilia," involving two naked performers facing each other across an entranceway. From sunset to sunrise. For more information, visit www.utac.utoronto.ca/ future-exhibitions.

October 23, St. George Campus October 24, U of T Mississauga October 30, U of T Scarborough Fall Campus Days for prospective students and their families. Info sessions, campus and residence tours, and visits with profs and students. www.utoronto.ca/ fallcampusdays

November 4 U of T Scarborough

Diwali Celebration, the Indian festival celebrated by Hindus, Sikhs and Jains symbolizes the coming together of family and friends. This celebration will feature Indian music, performances by student groups, and booths with clothing, jewellery and ornaments. Get Henna "tattoos" and partake in samosas and sweets. 11 a.m.-2 p.m. at the Meeting Place, 1265 Military Trail.

SPORTS

October and November Varsity Centre Oct. 2. Football: Toronto Blues vs. Ottawa Gee-Gees. 1 p.m.

Oct. 16. Football: Toronto Blues vs. McMaster Marauders. 1 p.m.

Nov. 11-14. 2010 CIS Men's Soccer Championships. Top soccer players vie for Canadian Interuniversity Sport championship titles.

All events take place at Varsity Centre, 299 Bloor St. W. Ticket info and more details at www.varsityblues.ca.

THEATRE

To October 2 Hart House Theatre

Richard III, by William Shakespeare, follows the corrupt path of a twisted man with equally twisted ambitions. \$25. Students and seniors, \$15. On Wednesday nights, student tickets are \$10. Wednesday to Saturdays, 8 p.m. Additional 2 p.m. matinee on Sat., Oct. 2.

November 12-27 Hart House Theatre

Equus, written by the Tony Awardwinning playwright Peter Shaffer, is the story of a psychiatrist who seeks to understand the sexual and religious mystery that leads a boy to blind six horses. \$25. Students and seniors, \$15. On Wednesday nights, student tickets \$10. Nov.12-13: 8 p.m., Nov. 17-20: 8 p.m., Nov. 24-27: 8 p.m., plus a 2 p.m. matinee on Nov. 27.

For tickets to Hart House Theatre productions, call (416) 978-8849 or visit www.uofttix.ca. For more information, please visit www.harthousetheatre.ca or email tara.bassett@utoronto.ca.



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Wednesday, October 27, 12:30-5:00pm

Eradicating Malaria: Prospects & Perils, MaRS Auditorium

Thursday, October 28, 9:00am-4:00pm

Minds That Matter Awardees Lectures, MacLeod Auditorium, University of Toronto

Friday, October 29, 2009 9:00am-3:00pm

Epigenetics & Genome Function, MacLeod Auditorium, University of Toronto

For program details visit www.gairdner.org























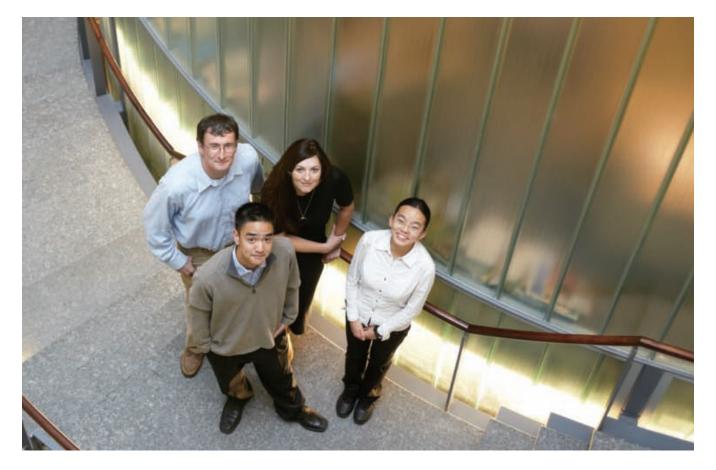






Life on

ampus



A Faculty Looks Ahead

Arts and Science proposal would enhance undergraduate learning and eliminate deficit, says dean

he Faculty of Arts and Science will host two town hall meetings this fall to discuss an academic plan that proposes to combine several departments into a new School of Languages and Literatures, and reorganize other areas.

Dean Meric Gertler says the measures will help the division

eliminate its \$22-million annual deficit, and allow it to invest in the learning experience of the faculty's 26,000 undergraduate and 4,000 graduate students. "This is about enhancing the quality of our programs," he says.

Released in July, the five-year academic plan has met with some criticism from students and faculty in the affected >>>

departments. Groups have started Facebook pages and petitions to oppose changes to the Centre for Ethics, the Centre for Comparative Literature and the East Asian Studies program.

Gertler says these groups will have an opportunity to express their concerns at public meetings in September. He notes that in the past five years, the faculty has added 15 academic units. He emphasizes that the proposal would not eliminate any undergraduate programs. "We are still looking to offer unparalleled breadth to students, but reduce the costs of doing so," he says.

Resources devoted to the Centre for Ethics, for example, would shift into teaching social and ethical responsibility throughout the undergraduate curriculum. The Centre for Comparative Literature would cease to exist as a standalone centre, but the faculty is proposing to retain graduate education and research in comparative literature. Degrees would be issued by other departments, such as English or French. "We plan to preserve the university's proud legacy in this field," says Gertler.

He adds that the faculty's deficit is forcing difficult choices. "The faculty needs to re-examine the scope of what it does. We can't afford to do everything, and we certainly can't afford to do everything well," he says.

In addition to cutting costs, the committee that prepared the academic plan is proposing strategies to generate more revenue. The plan calls for a 25 per cent increase in international undergraduate enrolment by 2015. (International students pay higher fees than domestic students.) The faculty is also phasing in a flat fee structure, which will require full-time students to pay a "program" fee rather than a "per-course" fee.

With these changes, Gertler expects to have the funds to invest in a better learning experience for undergraduates. In particular, the academic plan proposes to create more small-group, first-year programs along the lines of the hugely successful Trin One and Vic One; additional writing instruction; new first-year "big ideas" courses that take advantage of the breadth of the faculty's course offerings; and more research opportunities and international learning experiences. An expected increase in the number of graduate students will allow for smaller undergraduate tutorial sessions. As well, Gertler says he expects the School of Languages and Literatures to give a higher profile to its component programs and provide its faculty members with more opportunities for collaboration.

After the town hall meetings and further consultation this fall, the dean's office will draft formal recommendations for U of T's Governing Council. - Scott Anderson



A Year in Mumbai

Normand Labrie coped with sweltering heat and noisy classrooms to bring Canadian teaching techniques to India's largest city

HEN NORMAND LABRIE began to teach in India, the first challenge he faced was being able to hear his students. His classes were located in the slums of Mumbai, a city of 20 million people, and situated on noisy street corners.

Temperatures were typically in the high 30s, and, in rooms with no air conditioning, windows were necessarily kept open; honking horns often drowned out the voices inside. Labrie eventually got used to such conditions. "At a certain



Ephemera

The G(irls) 20 Summit, held in June at the Rotman School of Management, didn't involve the leaders of the world's richest countries, attract thousands of protesters or result in burning police cars. But the media who attended the girls' final news conference did get a story: On the summit's last day, 21 impressive young women, hailing from the G20 nations and the African Union, urged their leaders to take action on women's health and education. They noted that advancing human rights, gender equality and women's issues can be "a catalyst for economic progress." Their communiqué, issued in the Rotman atrium, received international coverage. - Suzanna Chang

point, you stop sweating and start understanding," he says. But the challenging teaching conditions were representative of the vast difficulties facing both the Indian education system and any foreigner trying to comprehend it.

In 2008, Labrie, a professor of sociolinguistics and associate dean at OISE, accompanied OISE dean Jane Gaskell on a fact-finding mission to India where he met many of the key players in the country's education system. When his partner, a diplomat, was posted to Mumbai later that year, Labrie accompanied him in the hopes of "understanding a complex system from within."

Labrie worked closely with local non-profit groups who have been striving to improve education in a country where the literacy rate is 40 per cent and two-thirds of students drop out. One of these groups, the Azim Premji Foundation, is building a new university inspired by OISE, Labrie says. This year, the foundation established a fellowship that will permit either one OISE doctoral student to conduct research in India or one education student from India to attend OISE. "There's a very strong priority on education in India right now," he says.

Initially just an observer, Labrie soon took on teaching duties of his own, assisting with classes in an after-school program for underprivileged students. In a country where the primary pedagogical tools are still textbooks and rote memorization, his methods were unorthodox. To teach geography, for example, he introduced the students to French aerial photographer Yann Arthus-Bertrand, who visited Mumbai last December to premiere his movie *Home*. In a history class where half the students were falling behind, Labrie had them create and perform in a YouTube video about India's struggle for independence; in subsequent exams, the entire class succeeded.

Labrie left India cautiously optimistic. The country still faces great challenges in becoming a knowledge economy, he says, but one of most important steps in doing so is developing creative approaches to education. "This was the idea I was instilling: not that there's a miracle recipe for teaching this or that subject, but that before you start teaching, you have to know how the kids learn." - Fason McBride



The new Health Sciences Complex being built at U of T Mississauga has received a landmark \$10-million gift from Mississauga businessman Carlo Fidani.

The complex is currently under construction and scheduled to open in August 2011. It will house the new Mississauga Academy of Medicine, which will train 54 new family physicians annually.

Students will focus on family and community medicine and specialties such as general surgery, general internal medicine and general psychiatry.

Fidani's gift - the single largest donation ever made to U of T Mississauga - will support the facility's construction and will endow medical student bursaries and a chair in family and community care at the Faculty of Medicine.

In addition to the medical academy, the fourstorey Health Sciences Complex will house the graduate biomedical communications program, research laboratories, classrooms and offices.

Overheard



Do it now, and do it right - Doris's words. I first heard them from her many years ago. I was likely over-thinking, or perhaps, procrastinating. Doris wasn't having any of that. I don't remember the details: they're no longer relevant. But I will always remember the words, and live by them as Doris has.



Lynne Wynick, of Wynick/ Tuck Gallery in Toronto, pays tribute to artist Doris McCarthy at her 100th birthday celebration in July, co-hosted by the U of TArt Centre and the Doris McCarthy Gallery.



Poll | What activities do you plan to pursue outside of academics this fall?









43%

18%

10%

29%

Sports or fitness

Club or hobby

Volunteer

None

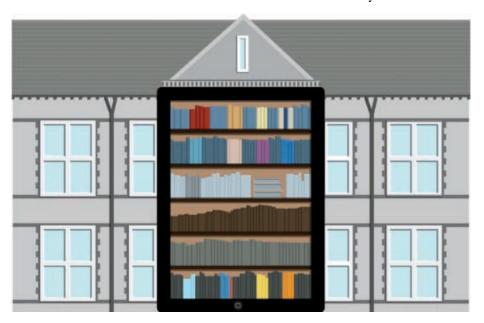
The University of Toronto boasts more clubs and sports teams than any university in Canada, but almost three in 10 students say they aren't planning to participate in any extracurricular activities this fall. Most say they will have a lot of homework and just want to relax in their spare time. Others, mostly graduate students, say they simply don't have any free time during the school year.

U of T students are known to study hard, but they clearly like to blow off some steam with physical activity, too. Almost half of the students polled plan to join a sports team or work on personal fitness. Soccer was one of the most popular sports cited by students - perhaps because of the recent World Cup, or because students hail from a diverse range of cultures in which the sport is played. Dragon-boat racing, dancing, cheerleading and triathlons were among the less common activities students mentioned.

This highly unscientific poll of 100 U of T students was conducted on St. George Campus in June.

The Mobile Revolution

U of T libraries and bookstore adapt to the iPad era



STUDENTS WHO ARRIVED AT U OF T this fall toting an iPad, iPhone or other mobile handset found that the university's libraries and bookstore are offering several new services for them, including the ability to view course readings and e-books on their device.

Peter Clinton, director of information technology services at U of T Libraries, says students are also able to use their mobile computer to find each of the university's 40 libraries on a map, check hours of operation and search the complete catalogue. Someone looking for Margaret Atwood's novel Surfacing, for example, can determine which libraries have a print copy and whether a digital edition is available to read on a hand-held device.

The U of T library system provides online access to about 250,000 e-books and more than 13 million journal articles. Although the number of e-books represents only a small percentage of the library's print holdings, Clinton expects the number to grow quickly in coming years as the market for tablet computers and smartphones explodes, and scholarly publishers shift away from printing books. "I think we're at a tipping point," he says.

