

Uncertain Times U of T and the economy / **Head of the Class** A school kids love / **River Rambler** Toronto's lost waterways
A Healing Spark Electricity in the brain / **Thirsty Lands** Water for millions / **Gift of a Lifetime** One student's generosity

UofT Magazine

SPRING 2009



The Science of Sleep

Decoding what
the brain does at night

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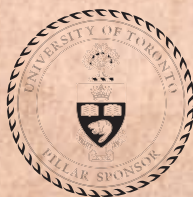
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Spring 2009



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by Cynthia Macdonald

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by David Naylor

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by Marcia Kaye

U of T Magazine

Editor and Manager

Scott Anderson

Managing Editor

Stacey Gibson

Art Direction and Design

Underline Studio

Magazine Assistant

Nina Haikara

Publisher

Rivi Frankle, Chief Operating Officer,
University Advancement, and Assistant
Vice-President, Alumni Relations

Editorial Office

T (416) 978-0838, F (416) 978-3958
uoft.magazine@utoronto.ca

Advertising Inquiries

David Wright

T (416) 978-4410, F (416) 978-1474
david.wright@utoronto.ca

All correspondence and undeliverable
copies: *U of T Magazine*, 21 King's
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Departments

“Governments can’t allow protectionism to be seen as a way out”

Business professor Walid Hejazi on the economic crisis, p. 28



Director Ron Mann indulges a sometimes psychedelic obsession



Professor Nigel Edwards owes his life to a former student’s remarkable generosity



Professor Emeritus Rod Tennyson’s proposal would bring clean water to millions in Africa

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“If U of T wants to catch academic malefactors, it is the faculty, not the students, who need ethical training.”

– *Ifty Nizami* BSc 1982, MSc 1988, PHD 1999

Cheating the Sciences

I enjoyed Zoe Cormier's story on the use of Turnitin.com's software to check for student plagiarism ("Stolen Words," Winter 2009). The article, which dealt primarily with arts courses, brought to mind my experience as a teaching assistant for nine years at U of T. During that time, I tutored classes and graded papers in the sciences – psychology, physiology and math – and found no shortage of students cheating. However, when my fellow TAs and I brought these acts to the attention of the course professors, the students generally received no worse a penalty than a grade of zero on the assignment. Harsher penalties and personal confrontations were avoided and the incidents were not reported to higher authorities, presumably because the professors themselves feared a stain upon their reputations.

The cheating my fellow TAs and I discovered included copying assignments from previous years, submitting identical math proofs or laboratory measurements (which rarely occurs when students work

independently) and sharing information during examinations. When TAs reported these incidents to the professors, we were, by and large, ignored. If U of T wants to catch academic malefactors, it is the faculty, not the students, who need ethical training – and the assurance that they will not be held responsible for incidents that are beyond their control. Without that, all the software in the world won't make a difference.

– *Ifty Nizami* BSc 1982, MSc 1988, PHD 1999
DECATUR, GEORGIA

Trying Turnitin

Congratulations on a superb Winter 2009 edition. I was particularly interested in the discussion of turnitin.com ("Stolen Words"), which we have just begun using at my high school in Switzerland. I will share this article with all of our senior students to emphasize what we already tell them: universities are even tougher on academic dishonesty than we are. I will use the article about international students ("Stay Awhile!") to support my discussion with our seniors that Canada

is a great place for undergraduate studies. I will use the story on the Mayor's Tower Renewal Project ("Tower Power") with my geography class to give them a great example of urban renewal, and the Q&A with Professor Miriam Diamond I will pass on to our chemistry teacher for a discussion on ethics in science.

– *Helen Taylor-Cevey (née Taylor)*
BSc 1991 UTSC, MSc 1994
VILLARS-SUR-OLLON, SWITZERLAND

Cosmic Ire

The title "Ms. Universe," used for the cover story about astronaut Julie Payette in the Winter 2009 issue, made me very angry. Payette is a world-class scientist, whom you diminished by resorting to a blatantly sexist double entendre for your headline. Would you do something similar if Stephen Hawking were your subject?

– *Micol Kates*
TORONTO

Math Misconceptions

In her article about kids and math ("Fear of Numbers," Autumn 2008), Cynthia Macdonald notes that she found the language of the National Mathematics Advisory Panel's final report "quite even-handed," though some reformers condemned it for being too "rigidly basics-oriented."

Good math instructors have always strived to simultaneously develop conceptual understanding, computational fluency and problem-solving skills. The fact that these so-called reformers

Letters

equate their misconceptions about how mathematics is taught and learned with conceptual understanding has always been the heart of the problem.

– *Wayne Bishop* PROFESSOR OF MATHEMATICS,
CALIFORNIA STATE UNIVERSITY, LOS ANGELES

Mental Breakthrough

When my husband, Ron Sawatsky (PhD 1986), and I moved to the U.S. in 2000, I went back to college and had to take a couple of math courses. I was petrified because although I am good at arithmetic, I have a mental block when it comes to conceptual problems. One course, called “The History and Culture of Math,” helped me realize that my fear of math was based on the way I learn; I need a context to understand a problem. In the course, we learned why math is useful and how it developed historically, and worked on math problems as they related to historical events. After finishing the course,

I still didn’t love math. But I had learned to appreciate the subject in a different way – and to fear it less. If, in elementary or high school, I had been introduced to math via history and culture, my mental block might never have developed.

– *Susan M. Sawatsky*
SOUDERTON, PENNSYLVANIA

Who Finances Whom?

In “Gum Control” (Autumn 2008), Professor Emeritus Jim Leake suggests that government tax benefits for employer dental plans result in “lost tax revenue.” He is quoted indirectly as saying that “perversely, low-income, non-insured individuals end up paying higher taxes to help finance the dental care of their wealthier neighbours who are fortunate enough to have a private plan.”

That’s a bit of a stretch, isn’t it? Perhaps I should argue that, more perversely, high-income individuals, in addition to working

hard to land a job with dental benefits, also end up paying higher taxes to help finance the health care of their poorer neighbours (via higher tax brackets, high-income surtax and Ontario Health Premiums). I don’t argue against universal health or dental care, and the article quite intrigued me. But I don’t think Leake will win favour for his cause with the educated readers of this magazine with such wishy-washy claims.

– *Shannon Hickey* BSc 1999 UC
GEORGINA, ONTARIO

Timely Recognition

I’m pleased that President Naylor’s message in the Autumn 2008 issue recognized the hard work, dedication and contribution of staff toward the academic mission of the university. While President Naylor is right in saying that “our staff members are capably represented by 22 separate unions” and that



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the university is “working with our unions” to “offer a wide range of employee services,” there is one group that is not collectively represented in any way: senior administrative staff in the professional, management and confidential group. They deserve to be included in the accolades, too. The president’s recognition of our work is timely and inspiring.

– *P. C. Cho* MA 1994
GOVERNOR FOR ADMINISTRATIVE STAFF,
U OF T GOVERNING COUNCIL
TORONTO

Expanded Opportunities

I was delighted to read about the extended postgraduate work permit for international students in the Winter 2009 issue (“Stay Awhile!”). And I was thrilled to hear that the University of Toronto was one of the key movers for this change. As an international student who graduated in 2007 and is now hap-

pily working at IBM Canada, I found that all sorts of possibilities opened up for me in Canada after I found out about this permit.

– *Sacha Chua* MASc 2007
TORONTO

An Important Safety Message

The photograph of the two microbiology students on page 63 of the Winter 2009 edition aroused my concern. The caption claims that they are freezing “bacterial cultures in liquid nitrogen.” I worked as a microbiology researcher for a dozen years, and am now a safety professional. By not wearing protection for their eyes and face or keeping their work behind a shield, these students are being exposed to serious hazards. Even if this photograph was staged, I hope that student safety is not being overlooked at U of T.

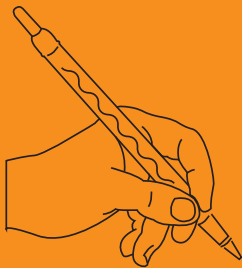
– *John Tcherkezian* BSc 1988 UTSC
TORONTO

Enticed by Design

The article “Women Wanted” (Winter 2009) explores the recent decline in female enrolment in engineering. I’ve been a mechanical engineer since 1996, but I began my academic career as an English major. My reason for not originally choosing engineering was pretty simple – I didn’t know what it was. I graduated from high school with great marks in math and science, but little understanding of what sort of career I could pursue. When I began talking to engineering students, I learned that I could use math and science to design things. The idea that I could someday design roller coasters or Cirque du Soleil sets is why I left English for engineering. Many years later I do not work for Six Flags or the Cirque, but I love my career as a machine safety consultant.

– *Renée Frigault Kemp*
TORONTO

Attention All Aspiring Poets & Short Story Writers!



Announcing U of T Magazine’s 2009 Alumni Short Story & Poetry Contest

First prize in each category:

\$500 and publication in the Autumn 2009 issue of *U of T Magazine*

Runner-up prize in each category:

A University of Toronto prize pack and publication on the *U of T Magazine* website

Deadline for submissions:

JULY 1, 2009

This contest is open only to U of T alumni.

For complete contest rules,
visit www.magazine.utoronto.ca/contest

Going Global

We must prepare U of T for a borderless world

TWO YEARS AGO, I visited an experimental school affiliated with Beijing Normal University where the students gave a new meaning to that old phrase “best and brightest.” The school was already a proud partner in the Green Path program at our Scarborough campus, and the list of top schools partnering with U of T Scarborough continues to grow. This June, the Green Path program will welcome more than 100 young people from China who will spend three months settling into life in Toronto before starting undergraduate degrees on our east campus.

It's just one example of how U of T's three campuses have adopted a more international outlook. International students represent about 10 per cent of our total student population. Thousands of our domestic students are first-generation Canadians. And each year more than half of our tenure-stream professors are recruited from outside Canada – stark proof of the mobility of talent in the modern world.

U of T's growing internationalism is a great strength. More than any previous generation, today's students will be global citizens. Through the wonders of Facebook, their social networks already extend readily across national borders. In many cases, their careers will also play out on a global scale. Indeed, as the economic and intellectual influence of other countries grows, Canada needs more citizens who understand and can work in a variety of languages and cultures.

The University of Toronto is superbly placed to meet that need. Situated in the world's most multicultural urban region, the university is also a hotbed for international research collaborations. In journals and at conferences, U of T students and faculty develop and exchange ideas with colleagues in other countries who are leaders in their field. U of T has formed strong partnerships with top-ranked universities around the world to create opportunities for faculty to be global academic leaders, and to open doors for students. The Faculty of Arts and Science, for example, has signed agreements with 100 institutions outside of Canada, allowing U of T undergraduates to take courses (for credit) without having to pay additional tuition. Some agreements also permit master's and

PhD students and faculty to work on a research team at the partner institution.

For many years, the University of Toronto has given students the opportunity to spend part of their summer studying in a foreign city, such as Berlin, Shanghai or Nairobi. Last year, 840 students visited 13 countries through the Summer Abroad program. In addition to encouraging students to broaden their academic experience outside of Canada, U of T offers myriad courses and programs with a global focus. The Munk Centre's School of International Studies is Canada's leading voice on global affairs and international relations. The Trudeau Centre for Peace and Conflict Studies at University College examines the root causes of violence and how to extend Canada's role in the world as a peacemaker. Students can also earn an undergraduate degree in international relations at Trinity College or in international development studies at U of T Scarborough, to cite just two examples. Over 50 languages are taught here, more than at any university in Canada.


These are positive steps, but when commerce is international and challenges such as climate change are global, we must do more. *Every* student – not just one in 20 or one in 30 – should have the chance to gain a meaningful international experience while attending U of T. We need more collaboration with research-intensive sister institutions worldwide. And while U of T is already one of Canada's most diverse universities, we must boost international student recruitment to attract the finest young minds from around the world.

Marshall McLuhan, the great media scholar and founding director of U of T's Centre for Communication and Technology, coined the term “global village” 30 years before the dawn of the Internet era to describe a new, worldwide collective identity fostered by electronic communication. By increasing the international opportunities available to students and faculty, U of T aims to enhance Canada's capacity to thrive in a world that's more interconnected than ever.

Sincerely,
David Naylor



Calendar of Events

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

MAY
9



Science Rendezvous at U of T. Expect multiple test-tube sightings during this day-long science festival across the GTA. The St. George campus is offering such

family-friendly (and free) activities as the Science Carnival – featuring stage performances, science buskers and games. Many U of T science departments will also offer tours and workshops. (Last year’s events included gummy bear fireworks for the kids at the Lash Miller Building and the making of telescopes at the Institute for Optical Sciences.) During an Amazing Science Chase, teams will battle it out “Amazing Race” style, using quick wit and creativity to save the environment. 11 a.m.-5 p.m. St. George Street (north of College).

 For a listing of events, visit <http://www.sciencerendezvous.ca>.

Hotel, 21 Avenue Rd. For info: Josh Lai at (416) 946-7681 or josh.lai@utoronto.ca.

May 27 to 31
Reunite with old friends during **Spring Reunion**, celebrating those who graduated in a year ending in a 4 or 9 – though all alumni are welcome. Events include the Chancellor’s Circle Medal Ceremony, Stress-Free Degree Lectures and events for 25th and 50th anniversaries. For a listing of all events, including for faculties and colleges, visit: www.alumni.utoronto.ca/springreunion. For more info, contact (416) 978-4941 or spring.reunion@utoronto.ca

May 28 and 30
University College

May 28. Spring Reunion: Women of Whitney Hall Luncheon. Tours, tea, photos and reminiscing. 1-3 p.m.

May 29. Spring Reunion: Principal’s Dinner. Cocktail reception, music, dinner, guest speakers, photos and memorabilia display. \$80 per person. Reception, 4 p.m.; dinner, 5 p.m.

Both events take place at Howard Ferguson Dining Hall, 75 St. George St. For info: (416) 978-2968, uc.alumni@utoronto.ca or www.uc.utoronto.ca/alumni.

May 28 and 30
U of T Mississauga

May 28. The Alumni & Friends Golf Tournament. Nine-hole shotgun start. Cost: \$80. Piper’s Heath, 5501 Trafalgar Rd., Hornby, Ont.