A survey conducted last spring found that although fewer than 20 per cent of students reported using a smartphone, many expect to acquire one in the next year." Mobile computing is becoming a major part of what students do," says Clinton.

While the library is moving quickly to offer e-books, U of T Bookstore is taking a more gradual approach to selling digital titles. Chad Saunders, the bookstore's manager, says the days when students download all of their textbooks to their

> tablet computer with the push of a button may still be some years away. Today's students, despite having grown up in the Internet era, largely still prefer to read from the printed page, he says.

> In January, the bookstore conducted a student survey and found that the majority want a print copy of a textbook, even if a digital edition is available. Given the choice between paying \$50 for an e-book or \$100 for a digital and print version, 30 per cent more of the respondents opted to pay extra to have both editions.

> What's more, almost 90 per cent of respondents said they would want the option of being

able to print at least a portion of a digital book.

To accommodate student preferences, the bookstore has teamed up with the library to offer a "print-on-demand" option for the 250,000 e-books in the library database. By clicking on an icon in the library catalogue, students are sent to the bookstore website where they can buy a copy of the book that is then printed at the store using a new "instant book" machine that can produce a paperback in four minutes.

This fall, U of T Bookstore has about 600 electronic course books and supplementary materials for sale. Saunders says demand for e-textbooks is slack so far - and publishers are in no hurry to promote them, given what happened to the music business after MP3s became popular. "There's a lot of concern among publishers about file sharing," observes Clinton. "Young people seem to have a different idea about the value of content and the rights of creators."

Apple launched its iBooks store in Canada in July - and the store could be a game-changer. It wasn't until Apple launched its iTunes store that sales of digital music took off. While textbook publishers are still negotiating with the computer-maker over terms, such as prices and Apple's cut, Saunders has no doubt that a much broader and more accessible selection of digital textbooks is on the way. "Everyone's searching for a good solution," he says. - Scott Anderson

A Month in Medicine

Mentorship offers high schoolers a close-up look at a career in health



Maryan Issa (left) and Malik Paris learn about intubation from surgical resident **Emily Partridge**

THE FACES OF EVERYONE WHO has ever graduated from U of T's Faculty of Medicine line two long halls in the Medical Sciences Building. The images of each graduating class, dating back to 1870, tell a story of the medical profession - first of pale men with high collars and strange hairdos, then of the occasional pale woman. But even as the women begin to claim half of the frame and the pictures feature people from a variety of cultures, there are still notable absences.

"Aboriginal students and students from an African background are still very under-represented in medicine, and in health care generally," says Diana Alli, co-founder of the Faculty of Medicine's Summer Mentorship Program in the Health Sciences. Several years ago, Alli decided she wanted to change this situation – so that the photos 10, 20 and 30 years from now tell a different story.

The Summer Mentorship Program is designed to introduce high school students from these under-represented groups to the health field – and to post-secondary education generally. The program runs for four weeks each summer, offering participants close-up views of the operating room, the dental lab and other health-care settings, as well as the opportunity to shadow health professionals. Students apply through their high schools.

Dr. Gary Miller, one of the program's 400 graduates, has just finished his specialist training in ophthalmology. He's also a former mentor, and says he has witnessed firsthand the life-changing impact the program can have on youth. "Some [students] say it's the first time they believed they could really amount to anything or succeed academically," he says.

This summer, 50 young people participated in the program, including Maryan Issa and Malik Paris, both 16. After their first week, the two were deeply enthusiastic about what they were learning."This mentorship rocks," says Paris, who is looking to combine his interests in medicine and engineering. The program has helped Issa clarify her career goals, too; she wishes more students could participate in the program.

Alli can provide a stack of moving testimonials and a slew of success stories - students who began the mentorship not considering university but who have gone on to become doctors, lawyers and professors. Ninety-eight per cent of students from the program have gone on to post-secondary education. More than 30 per cent have gone into health care, and more than 10 per cent have gone to med school. It goes to show what a difference a month can make. - Lisa Bryn Rundle

People

Professor James Graham, chair of the department of astronomy at the University of California, Berkeley, has been named the inaugural director of the Dunlap Institute for Astronomy and Astrophysics. Graham was a member of the team that in 2008 detected the first extrasolar planet seen with visible light.

Law professor Michael Trebilcock has won the \$250,000 Premier's Discovery Award in social sciences. An expert in the economic analysis of law, Trebilcock founded the law and economics program at U of T in 1976 and the Canadian Law and Economics Association in 1990.

Dr. Mark Henkelman, a professor of medical biophysics, has received a Killam Prize, worth \$100,000. Henkelman uses a variety of high-tech imaging techniques to study the progression of disease and treatments in mice.

Professor Cristina Amon, dean of the Faculty of Applied Science and Engineering, has been reappointed as dean for a five-year term, beginning in July 2011.

Professor Sioban Nelson, dean of the Lawrence S. Bloomberg Faculty of Nursing, has been reappointed as dean for a seven-year term, beginning in July.

University Professor Linda Hutcheon of English and comparative literature is the 2010 recipient of the \$50,000 Molson Prize in the social sciences and humanities, an award presented by the Canada

Council for the Arts to recognize outstanding lifetime achievements and ongoing contributions to the cultural and intellectual life of Canada.

Youth in Motion has named David Castelino, a secondyear chemical engineering student, one of Canada's Top 20 under 20. Castelino was recognized by the national youth program for his development of a thin-film solar tile that uses solar paint made from organic dyes to convert the sun's rays into energy.

Edge Leading



Can Our Forests Stand the Heat?

Scientists discover unusual die-off in sugar-maple leaves due to high spring temperatures

ou might expect warm weather to be good for trees. But new research by professors and students in the Faculty of Forestry suggests that a balmy spring can be bad for temperate forests. The group, studying a patch of forest in the Haliburton Highlands, discovered that many sugar-maple leaves that developed during three record-hot days in May died without expanding to their full size; other leaves are stunted.

"In early June, when the canopy should be its greenest, the canopy was tinged brown," says Sean Thomas, the Canada Research Chair in Forests and Environmental Change and a professor of forestry. "In my 10 years of working in this region I've never seen anything like this. The foresters I work with who have been there many decades have never seen anything like this."

learn about temperate and boreal forests. Although scientists have studied and managed these forests for decades, their focus has often been on growing healthy trees quickly for logging. "Most of the history of traditional forestry research has been narrowly applied," he says.

Researchers at the Haliburton mega-plot are trying to learn everything they can about the basic biology of the forest. The first step was to record, measure and map every woody-stemmed plant with a diameter of one centimetre or more - about 47,000 plants in all. This work was completed last summer, and a team of graduate students are now analyzing the data. The census will allow them to track the growth and mortality of every tree in the forest over years.

Scientists working on the plot use a network of 180 temperature sensors and a nearby meteorological instrument tower. The 30-metre-high tower, run in collaboration with Jennifer Murphy, a professor of chemistry, and Nate Basiliko, a professor of geography, uses special equipment to measure the exchange of carbon dioxide, methane and other gases between the forest and the atmosphere.

Thomas says the death of new leaves is an effect few would have predicted for warmer springs; the researchers have ruled out other causes, such as disease, pests and rainfall. The finding is a good example of the sort of unexpected consequences of global warming that the forest plot and instrumentation will help researchers understand. For instance, if warmer temperatures are going to kill leaves more often in the future, and if the death of those leaves slows forest growth or reduces the intake of carbon dioxide, then global warming might be quicker and more severe than currently predicted. - Kurt Kleiner



Do You Drink Too Much? A behavioural scientist offers new criteria for defining how much is too much

ALTHOUGH SERIOUS ALCOHOLICS do plenty of damage to themselves and others, it's the people with moderate drinking problems who cause the most trouble, simply because there are more of them - about four problem drinkers for every one with a serious alcohol dependency.

The bad news is that most of these problem drinkers – an estimated 1.5 million in Ontario - never seek help. The good news is that relatively brief and easy interventions can help them, says John A. Cunningham, a professor of social and behavioural sciences.

"In Canada, only one in three people who experience lifetime [alcohol] problems will ever seek treatment," Cunningham says. They either don't think they have a problem, or would prefer to deal with it themselves. So Cunningham is developing quick and easy intervention methods that are also effective.

When problem drinkers take a 10-minute Internet survey that Cunningham developed, they cut their drinking by about a third. The survey - at checkyourdrinking.net - asks about the amount of alcohol consumed, and compares it to averages for others of the same age and sex. It also reports how much the drinker spends on alcohol, and his or her chances of suffering negative consequences from drinking.

In 2007, Cunningham launched a study that included 72 problem drinkers, about half of whom took his survey. He tracked their drinking for a year and found that, after six months, the survey participants had reduced their alcohol consumption by 30 per cent more than the non-participants, although after 12 months all drinkers had cut down. (Cunningham notes that many problem drinkers involved in a study reduce alcohol consumption on their own. But he says his intervention gave the survey-takers a year with greater reductions.)

Cunningham is now working on a similar questionnaire in the form of a pamphlet mailed to households. - Kurt Kleiner



The Big Idea

One Patient, One Record There are plenty of compelling reasons for health records to go digital. So why are some doctors resisting?

EVIN LEONARD, an information systems expert at U of T's Department of Health Policy, Management and Evaluation, has suffered from Crohn's disease for much of his life. As someone with a chronic condition, he has endured not only painful symptoms and side-effects of drugs, but also the proliferation of caregivers, each of whom maintains a paper-based medical record documenting his condition. He's long believed such an information system is "cumbersome, slow and costly."

In recent years, Leonard's advocacy organization, Patient Destiny, has been organizing conferences bringing together patients and health-care providers to promote the "one patient, one record" principle as a means of improving outcomes for the growing number of individuals with chronic conditions. A single, comprehensive, web-accessible health record, he argues, would allow patients to monitor their own conditions better, prevent emergencies and reduce health spending. The result, Leonard predicts, will be "significant cost savings" because patients with chronic conditions consume 70 to 80 per cent of health budgets.

But while he's a proponent of digitizing patient records and then building electronic networks that can share everything from test results and prescriptions to digital imaging, Leonard felt the vision of Ontario's eHealth agency was "incomplete," and driven by the needs of health providers, not patients. Following a multimillion-dollar contracts scandal at eHealth last year, the agency has done a major rethink, says Leonard. "That's a good thing."

Experts have long debated the form, content and functionality of electronic health records. Should they include generic but authoritative health information or email options allowing patients to communicate directly with their physicians? What kind of security is required if the record can be accessed like an online bank account? Comprehensive systems now exist in Denmark and inside California's giant Kaiser Permanente health management organization.

But Canada's medical establishment, Leonard says, has long resisted giving patients unfettered access to their health records, even though courts have established that an individual's record is not the exclusive property of a hospital or physician. Many doctors, including former eHealth Ontario advisors, believe patients aren't "mature enough" to see unedited versions of their own medical records, Leonard notes.

From his perspective, Ontario's new eHealth administrators should begin from the premise that patients have the right to access all the information - tests, digital images, diagnostic options - that end up in any new eHealth system. When individuals can go to their own secure portal and check their latest test results, participate in online patient support groups or exchange emails with their physicians, they become less passive consumers of medical advice, he says.

Leonard points to Sunnybrook Health Centre's "MyChart" system as an example of what's possible. The five-year-old system allows Sunnybrook patients to go to their own password-secured online account from any computer and retrieve information such as clinic visit notes, results of tests done at Sunnybrook and personal and family health details. They can also request appointments and prescription refills by email.

Sunnybrook chief information officer Sam Marafioti (MSW 1977 St. Michael's), a guest lecturer in the Faculty of Medicine, believes that Ontario's eHealth system will evolve through the expansion of local systems, such as MyChart, rather than the construction of a large central network. He says eHealth's role is to develop standards and the backbone, and then facilitate the creation of more MyCharts by local or regional health institutions. "It will only succeed when bottom-up meets top-down."

Leonard, who has been urging Marafioti to publish data on how MyChart has affected patient outcomes, agrees. "There are not enough competing products," he says. "We need to do more projects to find out what works and what doesn't work." - John Lorinc

Prototype

All Clear Surveillance and surgery could both get a boost from a new kind of video camera that can focus on near and distant objects at the same time



SOMETIMES, YOU WANT TO see both the forest and the trees. With video recording, though, you've had to settle for one or the other. Now an innovative new video camera promises to bring both simultaneously into focus.

The Omni-focus video camera is the brainchild of Keigo Iizuka, a professor emeritus in the Edward S. Rogers Sr. department of electrical and computer engineering. The camera can focus on objects both near and far with high resolution, automatically and in real time, says Iizuka. He and his pri-

vate-sector collaborator David Wilkes believe the device may find use not only in movie-making, but also in areas such as security and medicine.

The key breakthrough is a special infrared camera that can map out the exact distance from the camera to each object in a scene. It works by illuminating two separated infrared LEDs in succession, snapping an infrared photo with each illumination and then comparing the images. One LED is located just in front of the infrared camera and one just behind it. Because the light is travelling slightly farther from the back LED, the two images of the same scene are different. That difference is used to calculate how far away the objects are.

Also within the Omni-focus camera are standard, colour video cameras, one per desired focal point, each camera focused on a different depth of the scene. The current prototype, about the size of a shoebox, has two video cameras, but it could contain more, says Iizuka. Due to an arrangement of prisms and mirrors, all the cameras are viewing the scene from the same vantage point. Special software, designed by Wilkes, uses distance information from the infrared camera to select the best individual pixels from the video cameras to form a unified and focused image. Iizuka has a video, for instance, that shows both the eye of a needle just centimetres from the camera and the eye of a needle a little more than a metre away, both in clear focus.

The first bite of commercial interest in the Omni-focus video camera has come from a maker of laparoscopes in the U.S. A laparoscope is a slender tube fitted with a camera that's fed through a tiny incision in the abdomen, and used to view parts of the abdominal cavity up close. Conventional laparoscopes have trouble viewing the whole terrain of our innards at once; the Omni-focus video camera, scaled down, might provide the solution. - Alison Motluk

Findings



Cancer

Researchers at U of T and Mount Sinai Hospital have discovered a new way to identify aggressive thyroid cancer and predict patient outcomes. "Our study shows, for the

first time, a key biomarker that can be used in diagnostic, prognostic and therapeutic strategies for the future management of thyroid cancer," says Paul Walfish, an endocrinologist and professor emeritus at the Faculty of Medicine and the senior author of the study.

Walfish's team discovered that increased levels of a biomarker named Ep-ICD within cells can be used to diagnose an aggressive form of thyroid cancer associated with a poor prognosis. "In patients with the most lethal form of thyroid cancer, the levels of Ep-ICD were remarkably higher than those with a more low-grade papillary thyroid cancer," said Walfish.

Thyroid cancer is the most rapidly increasing cancer in Canada, with more than 3,000 Canadians - 80 per cent of them women - diagnosed annually. The research was published at the end of June in the medical journal BMC Cancer. – Karin Flemina



Improving accessibility and inclusivity, as required by provincial law under the Accessibility for Ontarians with Disabilities Act, could increase the size of the provincial

economy by almost \$5 billion, according to a new study from the Rotman School of Management.

Disabled people view the legislation, passed in 2005, as helping to create a level playing field for all Ontarians. But many businesses and municipalities across the province responded with skepticism, believing the act would result in increased costs and result in few benefits.

However, the study finds that the act will generate both economic opportunity and benefits. For example, the participation rate of individuals with a disability could increase by two to 15 per cent, thanks to improvements in accessibility. The report also finds that the increased productivity could increase the province's per capita GDP by anywhere from \$49 to \$653 as a result of the changes, to a total of almost \$5 billion. - Ken McGuffin



Ask an Expert Stephen Scharper Averting Disaster



The BP oil spill in the Gulf of Mexico, by far the largest in American history, has poisoned the waters and marshlands of the region, killed countless birds and marine animals and thrown thousands of people in the fishing industry out of work.

Stephen Scharper, a professor of anthropology at U of T Mississauga and at U of T's Centre for Environment, spoke with Paul Fraumeni, director of research communications, about how the catastrophic spill might have been averted.

You have advocated that decision-makers adhere to the "precautionary principle." What is this?

By using the precautionary principle, you anticipate potential harm, based on scientific and other evidence, to the environment and human communities from any kind of activity. The principle says you don't need absolute scientific evidence that an activity is going to bring harm; you can have suggestive scientific evidence. Therefore, you put in safeguards, such as is the case with automobiles.

How does the precautionary principle relate to the Gulf of Mexico oil spill?

There is a lot about this oil spill that is disturbing, and which indicates that decision-makers didn't follow the precautionary principle. It has been revealed, for example, that the Mineral Management Service, the group responsible for overseeing drilling in the United States, is also the group responsible for encouraging offshore oil drilling - and collecting the royalties from it. Thankfully, the Obama administration separated these responsibilities, and the director of the service resigned.

The New York Times and other news organizations have reported that the service's inspectors received gifts from oil companies. In some cases the companies were allowed to write their own inspection certificates and reports. MSNBC has stated that permits were not required to build and install the Deepwater Horizon oil rig; government oversight was absent.

The precautionary principle may not have been followed during the cleanup either. In May, the Environmental Protection Agency warned that the chemical being used to disperse the oil in the Gulf and the wetlands of Louisiana was harmful and ordered BP to stop using it.

The public outrage over this spill seems greater than with the Exxon Valdez disaster off the coast of Alaska in 1989. Why do you think this is?

The Gulf spill hit a traditional mainland area that affects millions of people and billions of dollars worth of business in fishing and tourism. "Deep ecology" celebrates wilderness and the intrinsic value of nature. "Social ecology" looks at how environmental damage affects people and social communities. What's interesting with this spill is that it blends concerns from social ecology with deep ecology. That's one reason it's received so much media attention.

Will this be a watershed? In time, will this disaster change things for the better?

It's too early to tell. Some people will continue to see these spills as a necessary evil as the U.S. attempts to reduce its dependence on foreign oil. What might turn people around is the fragility of the Gulf ecosystem. I was heartened that President Obama implemented a six-month moratorium on coastal drilling. This is where we have to put pressure on decision-makers. In Canada, we have potentially the same risk with the offshore oil rigs near Newfoundland and proposals for drilling in the Beaufort Sea. Something similar could happen here very easily if we do not demand stringent precautionary measures.

Polar Express

For many Canadians, the Far North conjures images of a desolate landscape home mostly to polar bears.

But the region intrigues Mason White, a professor at the Daniels Faculty of Architecture, Landscape, and Design and a partner in the Toronto firm Lateral Office, who is studying how to adapt buildings and transportation to cold climates.

Over the past four years, White and his colleague, Lola Sheppard, have designed a number of Arctic projects, including a high-speed rail link connecting Russia and Alaska over the Bering Strait. The station at right is situated on the international date line, so visitors are "neither in yesterday nor today," says White.

Lateral Office typically designs structures that serve more than one purpose, so the station is also home to an Arctic research facility and iceberg harvesting piers that collect fresh water. The people jogging on the boardwalk could be taking part in an Arctic marathon, says White.

The proposed Bering Strait Ice Link is one of several Lateral projects that the Canada Council for the Arts considered in awarding the firm this year's Prix de Rome.



Islamic Finance Religion meets banking in a new course at Rotman



ONTARIO REJECTED SHARIAH LAW and the use of any faith-based arbitration in the province five years ago. But a U of T professor now wants to introduce students at the Rotman School of Management to the concept of Shariah finance. Professor Walid Hejazi argues that without expertise in the sector, Canada risks losing out on a rapidly growing \$800-billion global market for financial products consistent with Islamic law. Hejazi, who specializes in international competitiveness at Rotman, says that while international banks such as HSBC, Deutsche Bank and Lloyds TSB already offer a range of Shariah-compliant financial products, no major Canadian bank does.

Hejazi has developed a three-day executive program which he believes to be the first of its kind in Canada - that will teach participants the differences between Shariah-compliant and conventional financial instruments using retail and commercial banking examples, such as mortgages and bonds. (Islamic law prohibits the payment or acceptance of interest on loans.) Program participants will also learn about Shariahcompliant derivatives and the legal and tax implications of Shariah finance. Hejazi says Canada's attractiveness to foreign investors has been slipping over the last 40 years. He argues that expanding Islamic finance would make Canada a more appealing destination for capital internationally.

However, Tarek Fatah, founder of the Muslim Canadian Congress, a liberal group, argues that Shariah financial instruments have a ghettoizing effect on Muslims because they separate people based on their religion. He also fears broader repercussions. "The danger is that we are legitimizing Shariah law," he says.

Hejazi rejects Fatah's claims. He says Canadian Muslims are currently at a disadvantage because they cannot access Shariahcompliant products at conventional banks. "If the main banks understand and offer these products, they're regulated, and there's more competition. We're simply talking about financial securities with different characteristics that anyone - Muslim or non-Muslim - can use." - Julia Belluz

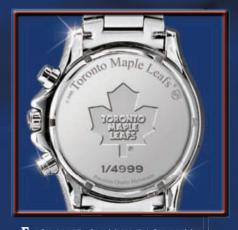
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By John Lorinc

STARTED EARLY, AND IT STARTED ANGRY. While the real campaigning is only just beginning, Toronto's raucous mayoral election (which will be decided on October 25) has been rolling across the city like a twister for months. In the spring, six front-running candidates emerged in the race to succeed

David Miller, a two-term mayor whose popularity collapsed due to voter frustration over a lengthy garbage strike, budget overruns, tax hikes and a contentious light-rail transit program. One of the front-runners dropped out of the race in July, and the field will continue to narrow.

Whatever else one may think of the city, Toronto's municipal races are showstoppers; not just because of their length, but because the mayor is directly elected by more voters than any other public official in Canada. Toronto's mayor then presides over a \$9.2-billion bureaucracy that is larger than that of several provincial governments.

As of August, the campaign had already featured a sex scandal, a drug scandal, not-so-subtle interference from the provincial Liberals and four pricey subway expansion schemes advanced by candidates who position themselves as cost-cutters.

But are these politicians (two longtime city councillors, a former provincial cabinet minister, a Liberal fundraiser and a businesswoman) debating the issues that will genuinely affect the city's future prosperity and its quality of life? Last fall, U of T's Cities Centre, a multidisciplinary urban research unit founded in 2007, put this very question to a group of prominent urban thinkers, with an eye to framing the issues and providing solid, non-partisan policy research to both the candidates and the voters. Among the priorities they identified: transit planning, infrastructure financing, governance, urban design, economic development and sustainability in urban settings. Here, six of U of T's top urbanists talk about the challenges facing Canada's largest municipality.

Get a move on

For all the rhetoric about improving transit and countering gridlock, Toronto hasn't had a properly thought-out transportation strategy since the mid-1970s, observes Eric Miller, Cities Centre director and a professor of civil engineering. The consequence, he says, is a legacy of ad hoc planning that stretches from a 1970s scheme to build magnetic trains to David Miller's Transit City strategy, which proposes several

new light rail transit (LRT) lines. Comprehensive research is needed to assess Toronto's long-term transit requirements, he adds. "No one at City Hall knows how many buses, LRTs and subways we need." Professor Miller points to transportation systems in cities such as Berlin and Stockholm as examples of how Toronto should be linking various types of transit services to smart fare cards and land-use planning decisions. "This isn't rocket science," he says.

The spectacle of several candidates touting their own subway-building schemes isn't helping because these various plans are just lines on a map; they're not based on proper research. Three candidates – *Women's Post* publisher Sarah Thomson, fundraiser Rocco Rossi and former Ontario health minister George Smitherman – are all promising specific subway projects, and have advanced various approaches to funding them, from road tolls to asset sales and public-private partnerships. A fourth candidate, fiscal conservative Rob Ford, also talks about building subways but hasn't offered details about how he would pay for them.

While Miller agrees that it's important that Torontonians debate transit expansion, he argues that the next mayor should move swiftly to commission a comprehensive transportation study with an eye to developing a meaningful long-term transit plan that connects land use, transportation patterns and the appropriate level of infrastructure investment.

He also wants the next mayor to find a way of making peace with Metrolinx, the Greater Toronto regional transit agency established by Queen's Park to operate the GTA's commuter rail service and oversee system expansion. "I would stop fighting with Metrolinx...because that's how the provincial funding will come into the city," he says.