ALUMNI

April 2 and 5
Kingston, Ontario, and New York City
Mass for Prisoners of

Conscience features choirs and a chamber orchestra from U of T and Queen’s University, as well as vocalists and children’s choirs. The concerts are dedicated to Amnesty International and will tour three cities. (Toronto was the first city, on March 28.) Composed by John Burge and conducted by Doreen Rao, the work combines sections of the Mass, sung in Latin, with political prisoners’ first-hand accounts,

sung in English. **Pre-concert panel discussions** will feature activists, artists and former prisoners. Prices TBA. **Kingston:** April 2. 7:30 p.m. Grant Hall, Queen’s University, 43 University Ave. Tickets: (613) 533-2558. **New York City:** April 5. 2 p.m. Avery Fisher Hall, Lincoln Centre, Columbus Ave. and 65th St. Tickets: (212) 721-6500 or www.lincolncenter.org.

May 2
Edmonton

Faculty of Medicine: Dean’s Reception. Dean Catharine White-side welcomes alumni, faculty and

friends to the Canadian Conference on Medical Education. 5-7:30 p.m. The Westin Hotel, 10135 100th Street, Edmonton. For info: Josh Lai at (416) 946-7681 or josh.lai@utoronto.ca.

May 4
Four Seasons Hotel, Toronto
U of T Transplant Institute Gala. Gala dinner to celebrate the institute’s establishment and to support research, education and patient care. Hosted by CTV News anchor Christine Bentley. Cocktails, 6 p.m.; dinner, 7 p.m. Regency Ballroom, Four Seasons

A detail of Laura Belém's "Diplomatic Talks," part of Meeting Point at Doris McCarthy Gallery



PHOTO: LAURA BELÉM

May 30. **Spring Reunion: UTM StreetFest.** This street festival will include Latin dancing, henna painting, a demonstration by the First Nations group Mississaugas of the Credit, a beer tasting, a showcase finale and a great meal. Dinner, \$5; beer tasting, \$5. At UTM campus, 3359 Mississauga Rd.

For info on both UTM events: Melissa Heide at (905) 569-4924 or m.heide@utoronto.ca.

May 30
Sandford Fleming Building
Applied Science and Engineering: Hall of Distinction Unveiling. 10:30-11:45 a.m. Sandford Fleming Building, 2nd Floor, Hall of Distinction. 10 King's College Rd. For info: Mary Butera at (416) 978-4941 or butera@ecf.utoronto.ca.

June 4
Hart House
U of T Institute for Aerospace Studies Alumni/Industry/ Student Dinner. Guest speaker: Robert Lieback, a senior fellow at the Boeing Company and an authority on aircraft design. \$30. Tickets at www.utias.utoronto.ca. For info: Joan DaCosta at dacosta@utias.utoronto.ca. 5:30 p.m., Great Hall, Hart House, 7 Hart House Circle.

June 6
Baben Centre for Information Technology
Applied Science and Engineering: Class of 9T3, 9T4, 9T8 and 9T9 – 10 & 15 Year Reunion, Friends and Family BBQ. \$20 per adult, \$10 per child (12 years of age and under). 11 a.m.-3 p.m. 40 St. George St. For info: Luke Ng at (416) 978-4274 or lukeng@ecf.utoronto.ca.

June 11
Hart House
Applied Science and Engineering: 8T9 - 20th Reunion. \$60. 6 p.m. East Common Room, Hart House, 7 Hart House Circle. For info: Mary Butera at (416) 978-4941 or butera@ecf.utoronto.ca.

June 16
Hart House
U of T Alumni Association Annual General Meeting. Guest speaker: Dr. James Orbinski, co-founder and chair of Dignitas International, a professor of medicine at U of T and former international president of Médecins Sans Frontières. 5:30 p.m. Great Hall, Hart House. 7 Hart House Circle. <http://alumni.utoronto.ca>

FESTIVALS

To April 3
Celebration of the Arts
This tri-campus event, which started on March 19, highlights U of T's arts scene through concerts, exhibitions, theatre and more. Exhibitions include "Kalon," a photo collection at the Bluffs Lounge at U of T Scarborough (on until April 3). Students read from their one-act plays on April 3 at the Helen Gardiner Phelan Playhouse. For details and many other events, visit www.arts.utoronto.ca.

LECTURES

Wednesdays, April 15 to May 20
Academy of Lifelong Learning - Spring Talks. \$6 per person. Free for Academy of Lifelong Learning members. Wednesdays at 10:30 a.m. Innis College Town Hall, 2 Sussex Ave. For a list of speakers: www.allto.ca or info@allto.ca.

EXHIBITIONS

To April 26
Doris McCarthy Gallery, U of T Scarborough
Meeting Point. Contemporary artists use objects to represent different types of relationships between two people. Tues. to Fri., 10 a.m.-4 p.m.; Sun., 12-5 p.m. 1265 Military Trail. (416) 287-7007 or dmg@utsc.utoronto.ca. www.utsc.utoronto.ca/dmg

May 5 to August 1
University of Toronto Art Centre
Sense of Place, organized by Windsor Printmaker's Forum. **Alistair MacLeod and Iain Baxter & in conversation with Nino Ricci** on May 5. Room and time TBA. U of T Art Centre. 15 King's College Circle. (416) 978-1838, www.utac.utoronto.ca.

April 2 to May 19
Justina M. Barnicke Gallery
South-South: Interruptions and Encounters explores the "aesthetics of the encounter." Each work of art investigates a site in which aspects of African and South Asian history come together and redefine each other. **Reception:** April 2, 6-8 p.m.

May 28 to August 23
Justina M. Barnicke Gallery
Noise Ghost: Shary Boyle and Shuvina Ashoona. The Noise Ghost, an Inuit poltergeist, as envisioned by Toronto artist Shary Boyle and Cape Dorset artist Shuvina Ashoona. Boyle's projection installation *Skirmish at Bloody Point* is co-presented with surreal drawings by Ashoona. May 28, 6-8 p.m.

For Justina M. Barnicke exhibitions: Mon. to Wed., 11 a.m.-5 p.m.; Thurs. to Fri., 11 a.m.-7 p.m.; Sat. to Sun., 1-5 p.m. 7 Hart House Circle.

(416) 978-8398, jmb.gallery@utoronto.ca or www.jmbgallery.ca



May 22 to September 4
Thomas Fisher Rare Book Library
Calvin by the Book. An exhibition of rare books to commemorate the 500th anniversary of the birth of John Calvin. Mon. to Fri., 9 a.m.-5 p.m. 120 St. George St. (416) 978-5285 or www.library.utoronto.ca/fisher/exhibitions/current.html

MUSIC

April 2 and 4
Walter Hall and MacMillan Theatre
Maria Schneider, a Grammy Award-winning composer, will give a **lecture** during the Thursdays at Noon series on April 2. 12:10 p.m. at Walter Hall. She will **perform** with U of T's jazz orchestras in concert, \$14 (\$8 seniors/students), on April 4 at MacMillan Theatre.

April 3 and 4
Walter Hall
Why Can't You Behave? A revue featuring the songs of Cole Porter and the wit of Dorothy Parker, presented by the opera division. 7:30 pm. \$14 (\$8 seniors/students).

Both Walter Hall and the MacMillan Theatre are located in the Edward Johnson Building, 80 Queen's Park. For tickets to music events, (416) 978-3744. For more info, www.music.utoronto.ca.



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Life on Campus



Gift of a Lifetime

Professor Nigel Edwards received a liver donation from a former grad student

PROFESSOR NIGEL EDWARDS KNOWS that he is a fortunate man. Sitting in the sun-drenched dining room of his Tudor-style home, the pale, wispy-haired University of Toronto geophysicist reluctantly discusses his medical odyssey that literally began with a stroke of luck.

In April 2003, Edwards suffered a mini-stroke. Although

unsettling, he quickly recovered and thought that the crisis had passed. But a blood test taken at the time led doctors to discover that Edwards had a degenerative genetic disorder called AAT Deficiency.

AAT is a protein produced mostly in the liver that shields the body's vital organs from disease. Edwards' liver was >>>

>> hoarding the protein, instead of secreting it. As a result, his liver had been slowly destroying itself for decades. But apart from an occasional bout of fatigue, he felt fine.

The prognosis, however, was dire. By 2005, doctors at the University Health Network told Edwards that the cirrhosis eating away at his liver was so advanced that he had just a few years to live. His only chance, they said, was a risky liver transplant. Edwards, who is now 65, greeted the ominous news with a mixture of scientific stoicism and alarm. “It was a cross between: ‘That’s interesting’ and...sheer panic.”

Edwards’ wife, Patricia, says that fear reverberated through the family. Their worry was compounded by the fact that finding a suitable donor who matched his O blood type was going to be difficult. Only one of his four children, Kathryn, then 22, had the same blood type. Without Edwards’ knowledge, she volunteered to be tested. She secretly endured a gruelling screening process – which included a battery of psychological and physical tests – only to be told at the last moment that she wasn’t a match. Kathryn’s liver, it turned out, was too small to be harvested.

The family was devastated. As time ran low, waiting for a liver from a cadaver became a dwindling option since locating a match was a long shot. Given his age, Edwards was also low on the transplant waiting list. “The clock was ticking,” he says.

Doctors encouraged Edwards to broaden his search for a living donor. Reserved by nature, he was hesitant. So Patricia quietly put out the word among friends and former students that her husband needed help.

One of Edwards’ previous graduate students stepped forward, but was quickly disqualified because she didn’t share Edwards’ blood type. In early January 2008, Graeme Cairns – who earned a master’s degree and a doctorate in geophysics under Edwards’ supervision during the 1990s – visited Nigel and Patricia. Cairns, a geophysicist working in Houston, was particularly close to the Edwards family. Their sprawling Toronto house had become a second home to him during his postgraduate studies. He knew that Edwards was sick and was seeking a donor, but his Christmastime visit was still a shock. Edwards’ health was deteriorating and Cairns told Patricia that he would consider donating part of his liver.

In April 2008, Cairns called Edwards to invite him to co-write a conference talk. But his former supervisor politely declined the offer, saying he was too ill to work and that doctors had told him that he had only months to live without a transplant. “I decided that it was time to

Continued on page 18 >>>



The Ties that Bind Survey reveals that a large minority of students are caregivers

THREE YEARS AGO, Karolina Szymanski was working, studying part time at U of T and caring for her father, who had terminal cancer. She was also pregnant. The morning after her father’s funeral, she went into labour. Szymanski, now 26 and in her fourth year, balances a work-study position and a full course load while raising her nearly three-year-old son. Szymanski’s story may be dramatic, but as a student caregiver, she is far from unique.

“There is a general perception that the typical undergraduate doesn’t have family responsibilities, which is not true,” says Magdalena Rydzy, interim manager of U of T’s Family Care Office, which advises and advocates for caregivers on campus.

According to the National Survey of Student Engagement, 45 per cent of first- and fourth-year U of T students spend time each week caring for a dependent – a significantly higher proportion than at other Canadian universities. Some students, like Szymanski, are parents, while others look after siblings, sick or aging family members or disabled loved ones.



ILLUSTRATION: RACHEL ANN LINDSAY

Some are mature students. Lindsay Foster, a 42-year-old single mother of five, wakes up at 5 a.m. instead of 6:30 on days when she *really* needs to get work done. “I dropped out of school in Grade 9. I was a drug addict for about 15 years, and was married to a biker,” she says. After leaving her husband, Foster entered treatment, high school and finally the Transitional Year Programme at U of T. She is graduating this spring, and hopes to go on to earn a master’s degree in social work.

Foster’s kids range in age from 11 to 20. The four that live at home attend three different schools. Some mornings, Foster makes two trips in her van before walking her youngest daughter to school. Then she hops on a bus for a 45-minute trip to campus. Driving is just too expensive.

The commute is a common stressor for student caregivers. U of T operates Student Family Housing, a 712-unit development east of campus, but there’s a waiting list. “If there was affordable housing close to campus, my life would be radically different in terms of having more time with my kids,” says Foster.

When her children were younger, Foster was able to depend on her mother to babysit. Other parents are not so lucky. Szymanski put her son on the waiting list for U of T daycare before he was born. It took about 17 months to secure a space. It also took 14 months to line up a childcare subsidy. “Most of



Vote for TVO’s Best Lecturer

The academic version of Canadian Idol is back, and U of T’s contestants need your support. Four University of Toronto professors are among the 10 finalists in TVOntario’s annual Best Lecturer contest. Watch videos of the finalists’ lectures online at www.tvo.org and, from March 31 until April 5, cast a vote for your favourite, either through the TVO website or by calling 1-866-281-3536.

The four U of T finalists have specialties ranging from science to sport. **Clare Hasenkampf** is a professor in the department of biological science at U of T Scarborough. She teaches an introductory biology class and genetics. **Shawn Lehman** is an associate professor in the department of anthropology. He teaches mostly primate ecology and his research focuses on how forest loss and fragmentation influence lemurs. **Doug Richards** is a clinical sport physician and professor in the Faculty of Physical Education and Health. He teaches sport medicine, biomechanics, and personal health. **Paul Stevens** is a professor and Canada Research Chair in English literature, and an authority on the works of John Milton.

our full-time students qualify for childcare subsidies, but if there is no space [in local daycares], they can’t really access that resource,” says Rydzy. There is a year-long wait to obtain a spot in on-campus daycare.

Daycare subsidies and grants are often restricted to full-time undergrads. The Family Care Office provided Szymanski with options, including full-time student status. “Without them, I would not have done it, and I would have been in a difficult situation,” she says.

Francesca Dobbin, director of family programs and services, says U of T is aware of the challenges student parents face and does its best to meet their needs. “The university’s Family Care Office assists students and employees to explore all available childcare options both on campus and in the community,” she says. A new facility at U of T Mississauga, slated to open in 2009, will bring the total number of childcare spaces at the three campuses to 309, up from 230 in 2002.

Students hope support for family services will come from somewhere. “The fact that we can attend school, raise a child and work – that shows you how valuable an investment we are as people and as students,” says Szymanski. – *Allison Martell*

|| This story is adapted from an article published in *Varsity Magazine*, available at <http://thevarsity.ca/article/5825>



Last fall, the Rotman School of Management announced a five-year, \$200-million fundraising campaign – the largest business school campaign in Canadian history. The funds will support the school’s previously announced expansion plans and help attract and support the world’s best business academics and grad students. Kuwabara Payne McKenna Blumberg Architects (the folks behind the National Ballet School and the Gardiner Museum) are designing the new structure. Expected to open

in 2011, it will be integrated with Rotman’s current home at 105 St. George St. The building will house the Desautels Centre for Integrative Thinking, the Lloyd and Delphine Martin Prosperity Institute, other research programs, centres of excellence, classrooms, study space and event facilities. It will also aim to be green, aspiring to certification by Canada’s LEED (Leadership in Energy and Environmental Design) green building rating system.