Lastly, Miller, like many other transportation experts, believes decision-makers have no choice but to consider new approaches to funding transit, including tolls and other forms of "road pricing." "That's a discussion we have to have." The key, he says, is to understand the cost of inaction. "We're very good at opposing things. What we don't see are the costs of doing nothing."

Power to the people

X

Since the 1998 amalgamation of the six municipalities in the former Metro Toronto, many residents have viewed their 44-member city council as unwieldy and inefficient. One candidate, Councillor Rob Ford, is looking to capitalize on that

frustration by pledging to halve the size of council. Another, Councillor Joe Pantalone, wants City Hall to allow citizens to vote online at election time and to encourage public participation in council business through the web.

Ford's solution is unlikely to occur unless imposed by provincial authorities. Even if he did succeed, fewer politicians won't address the real problems with how Toronto is governed – poor voter turnout, the lack of turnover on council (incumbents are almost guaranteed re-election, barring major scandals) and little citizen involvement in public consultations such as pre-budget hearings. As a Cities Centre discussion paper notes, "Some citizens take advantage of what democratic access there is...But many people, if not most, simply accept or endure the result of policies influenced by the few who have mastered the city's intricacies and who know which 'buttons' to push. This highlights a core challenge: how can citizen involvement in governing Toronto be improved?"

"It's an extremely large, complex system," says U of T political scientist Richard Stren, pointing to the city's extensive network of agencies, boards, commissions, and advisory panels. Stren, the co-author of the Cities Centre discussion paper, notes that councillors have become preoccupied with technical land-use issues while larger questions about how the city is governed are often overlooked. "It's hard for people to understand how this whole thing comes together."

While the amalgamated City of Toronto has been operating for a dozen years, no one has set out to study how council actually makes decisions, although Stren says a number of themes have emerged. Individual councillors tend to focus on issues in their own ward and ignore the broader urban picture. Social agencies and community organizations often have difficulty working with the city, and many citizens know little about the city council committees that deal with matters in their neighbourhoods.

In Stren's view, the opaque quality of council's decision-making process is a factor in Toronto's low voter turnout – just 39 per cent of 1.5 million eligible voters bothered to mark a ballot in 2006. This level, while not outside the norm for large North American cities, reinforces the lack of public participation in a kind of vicious cycle.

In an attempt to engage more residents, and especially younger people, Mayor Miller and some councillors have become increasingly adroit at using online social media, such as Facebook and Twitter, to communicate with constituents. These tools offer a glimpse of how council can generate interest among voters in city issues and encourage more direct interaction between citizens and elected officials. Pantalone, a key

ally of Mayor Miller, has picked up the call to give landed immigrants – there are about 200,000 in Toronto – the right to vote in municipal elections. Stren also lauds the efforts of the Better Ballots coalition to encourage greater public participation in city politics and bring new voices to council. Still, incumbents "are constantly re-elected," says Stren, noting the parallels to the U.S. Congress, where there are no term limits. "Whoever is in is in unless they do something very egregious. This is a problem."

Money problems



Besides transit, Toronto's dicey financial condition has emerged as a dominant campaign theme this year, with many critics focusing on one particularly vexing figure: the \$450 million the city spends each year to service its accumulated debt. Rossi, a right-of-centre candidate, has pledged to privatize Toronto Hydro, retire the debt with the proceeds and use any leftover funds to finance subway construction. Sarah Thomson has pledged road tolls to finance her subway scheme. George Smitherman, in turn, is vowing to use public-private partnerships for his plans.

Matti Siemiatycki, a professor of geography, has been exploring alternatives to the traditional municipal financing model of issuing long-term debt. He argues that Toronto's leaders should be looking closely at cities such as Madrid (which has one of the world's fastest growing subway networks) and Vancouver for contemporary lessons in paying for big-ticket construction projects, such as rapid transit.

The long-standing problem with the usual approach, he says, has to do with the accumulated burden of construction-cost overruns, especially on subways. Another approach would be to have the private sector raise the capital for construction, oversee building the project and then run the line at a specified rate for a specified time. This way, the risk of any cost overrun is transferred to the private partner, who has the incentive to make the numbers work. "If they go over budget, the city still pays the same amount," says Siemiatycki. This, he adds, is the theory. "In practice, the experience is somewhat mixed."

Vancouver's Canada Line, between downtown and Richmond, is a public-private partnership that came in on time and on budget, while a US\$650-million monorail in Las Vegas built on the same model is now in bankruptcy protection. (The Canada Line, Siemiatycki notes, generated a lot of political

"A challenge for the new mayor is to think about Greater Toronto as a globalized urban region.... We are one of the most vital economies in the world. but we don't think of ourselves that way"

controversy, while cost-saving construction methods led to traffic tie-ups on the planned route.)

Siemiatycki says public-private partnerships have emerged as one of several increasingly accepted financing tools in the U.S. and Europe, along with road congestion charges (in London, England), region-wide taxes on parking spaces and other user fees, such as the vehicle registration levy that Toronto enacted two years ago. Pointing to the defeat a few years ago of a parking levy system adopted in Greater Vancouver, Siemiatycki acknowledges that all of these methods come with political baggage. And of course, the viability of such solutions depends heavily on whether the projects they support capture the imagination of the public and are seen as plausible solutions to tenacious problems. "You can't look at them as purely technical endeavours."

Better by design

Over the past several years, Toronto's city council has approved a range of largely technical planning policies, including a new official plan, design review guidelines, a tall buildings strategy, the "tower renewal" plan for aging apartment buildings and various public space measures. Despite all these changes, the candidates vying to succeed David Miller haven't paid much attention to urban design issues. In the meantime, development continues to defy council's direction, as has been the case for years.

The Ontario Municipal Board's role in trumping municipal planning policies has long hobbled the city's ability to plan its own future. "In this city, like many other North American cities, the planning department has been undermined in its ability to plan proactively and strategically," says Richard Sommer, the dean of the John H. Daniels Faculty of Architecture, Landscape, and Design. "There is no goal."

A longtime faculty member at Harvard University's Graduate School of Design, Sommer argues that Toronto "needs to conceive of a post-Jane Jacobs approach to urban design." In many downtown circles, where strong ratepayer groups succeeded in blocking large projects-from highways to unwanted industrial development - that sentiment may amount to heresy. But in the years since Jacobs' death in 2006, some planners have begun to critically re-examine her legacy, and specifically the NIMBYism it sanctioned. Sommer points out that big-picture planning has become "ideologically suspect" and Toronto's system of extensive public consultation inadvertently provokes a kind of political gridlock. Despite the fact that the region grows by about 100,000 people a year, many Toronto neighbourhoods have densities that are too low to sustain rapid transit. But residents actively resist the sort of intensification required to meaningfully reduce carbon emissions.

Cities such as Tokyo, Vancouver and Chicago, he notes, are taking a more holistic view of planning by integrating architecture, landscape, transportation planning and governance into the formulation of forward-looking urban design. Sommer also argues council needs to do much more to promote an environmentally sustainable vision of urban development on a city-wide level.

A large part of the task is finding ways to better engage Torontonians in the project of modern city-building, which, he says, won't occur if the city continues to stress the vague goal of intensification. In Barcelona, Sommer notes, architects and planners enjoy positions of authority with the city government, and have directly influenced the transformation of an industrial waterfront. "We have the right to ask, 'why can't Toronto do better?' This is the question for the next mayor."

Green fleets to green roofs



While one of the candidates (George Smitherman) was a provincial energy minister who favoured investment in wind and solar power, sustainability has received scant attention in the campaign. It's a curious omission given that David Miller invested plenty of political capital in pushing his "Live Green" agenda, which encouraged residents and the municipality to adopt environmental measures ranging from green vehicle fleets to green roofs to grants to make homes and workplaces more energy efficient.

As Ingrid Stefanovic, a philosophy professor and the

founding director of U of T's Centre for Environment, points out in a new discussion paper, "Many of these initiatives have been developed relatively recently and, consequently, may be vulnerable in light of the city's current and projected fiscal constraints."

Stefanovic points to three basic principles that should be animating debate about the city's approach to sustainability: ensuring that the environment is part and parcel of all decision-making about municipal operations; incorporating a culture of sustainability into all areas of policy development; and moving beyond the economy-vs.-environment debate about advancing a green agenda. "I don't see that there's been a serious initiative to have the corporate sector buy in to the city's environmental message."

In recent years, Stefanovic and her colleagues have been running increasingly popular workshops for executives on financing environmental programs and offsetting carbon emissions. She argues that the next mayor and council should push Toronto businesses to make their own operations more sustainable, for example with better recycling programs or renovations to improve energy efficiency. But Stefanovic also wants the city to encourage the evolution of a green business cluster as part of the city's long-term economic development strategy.

Indeed, Stefanovic says the city and non-government partners should begin seriously investigating the establishment of an incubator for scientists, venture capitalist and eco-entrepreneurs, modelled on the MaRS Centre - an idea that has floated around the centre for a couple of years. "There is an opportunity there and it has to be taken up by the next mayor," says Stefanovic.

Attracting global talent

Last spring, candidate Rocco Rossi pledged to establish a GTA-wide economic development agency - a long overdue but politically implausible move that underscores one of the lingering perversities of Toronto politics. While the City of Toronto sits at the heart of a highly integrated economic region and functions as its financial and cultural heart, Greater Toronto's rival municipalities have never been able to mount a concerted effort to promote international investment in the region.

One of the major challenges for the new mayor, says Patricia McCarney, director of the Global Cities Program at the Munk School of Global Affairs, "is to really think about Toronto and the Greater Toronto region as a globalized urban region.... We are one of the most vital and active economies in the world, but we don't think of ourselves that way." She reckons that building a GTA-wide economic development strategy should be one of the next mayor's top three priorities.

Armed with funding from the World Bank, McCarney and her team have spent the last few years building a robust database of city indicators that allow ambitious, growthminded urban leaders to see how their regions measure up. With more than IIO cities now participating, the centre has become the pre-eminent source of data on cities globally, says McCarney.

As she's assembled the list, a process that requires extensive travel, McCarney has observed how other dynamic city-regions have tackled the problem of building effective, outward-looking economic development programs that don't get bogged down in parochial bickering. She recounts a recent encounter with a senior executive of a global company looking to locate a new plant. When the executive sought information on Toronto, he was thwarted in his attempt to get authoritative information on the entire region. "It's like an alphabet soup out there," the person said, referring to the tangle of acronyms for the different agencies from the Greater Toronto Area.

With the global economy still fragile but poised to enter a new period of growth, McCarney says the region desperately needs to establish "a war cabinet," with participation from all three levels of government, to develop the sort of one-voiceone-window programs that exist in other dynamic city-regions. "This is the moment," she says. "Everyone is getting further ahead of us on this."

Journalist and author John Lorinc (BSc 1987 UC) writes about urban affairs for the Globe and Mail and Spacing Magazine.



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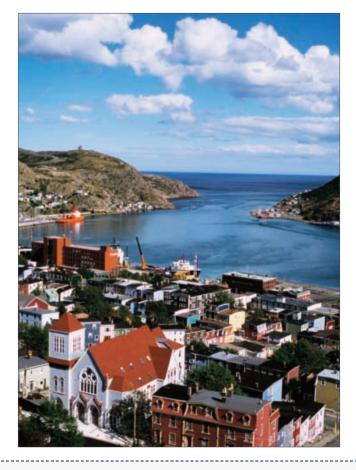
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The Munk School takes on the world

By Cynthia Macdonald

THESE DAYS, JANICE STEIN'S WORLD IS TURNING a little faster than usual. The Munk School of Global Affairs, of which she is founder and director, has received a funding infusion of unearthly proportions: \$35 million from its original benefactor, gold mining executive Peter Munk, with an additional \$25 million from the federal government; this follows an equal commitment from the provincial government in 2008.

Such robust investments are intended to vault the Munk School into the top ranks of international-relations programs, enabling it to take its place alongside the London School of Economics and Political Science, Tufts University's Fletcher School of Law and Diplomacy, and Johns Hopkins School of Advanced International Studies.

To be sure, money will help attract visiting experts to the Munk School, sponsor partnerships and new degree programs, support top-flight research and enable the construction of a new facility. All good things, of course. But what about the fact that, unlike its rivals, the Munk School is located in a young, sparsely populated country, far from the traditional seats of world power? Some might see this as a weakness: not Stein.