Overheard



Basic one-ingredient foods – the foods that don’t have any ingredients, because they are the ingredient – don’t make anybody any real money. No one wants to sell you oats. [Food companies] want to sell you oat bran in a granola bar.



Mark Bittman

The New York Times columnist and author, on his new book, *Food Matters: A Guide to Conscious Eating*. *Hart House, January 22*

Poll | Are you worried that the recession will hurt your job prospects?



72%
Yes



28%
No

Recession or not, the U of T Career Centre’s resumé clinics are always solidly booked. But as job losses began making headlines earlier this year, career management consultant Mary Giamos says students seemed especially keen to retool their resumé to gain a competitive edge. Many also seemed willing to consider job options beyond their first choice. “They know competition will be tight,” she says.

When *U of T Magazine* asked students what they were doing to boost their chances of securing a full-time position, 13 said they were thinking of attending grad school. (Indeed, the School of Graduate Studies reports that applications to grad programs are up eight per cent this year over last.) Three planned to move overseas and two were considering other fields. Two others were “praying.”

We asked this question in January of 100 graduating U of T students in the Faculty of Applied Science and Engineering, the Faculty of Arts & Science, and the Rotman Commerce and MBA programs.



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UNIVERSITY OF
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Go back to school. For the weekend.

Varsity Blues

Marathon Man

Runner Danny Kassap recovers from a near-death event, with a little help from his friends

DANNY KASSAP'S COACH describes him as "remarkable."

Born in the Democratic Republic of Congo, Kassap arrived in Canada in 2001. He filed a refugee claim, citing political persecution, and over the years has become one of Canada's best long-distance runners. But this past fall, the U of T Track Club member made headlines of another type. Kassap was in Berlin last September for the city's marathon – his first as a Canadian citizen. But at the 5-kilometre mark, he collapsed.

What happened is still somewhat of a mystery. Kassap experienced 45 minutes of cardiac arrest, thought to have been brought on by a virus. He was put into a medically induced coma for three days. When he was brought out of it, he had no heart damage, no brain damage. He was up and walking. He was "the same old Danny," says Ross Ristuccia, his personal coach at U of T – but with some major medical expenses to pay.

Kassap's medical bills had initially run to about \$18,000. His U of T teammates set up a fundraising operation, soliciting online donations as well as collecting cheques and creating a bank account. Ristuccia says he wasn't surprised by the outpouring of support, but rather how quickly it came together. "Within 10 days of setting up the account, [the club] had collected about \$15,000 – from fellow runners and anonymous donors alike – enough to pay the full bill." (The German hospital where Kassap was treated forgave some of the debt.) "The guys from the U of T track club...are my family," says Kassap. "But it was still a big surprise, the kind of effort they put together."

Kassap now occasionally stops by practices at U of T to lend encouragement. He's also back at his job as assistant manager of a Running Room store. Following one round of follow-up tests upon his return to Toronto, doctors were unable to find anything wrong with Kassap.

Both athlete and coach are hoping that a clean bill of health – and thus approval to begin running again – will follow a final once-over. "He's starting to get antsy. We're not talking races yet, but we've talked about getting him into training," says Ristuccia. "I am hopeful that he'll be able to get back to the level he was at." Says Kassap: "... I will never give up." – *Liz Allemang*

People



Philosophy professor **Cheryl Misak**

has been appointed vice-president and

provost of U of T. In her new role, she takes on the duty of chief academic officer. Misak has also

served as interim provost and deputy provost, and was acting vice-president and principal at U of T Mississauga.



The University of St. Michael's College has selected Professor **Anne Anderson** as president and vice-chancellor of

the university. Anderson had been serving as interim president since July 2008, in addition to her duties as the dean of the Faculty of Theology. Anderson is a member of the Sisters of St. Joseph.

World-class percussionist **Russell Hartenberger** was appointed dean of the Faculty of Music in December. Hartenberger, who

previously served as interim dean, is a professor of percussion and a member of Nexus and the Steve Reich Ensemble.

Meric Gertler, a professor of geography and planning, became the dean of the Faculty of Arts and Science in December. He is the Goldring Chair in Canadian Studies.

Etiquette 101 U of T's Faculty Club serves up a helping of manners to alumni, students and staff



IN THE U OF T FACULTY CLUB'S elegant upper dining room, 25 Rotman Commerce students are attempting to consume Moroccan vegetable soup in a genteel manner. They fill their spoons to the three-quarter mark, gliding the utensils away from themselves. They then tilt the silverware into their mouths without leaning forward. There are varying degrees of success: more than one slurp is heard; more than one slumped back seen. But they have guidance from Leanne Pepper, the Faculty Club's general manager, who teaches

etiquette and protocol training to U of T alumni, faculty, staff and students. Pepper, in a navy pantsuit that doesn't exhibit one stray hair or fleck of lint, carries herself with perfect composure. And her authority is well-earned; she was trained and certified by the Washington School of Protocol.

Because corporate employers often take potential employees to a dinner or a social event during a later round of interviews, "how you conduct yourself at the dining-room table can be the deciding factor," says Pepper. In other words, if you've got the intellectual know-how, do you really want to mess it up by slurping your soup?

Today's class is on international dining etiquette – students are not only learning the fundamentals, such as the correct handling of cutlery, and Continental and American styles of dining – but tips that will help them be polite the world over. Pepper mentions eye contact: in Latin America, for example, it's best to keep eye contact to a minimum as it can be taken as an affront or a challenge to authority. She states that, in Japan, when you pick up sushi from the communal tray, turn your chopsticks around – don't use the same ends you use while eating off of your own plate. That's the North American equivalent of double-dipping your vegetables.

Cynthia Bishop, the director of Student Life, Career Services and Alumni at Rotman Commerce, regularly arranges for

students to take Faculty Club etiquette sessions. "As corporations expand their businesses into new markets [such as India and other parts of Asia, and Brazil and elsewhere in South America], and international recruitment becomes more prominent, students who learn to appreciate and leverage diversity in the workplace will be the best leaders." – *Stacey Gibson*

To arrange a group etiquette session, contact Leanne Pepper at leanne.pepper@utoronto.ca.

Philosopher's Walk

As far back as the 1870s, Taddle Creek ravine – the meandering green space now known as Philosopher's Walk – has been a popular spot for students and professors to stroll and contemplate. In recent years, U of T has made numerous improvements to the site, including the installation of the Bennett Gates at the walk's southern entrance to honour Avie Bennett's commitment to U of T, and plantings funded by friends and donors. A donation from TD Bank Financial Group allowed paving stones to be laid.

With TD's support, plans are underway to refurbish the Queen Alexandra Gateway at the walk's north end, and to build a small amphitheatre midway. The gateway's historic lamps and masonry will be repaired and the ironwork painted. The amphitheatre will provide seating for 20 to 30 – perfect for a lecture or starlit performance.



Continued from page 12

commit,” writes Cairns via e-mail from a research vessel off the coast of Senegal.

And what a commitment it was. First, Cairns had to be thoroughly tested to determine if he was a match. He was. Then he had to overcome fears that the major surgery could go fatally wrong. He also had concerns about the possible lasting impact to his own health. Indeed, Cairns faced a long and disturbing list of potential complications: blood clots, infection, stroke and even failure of the remaining portion of his liver. “I kept turning the decision over in my head...but in the final analysis it was unacceptable to me to stand by and do nothing,” Cairns writes. “Someone desperately needed help and I was in a position to give it.”

In fact, what Cairns gave up during a six-hour operation on June 30, 2008, was two-thirds of his liver. Technically, the operation was a success. But for both men the weeks that followed the surgery were filled with discomfort and doubt.

Edwards spent several days in the intensive-care unit as powerful anti-rejection drugs worked to ward off infections that could abort the donated liver or worse. Morphine helped blunt the post-operative pain. The drugs did their job. After

several more weeks in hospital, Edwards and his new and healthy liver were ready to return home.

Beyond the pain, nausea and soreness, Cairns also escaped the surgery's potentially lethal complications. He returned to his adopted Toronto home where Patricia took care of him as well. By early August, Cairns was back at work and his liver had fully regenerated by later that summer.

Before Cairns left Toronto, the pair teased each other about the size of their boomerang-shaped scars. Then Edwards thanked his former student for saving his life. “I told him,” he says, “[that] I was awfully glad he did this and I was awfully glad that we were both well.”

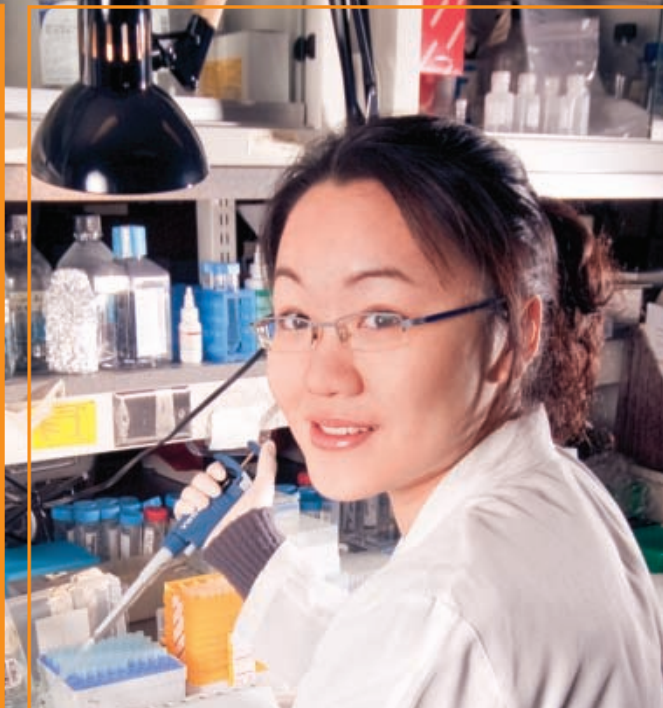
For Cairns, that simple, heartfelt expression of thanks was enough. “I hope that Nigel will enjoy the extra years he's gained and will make good use of them.”

Edwards certainly intends to. He has returned to class to do what he loves: teaching a new batch of third- and fourth-year physics students, this time with part of a former student's liver inside him. “I am a very lucky man,” Edwards says.

– *Andrew Mitrovica*

For more information about organ donation, please visit www.torontotransplant.org and www.giftoflife.on.ca

“After my father passed away, my family struggled to make ends meet. But now I can follow my dream of becoming a doctor.”



Grace Dalue Yan

Pursuing a BSc in Laboratory Medicine & Pathobiology

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Leading Edge



Quenching Africa's Thirst Rod Tennyson's dream of a trans-African pipeline would bring clean water to millions

Water is the lifeblood for daily survival, from drinking and washing to growing food. But for many people in Africa, that lifeblood is a pitiful and dirty trickle. An estimated 700,000 African children die every year from diarrhea and related diseases that could be avoided with clean water.

Rod Tennyson sees a way to end that suffering. The professor emeritus from the University of Toronto Institute for Aerospace Studies envisions building a mammoth pipeline to deliver water to 20 million residents of the parched nations that lie immediately south of the Sahara Desert. "It's a megaproject but it's doable," says Tennyson, >>>

>> noting that his idea – he calls it the “greatest engineering and humanitarian project of the century” – would cost US\$24 billion and use existing technology. The main challenge lies in inspiring the kind of leaders who could effectively champion such an audacious undertaking.

The spine of Tennyson’s trans-African pipeline features a reinforced concrete pipe two metres in diameter snaking 6,000 kilometres across the sub-Saharan region of Africa from Mauritania on the Atlantic Ocean to Djibouti on the Indian Ocean. Two conventional desalination plants, powered by nuclear reactors, would feed a total of more than one billion litres a day into the pipeline from either end. This water would course through the spine to 60 or more mammoth holding tanks and then into smaller pipelines spreading out like branches from a tree.

“A lot of the focus has been on poverty in Africa, which is the wrong issue,” says Tennyson. “Once we provide clean water to this region we’re going to mitigate many other problems, such as poor health, disease, marginal agriculture, desertification.”

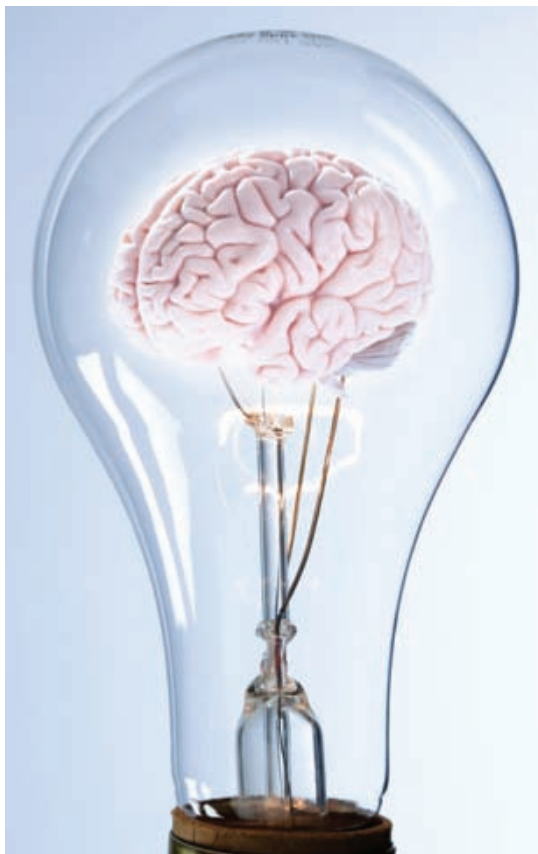
Tennyson conceived of the pipeline idea shortly after G8 leaders at the 2005 summit in Gleneagles, Scotland, promised US\$25 billion in new aid to Africa on top of cancelling US\$40 billion in debts, owed mostly by African countries.

Tennyson promoted his vision at a University of Ottawa conference in 2007 about water challenges in Africa. Many attendees told him that his presentation was the only one they saw that offered actual solutions. Tennyson says he needs to drum up more support from influential people if the pipeline is ever to reach the stage of a feasibility study, which would cost millions of dollars.

The study would examine Tennyson’s rough approximations that the pipeline could supply enough water to meet the hygiene, cooking and drinking needs of 20 million Africans (modest compared with North Americans’ profligate water use) and also sustain 2.5 million chickens and 400,000 dairy cattle in green agricultural oases. His assumption that revenue from salt collected at the desalination plants could cover much of the pipeline’s operating costs would also have to be tested.

Guaranteeing the security of any water pipeline across Africa is also a major concern, although Tennyson’s recent professional expertise lies in fibre optic sensors that can detect breaches or emerging structural weaknesses in pipelines.

“There is political instability in many of the countries along the pipeline route. But many of those problems emanate from a lack of water,” he says. – *Peter Calamai*



The Big Idea

A Healing Spark

A tiny electrode implanted in the brain may help patients with Alzheimer’s disease, depression and other disorders

Years of painstaking observation and careful study is what typically leads to scientific breakthroughs, but serendipity can also play an important role, as Dr. Andres Lozano recently discovered.

Not long ago, the U of T neurosurgeon was implanting an electrode into the brain of an obese patient in an experimental procedure designed to suppress the man’s appetite. When Lozano switched on the electrode to deliver

tiny electrical pulses, the patient (who was awake for the surgery) suddenly remembered a visit to a park with his girlfriend 30 years earlier. When Lozano increased the current, the patient was able to recall vivid details, such as the type of dress that his girlfriend was wearing and the warmth of the sun that day. When the current was off, the memory faded. “We were flabbergasted,” says Lozano. “We could unlock and lock memories by turning the current on and off.”

Lozano, who holds a Canada Research Chair in Neuroscience and is a professor of surgery at U of T, wondered if he had stumbled on a potential new treatment for people with memory problems. He conducted further tests on the patient and found that the man’s ability to remember pairs of words tripled when the electrode was turned on. Recently, as part of a research study, Lozano performed the identical procedure on six patients with mild Alzheimer’s. Results so far are promising. “We’re seeing some positive changes in their brain activity, their memory and their cognitive ability,” he says. “And so far, the procedure seems quite safe.”

To perform the surgery, Lozano drills a nickel-sized hole through the patient’s anesthetized scalp. He then inserts a millimetre-wide electrode into the brain, runs a wire underneath the scalp and neck and connects it to a battery a little smaller than a hockey puck, which he implants near the patient’s collarbone. The subject remains awake during the surgery to help ensure that Lozano places the electrode correctly (but is under general anesthetic while the wire and battery are implanted). Following the operation, the patient, by pressing the buttons on a remote control, can turn on the current and adjust the level to alter the intensity of the treatment.

Scientists began experimenting with deep brain stimulation on animals in the 1950s. The first humans underwent tests a decade later. Since then, as more detailed maps of the brain have emerged, surgeons have used the technique to control phantom limb pain and the tremors associated with Parkinson’s disease. Lozano pioneered the surgery for treatment-resistant depression and Alzheimer’s, and is now testing it for Parkinson’s patients who have difficulty with balance and walking.

How deep brain stimulation works is not well understood. Scientists believe that, depending on the precise position of the electrode, the current either stimulates or inhibits neuronal activity. In the case of Parkinson’s tremors, it’s thought that the electrical pulses inhibit nearby neurons from firing excessively. With depression, underperforming neurons get a boost. In both cases, the surgeon must position the electrode in exactly the right spot. “It’s like real estate,” says Lozano. “The three most important things are location, location, location.”

Ultimately, Lozano’s research has two aims: to develop novel therapies for patients with difficult-to-treat neurological

Lingo

Third-hand smoke



The Ontario government’s decision to ban smoking in cars carrying children is looking prescient. The *Toronto Star* reported in January that a Boston doctor is sounding the alarm over “third-hand smoke,” a term she coined to describe the heavy metals and carcinogens that cling to smokers’ hair, clothing, furniture and other surfaces long after the cigarette has been extinguished. The provincial law, which came into effect in January, was based on a recommendation from the Ontario Tobacco Research Unit, of which U of T’s Dept. of Public Health Sciences is a principal sponsor.

and psychiatric conditions; and to better understand how deep brain stimulation works at the cellular and molecular level. The research will also yield more information about the role that neurons play in different regions of the brain. “It’s like exploring space,” he says. “We’re interrogating the brain for the first time to find out what it does.”

Five to 10 years from now, Lozano predicts doctors will use deep brain stimulation to treat other diseases, such as Tourette’s syndrome, obsessive-compulsive disorder and epilepsy. Newer electrodes will be able to detect abnormal brain activity and then automatically deliver an electric pulse – to stave off an epileptic seizure, for example. By 2040, tiny computer chips might download information directly to brain cells (encyclopedic knowledge, anyone?), though such a possibility raises serious ethical issues. “Right now we’re talking about treating people who have a disease. But you could imagine boosting the function of someone who is normal,” says Lozano. “Already I’ve had people writing to me to volunteer.”

– Scott Anderson



All the Young Dudes

Toronto's gay community favours young, fit, Caucasian men. Others are often shunned in the sexual marketplace, leading to health problems, study finds

FEELINGS OF UNATTRACTIVENESS CAN LEAD TO health problems and risky sexual practices among urban gay males, according to a recent study by U of T sociology professor Adam Isaiah Green.

Green observed life in Toronto's gay community over three years and conducted interviews with 70 gay men who frequented the area of Church Street between Wellesley and Carlton streets known as "the Village." For many of the men he interviewed, sexuality and social life are intertwined.

In the study, Green outlines four main factors – youth, ethnicity, physical fitness and social class – that contribute to a gay male's attractiveness, arguing that the Village's status structure favours young, fit, middle- and upper-class Caucasians. On the other hand, black, Asian and Aboriginal men, working-class men and men older than 40 or overweight, faced considerable disadvantages in social status.

Green found that men in these latter groups were repeatedly rejected by potential partners and were avoided, ignored or in some cases overtly shunned in the sexual marketplace. "For instance, a man over 50 can have a really hard time in the urban gay downtown, and Asian men report they're marginalized in the status structure," says Green.

As a result of their low sexual status, less desirable males can suffer from low self-esteem and lack of control over their sexual life. This can lead to feelings of hopelessness and alienation, depression and anxiety and to substance abuse. Green found that some were willing to agree to unsafe sex in order to please a desirable partner. "Older men may 'trade off' safe sex to solidify a sexual interaction with a younger man," according to the study.

These findings could have implications for battling HIV transmission in Canada's largest gay community. As well, social workers should consider how feelings of perceived sexual attractiveness affect an individual's overall physical and mental health, self-esteem and social support, says Green.

While working on the study, Green amassed a large collection of posters, magazines and flyers from the Village. Nearly nine out of 10 feature an image of a young, fit, white model. For gay males who don't meet this criteria, "it creates a feeling of disempowerment and of marginality," says Green. "In some cases it can be quite consistent and severe."

The research may be relevant outside of the gay community. Green refers to similar sexual status structures that exist in the heterosexual world, particularly among young, unmarried people and divorced men and women who return to the dating scene in mid-life.

The study was published in the *Journal of Health and Social Behaviour* in December. – Ryan MacIsaac

This story is adapted from an article published in *The Varsity*.

Prototype

Intelligent Paper

Chemical engineer Ramin Farnood is developing “smart” packaging that could warn consumers if a food product is tainted



LAST YEAR'S LISTERIOSIS OUTBREAK killed almost two dozen people and raised difficult questions about Canada's food safety system. The incident, and others like it, has led U of T researchers to pose an intriguing scientific query: Can such disasters be averted with “smart” packaging that warns consumers when a food product has gone bad?

This is exactly what Ramin Farnood, a chemical engineering professor, and PhD student Peter Angelo are investigating in a project backed by Canada's Sentinel Bioactive Paper Network and the University of Toronto's Pulp and Paper Centre.

The core of Angelo and Farnood's invention is a specially coated paper that glows when an electrical charge is applied to it. In their U of T lab, they layer special inks, conductive polymer film and electro-luminescent coatings on to conventional paper. These coatings essentially transform a non-conductive surface – in this case, paper – into a luminescent display.

Engineers have used similar technology to create conductive plastic films that provide the back lighting in cellphone displays and digital watches. The trick with paper is that you need to alter the surface structure of the paper and formulate special inks in order to create a functioning device.

Farnood and Angelo apply these inks using a conventional electronic printer to make letters and shapes that glow when a charge is supplied, either by “plugging in” the paper or attaching it to a battery. Eventually, they hope to incorporate an ultra-thin battery right into the paper.

According to Farnood, such paper could also be coated with substances that react when exposed to certain pathogens or chemicals. The reaction would act as a switch to turn on the luminescent message printed on the paper's surface. The message might warn consumers that the food is contaminated.

Farnood also envisions putting a paper-based biosensor in safety or construction masks. The masks will then be able to warn the wearer if he or she is being exposed to a harmful substance.

Because this technology is paper-based, it's renewable, biodegradable and sufficiently flexible to use in the myriad forms of packaging found in a supermarket. If Farnood and Angelo are able to refine their invention, that familiar “Best Before” stamp may soon be past its expiry date. – *John Lorinc*

Findings



The Cold Shoulder

Unfriendly or aloof people are sometimes described as “frosty” or “cold.” Now, a study by professors of organizational behaviour at U of T's Rotman School of Management shows that there is a scientific basis for linking cold with feelings of social isolation.

Chen-Bo Zhong and Geoffrey Leonardelli tested the idea that feelings of exclusion generate a physical sensation of coldness. They divided volunteers into two groups. One group recalled a personal experience in which they had been socially excluded – rejected from a club, for example. The other recalled an experience of being accepted.

Then, the researchers asked all the volunteers to estimate the temperature in the room. Their guesses ranged widely, from 12 to 40 degrees Celsius. Interestingly, those who were told to think about a socially isolating experience gave lower estimates of the temperature. The results suggest new avenues for exploring the interaction between environment and psychology. The complete study is reported in the September 2008 issue of *Psychological Science*. – *Ken McGuffin*



Big Fish

The common practice among fishers to keep their biggest catch but throw the little ones back may result in an unsustainable fishery, say U of T scientists.

In fact, the opposite policy – keeping the small, young ones and throwing back the large ones – is better for the long-term health of the fishery. The researchers found that a fish population will produce more young, and therefore sustain more fishing, if it is made up of big, older fish.

The team of scientists, led by Paul Venturelli, a graduate student in the department of ecology and evolutionary biology, used a simple population model and evaluated data from 25 fish species. Finding ways to replenish fishery stocks and improve management provides both ecological and financial benefits. The research is published in the *Proceedings of the Royal Society B* and is available at www.paulventurelli.net.

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Q&A

Ask an Expert

Walid Hejazi The D-Word



Walid Hejazi is a professor of business economics and international competitiveness at the Rotman School of Management. He recently spoke with *U of T Magazine* editor **Scott Anderson** about the economic downturn and corporate bailouts.

We've been hearing a lot about this economic slump.

How likely is this recession to become a depression?

If governments today do what they did after the 1929 stock market collapse, there's little doubt we would go into a depression. Governments must ensure that banks do not fail so that individuals are able to borrow money to buy autos and homes, and so that businesses can finance operations. U.S. Treasury Secretary Henry Paulson made a strategic error last fall in letting the Wall Street investment bank Lehman Brothers fail – this undermined confidence in the banking sector.

Governments can't allow protectionism to be seen as a way out. If countries pursue policies to protect jobs, the gains from globalization will unwind and our economy will worsen. Protectionism in the current environment is one of the biggest threats to a smooth and speedy recovery. In the aftermath of the 1929 crisis, the U.S. embarked on a protectionist path that prolonged the global downturn. We must not make this mistake again.

Governments must also act to boost customer and business optimism. This should include fiscal stimulus and bailouts, if needed, for many of the large companies in the economy, such as the automakers. But these bailouts should be linked with commitments from the companies to become more competitive.

Banks seem to get special treatment under these circumstances. Why?

Banking is fundamental to the economy. If General Motors were to go broke, it would be terrible, but the bankruptcy would affect particular sectors of the economy. If a major bank goes broke, it affects every player in every sector of the economy. If there's no confidence in the banking sector, the economy goes into a free fall.

Do you think the American car companies can be fixed for the long term?

The Big Three have been losing market share for a long time and haven't adjusted. They have too many different products, they haven't focused on their best products, and their cars tend not to be fuel efficient. General Motors is also saddled with 6,300 dealerships in the U.S.; Toyota has 1,500. When GM had 50 per cent of the market this was justified, but not when it has less than 25 per cent. GM would probably like to reduce its dealer network, but it has contracts to uphold. It can't just cancel them. GM's pension system is sitting on a multibillion-dollar shortfall. The company also faces significant liabilities for retirees' health and dental benefits. Retirees are living longer and health-care costs have risen. All of this is problematic for GM because Toyota and other competitors don't have these same costs. Toyota spends much less on health care and pension costs for every car it sells than GM does.

What about smaller companies that are in trouble and also employ thousands of people? Should they get bailouts?

The big players are fundamentally important even to the Circuit Cities of the world, because when a GM goes broke, small companies get hurt, since unemployed people are less likely to buy their products. Governments can provide tax relief or an incentive to assist smaller companies directly. For example, technology adoption rates in Canada are much slower than in the U.S. and the G7 generally. The Canadian government could accelerate the depreciation rate for old equipment. It could put something in place over the next year so that the businesses that do make it through the downturn are more competitive.

An Animated History

Born into comic books at the height of the Great Depression, Superman owes some of his early fame to Dave and Max Fleischer, the American studio owners who animated him for the silver screen in 1941. A defender of “truth, justice and the American way,” the Man of Steel became a patriotic symbol for a country at war. As a cartoon – all sharp angles and muted colours – he stood out from Betty Boop and Popeye, his curvier contemporaries.

Nicholas Sammond, a professor of cinema studies and English at U of T, teaches a course on the early days of American animation. Last year, he created a website that will soon feature biographies of dozens of animators from the first half of the 20th century, including the Fleischers, who worked extensively on Superman. What’s unique about the project (at www.rarebit.org) is that web users will be able to track animators’ careers as they hopped from studio to studio. Sammond intends to reach beyond the university’s walls to encourage collectors and fans to share their knowledge. He also plans to add videos and photographs of animators’ work.

Frames from the animated Superman short *The Mechanical Monsters* (1941)



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Satisfaction Guaranteed! Business professor Ming Hu comes up with a new twist on a hard sell



ANYONE WHO HAS BOUGHT A NEW COMPUTER, television or stereo has no doubt encountered the pitch: pay up to \$100 more for an extended warranty that lasts up to five years.

The offer is a good deal for retailers, who typically make more on the extended warranty than they do on the sale of the product. It’s not so good for the consumer, who may pay more for the extended warranty than to have the product repaired. Studies have shown that most products break down in the first year—when they are covered by the manufacturer’s warranty – or near the end of their life, *after* the extended warranty has expired.