"This school is a little different and you can see that in its name - it's Global Affairs, not International Relations," says Stein, an affable expert on conflict resolution and the Middle East who's become an academic celebrity, in part due to her parallel career as a television commentator. As she sees it, the word "international" implies a collection of static land masses, some of which matter more than the others. "Global," by contrast, encompasses a more 21st-century vision: one in which power is diffusing; in which economies are increasingly interconnected; in which groups of people live within countries but are not necessarily defined by them; and where polar ice, fresh water and fibre optics are as strategically important as land.

Currently, the world's best schools of international relations are superb centres of research and policy analysis that regularly play host to the most significant thinkers in the field. Under the heavy weight of their histories, however, Stein says some of these institutions are struggling to adjust to new realities. The larger schools were founded in the wake of both world wars, and their directions were set by the victors. To this day, many academics in the area still hew largely to a world view in which national governments hold unique power over the economic, social and cultural lives of their citizens.

The Munk School, however, sees things through a wider lens. "We focus on three areas," says Stein. "The global economy, which shapes opportunities for people all around the world; global institutions, or the broader architecture of how we govern ourselves; and the third is global civil society." The third area is perhaps most surprising for those attached to the old paradigm. "Civil society" refers to the idea that volunteers, foundations, special interest groups and individuals all have an increasing ability to band together to make change, irrespective of place and ethnicity, thanks in no small part to the Internet. (As an example, think of the recent global campaign to prevent the stoning of a woman in Iran, a movement that spread quickly around the world and attracted thousands of signatures.) "We say to students: it's not enough to know about one of these areas - you also need to know the other two," Stein says. "If you don't, you're going to miss a big part of the story."

To talk to Stein is to feel the very land mass beneath you crumbling; she convincingly argues that nothing now is as you thought it was. "You name any significant policy challenge that you think people are worrying about; stabilizing the economy, for example. That's not within the sole purview

Planetary Observatory

The Munk School's new headquarters on Bloor Street will provide a unique window on the world

It was once home to a service that charted local weather patterns. But the residents of 315 Bloor St. W. will soon be monitoring winds of change across the planet.

As of September 2011, the Munk School of Global Affairs will be headquartered in a 100-year-old sandstone edifice near the Varsity Centre that used to house the Dominion Meteorological Service. During the Second World War, pilots were trained to read weather patterns there so they wouldn't have to rely on radio communications. A circular tower where there was once a large telescope will be refashioned into meeting rooms and intimate places for conversation, and topped by what KPMB Architects calls a "Thinking Room" offering panoramic views of the campus and city. The tower's original purpose as an observatory will thereby, in its own way, be recaptured.

Some of the more striking features of the school's current location will be repeated in the new facility - hedgerows, benches and a "water feature" in the forecourt, providing space for quiet contemplation. Indeed, many Munk School programs will still be conducted at the existing KPMB-designed facility at Trinity College on Devonshire Place.



But the renovated building on Bloor will create a far more public face for the school, situating it at the northern gateway of the St. George campus. Declared a heritage site in 1973, the architects deem it "immediately recognizable as a landmark, expressive of a place of serious inquiry." - Cynthia Macdonald

of national governments to do anymore." Institutions such as the International Monetary Fund and the G20 are defining the new regulatory structure, "and these are now being discussed at a global table, not a national table. And," she says, gesturing outside, toward Toronto streets recently ensnarled by G20 unrest – "we just saw that these issues are not only the province of governments that come together at a table. Outside organizations have a voice in how these issues are shaped." In this category, she includes corporations, NGOs and not-for-profit behemoths such as the Bill & Melinda Gates Foundation.

These changes have had a big impact on who works at or visits the Munk School. Since its inception in 2000 as the Munk Centre for International Studies, it has played host to speakers and faculty from all walks of life – not just scholars and diplomats, but policy analysts, journalists, financiers, scientists and cultural figures; "professors of practice," in other words. With new funding, the panoply of voices will expand. "It's also broad in terms of where people come from," says Stein. "It's not a focus exclusively on the United States and Europe, which is traditional... there are places that Canadians don't hear a lot from but are so important to the future." Upcoming events will welcome guests from Latin America, Japan and Turkey.

And then, of course, there are India and China. China is the world's fastest-growing major economy, and India is not far behind. Accordingly, Asia will continue to be a major focus of the Munk School's activities. While the United States turns inward to deal with an economy hobbled by war and recession, the rise of China and India suggests that this will be "Asia's century," says political scientist Joseph Wong, director of the school's Asian Institute. "However, there remains great uncertainty about what we mean by that; indeed, this is a serious debate in China and India as well." And so, Munk School students will be called on to investigate the as-yet unknown ways in which Asia will deal with political, environmental and economic pressures in the coming years. It's the faculty's main job, says Wong, to try and "inculcate a genuine sense of global curiosity."

Stein considers Toronto's diversity a natural and powerful asset for the Munk School. "Our students come from everywhere. They're knowledgeable and connected, and that's a phenomenal resource," she says. In September, the school welcomed 36 students to its first graduate program: the Master of Global Affairs, which requires them to work abroad for the summer between their two years of study. Most schools recom-

mend international experience; Munk makes it mandatory. During this time, students will work within one of the school's streams of study: in a government, corporate, institutional or civil-society milieu, all of which are, in turn, enriched by the presence of potential future leaders. Wong, who regularly teaches in a summer program in Shanghai as part of a Munk School partnership with Fudan University, U of T's political science department and Woodsworth College, cites the workabroad component as crucial. "Learning," he says, "is not simply the mirror of teaching, Learning is about experiencing."

Learning, here, is also interdisciplinary. International relations has long been considered a branch of political science, subject to input from philosophers and economists. Over the last 20 years or so, the field has broadened to include scholars from a variety of disciplines. The school's "Dynamics of Global Change" PhD reflects this: it is a collaborative program, whereby students in the medical, legal, business, cultural or scientific fields can conduct research with an eye to applying it in a global context.

"SOMEBODY JUST SAID TO ME WHEN THEY CAME IN – this place *smells* good!" Stein says with a laugh. "There's excitement, there's buzz, there's activity, there's ferment." Emails ping from the bespectacled professor's desktop computer as we speak, and her arms wave passionately; always in motion, she seems one of those people for whom the mere act of sitting constitutes exercise.

But on this lazy summer day, the school's reflecting pool shimmers softly in the haze – reminding one that, lively as it is, this is also a place where peace is a central concern.

Many of the Munk School's programs lead, in ways both direct and indirect, to advancing the cause of peacemaking. At the Trudeau Centre for Peace and Conflict Studies, for example, undergraduates examine the causes of violent strife in the world via a distinctly interdisciplinary route, studying history, economics and psychology.

But the institution's commitment to bridge-building becomes more immediately evident when you look at its extracurricular plans. In October, the school will host a conference with academics from Mexico. Hot-button topics such as illegal immigration and visa restrictions will, Stein hopes, not be the principal focus of attention: while significant, their dominance in the discourse often obscures natural sources of partnership between the two countries. "So we're going to talk about whether we have some *shared* concerns on global issues," Stein

says. The global economy naturally comes to mind, especially in advance of November's G20 meeting in Seoul. Other research questions, such as science policy, will be broached. And there will be an exchange of ideas on a wide variety of other global issues. This is important, says Stein, because "there are 100 million Mexicans. We're focused rightly on India and China, but they're halfway around the world and Mexico's right in our backyard."

The public is invariably invited to play a part in such conferences; an acquaintance of Stein's says these events offer "a university education for free." Lectures and debates are sometimes televised, always streamed on the Munk School's website and frequently sold out within minutes. Other gatherings include film screenings, book launches and talks on topics ranging from folk religion to pharmaceutical policy to the state of the euro; speakers come from all over the world, finding instant audiences from every tile in the Canadian mosaic.

"One of the reasons I was committed to public education right from the word go is that I wanted a place where people from different communities can come and hear their own countries talked about," Stein says. She admits it isn't always easy. Campuses can be particularly fractious places. But Stein is "absolutely committed" to the idea of civil conversation, even in the many cases where argument may be unavoidable.

"There's no value in shrieking at each other," she says. "That's not educational. We want questions and participation from the audience, but we don't want harangues, speeches, personal attacks or insults. A university has a right to have higher expectations."

There can be, however, no peace without security. And security, in myriad forms, will be a major focus in coming years.

The \$25-million federal commitment has been specifically earmarked to establish the Canada Centre for Global Security Studies, which will position the Munk School as a vital locus for policy generation on the issue.

But what does security mean? Here is where the land mass crumbles further. In the coming decades, it will not be enough to fortify our borders and airplanes and public buildings, nor to concentrate exclusively on sabre-rattling from rogue nations. At Munk, experts are looking beyond these problems into realms that are larger, more fluid, less subject to traditional methods of control: Water. Cyberspace. A previously forbidding Arctic that, because of climate change, is potentially open to predation.

"At evolutionary times such as these, the greatest challenge is for our understanding of the world to keep pace," Prime Minister Stephen Harper said earlier this year, in announcing his government's intention to fund the new centre. "The

Making Canada Heard

Benefactor Peter Munk hopes school will help transmit Canadian values around the world



Peter Munk's storied life has itself been a global affair. Born into a Jewish family in Budapest 82 years ago, he fled the Nazis in 1944 and made his way to Canada by way of Switzerland. After an early stint as an impoverished tobacco-picker, Munk earned a degree in electrical engineering from U of T in 1952. His subsequent business career led him to the \$40-million purchase of Barrick Gold in 1983; it is now

the world's largest producer of the precious metal, with a market capitalization of \$35 billion.

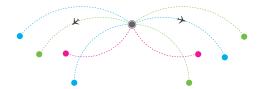
Such wealth has enabled Munk to become what he calls a "focused philanthropist," funding numerous causes that he ardently believes in. One of these is the school that bears his name. "I wanted to repay the U of T for taking me in as an immigrant student," he says, speaking on the telephone (in true globalized fashion), from a yacht off the coast of Montenegro. "I spent five years there; when I arrived I hardly spoke the language, but I left as a total, absolute Canadian."

Though he has lived and worked in Canada for many years, Munk never takes Canadian values for granted - he knows all too well that they are not universal. To his delight, however, "Canada is increasingly being held up as a prime example of a country that others should emulate," he says proudly. "From freedom of the press, to our banking system, to policies on immigration, health care and education: for a whole bunch of reasons, Canada is now getting a chance to make its voice heard." - Cynthia Macdonald

[Munk School] has already earned a reputation for excellence in international security studies. Demonstrated success deserves reinforcement."

The effect the school's security initiatives have had on the world outside is indeed worthy of note. Its Program on Water Issues has long been examining concerns relating to the protection of Canadian water; director Adele Hurley has drafted a Model Act for Preserving Canada's Water, the principles of which are supported by all major federal parties. In the coming years, water may be a key focus of U.S.-Canada relations, as scarcity affects many areas south of the border and conflicts could arise, despite treaties designed to protect our ownership. Global climate change, the oil sands and energy use are also key areas of the school's focus.

Professor Emeritus Franklyn Griffiths, an expert on Arctic security affiliated with the Munk School, has provided policy analysis and advice in this area to the federal government for more than 30 years. His advice may be more valuable than ever in the near future: Griffiths says the now-navigable Arctic is an area that, to date, has been well managed nationally



"If you ask me why we have done as well as we have over the decade, I think it's the culture we have created.... We have to make a place for experimentation and innovation"

but comparatively neglected in a global sense. "Through proper stewardship, we can build greater security there," he says, though problems could arise: further drilling under ice-covered waters, for example, could give rise to a "nightmare" scenario should a BP-style blowout ever occur. Shipping and territorial disputes, as well as the well-being of aboriginal people living in the area, are also areas of concern.

So far, though, the Munk School's most prominent success on the security front has been realized by the Citizen Lab. Led by political scientist Ron Deibert, its small research team monitors an Internet world that, as Deibert put it in a CBC report, has been "carved up, colonized and militarized." The lab has developed software to circumvent Internet censorship in countries such as Iran and China. And in the past two years it has cracked two large cyber-espionage rings that allegedly originated in China. Both rings were hacking into computers around the world (the second ring focused on India) in order to steal politically explosive information. The Citizen Lab is without question a world leader in this area, says Stein. "We're making a huge investment there," she continues, saying that new funding will enable it to double in size.

The Citizen Lab made global headlines for two studies in quick succession, but seven years of intensive work preceded the publicity. Stein says the Munk School's "incubator atmosphere" can be nerve-racking, since she never knows whether a project will succeed. "Most will not, and we have to have the expectation that they will not," she says. A project on global public policy "didn't attract enough interest and excitement." One on public space did not survive the initial investment, but Stein may go back to it, incorporating the work of architects and designers as well as political scientists. But "if you ask me why we've done as well as we have over the decade, I think it's the culture we have created," which she

says is more accepting of risk than is usual in Canada. "We have to make a place for experimentation and innovation – and in order to do that, it has to be okay to fail."

Canadians' natural aversion to risk may irk Stein. Otherwise, she says, her home and native land might just be the best possible place for a school of global affairs. "We are a developed country with a rich knowledge base, with excellent universities that are among the best in the world. But we don't have an imperial past. You can't say that about the United States, Britain, France, Germany, Holland, Portugal or Spain! Our slogan is 'Join the Global Conversation' – not 'Lead...'"

This conversation, naturally, is largely being conducted over the Internet. But although the school has accommodated itself to a cyber-dominant world, Stein also sees its teaching and research as a bulwark against the electronic realm's errors and superficialities. Today's world may be saturated in information, she says, "but how do you know how well-researched it is, how thoughtful it is? People want places where they can get some quality assurance. And that's in a sense what the Munk School is – it's a node of quality assurance."

And though Stein's departure from the Munk School directorship can be seen on the horizon, she says it isn't imminent. "The university will begin this fall to look for a successor. However long that process takes, I will stay until my successor takes over." Until that happens, she will continue presiding over an institution that is diverse in perspectives, but unified by strong values. Brash, yet respectful. And forward-looking, even as it is deeply grounded in history. Tolerance, peace and diversity may be distinctly Canadian virtues, but Stein knows their appeal transcends all borders. "I like working here," she says. "You can hear it in my voice, can't you?"

Cynthia Macdonald (BA 1986 St. Michael's) is a writer in Toronto.

This Looks Like a Farm

And it's what most of us

But nowadays, most of the 700 million animals raised in Canada for food each year live on industrial sites where they never even see the outdoors. Under our laws, this is perfectly legal, but is it ethical?



RACIE, A FIVE-YEAR-OLD YORKSHIRE PIG, is lying in a patch of shade at Snooters Farm Animal Sanctuary in Uxbridge, Ontario. At 600 pounds, she needs all the relief she can get on this muggy spring day. Despite her prodigious size, Gracie has a finely etched daintiness to her: delicate

translucent pink ears; tiny black eyes shadowed by long lashes; legs that seem too slender to carry her corpulent body. Mud cakes the top of her pale snout. Behind her, a black pot-bellied pig named Valentine trundles about, snuffling at the ground. She stops a few feet away from Gracie and won't pass her; there's a hierarchy here, and Gracie can be short-tempered.

Gracie was the first factory-farm pig that the sanctuary rescued, in 2005. An employee at an industrial farm found out that the three-week-old piglet had a leg infection, and that the owner had decided it would be more economical to kill her than to treat her. The next day, the worker snuck the 10-pound piglet out in her bag, and brought her to Snooters. By then, the infection had spread to Gracie's brain, leaving her with neurological damage—which accounts for her bad temper and why Valentine gives her wide berth.

"Everybody loves their pets, but food animals are regarded as second-class citizens. We treat them as inanimate objects, but each has his or her own personality," says Brian Morris, co-owner of the 25-acre sanctuary, which is home to 25 rescued animals, including two calves, a dozen pigs, and horses and chickens.

Snooters is one of a growing number of sanctuaries in Canada that exist partly in response to industrial agriculture. Factory farming began in earnest after the Second World War, and the vast majority of the animals raised for food in Canada now pass through this system. Any way you look at it, it's big business: in terms of profitability; in physical scale (some Canadian factory farms, for example, house up to 50,000 laying hens); and in environmental footprint, with one study showing that livestock production worldwide is responsible for 18 per cent of greenhouse gases. Even the sheer size of each animal is massive, as many have been bred to grow as large and as rapidly as possible – to yield the most amount of flesh in the shortest time frame.

Seven-hundred million animals are eaten each year in Canada, and most did not spend their days in pastures. Rather, animals are often raised indoors, without ever touching grass or feeling the fresh air. In their cramped environments,

they might not be able to walk around, or, in the case of chickens and turkeys, flap their wings – much less graze, forage or form social groups.

If Gracie hadn't been "lucky" enough to get a leg infection and be rescued, her fate would have been similar to the majority of the 1.5 million sows raised in Canada each year: she would have spent a great deal of her life pregnant in a two-by-sevenfoot steel cage - a space too small to turn around or walk in. With nothing to do, she would have rubbed against and bitten at her bars incessantly, or tried to root at her floor. She would have given birth in a small farrowing crate in which she couldn't turn about, and nursed her piglets through bars. After her young were weaned at two to three weeks, she would have, once again, been artificially inseminated. By 24 to 30 months, after a few litters, Gracie wouldn't have been as productive, so she would have been sent to slaughter. Her male piglets, in turn, would have been moved to overcrowded pens. Because tight quarters lead to aggression, their teeth would have been clipped and their tails cut. As well, they would have been castrated. These procedures would have been done without anaesthesia.

The first time Gracie would have gone outdoors and felt the sun on her would likely have been the trip to the slaughterhouse. Because she would have been caged most of her life, she might have suffered from leg, joint or cardiovascular problems, making it difficult to walk up the transport ramp. This slow movement would have increased her likelihood of being goaded with an electric prod. She could have been in the truck – without food, water or rest – for up to 36 hours. Crowded conditions could have meant no room to lie down or turn around, which could have led to injury. Gracie could also have been harmed if the truck wasn't equipped with proper ventilation and temperature control. According to an international animal protection agency, between two and three million animals die during transport every year in Canada and another II million arrive at their destination injured or diseased.

"It's a nightmare, a horror story," says Stephanie Brown, director of the Canadian Coalition for Farm Animals. "These are thinking, feeling, inquisitive creatures – and their destiny is suffering and misery. It's legitimized animal cruelty."

Lesli Bisgould, an adjunct professor in U of T's Faculty of Law, who established the first animal-rights practice in Canada, puts it just as bluntly: "If they're arriving dead, why? What's the problem? What's happening before they get there that they can't even make it to the ultimate destination?"

Or, to put it another way, if millions of animals are in a state of suffering, what does that say about *us*? A growing number of

"When an animal is struggling to get away from something, you don't have to be the brightest light on the block to know they feel"

biologists, ethicists and other thinkers are criticizing the ways animals are treated on factory farms. They are contemplating what we need to change in our behaviour and our laws; what our moral obligations are to those who depend on our goodwill; and examining quality-of-life issues concerning animals. As industrial agriculture has only been around for about 65 years - a mere blink in the several-thousand years of human agricultural history - we are still playing catch-up in our moral reflections. "I think new technologies have always raised new ethical questions, and usually the ethics and the spiritual response is much slower than the technology," says John Berkman, a professor of moral theology at U of T's Regis College whose expertise is in animal ethics.

THE DAYS WHEN DESCARTES saw animals as furry machines (they are not rational, he argued, and therefore not conscious), and people claimed that animals couldn't feel pain, are long gone. If we ever really did believe that, biologists have since proven that mammals and birds are sentient creatures with a wide range of physical, emotional, psychological and social needs. "Whenever we do studies, we find out that they are more sensitive, more aware, and more vulnerable to stress than we think. It's almost never in the opposite direction," says Monika Havelka, a biologist at U of T Mississauga. "We always seem to find out that they suffer more than we think that they do."

Scientists have known for several decades that animals - from humans, to pigs, to chickens, to dogs - have almost identical central nervous systems, meaning we all experience stress, fear and pain in very similar ways. When something or someone in our environment upsets us, for example, we have the same fight-or-flight responses: our heart rate accelerates and our adrenal gland releases stress hormones (known as cortisols). Cows, for instance, hate the sound of loud voices and will get extremely anxious when people yell, says Havelka. "[Farm animals] certainly feel a tremendous amount of stress. We know that they can have very high cortisol levels, and we know that transportation, crowded conditions, noises and changes in temperature can all send their cortisol levels skyrocketing."

When people talk about animals having emotions, they are often criticized for "anthropomorphizing" - but the assumption that humans are the only animals with feelings is a human-centric prejudice, a fallacy. All mammals have a limbic system (the site of basic emotions in our brain) and can all experience fundamental emotions, such as fear and happiness, says Professor Marc Bekoff, a world-renowned ethologist and conservationist who spoke at U of T in May. Bekoff is the author of The Emotional Lives of Animals, and cites example after example of observed animal emotion: from pigs suffering from depression, to cows holding grudges, to elephants experiencing joy while playing. "To say animals don't have a rich emotional life, or they can't feel pain - that's just nonsense," he says. He employs scientific evidence and evolutionary theory, as well as common sense, when it comes to assessing animal experience. While speaking about how it is legal in many parts of the world to castrate pigs without anaesthesia, he says, "When an animal is struggling to get away from something, you don't have to be the brightest light on the block to know they feel."

"If we analyze our emotions, they're not that different in kind," adds Havelka. "Most of what [humans and animals] feel are the fundamental, basic emotions. We're scared to be alone, we're scared of new situations, we can be angry if we feel we're being mistreated, we like to be around others who make us feel calm and accepted. We want to feel secure."

One way animals feel secure is through their social groups, and many form hierarchies and cliques. This is easily observed in herd animals such as cows, who have evolved to move in large groups. Havelka cites one study that shows sister cows like to hang out together, proving that they care not only about having company, but who that company is - and making it profoundly at odds with their nature to be constantly penned or separated. The opposite extreme, of overcrowded living conditions, prevents animals from establishing a social hierarchy - which leads to aggression. "It's like people trapped in a crowded elevator," says Stephanie Brown. "Eventually, they are going to start to fight."

ALTHOUGH WE ARE NOW more scientifically fluent about the inner lives of animals, we are more likely to treat them like, well, Descartes' furry machines. Legally, all animals are property (and always have been), meaning we own them and can use them for our own purposes, says Lesli Bisgould, who is currently writing a book on animals and the law. Whether one looks at the Criminal Code's general anti-cruelty laws or at legislation that applies to agricultural animals, one finds the same qualifiers - prohibiting "unnecessary" or "undue" or "prolonged" pain and suffering, she says. "That means we have permitted ourselves to cause necessary pain and suffering. And what does that mean? When is it necessary?" asks Bisgould. "You'd never use the word 'necessary' in that context with another human being."

While in the eyes of the law, an animal is property, a corporation can be granted rights of personhood-making, legally, an animal an "it" and a corporation a "he" or "she." (Corporations, of course, also have privacy rights - their facilities are private property, making it next to impossible to see how any animals they own are treated.) Animals - displaced from their natural environments and deprived of acting out many of their instincts - are essentially rendered into units of production. "Corporations, by law, are required to maximize profits. That's their obligation to their shareholders," says Bisgould. "Every penny spent on animal welfare is a penny that doesn't go into profits."

When it comes to legal rights for animals, Bisgould advocates for a large-scale shift in thinking: if corporations can have legal personhood, why would we not extend the same rights to living entities other than humans? She adds, "It's a bit of a circular problem, because if animals were legal persons - meaning not that they have human rights, all the same rights we have, but the basic rights to their lives and to have their interests considered before we do things that are going to hurt them - if it ever got to that point, it's unlikely we'd be eating them. Because their interests in their lives would conflict with our relatively trivial interest in eating them."

"WHAT DOES IT DO TO YOUR PSYCHE and to your spiritual well-being if you are part of this system of violence?" asks Stephen Scharper, a professor of anthropology at U of T Mississauga and U of T's Centre for Environment, who focuses on issues of religion, ethics and the environment. Scharper views factory farming as a "seamless garment of violence"- one that violates the dignity of animals, contributes to environmental destruction, and often employs non-unionized workers and pays them minimum wage for work that can be both emotionally troubling and physically dangerous.