Ming Hu, a professor in the Rotman School of Management, and Guillermo Gallego, of Columbia University in New York, together with colleagues at Hewlett-Packard Labs in Palo Alto, California, are using game theory to analyze warranties. They have devised two variations of extended warranties that they say offer a better outcome for consumers, with little downside for the warranty provider (either the retailer or the manufacturer).

In one variation, warranties would be offered at different prices, depending on how many times a consumer expects the product to break down. Consumers who anticipate taking good care of the product or using it infrequently might choose to pay the lowest price for an extended warranty – but would receive protection against only a single breakdown.

Those who anticipate using the product extensively might choose to pay the most and would be covered for unlimited breakdowns. Although the warranty providers would earn less, on average, for each extended warranty they sell, the new lower-priced options could lead to higher sales overall.

In another variation, consumers would get a free product upgrade instead of free repairs, should the model they purchased break down. In other words, if a fourth-generation iPod Nano stops working after a couple of years, the buyer could trade it in for a fifth-generation model, with all the new bells and whistles. Now, that’s an extended warranty one just might take a chance on. – *Scott Anderson*

Head

of the

Class

U of T's Institute of Child Study has influenced education in Canada for more than 80 years. A visit to the lab school reveals why

By Cynthia Macdonald

Scene: *A high school classroom. Daytime. A weary teacher stands in front of a blackboard, scrawling notes in chalk.*

Teacher: In 1930, the Republican-controlled House of Representatives, in an effort to alleviate the effects of the ... *Anyone? Anyone? ...* the Great Depression, passed the ... *Anyone? Anyone? ...* the tariff bill? The Hawley-Smoot Tariff Act, which ... *Anyone? Raised or lowered? ...* Raised tariffs, in an effort to collect more revenue for the federal government. Did it work? *Anyone? Anyone know the effects? ...* It did not work ...

VEN THOSE WHO HAVE NEVER SEEN THE FILM *Ferris Bueller's Day Off* will be familiar with the above scene: a bored economics instructor drones on while his students stare back in a state of collective catatonia. Most are so stultified they can barely blink, although one student has managed to fall sound asleep – in a puddle of his own drool. Small wonder

the film's hero is playing hooky.

At one time or another, we have all sat in classrooms like this. Unfortunately, many students still do. Is it right that children should binge on facts, only to purge themselves of them through exams that measure short-term memory instead of real engagement? *Anyone?*

The classrooms at the Institute of Child Study Laboratory School are a long way from Ferris Bueller's arid educational prison. The school is housed in a three-storey Georgian revival building on Walmer Road in Toronto's Annex neighbourhood. At first glance, its elegant rooms seem more suited to high tea than fractions and adverbs. The 200 students enrolled in nursery school to Grade 6 do not sit in rows of desks; in fact, many of them aren't sitting at all. In one Grade 4 class, some students lie prone on the carpet, while others walk around. All are involved in a shared activity – in this case, the study of rocks and minerals – but they're free to approach the activity in whatever way is most meaningful to them. One child is creating crystals with sugar and water, while another is reading about the history of gemstones. Other students are trading information through conversations, while sitting alongside classmates absorbed in computer research. Teacher Krista Spence (MEd 2003) acts as a sort of pedagogical maître d': she provides children with the menu, but doesn't tell them what to order.

Founded in 1926, the Institute of Child Study (ICS) has a triple mandate: to educate student teachers as well as children, and to be a world-class pedagogical research facility. Staffed by teaching professionals and affiliated with the Ontario Institute

for Studies in Education (OISE) at the University of Toronto, ICS advocates for experiential education, which posits that children learn best through experience. Promoted during the first half of the 20th century by the American philosopher John Dewey, the notion is radical to those who think that children enter school as blank slates.

At the ICS lab school, Carol Stephenson's senior kindergarten class proves that the mind of a child is far from blank. Among other topics, her pupils are undertaking a term-long study of the human body. Stephenson started by canvassing the children about what they knew – or thought they knew – about the way the body works. "I asked them what was under the skin," she says. "Where do food, air and blood go?" The wealth of ideas these pre-readers have brought to the subject is astonishing. Like British physician William Harvey centuries before them, they have even arrived at the idea of circulation. One child suggested that cardiac function might work like a pump from a fish tank and a student teacher brought one in to illustrate the theory to the class.

During my visit to the school, another student – bespectacled Phoebe – creates an anatomical diagram. Stephenson (BA 1990 University College, DipCS 1993) asks her about the grey scribble she's drawn in the head area. "That's the brain," the little girl says, swinging her hair with the confidence of a practised talk-show guest. "It helps you think. If you didn't have one, you wouldn't be able to tell the difference between a salamander and a chameleon."

Phoebe is right, but some of her fellow students have mistaken ideas about how the body works. "When you pull air in, the heart pumps it out," a boy suggests. Remarkably, Stephenson does not correct him. "In five years, if I asked them what they thought about the body, all these ideas would be gone anyway," she says. "But the curiosity that's been developed will still be there. My job is to get *them* to ask questions." These questions may well be answered by fellow students instead of teachers. ICS believes in knowledge building – the idea that both adults and children are on a communal path to understanding.

Here, students have considerable say in driving their own learning experience. Teachers provide a big idea – such as wheels, animals or trees – that enables children to embark on in-depth investigations that blur the lines between subjects. For example, math and science might blend into phys-ed as children study the velocity and acceleration of a figure skater.

This stands in marked contrast to the curriculum in some school systems, which divide subjects into one- to four-week units, offering little in the way of depth. "I've walked into classrooms and heard children say oh, we *did* rocks and minerals

– as if they had acquired all the knowledge there is on the subject,” says ICS vice-principal Richard Messina (BA 1989 St. Michael’s, BEd 1993). “We’re doing students a disservice by not teaching them that these are deep questions people spend their lives asking.”

Progressive education, which developed roughly a century ago, has certainly had its enemies over the years. In the 1950s, critic Hyman Rickover’s protests were typical. He suggested the approach offered children insufficient grounding in basic subjects, such as reading and math. Since then, Rickover’s views have been on the rise. Former U.S. presidents Ronald Reagan and George W. Bush advocated for the educational methods of drilling and testing. They saw them as twin weapons against economic competition from countries that also use these methods.

Many educators are starting to question the effectiveness of this approach, though. Some have criticized Bush’s 2001 “No Child Left Behind” policy for creating a test-heavy system where teachers “teach to the test” instead of fostering real learning. Across Canada, curriculum integration is catching on, and the trend is now toward “big ideas” instead of myriad “expectations.” The Ontario ministry’s new science curriculum, for example, contains 20 per cent less content than its predecessor. Even the Japanese, long known for their brutal, constant exams, now give students more unstructured thinking time.

Do progressive educators really consider reading and math less important? Two former ICS parents, whose children struggled mightily with reading in Grade 2, are convinced their kids wouldn’t have been better served at another school. ICS teachers use a blend of whole language and phonics to teach reading. But with the latest research on reading at their disposal, they may be able to offer a more tailored approach to remediation. Says one mother: “The question is always, ‘What does this particular kid need?’” The ICS lab school doesn’t blindly follow progressive ideology, but goes with what works. “Here we develop a culture where children love to read. Funnily enough that’s not an expectation in the [Ontario] ministry’s language arts curriculum,” says Messina, a passionate educator who projects what might be described as electrified calm. “When I got here, children were *walking around* reading,” he marvels. “You had to tell them to close their books because it’s not safe to walk the hallways that way.”

Math is equally important. One day last year, I observed guest researcher Joan Moss (DipCS 1988, MA 1997, PhD 2000) working with a group of Grade 3 students on algebra, a subject that public school children don’t usually encounter until Grade 6 or 7. The children were making innocuous

“Here we develop a culture where children love to read.... Children here *walk around* reading. You have to tell them to close their books because it’s not safe to walk the hallways that way”

pictures of houses and flowers from tiles. But in doing so they were actually creating patterns from equations (such as $2x + 3$), and then asking fellow students to guess the equations they had devised. This was astonishing, but shouldn’t have been: even the most conservative math experts cite the late introduction of algebra as the biggest cause of math failure in high school.

Later, I watched Messina (who also teaches) guide a group of Grade 6 pupils through a unit on graphing. A student named Tillie solved a problem quickly while Messina scratched his head in wonder at her results. “Richard, how can you *not* understand this?” she asks.

Many adults would be shocked by this exchange. Talking back to a teacher? Calling a teacher by his first name? A teacher admitting that he doesn’t understand? But that’s how things are done here. The children are collaborators, not sponges. “When I think about my own schooling,” says Messina, “at no point until the post-graduate level did I feel I was contributing something. My job was to receive, remember and give back. That was the game of schooling. I would hope – and I know – that our children don’t play that game.”

It’s not surprising that ICS children are treated as if they’re much older than they actually are. This may be because the school’s roots are in adult education. Founder William Blatz was a medical doctor with training in psychology. He became intrigued by the results of a program at U of T’s Hart House from 1916 to 1919, in which wounded war veterans were taught to “re-educate” their bodies’ muscular function. Doctors noticed that soldiers who took personal ownership of their healing had more favourable results.

Blatz believed that what was good for the body might be good for the mind. Beginning with a group of eight youngsters



Researcher Joan Moss works with young ICS students on algebra. Experts cite the late introduction of algebra as the biggest cause of math failure in high school

aged two to four, he explored whether the Hart House results applied to children's learning. They did.

This is why, 83 years later, the ideas of Blatz and other researchers are still being refined, tested and improved. ICS's pupils learn from a variety of pedagogical techniques, which the teaching staff constantly assess and refine. "We're involved in both the art of teaching the students we have and disseminating a distilled conversation about what we do," says Elizabeth Morley (DipCS 1981), now in her 16th year as ICS school principal. "We open our doors to visitors from all over the world and run local workshops for teachers. We intend our practice to be examined."

Of course, the idea of child study has come a long way since Blatz's era. In his day, the flamboyant doctor was a sort of Canadian Benjamin Spock, flying overseas to study children traumatized by war and penning regular columns for *Maclean's* and *Chatelaine*. He also conducted in-depth observations of the Dionne Quintuplets in their infamous nine-room nursery. This research, while considerate of the Dionnes' well-being, probably didn't accord with today's notions of strictly ethical child study. "I think education is more sophisticated and mature now, and child study reflects that," says Morley. "But I don't want people to think child study is just kids sitting in a classroom and being tested. Child study is multidisciplinary, and looks at all the different perspectives we can take in coming to understand a child."

The research conducted at ICS is diverse. Under the auspices of the institute's Dr. R.G.N. Laidlaw Centre, educational researchers work in tandem with teachers to look at such topics as the influence of bedtime stories on literacy and the existence of a child's "school personality." Perhaps most importantly, they continue to improve our understanding of how children best absorb reading and math concepts. They also investigate whole new subjects, such as environmental education. The ICS lab school was one of the first elementary schools to use Knowledge Forum software, through which students share received ideas in order to build new ones. First tested in 1986, co-developer Marlene Scardamalia calls Knowledge Forum the "first collaborative networked learning environment." The product is now being used in 19 countries.

Philosophically, ICS still touts Blatz's philosophy of security, the notion that every person should be equipped with the courage to make decisions and live with the consequences of those decisions. That security extends to the way the school deals with bullying. Playground fights used to be seen not as an adult's problem, but as a necessary part of growing up. Now, however - whether because acts are more aggressive, parents more vocal or there has been a cultural shift - bullying concerns everyone. Workshops and zero tolerance policies are in vogue, but haven't really succeeded; many kids just laugh at the workshops, and suffer exile through the latter.

ICS's lab school takes bullying seriously. Its teachers believe that instructing students in how to handle conflict is as important a subject as any other. One former parent was deeply moved by the way Messina handled her son's victimization at the hands of another boy. "Richard called me first, so we could figure out together what should be done," she says. "Then he got the whole class involved in a discussion of the problem."

Indeed, dialogue is an essential tool at the ICS school. Parent after parent told me how the school had given shy children the courage to handle interviews and speeches with aplomb. As a result, some young graduates take on sophisticated public roles well before adulthood. These ICS alumni have included actor Megan Follows and *New York Times Magazine* editor Paul Tough, who started hosting a CBC Radio show before he hit high school.

Who gets in to the ICS lab school? Not everyone who wants to; in fact, the waiting list has more than 1,000 children's names on it. And that's for a school with a yearly tuition fee of about \$11,000. Admissions are handled on a first-come, first-served basis, although children with siblings have priority, as do children of staff members and students from the Bloorview Kids Rehab integrated kindergarten program. Four in 10 students come from a visible minority background, and all classes are gender-balanced. Nobel Prize winner John Polanyi, a U of T chemistry professor, photographer Edward Burtynsky and CBC television host Evan Solomon send, or have sent, their kids to ICS. These parents are outside-the-box thinkers whose children may well follow suit. "Our students tend to go into writing, the arts, business, medicine – always something with a bit of a creative take," says Morley. Some are rebellious, too: perhaps the best example is Abby Hoffman (BA 1968 University College), the female Olympian who made headlines as a child in the 1950s by sneaking onto a boys' hockey team.

The exclusivity can be maddening: if an ICS lab school education is a good one, why shouldn't it be available to all children? Morley insists that, indirectly, it is. "This institute is about public education," she says. "Our mandate is to educate teachers who will teach almost entirely in public schools. Our research doesn't change this school alone; that would be irresponsible. It changes other places as well. In fact, ICS's three inextricably linked missions are what make it so unusual and

dynamic. It's a real think-tank with innovative perspectives on child development and childhood education."

Morley describes herself as a "born teacher." By the age of four, she had already decided to pursue a career in education. Morley spent her early years as an educator in Latin America working with street children, an experience she loved. She admits she never expected to work at a school like ICS. "From my life experiences and the way I was raised, I'm a little bit surprised that I'm working in what some people would call an elite independent school. On the surface, it doesn't seem to fit with what's important to me. But below the surface is our purpose: if we can train teachers who understand that ideas are improvable and students can contribute, we've succeeded."

Teachers concur. Jill Baptist, who earned her MA and elementary teacher certification at ICS before she began teaching in the public system 18 months ago, is introducing a violence prevention program in the Toronto school where she works. Baptist says she was influenced by ICS's emphasis on emotional literacy. "I think the best part of what ICS taught me is that I can follow the curriculum, but I know that if I let the kids drive a little bit, it's OK too," she says.