Scharper points to several religious traditions concerned with the peaceful, respectful treatment of animals. Followers of the Jain and Hindu religions abstain from meat entirely, believing that the cycle of violence brings with it bad karma - which would affect their salvation. He also cites Judaism's kosher dietary laws and the Islamic tradition of halal, both of which have strictures on how animals are to be treated during their lives and slaughter. Scharper, a Christian himself, is the co-editor of The Green Bible, which interprets Christian scriptures through an environmental lens. He notes that one of the first injunctions in Genesis - to take care of the garden - can pertain to both the environmental crisis and animal welfare. "If we are defacing God's creatures and God's creation, we are rupturing our friendship with God, living a life of sin and therefore affecting our future salvation," he says.

Professor John Berkman of Regis College ties the notions of non-violence and respect for other beings into an even broader theological framework. He notes that every animal (human or non-human) deserves the opportunity to live well and to flourish according to his or her own abilities, within his or her own community - whether the animal is a dolphin in a school of dolphins or a cow grazing in a pasture with a herd. And respecting the natures of others, and recognizing our place within the larger picture, shows up in many religions. "This gets to a theological vision that ultimately the world is not to be disposed of however humans deem, but each creation has its own end, its own telos, its own purposes, and part of human life is to understand and respect those various purposes - not only those of human beings," he says.

Because Berkman believes respecting the natures of other animals and giving them the opportunity to flourish is so important, a pure reduction-of-pain model concerns him. "Reducing suffering is *the* project of modernity," he says. "That is a good thing in itself, though there are certain intellectual limitations and problems with a pure suffering approach... somehow, then it would seem to be OK to do whatever you want to do with animals as long as you kind of keep them in a halfdrugged state where they're not experiencing any suffering."

IF ONE ACCEPTS THAT THERE ARE ethical and spiritual concerns surrounding the treatment of animals on factory farms, what then, is the answer? Is it a radical overhaul of the system? Not eating animals? Changing a few regulations?

Bisgould is not convinced there are any laws that can really improve things for animals used in industrial agriculture (although she would like to see a change in privacy laws, which would allow people to see where their food comes from). One can ask for bigger cages or make anaesthesia mandatory before castration, but these improvements are minimal in the grand scheme of the suffering the animals endure, she says. The demand to produce vast amounts of meat for human consumption means there's no room for animals to live well, she adds.

"When there's no market, we'll stop producing them," says Bisgould, pointing to the cosmetic industry, which began to make massive changes after people found out their products were being tested on animals. "In that sense, all of us have a lot of power, but we have to be willing to re-examine our own behaviours because a lot of us love to eat animal products and I totally get that, but we have to be open to a little bit of change if we want these harms to go away."

Wayne Sumner, a professor emeritus of philosophy at U of T, points to vegetarianism as the moral ideal. (A vegetarian himself for several decades, he says, "I've backslid a bit since then. I don't live up to my own ideals.") "For most of us living in big cities in Canada, we can get by perfectly well without eating animals or eating animal products. I think that's ethically admirable, but I would take a harder line as far as animal suffering is concerned," says Sumner. "It's not just admirable not to cause animals to suffer, it's an obligation not to cause them to suffer."

Scharper favours a "context of consumption" approach, which takes into account quality-of-life issues for animals and humans, and environmental concerns, when choosing what meat to eat. Of factory farming in particular, he adds, "This is a crisis of imagination and of the way we think. And because we've allowed ourselves to be colonized by a pragmatic, endsdriven model, rather than to other ways of looking at the world - of integration, of deep empathy, of deep participatory solidarity - we can't think of other ways to be human. That's what we are challenged to do now."

Berkman, a vegetarian himself, references a modern Mennonite poster that reads: A Modest Proposal for Peace: Let the Christians of the World Agree That They Will Not Kill Each Other. "People asked, 'Why just Christians? Why shouldn't everybody not kill each other? Well, this is a modest proposal for peace. At least people who are supposed to agree, fundamentally, about what life is about, should be able to not kill each other," he says. He relates this back to animal suffering, arguing for at least eating free-range meat: "Ultimately, I would like to see a much broader vision where we come to an agreement about respecting the goodness and the inherent dignity of animals, and that unless we absolutely need to we should let them live according to their natures and peaceably. The modest proposal for change is let's not be engaged in institutionalized cruelty, which almost everybody knows is wrong."

BEFORE ENDING THE CONVERSATION, Bisgould makes one important distinction between humans and other animals. "We've tried for a long time to distinguish ourselves from other animals to justify hurting them. And all of the distinctions that we've drawn over time have been disproven by our own science. They don't think, they don't reason, they don't feel, they don't form social bonds. So we don't have the factual premise for this entitlement that we continue to claim," she says. "If there is perhaps one difference, it might be this second-order thinking that we do, this thought about thought. And since we have that capacity, aren't we obliged to use it? Instead of saying, we're better than you, therefore we get to hurt you, let's use our morality and say, I have a choice between sustaining myself in a way that causes profound pain and suffering, or a way that doesn't. How do I justify choosing pain and suffering? How do *I* justify it?"

Stacey Gibson is managing editor of U of T Magazine.

For more information about factory farming, visit www.magazine. utoronto.ca.



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All about umi



Funny Bones

Hart Hanson blends crime and comedy on his hit Fox TV show

am a popular entertainer," says Hart Hanson, creator of the hit Fox TV show Bones, now in its sixth season. "I tap dance and fart, as Kurt Vonnegut would say."

That peculiarly Canadian knack for self-deprecation has stuck with Hanson (BA 1981 UC), even as his big-shot credentials have bloomed in Hollywood. And the same comic sentiment pervades the show he created - even if it is about grisly murders.

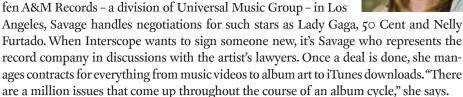
Outwardly, Bones is a straightforward police procedural: each week, improbably glamorous forensic anthropologist Temperance "Bones" Brennan (Emily Deschanel) must study the remains of long-dead murder victims so that FBI Special Agent Seeley Booth (David Boreanaz) can crack the case. But Bones' whimsical characters and sly humour set it apart from other body-of-the-week shows such as CSI, Criminal Minds and >>>

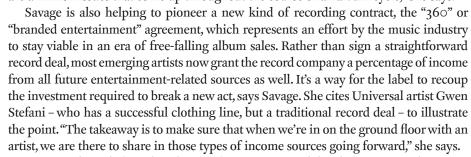
Rock Star Lawyer

Erika Savage is helping to pioneer a new kind of recording contract at Universal Music Group

WHEN ERIKA SAVAGE (BA 1995 INNIS) STARTED LAW SCHOOL in the mid-1990s, she didn't know the field of music law existed. Today, Savage – a former hip-hop dancer and a longtime advocate for female urban-music artists – is helping to redefine how the music industry does business.

As an attorney, business and legal affairs, with Interscope Geffen A&M Records – a division of Universal Music Group – in Los





Savage acknowledges that the trend is controversial, but believes it is also inevitable. "Everyone keeps saying the music industry has to adapt, and this is how we're adapting." – Jessica Leigh Johnston





Even at the age of 14, I couldn't see my way through a day without writing a poem, part of a short story, or a letter to a friend or family member. I worried that life was like sand slipping through my fingers. Writing was one good way to grab hold of life, stop it from sliding away – study it, digest it. Writing was the only kind of work I wanted to do.



Author and honorary degree recipient **Lawrence Hill**. Innis College Convocation, June 15.

Cold Case. Hanson half-jokingly calls the show a "crimedy," in which the characters kibitz over the corpses and the one-liners are scalpel-sharp.

Hanson originally aspired to write "serious" novels, but the realities of supporting a young family soon crowded out his literary ambitions. "As a struggling novelist, I had to do something for money," he says. "I had heard if you wrote a *Beachcombers* script, they would pay you \$8,000. And I thought if I wrote one or two of those a year, I wouldn't be a bad father." Sure enough, Hanson sold his first script to the CBC show, and later wrote and produced many others, including *Street Legal, Road to Avonlea* and *North of 60*. In 1996 he created the Bay Street drama *Traders* for Global TV, set in the pressure-cooker world of investment banking. He decamped for Hollywood in 1998, writing for several Fox shows before the network asked

him to develop a new crime drama. *Bones* premiered in 2005.

Hanson flexed his comedic muscles early, as editor of University College's satirical newspaper, *The Gargoyle*, and served as vice-president of the college's literary and athletic society, UC Lit. He took his first creative-writing workshops at U of T (he majored in political science and minored in English), and won UC's Norma Epstein Foundation Award for Creative Writing. "I had the greatest university experience," he says. "It was life-changing for me to go from being a hair-down-to-my-ass metalhead to actually working hard at school."

Today, Hanson talks about his career as if he still can't quite believe it. "I think I was booked to be a college English teacher," he says. "Instead I ended up writing a murder show for Fox and living in Malibu. It's very odd."

- Graham F. Scott

Crimes Against Women

Shelley Saywell explores so-called "honour killings" in her new film



THE GIRL WOULDN'T WEAR THE HIJAB; her father couldn't bear the feeling that he was losing control of her. A sensational murder. The cameras flash, the daily reporters meet their deadlines by filing timely stories. But then they shift focus to the next day's item. Filmmaker Shelley Saywell (BA 1977 Woodsworth) has made a career of documenting what happens after the mainstream media moves on. For her celebrated 1997 film, Kim's Story: The Road from Vietnam, she tracked down the girl shown running naked from a napalm attack in perhaps the most famous news photograph from the Vietnam War.

Her latest film, In the Name of the Family, looks at so-called honour killings - including that of Aqsa Parvez, a Mississauga teen whose father and brother were recently convicted in her death. Saywell convinced an extraordinary variety of people to talk to her for this film, the winner of the Best Canadian Feature at this year's Hot Docs festival. The interviews lend colour and nuance to the stories we've read about in black and white. We

hear the disturbing tale of a taxi-driving father who follows his daughter everywhere in his car to see what she's wearing and who her friends are; we watch a mother talking and weeping near the graves of her two teenaged daughters, killed by her longtime husband and their father.

The film has no narrator; rather, the story is told primarily through the girls who are living this dual existence. It profiles their extraordinary courage as they struggle to find a way to participate fully in the rituals of North American teen life, without utterly disappointing the families they love. The story of a brother and sister, both Afghan immigrants to the U.S., illustrates how intractable the problem can be. The brother stabbed his sister II times - because she had

the gall to suggest she wanted to move to New York for a summer job, "without permission." He speaks from behind bars at Attica, and is unrepentant: "She destroyed my family. If she did listen to me, I wouldn't be here." The sister who somehow survived the multiple stabbings, tells her chilling account calmly. "He is stabbing me, and saying, 'I am Muslim, I am going to kill you.' And I am thinking, 'Islam does not allow people to hurt an ant, how could you kill your own sister?" - Alec Scott

In the Name of the Family will premiere soon on CTV. Visit www.magazine.utoronto.ca for an air date.

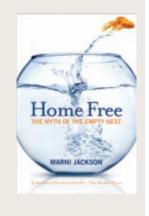
Learning to Let Go

In Marni Jackson's new book, Home Free: The Myth of the Empty Nest (Thomas Allen Publishers),

she contrasts her parents' supportive but distant child-rearing attitude with her own hands-on style. "The book explores how we went from the generation gap to this more fused kind of family," she says. Speaking on the phone from her Toronto home, Jackson recalls bumming around Europe in her 20s, even living in a cave in Greece with a boyfriend, and hardly ever touching base with her folks. However, when her adult son takes off on a hitchhiking tour of the American Southwest and Central America, she finds it

emotionally difficult to be separated from him.

Jackson's publisher had asked her if she wanted to do a sequel to The Mother Zone, her 1992 bestselling memoir about being an older firsttime mom. "I chuckled and said, 'that's hilarious,' because my son is now 24. But then I went, 'wait a minute, I'm still on the job here and he's very much in my thoughts." She argues that there must be some middle ground between excessive detachment - as her mother lies dying, she laments the emotional gap between the two - and excessive involvement. "There's more intimacy now [between parents and children] than there was in my day, and that's a good thing. But the job is on the parental side - letting go." - Alec Scott





First Person

The Architecture of a Life

Out of hardship, Raymond Moriyama built the foundation of his career

This past April, architect Raymond Moriyama (BArch 1954) received the Sakura Award for contributions to Japanese culture in Canada and abroad. Moriyama – who designed the Canadian Embassy in Tokyo, the Ontario Science Centre and the Canadian War Museum (at the age of 70) – delivered a speech at the Sakura Ball. He spoke of his life's challenges – from being severely burned as a child when he accidentally upset a pot of stew, to being sent to an internment camp (the fate of 22,000 Japanese-Canadians after the bombing of Pearl Harbor) in Slocan, B.C. Below is an excerpt.