ICS researchers also go out in the field. Moss's algebra project has been introduced to Toronto's Rose Avenue Public School, which has a large immigrant student population. Researchers also helped link ICS's lab school with the city's Bloorview School Authority (part of Bloorview Kids Rehab), where children with

ICS Seeks \$12 Million for Expansion



The Institute of Child Study has outgrown its home on Walmer Road, and is hoping to raise \$12 million to construct a new wing

for the facility. The addition would include extra classrooms and seminar space, as well as a new dual-purpose auditorium and gymnasium for professional workshops and conferences, parent education and family literacy programs. Leighton G. McCarthy House, the institute's home since the 1930s, would also be renovated.

Recently, ICS raised \$200,000 to establish an environmental educational initiative. The lab school's inquiry-based approach will be used to encourage ecological awareness in students. As with all ICS projects,

the institute's larger aim is to create a practical resource that can be used at other schools.

The 83-year-old institute, which offers a master's of arts degree in child study and education and conducts research through the Dr. R.G.N. Laidlaw Centre, is seeking leadership gifts, including naming rights.

Nobel Prize-winning chemist and U of T professor John Polanyi is a past parent of ICS, and a strong supporter of the institute's goals. "The ICS lab school draws on its scholarly links with a great university, but it does more; it transforms

the study of children into a study of the entire world by children," he says. "This enchanting enterprise, with which I have been associated one way or another for generations, now needs new space. It abundantly merits it."

||  For more information on the institute's capital campaign, please call director Robin Farb at (416) 934-4515, or email rfarb@oise.utoronto.ca.

Morley is concerned that kids from diverse backgrounds be represented in school; if they aren't, the studies won't truly reflect the range of childhood experiences

disabilities and their able-bodied peers attend kindergarten together. Finally, ICS has had an important effect on general education policy. Blatz and his colleagues helped write and develop the Day Nurseries Act, which is still in use, and the ICS school's research into full-day kindergarten helped provide the impetus for testing the model throughout Ontario.

Morley is concerned that kids from diverse backgrounds be represented in the school; if they aren't, the studies won't truly reflect the range of childhood experiences. The admissions policy includes a visible-minority quota, but ICS's school rarely grapples with English-as-a-second-language requirements, a key challenge in other Toronto schools. Like other Toronto private schools, ICS is not as socio-economically diverse as the average public school. "One way in which we are limited is in whether we have economic accessibility for all," says Morley. "But we're doing something about it. This year, we've given out \$45,000 in tuition support, and next year it will be almost \$100,000."

It's worth asking why the ICS lab school caters only to elementary school students. After Grade 6, the children typically go on to other private schools, often with wildly different educational philosophies. Messina says the school's stalwart smallness is a function of the building's size and a belief that small class sizes are the most conducive to student success. "But while I think that for some children it would make perfect sense to continue in a small school setting, others are ready to go off to larger schools where they can join clubs and teams that we can't provide. I think another thing is that socially, they're ready to make new friends, and that is such a huge skill – to be able to be confident and meet others."

A good elementary education doesn't guarantee that students won't struggle later on. One former student I spoke with admitted to feeling hopelessly defeated by the vast impersonality of his high school.

The benefits of this student's progressive elementary school education may be realized much later. Noah Cowan, former co-director of the Toronto International Film Festival and now artistic director of Bell Lightbox, says that ICS had a direct influence on his career. Cowan, 41, is overseeing the construction of Bell Lightbox, a cultural centre devoted to the history of film. It's "an enormous undertaking," he said via email. "As the artistic director, I am responsible for creating a program and vision that will be unique. I would have been unable to do so without my background at the Institute of Child Study. The school teaches creativity foremost, especially the importance of non-traditional solutions and the fluid interplay of interesting ideas. Such openness is impossible to develop later in life, in my opinion."

In his formative years, Cowan wasn't *taught* to build the Lightbox, any more than Abby Hoffman was taught that she should protest women's exclusion from hockey. What they were taught is how to think critically. And principal Elizabeth Morley has choice words for schools hell-bent on churning out lawyers, doctors and financiers, without regard to how these professions are constantly changing: "We have to make sure we're not getting children ready for our reality," she says. In times to come, she warns that society will need "robust individuals with eyes wide open, who can observe extremely carefully what a situation requires and move in a collaborative way to contribute to that – or they won't be successful."

In other words, ICS offers education not just for what is, but what will be. It is education that seems to work for most kids – an approach that may, if more widely accepted, keep Ferris Bueller in the classroom, where he so rightly belongs.

Cynthia Macdonald (BA 1986 St. Michael's) is a writer in Toronto. Her story about teaching math appeared in the Autumn 2008 issue of U of T Magazine.

Some clothes you never grow out of.

Françoise Ko, PhD 2006 Pharmacology, still wears her U of T pride like a badge, inside and out. Whether she's volunteering with the U of T Alumni Association or relaxing in the comfort and style of this season's crested apparel. Wear your pride on your sleeve. Shop the stores or go online.



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U of T and the Economy

A Special Message from the President

TO MEMBERS OF THE UNIVERSITY OF TORONTO COMMUNITY: I am taking this opportunity to provide a brief update on two fronts – the current fiscal climate, and the extraordinary collective achievements by members of the University of Toronto over the last few years. The juxtaposition of these topics is deliberate: the university clearly faces some economic headwinds in the year ahead, but we do so with substantial academic momentum.

Challenges in 2009

The economic forecast remains guarded. As has already been reported, recent turmoil in the financial markets – the likes of which we have not seen since the 1930s – will severely limit the university's ability to draw on endowment revenue. The endowment was slated to pay out \$62 million in April of this year. Part of our endowment strategy involves building up a

funding cushion so that payouts can still be made when there is a moderate downturn in the markets. The massive decline in the equity markets, however, has eliminated that cushion. We must therefore prepare for a situation where the scheduled endowment payout is either markedly reduced or foregone for the year.

I want to address the rationale for not eroding accumulated capital to make these payouts regardless of income earned. These endowments were put in place for the very long haul. Erosion of capital would immediately change the baseline for future growth in our endowed funds. It would thereby compromise our ability to return rapidly to usual payout levels as the investments supporting our endowments recover their value. Prudence in managing the endowment is accordingly part of the responsible stewardship of funds

that were designed to support the university's faculty, staff and students for generations to come. Meanwhile, the divisions of the university are all planning actively to ensure that, if usual endowment payouts cannot be made, they will still be able to meet critical commitments such as endowed professorships and chairs, as well as endowed support for needs-based student aid.

On that point, I must thank our benefactors for their response. Naturally, donors share our concerns about the possibility of reduced payouts on endowed funds. However, many have expressed support for the university's strategy, including appreciation for our contingency planning to cover key commitments using internal funds if necessary. We have also had donors come forward with new annual gifts to help bridge-fund personnel and projects supported by their endowed benefactions, or to support areas of urgent needs, such as entrance scholarships and bursaries for our students. To say the least, their generosity and loyalty has been both inspiring and very encouraging.

While a suspension of this year's payouts seems both prudent and probable, I should emphasize that our budget plans for 2009-10 presuppose the resumption of endowment payouts. The level will be determined based on market conditions as the year progresses.

The status of the endowment is our most acute financial concern – one that should be self-limited as the world economy stabilizes and investment performance improves. However, as noted previously, the level of government per-student grants in support of our core operations is also uncertain. Caps on government transfers to universities may exacerbate our budget pressures by several million dollars. Should this come to pass, the impact will vary across divisions. Divisions also vary in their reliance on payouts from endowed funds, and in the amount that they contribute to the university's overall fiscal balance. In these circumstances, any across-the-board budget reductions may have perverse or unfair effects. Similarly, our hope is to avoid a general hiring freeze for 2009-10. Instead, each division of the university, including the central administrative divisions, will be expected to contain costs using measures most appropriate to its specific circumstances.

I should add that the provost continues to review each university division's budget plans with division heads to assess the division's prospects of achieving budgetary balance. In this regard, while savings must be realized in operating costs wherever feasible and reasonable, and while

all divisions are expected to use "rainy day funds" to the fullest extent possible to navigate this stormy period, we must also be measured in our responses to what is likely to be a medium-term budget crisis. We are certainly not encouraging deficit finance by divisions but that may be a necessary short-term measure in some cases. As a result, it seems unlikely that we can bring the university's budget to the balance planned for this year in accordance with our fiscal cycle. This is a matter that I and other members of the executive group will be continuing to discuss with governors of the university.

It is worth remembering that though these are difficult times everywhere, the University of Toronto is faring as well or better than many of its peer institutions across Canada and, indeed, throughout North America. As well, the higher-education sector in general has so far been spared some of the massive restructuring confronting other sectors of the economy.

A university president has no special expertise in economic prognostication and I cannot predict the duration of this downturn. Some pundits expect the current fiscal crisis to continue for at least 18 months, but then again, few of these same pundits foresaw the current trouble! Thus, we must simply wait and see how fast the economy recovers. While the timing of a recovery is uncertain, two things are clear. First, there will indeed be a recovery. And second, thanks to the excellence of our faculty, staff, students, alumni and friends, we shall weather this storm successfully.

A Legacy of Accessible Excellence

This past year, the provincial government made a very welcome commitment to a large-scale capital investment in Ontario's colleges and universities. The government of Ontario has aimed not only to address long-standing challenges of deferred maintenance on campuses, but also to foster exciting initiatives in teaching and research. A province-wide review process has just been completed. As part of that review, consultants working on behalf of the provincial government visited our three campuses in December to hear our story and to consider the merits of our capital proposals. Preparing the university's presentation afforded me a rare opportunity to compile and share with our visitors just a few of the indicators of the University of Toronto's success in recent years. That success, of course, is due to the talents and efforts of all members of our community, and the indicators are very encouraging indeed.

Figure 1

University of Toronto Publications and Citations, Summary of Rankings, 2003 – 2007
 Canadian peers (G13), Association of American Universities public institutions, and all AAU institutions

	G13 (Canada)		AAU Publics		AAU All	
	Publications	Citations	Publications	Citations	Publications	Citations
All Science Fields	1	1	1	3	2	6
Health and Life Sciences	1	1	1	2	2	4
Cell Biology	1	1	2	3	5	9
Materials Science, Biomaterials	1	1	1	3	2	6
Biotechnology and Applied Microbiology	1	1	7	6	12	11
Engineering	1	1	6	9	8	12
Nanoscience and Nanotechnology	1	1	17	17	24	28
Optics	1	1	3	2	8	13
Environmental Engineering	1	1	2	1	2	1

• **Publications and Citations**

We continue to attract excellent students because we continue to recruit and retain excellent faculty and staff. One measure of the excellence of our community is its collective scholarly output. Across a staggering range of disciplines, the University of Toronto is one of the leading research universities in North America.

Figure 1 highlights publication and citation data from diverse areas of science and technology. Journal-based publication data are less helpful for social sciences, but show the University of Toronto ranking with the top 10 U.S. public universities across disciplines as varied as geography, psychology, ethics, women’s studies and industrial relations. Rolling all disciplines together, only Harvard publishes a greater number of scholarly papers. Humanities performance indicators paint a similarly compelling picture. Put simply, from the standpoint of overall excellence in scholarship, no post-secondary institution in Canada is close to the University of Toronto.

• **Rankings**

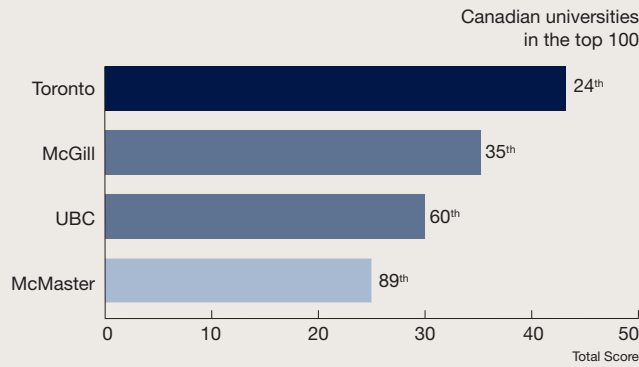
Omnibus rankings of universities continue to be generated by various media outlets and agencies, just as questions continue to be raised about the basis of the various metrics and combinations thereof that are compiled and published.

The issue, of course, is not the need for rigorous assessment and disclosure of discrete dimensions of performance, but rather the tossed salads of measures served up annually to those seeking – with apologies to Mencken – simple answers to complex questions.

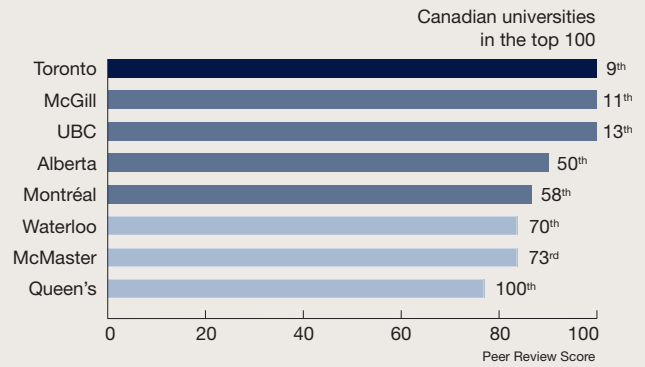
Among those specific measures of performance that we have long taken seriously is assessment by academic peers. While peer-review surveys have their own limitations, such surveys can shed some useful light on how a university’s scholars are perceived by others in the same field. The *Times Higher Education Supplement (THES)*, for example, ranks U of T 41st in the world according to its “tossed salad” of criteria. But when the *THES* asked the scholars at different universities to rank each other, our peers placed us ninth in the world – and top among

Figure 2

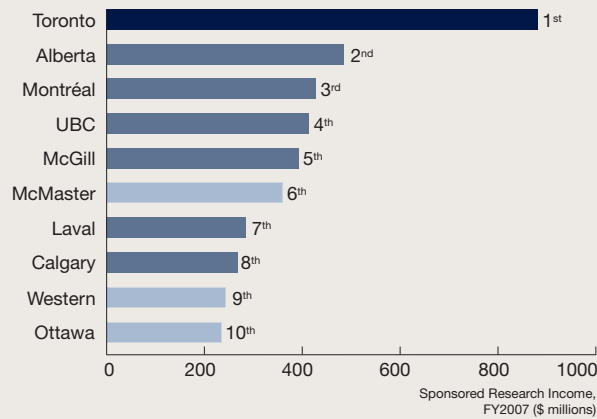
Shanghai Jiao Tong University
Academic Ranking of World Universities, 2008



Times Higher Education Supplement World Rankings
Academic Peer Review, 2008



Research Infosource
Canada's Innovation Leaders, 2008



Higher Education Evaluation & Accreditation Council of Taiwan
Performance Ranking of Scientific Papers for World Universities, 2008

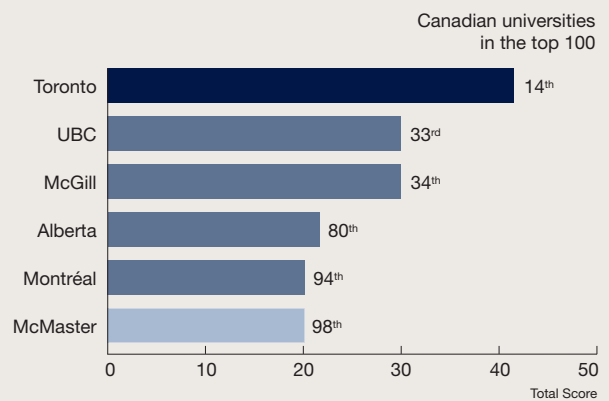


Figure 3

Faculty Honours by Award, 1980 – 2008
Awards Held by the University of Toronto as a Percentage of Awards Held by All Canadian Universities

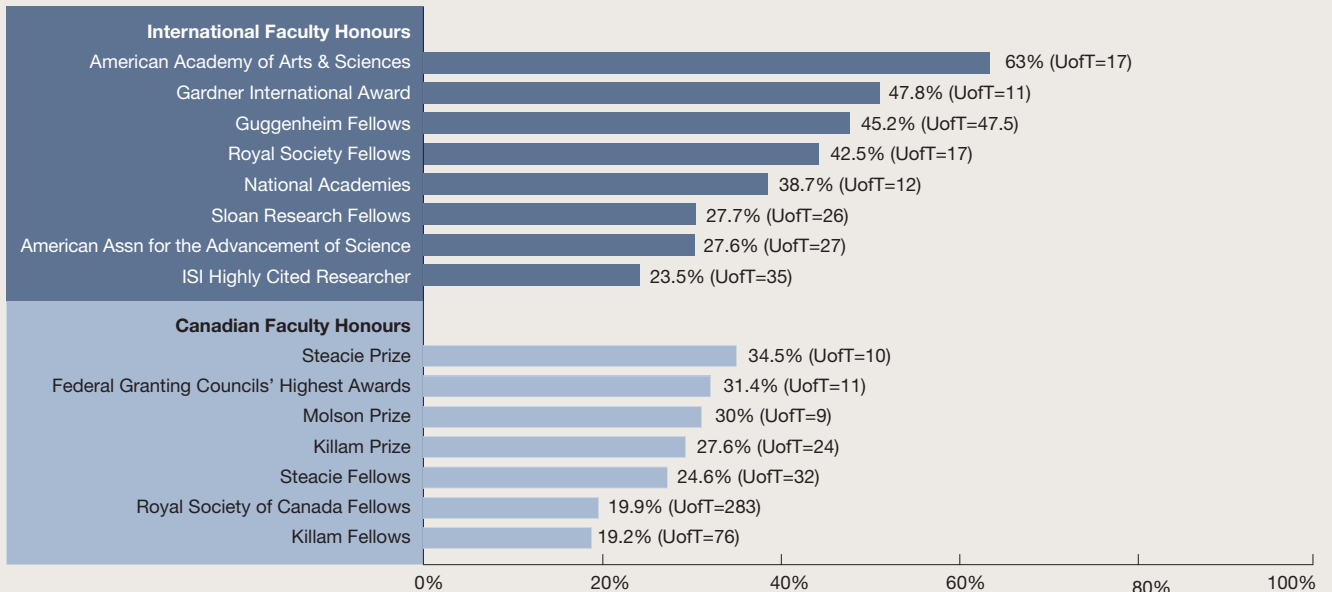
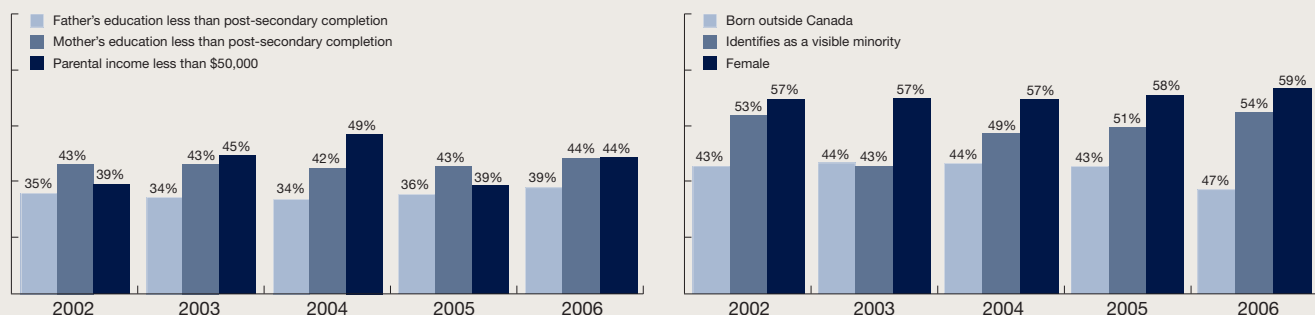


Figure 4

The University of Toronto's Undergraduate Students, 2002-06 – Accessibility and Diversity



Canadian universities. In fact, the University of Toronto is one of only five universities to place in the top 16 in every field peer-reviewed for the *THES*. The other four were Berkeley, Oxford, Cambridge and Stanford. *Figure 2* shows some of the most recent rankings of research-intensive universities.

• Awards and Honours

Our students and faculty represent U of T with distinction. *Figure 3* shows that our faculty, in particular, win far more awards and prizes than would be expected given the size of our professoriate. It is also striking to see U of T's faculty celebrated at a higher rate both internationally and for the most prestigious Canadian prizes – those competitions in which the bar is set highest and meritocratic peer review prevails.

• Access and Student Aid

One of the distinguishing features of the University of Toronto is the extent to which it has sustained access to outstanding educational opportunities – inside and outside the classroom – for the best and the brightest students regardless of means. Our campuses are among the most ethnoculturally diverse in the world and over 40 per cent of our undergraduate students report a combined family income of less than \$50,000 a year. In fact, U of T contributes more than twice the provincial average to student bursaries and financial aid.

The Governing Council has also committed the university to the following policy: No student offered admission to a program at the University of Toronto should be unable to enter or complete the program due to lack of financial means. This commitment is particularly important for the next year or two, as the recession will compromise the finances of some of our students and their families.

As *Figure 4* shows, we have an enviable record of success in sustaining access to excellence. The Government of Ontario deserves huge credit for enhancing OSAP eligibility under

its 2005 “Reaching Higher” plan for higher education. However, the university’s ongoing success in maintaining access would simply not have been possible without increased revenues from tuition, because we continue to draw heavily on tuition revenues for needs-based bursaries. The Faculty of Law at U of T offers compelling lessons in this regard. Currently, about half our students taking their first law degree apply for internal student aid. The faculty is able to help in a major way thanks to tuition revenues. In fact, 16 per cent of all students in the Juris Doctor program receive bursaries that offset at least 50 per cent of their tuition fees, and 33 students are paying no tuition fees this year.

Funding: An Acute and Chronic Challenge

Our current financial circumstances are frustrating in part because they represent an intensification of longstanding challenges. *Figure 5* compares the university’s per-student funding to our public peers among research-intensive universities in the United States.

U of T receives less than half the mean per-student funding available to our peers. *Figure 6* is more striking. It shows the dramatically higher per-student funding available to the private universities in the U.S. I should emphasize, in fairness, that the levels of per-student funding for U.S. private universities include endowment returns generated before the crash of 2008, and that the per-student resources available do not necessarily reflect those typically spent in a given year. Although the differences in funding are large, the scholarly footprint of U of T is strongly competitive in width and depth with all these great private universities.

Drawing comparisons closer to home, notwithstanding the McGuinty government’s praiseworthy “Reaching Higher” plan, the educational grants per student available for Ontario’s universities remain more than 25 per cent below the average funding available to university students in the other nine

Figure 5

Total Revenue per Full-Time Equivalent Student
 Fiscal Year 2006-07 (U.S. Funds) University of Toronto vs. Association of American Universities Public Peers

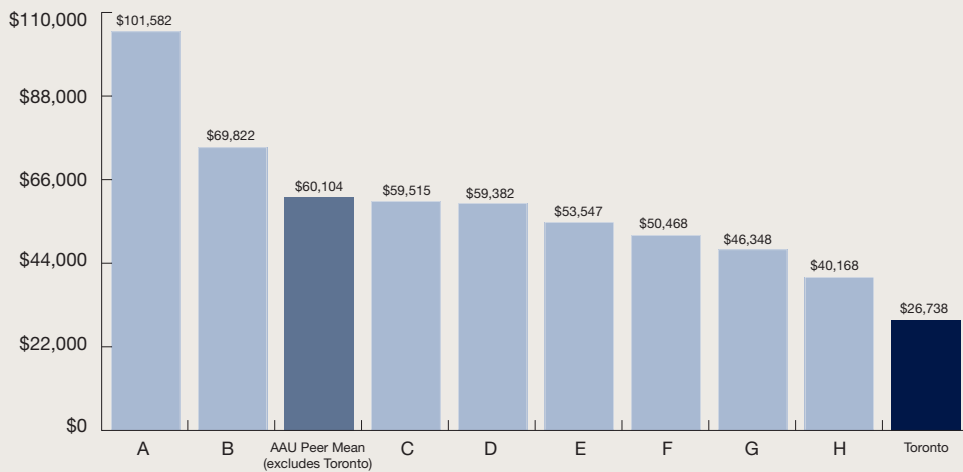


Figure 6

Total Revenue per Full-Time Equivalent Student
 Fiscal Year 2005-06 (U.S. Funds) University of Toronto vs. Association of American Universities Private Peers

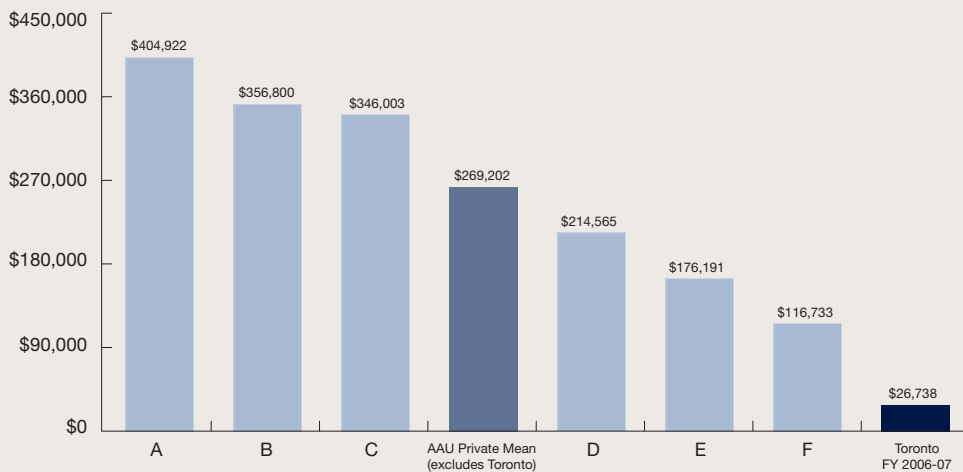
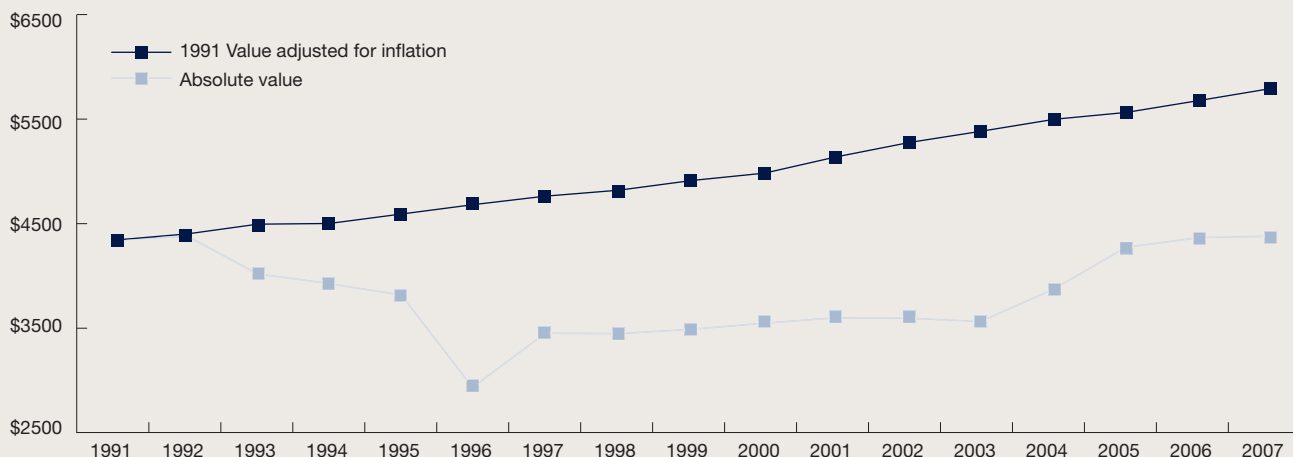


Figure 7

Ontario Funding per Basic Income Unit (a weighted enrolment unit),
Absolute Value vs. Inflation Adjusted 1991 Value



provinces. The missing money, unfortunately, is tied to long-standing imbalances in fiscal federalism. This fall, Don Drummond, chief economist of the TD Bank, has estimated that Ontario unfairly gave up \$11.85 billion in 2005. In essence, Ontario's taxpayers and students are underwriting higher education in other provinces. The federal government has fortunately agreed to a number of positive changes in shared-cost social programs, but implementation of these reforms to fiscal federalism is slated to take several years.

Figure 7 shows that, until recently, Ontario's real per-student funding of higher education had been falling over many years. In contrast, Ontario's per-capita spending on healthcare and per-student spending on K-12 education has tracked much closer to national benchmarks. We must encourage the Ontario government to maintain and augment its investments in higher education, research and innovation. And we must continue to encourage the federal government to accelerate its rebalancing of fiscal federalism while enhancing its support for research, innovation, student aid and university infrastructure. The ultimate beneficiaries will be future generations of students through enhanced access to a positive, personalized and well-rounded university experience.