WAR IS HELL. Physically facing an enemy is hell. It is a psychological hell when your own country, the country of your birth, stamps you an "enemy alien," disowns you and expels you to an internment camp in the mountains far away from home.

Father was sent to a POW camp in Ontario for resisting the government's contradictory action of going to war to preserve democracy and individual rights while, at home, disregarding the rights of 22,000 citizens. Mother, who was pregnant, in despair and having to face a future with three children and \$34.92 in savings after 13 years of struggle in Canada, lost the baby: the only brother I could have had. In the B.C. camp, I was mocked in the public bath by fellow Japanese-Canadians calling my scars [from childhood burns] a contagious disease.

I was disowned by my country and mocked by my own community. My father was a POW in faraway Ontario, and my self-esteem was destroyed. In despair, I decided to bathe in the Slocan River on the other side of a little mountain away from the camp. The water was glacial, but it was better than hot tears. To see who might be coming, I built an observation platform.

Soon I found myself wanting to build my first architectural project, a tree house, without being found out by the RCMP. I used just an axe as a hammer, an old borrowed saw, six spikes, some nails, a rope, and mostly branches and scraps from the lumberyard. It was hard work building it by myself, and it was a lesson in economy of material and means.

That tree house, when finished, was beautiful. It was my university, my place of solace, a place to think and learn. This is when I first learned to listen to the Earth. The view, and sound, of nature from the tree house was astonishing: the mountains green and silver; the sunrise, the sunset; the whisper of the river and the sound of the wind. I was learning the true meaning of *dynamic permanence of temporariness* – that the "frightening" storm was a part of a balance to the beautiful sunset and that *it* was less vengeful than man's irrational thoughts and deeds.

I was amazed that my despair was subsiding. I began to understand that I could not hate my community and my country, or my hate could crush my own heart and imagination. I replaced the despair with ideas about what I could do as an architect to help my community and Canada.

The inspiration for the Canadian War Museum came during this period, at age 12 and 13: the sound of nature and the evening breeze I heard in the tree house coming fully alive 60 years later. The Canadian Embassy in Tokyo is a tree house inspired by the original.

MY HIGH SCHOOL GRADUATION came soon after the war, so my father had very little money. Instead of a material gift, he passed me an envelope at the graduation ceremony. For a moment, I thought it could be a cheque to pay for my tuition at U of T. But it was better than that or anything else he could have given me. It was a poem he worked on very hard, I'm sure, with a lot of love and wisdom. It was beautifully scripted, and it read: Into God's temple of eternity, drive a nail of gold.

He did not ask me to build the temple. He wasn't even asking me to design it. He was asking me to drive in just one nail – just one, but one forged of gold. This poem propelled and sustained me through university and my professional life. I thought about it for years and tried to live up to its fuller meaning.

I realized architecture needed to be more than nicely proportioned surface treatment. If it is to be truly "golden," architecture has to be humane and its intent the pursuit of true ideals, of true democracy, of equality and of inclusion of all people.

The Two of Us

Tuan Nguyen and Richard Bingham

TUAN NGUYEN and Richard Bingham both love the water, so it's not surprising that they met while swimming at the Athletic Centre. Twenty-six years later, U of T is still a big part of their lives. "We exercise here, and it's our intellectual and cultural centre," says Richard (BA 1976 VIC, MLS 1980), who runs a language school not far from the St. George Campus. Tuan (BSc 1987 VIC) is a research analyst with the Centre for Addiction and Mental Health in Toronto.

Tuan: I left Vietnam in a boat with an older brother and sister. I was 15 and all I had was a pair of shorts. On the South China Sea, we ran into pirates and storms. People were dying. It was such a shock for me, and as soon as we got on land I swore that I would never set foot in a boat again.

But in the summer after I met Richard, he took me on a camping trip in Georgian Bay in a 15-foot open boat. Everything was fine until, a couple of days in, we ran into a storm. We made a wrong turn, the boat hit a rock and everything flashed back. I almost had a nervous breakdown. Richard stopped the boat, set up the tent, heated up some mushroom soup and opened a can of pineapple and some ham. Right then I knew he was my captain, my matelot. I knew that I could trust him with my heart.

Richard: Tuan's father is a goldsmith in Vietnam. He had made wedding rings for each of his 10 children, except Tuan.

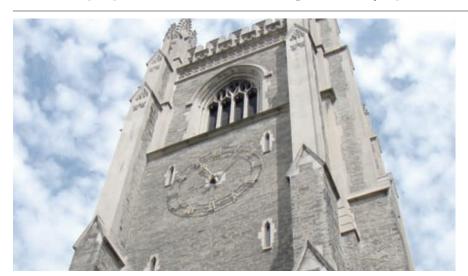


Tuan Nguyen (left) and Richard Bingham on Split Rock Island in Georgian Bay, Ontario

One day a few months after gay marriage became legal in Canada, Tuan and his father had dinner together. His father told Tuan he would consider it a great honour if he could make wedding rings for us. Tuan and I had never even talked about getting married. But once it came up we said, "Sure, why not?" His father performed a Confucian ceremony at the family home. We had one witness from my side and one witness from Tuan's side. We didn't think much about the actual event; it just seemed like, "tomorrow we'll go shopping, then we'll get married." In the end, though, it was quite emotional for us.

I love Tuan because he is committed to resolving any issues so we can always live in harmony. His Buddhism has been my enlightenment in many ways.

We met when he was 20 and I was 30. We grew up, and experienced so much, together; I think that's why we stay together.



Soldiers' Tower honours U of T community members who died in the First and Second World Wars. Today, exhibits inside the tower include artifacts and memorabilia from subsequent conflicts and peacekeeping missions.

Completed in 1924, the tower has been battered over time by the elements. To return the structure to its former glory, repairs of \$1.8 million are needed. Scaffolding was erected for the summer - and will be put up for the next three summers - to allow for renovations. The scaffolding will be taken down each year in time for Remembrance Day ceremonies.

Soldiers' Tower Committee raised about \$400,000 for the first phase of renovations, thanks to a significant gift from Blake Goldring and other donations from alumni and friends - which was then matched by U of T. The second phase of renovations will cost \$1 million. To contribute, please contact Kathy Parks at soldiers.tower@ utoronto.ca or (416) 978-0544. - Suzanna Chang

60 Seconds With

Autumn Haag



SHE'S A REFERENCE ARCHIVIST from Boston who, as a teenager, was fired from her first summer job. And in June, Autumn Haag appeared for the first time (and, as it turns out, the last) on Feopardy. Lisa Bryn Rundle quizzes Haag, who earned a master of information studies in 2007 at U of T, on the experience.

When did you first realize you were a trivia

I grew up watching Jeopardy. And I just liked knowing things that my sister didn't know. We'd play Trivial Pursuit growing up and it was one game I could beat her at.

So how did you do on the show?

I lost horribly.

How did you feel about that?

The guy who won was so dominant it was hard to feel too bad. He was *really* good.

What made you choose Jeopardy? Other shows might have been easier.

I don't have an interest in being on any other game shows. I didn't want to be on TV per se, but *Feopardy* has serious nerd cred.

Would you consider appearing on Downfall - the show where the trivia questions are much easier, but losers jump off a skyscraper? (You are on a big bungee cord, but still.) Nooo. If it was something wimpier than bungee jumping, maybe – like running a mile.

What surprised you the most about being on set?

It's a silly thing, but I was totally blown away by it: Behind the podiums, there's actually a hydraulic lift to even out contestants' heights.

I guess they can't have someone standing on a stack of books. So were you able to exploit your Canadian connection at all with famed Canadian host Alex Trebek?

I was really hoping I'd be able to. They ask you to come up with five things that are interesting about you for Alex to ask about, but my Canadian connection didn't get chosen.

What did he go with?

Well, I got fired from my first job, when I was 14. I was picking strawberries and I was let go for eating too many.

Is there one particular clue that is now seared in your memory forever?

Yes! I got one of the Daily Doubles right! The category was 12-letter words and the answer was "Egyptologist."

Do you have a favourite bit of trivia?

Hmmmmmm.

Maybe I should have given you a buzzer.

Oh, OK. Maybe something like... the Massachusetts state doughnut is the Boston Cream. The weekend before your episode, the New York Times Magazine had a story about a computer that's going to compete on Jeopardy. Do you have any advice for it? Wear comfortable shoes.

Match your trivia knowledge against Autumn Haag's. Answer selected *Jeopardy* questions at www.magazine.utoronto.ca.

Milestones



Two U of T alumni and three faculty members have been named to Canada's Top 40 under 40 list, which is run by Caldwell Partners International and honours outstanding young people. Dr. Eve Tsai (MD 1995, PhD 2004) is a neurosurgeon and lead researcher into spinal cord injuries at the Ottawa Hospital. Robert Normandeau (MBA 1999, LLB 1999) is president and COO of Clarke, Inc., an investment company. Prof. Ike Ahmed of ophthalmology and vision sciences is a world-renowned eye surgeon. Prof. Daniel Durocher of molecular genetics is the Canada Research Chair in Proteomics, Bioinformatics and Functional Genomics. Dr. Subodh Verma of surgery and pharmacology is the Canada Research Chair in Atherosclerosis.

Several alumni and faculty members have been named to the Order of Canada, this country's highest civilian honour. Michael Wilson (BCom 1959 TRIN), former Canadian ambassador to the U.S., was promoted to the highest rank of companion. Named officers were astronaut Julie Payette (MASc 1990), mathematician and playwright John Mighton (BA 1978 VIC, MSc 1994, PhD 2000) and Prof. Emeritus Mladen Vranic of physiology. Named members were Edmund Clark (BA 1969 UC), president and CEO of TD Bank Financial Group; Prof. Emeritus Stephen Clarkson of political science; Mary Jo Haddad, an adjunct member in health policy, management and evaluation; Mary Ellen Jeans (Dip P and OT 1968), president and CEO of Associated Medical Services Inc.; composer Ann Southam (Lic Dip Mus 1963); actor and director R.H. Thomson (BSc 1969 TRIN); and Prof. Kue Young of the Dalla Lana School of Public Health.



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1917-1918

Training Days

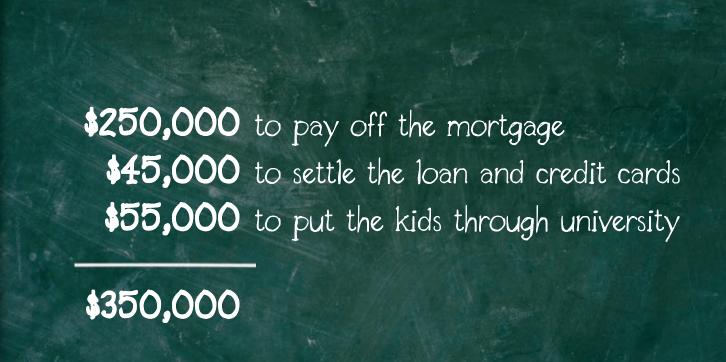
Cadets get ready to serve in the First World War, on St. George Campus

In 1917, with the Great War raging in Europe, U of T president Robert Falconer turned over large portions of the downtown campus to the British government to establish the No. 4 School of Aeronautics. For 17 months, the St. George Campus was the location for all classroom training in North America for military pilots and aircrew. This photo, taken on back campus, shows some of the tents used by the airmen-in-training.

The first manned flight in Canada had only taken place in 1909, but gallant stories of fighter aces such as Billy Bishop had seized the Canadian popular imagination, and the short life expectancy of combat pilots meant there was no end of demand, either. The No. 4 School provided roughly two months

of instruction in aerial photography, telegraphy, map reading and engine maintenance before cadets departed for flight training at aerodromes. By 1918, the school had taken over front and back campus, the engineering building, Convocation Hall, Hart House, Wycliffe College, Burwash Hall and most UC residences. Among the students was William Faulkner, who would go on to win a Nobel Prize in Literature. Future prime minister and alum Lester Pearson was an instructor.

After the armistice, many who started their pilot training at U of T would go on to open up the Canadian North, enabling the nation to map and explore those vast expanses for the first time from the air, as Canada's first bush pilots. - Bruce Rolston



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