(In January, as *U of T Magazine* was going to press, the federal budget provided a welcome infusion of funding for

university infrastructure along with an acceleration of the redress for Ontario within the framework of fiscal federalism. While measures in the budget also sparked concern about the federal granting councils, there remain grounds for optimism that Ottawa will augment operating support for research in 2010-11.)

Great Stories – and a Great Future

Given the serious funding gap that has continued for two decades, it is truly remarkable that the University of Toronto has emerged as one of the world's great public universities. Ours is not so much a uniquely Canadian success story as a cumulating collection of success stories. By many measures, the institution's academic fabric has never been stronger. While 2009 will bring ongoing financial turbulence and some difficult decisions, I am confident that, in the longer run, U of T will continue to excel. That confidence, in turn, reflects an extraordinary record of success attributable to the talent, commitment and creativity of our faculty, staff, students, alumni and friends. In the circumstances, I consider it a continuing privilege to be part of our university community. Thank you for your varied contributions to the University of Toronto.

Best wishes,
David Naylor

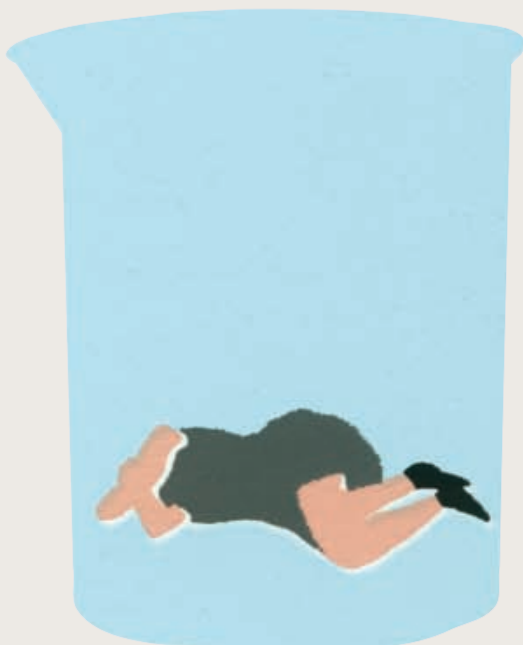
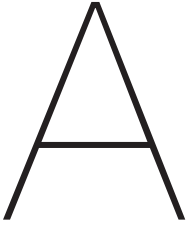


Illustration by Tamara Shopsin



Research is pointing to new
treatments for the millions of
North Americans who suffer
from sleep disorders

By Marcia Kaye



ANNE MEDA WAS EXHAUSTED. Barely able to drag one foot in front of the other, the Toronto elementary school music teacher had to stop working because she no longer had the energy to teach, sing or get through a school day. She'd been diagnosed with heart failure, a sometimes fatal condition in which the heart can no

longer pump enough blood to meet the body's needs. Her heart, struggling to compensate, had enlarged to such an alarming degree that the only solution, she was told, would be a transplant. At 52, Meda felt she was dying.

And then her cardiologist suggested she join a U of T sleep study that was investigating a possible link between heart failure and sleep disorders. Meda was doubtful – her husband, a physician, had never complained that she snored – but she agreed. After spending a night in a sleep lab, she received a diagnosis that astounded her: sleep apnea, a disorder that was causing her to stop breathing at least five times an hour for 10 seconds or more each time, repeatedly making her oxygen levels plummet, her blood pressure soar and her heart work far too hard. She began nightly treatment with a small, bedside CPAP (continuous positive airway pressure) machine with a nose mask to supply a steady flow of pressurized air. It wasn't easy – she cried the first time she used it – but her heart has gradually reverted to its normal size and today, 10 years later, Meda no longer has heart failure. "I just joined a gym," she says, "and I hadn't been able to do that for years."

It's been a tough sell, but only recently is sleep beginning to receive the recognition it deserves. It's gradually catching up to its more popular cousins, balanced diet and regular exercise, as one of the pillars of good health. Beyond that, more and more studies are showing a strong correlation between sleep disorders and a whole range of illnesses and conditions, including heart disease, stroke, high blood pressure, diabetes, Parkinson's disease, sudden infant death syndrome and even attention-deficit hyperactivity disorder in children and teens. While the importance of sleep is still underestimated in our 24-7 society, Dr. Douglas Bradley, director of U of T's Centre for Sleep Medicine and Circadian Biology and director of the Sleep Research Laboratory at the Toronto Rehabilitation Institute, says, "A lot of people still have trouble seeing that disorders specific to sleep can contribute to so many illnesses, but I think the barriers are gradually being broken down."

U of T sleep scientists such as Bradley are waking us up to the stark reality that the distinctive snoring of sleep apnea is more than a noisy nuisance, or that the sudden napping of narcolepsy is not just a comic quirk. The implications of sleep disorders are staggering both in their severity and in their scope. An estimated 40 million North Americans have chronic sleep

problems, costing the Canadian and American economies billions of dollars a year in health-care expenses and lost productivity. Many sleep disorders cause chronic daytime sleepiness. One study found that, in 2000, more than 800,000 drivers were involved in vehicle crashes related to sleep apnea.

A common sleep disorder, and Bradley's particular area of interest, is obstructive sleep apnea. The typical pattern involves many cycles of snoring and cessations of breathing, punctuated by loud snorts to restart the flow of air. The struggle to breathe, which is like trying to suck air through a soggy straw, causes oxygen levels to drop, which forces the person to wake up briefly to breathe, often hundreds of times a night. Each arousal makes heart rate and blood pressure soar. Bradley says that among people who have difficult-to-control high blood pressure, 85 to 90 per cent have sleep apnea. The disorder can be a problem at any age; it's thought that some crib deaths may be caused by apnea in infants who lack the ability to wake up to breathe.

Identified as a clinical disorder only in the 1960s, sleep apnea was considered a problem mainly of obese men (and their long-suffering bed partners). Now it's known that apnea can also affect people with small jaws, overbites, recessed chins, thick tongues or big tonsils. Four to nine per cent of men and two to four per cent of women aged 30 to 60 have obstructive sleep apnea combined with daytime sleepiness, which makes the condition as prevalent as asthma but far less recognized. In fact, 80 to 90 per cent of people with sleep apnea go undiagnosed, especially women and children, people of normal weight, and those who sleep alone and are unaware of their breathing problems while sleeping.

The consequences are serious. Bradley estimates that at least half of people with heart failure, which is a leading cause of cardiovascular death, also have sleep apnea, and that people with sleep apnea have three to four times the risk of stroke. He adds that just as treating high blood pressure has resulted in a decrease in heart attacks over the past generation, treating sleep apnea could also make a significant difference, since it improves cardiovascular function in people who have heart failure as effectively as the most potent heart medicines. "Sleep apnea might be the hypertension of the 21st century," he says.

One of the biggest difficulties, however, is identifying sleep apnea before someone has a heart attack or stroke. There simply aren't enough facilities (or money) for every Canadian to undergo a sleep study; while Ontario has more than 100 sleep clinics, other provinces have far fewer. Wait times often exceed a year. Bradley's clinic is developing a user-friendly home device so people can record their breathing patterns in their own beds. He predicts it will become commercially available in the next two years.

Another problem is treatment. The CPAP machine, invented in 1981 by Colin Sullivan, an Australian who did some of his

research at the University of Toronto, is extremely effective, but there's a catch. Only about two-thirds of the people prescribed one actually use it regularly, citing discomfort, dry nose and mouth, or headaches. That is why there's a push to find alternate treatments, such as drug therapies. It's a huge challenge because not only is sleep a very different physical state from wakefulness, but the stages of sleep are diverse, too.

We tend to think of sleep as a time of rest and recovery for the whole body and brain, but in truth it's a time of dynamic activity. Typically we cycle through four stages of progressively deeper sleep and then back before entering REM (rapid eye movement) or dreaming sleep. The whole cycle repeats about every 90 to 120 minutes. Everyone's respiratory muscles relax during sleep – we can instantly tell when someone is asleep by the slightly laboured breathing – but the airway stays open. In people with sleep apnea, the airway collapses when their respiratory muscles relax. The tongue can also go slack and block the airway. In order to study what drugs might be beneficial, researchers first needed to understand why the brain signals the muscles that affect breathing, such as in the tongue and diaphragm, to become inactive, and why this never happens when someone is awake.

"I wanted to learn what there is about the brain that is causing breathing to change during sleep," says Richard Horner, an associate professor of medicine and physiology at U of T who holds the Tier I Canada Research Chair in Sleep and Respiratory Neurobiology. Horner's lab was the first in the world to study how cells in the medulla area of the brain stem affect the muscles that are critically involved with breathing during wakefulness and during sleep, and which chemicals are chiefly involved in the process. Horner says, "We've successfully used this knowledge to increase respiratory activity in sleep."

Using rats, Horner's lab has been identifying the chemicals involved in the brain when there is a loss of breathing muscle activity in sleep. Based on this knowledge, he is devising and testing new pharmacological ways of reactivating these muscles. The chemicals Horner is examining include histamine, norepinephrine and serotonin, which are involved in producing a state of wakefulness in the brain. (That's why antihistamines cause tiredness and some antidepressants disturb sleep.)

His research points the way to further study. "This work offers proof in principle that it is possible to reactivate these important breathing muscles in sleep when they are normally suppressed," Horner says. "However, the next challenge is to achieve this in a clinical setting." While drug therapy may be a few years in the future, Horner's results may eventually be extrapolated to understand other conditions where breathing is suppressed, such as the shallow, slow or irregular breathing that results from the use of opioid medications for pain management.



We tend to think of sleep as a time of rest and recovery for the whole body and brain, but in truth it's a time of dynamic activity

There may also be some low-tech treatments on the horizon. Researchers have established that obesity worsens apnea, as it places extra weight on the throat. But in a new study of 23 normal-weight men, Bradley's lab found a surprising link between sleep apnea and fluid retention. During normal sleep, fluid moves out of the legs and into the upper body. But among these men with apnea, the amount of fluid that moved related directly to how much time each day they spent sitting. In men who sat for most of the day, so much fluid moved that it increased their neck size by up to a full inch, worsening apnea. The study, published in November, attracted worldwide attention. Future treatments might include a simple diuretic or even a prescription for daily walking, which reduces fluid retention in the legs.

Another sleep disorder under scrutiny at U of T is narcolepsy. It's a neurological condition that causes excessive daytime sleepiness. People with narcolepsy may sleep a normal amount at night, but because they don't get enough deep sleep – they often go immediately into REM sleep, complete with vivid dreams – they experience an overwhelming urge to nap throughout the day and often in inappropriate situations. "I can fall asleep talking, sitting at the lunch table, getting a root canal or having sex," says Lee Lyons, 49, of Toronto. "I'll get this weird crawly feeling at the back of my neck and I know I can't fight it. If you offered me a million dollars I couldn't stay awake."

Lyons (BA 1981 Trinity) first experienced the problem as an adolescent but, like many narcoleptics, went undiagnosed throughout her teens and young adulthood. As a history student at U of T, she loved school but couldn't stay awake in class or during exams. Between classes she'd sneak naps on a couch in the women's washroom. She says, "I had professors glare at me because I fell asleep in every class. Everyone thinks you've been partying too much or you're irresponsible." She just barely got her degree, and then, forced to abandon her plans to continue in academia, took a series of jobs, including



“I had professors glare at me because I fell asleep in every class. Everyone thinks you’ve been partying too much or you’re irresponsible”

driving a truck and operating machinery at a nuclear plant. Luckily her sleepiness never caused a serious accident. But when she was finally diagnosed with narcolepsy and told her boss, he said, “Thank God! We thought you must be an alcoholic or a heroin addict.” After trying various medications, Lyons now takes the psychostimulant modafinil, which helps her manage her condition. It’s not a cure – she had her commercial driver’s license revoked, can no longer work and receives disability benefits. Moreover, Health Canada has issued warnings about modafinil’s dangerous side-effects, including a life-threatening skin condition and adverse psychological symptoms.

To complicate the issue, narcoleptics generally also have cataplexy, a condition of sudden muscular weakness, ranging anywhere from a barely perceptible slackening of the jaw to a total body collapse, even as the person remains awake and aware. The attacks, often triggered by emotional events such as surprise, excitement or laughter, last seconds to minutes and can occur up to several times a day. “Sarah” a 32-year-old U of T graduate with a BA in anthropology, developed narcolepsy at 14 but didn’t have her first experience of cataplexy until her mid-20s when one day, while she was laughing, her knees buckled under her. “I can’t even watch *America’s Funniest Home Videos*,” she says. “I can never have a really hearty laugh.”

Today, Sarah takes a psychostimulant for the narcolepsy and an antidepressant for the cataplexy. Volunteering in a school and still searching for a full-time teaching position, she’s only too aware that the stigma of her condition could prevent her from landing a job – which is why she’s afraid to use her real name for this article.

Aiming to help the estimated three million narcoleptics in the world is John Peever, an assistant professor in U of T’s department of cell and systems biology. Peever’s research seeks to understand exactly how the brain regulates motor activity during sleep. “We’re trying to figure out what brain chemicals change in narcolepsy and particularly cataplexy,” Peever says.

What is known is that narcoleptics have a deficiency of a group of cells in the brain’s hypothalamus that make the peptide orexin, which promotes wakefulness. Symptoms of narcolepsy appear in adolescence, which is also the time that scientists believe orexin cells may begin to degenerate, though there is still no evidence to link them. Adult narcoleptics may have lost up to 90 per cent of their orexin. “We’re trying to find out why those cells are dying,” Peever says.

There’s evidence that physical damage to that part of the brain may trigger the process – Lee Lyons suffered eight concussions as a child – but in most narcoleptics, why orexin cells die is unknown. They could be pre-programmed to die, or they could die as the result of an autoimmune disorder. That narcolepsy is significantly more prevalent in Japan than in North America suggests that there may be a genetic, cultural or environmental piece to the puzzle. Recently, Peever’s lab studied the brainwave and muscle activity of mice bred without orexin, and screened drugs to see what treatment works best for narcolepsy and cataplexy. “The real direction the field is moving in is why these cells get lost in the first place,” he says. “Then we could work on coming up with neuroprotective drugs to stop the death of those cells.” Evidence so far indicates that the dopamine system may be an important neurotransmitter to target. “Drugs that act on the dopamine system are miraculous at suppressing cataplexy in mice,” says Peever.

There’s promise, too, for a sleep problem called REM behaviour disorder, which causes violent thrashing as people act out their dreams, often resulting in physical injury. Peever and PhD student Patti Brooks have discovered that mice lacking glycine receptors in the brain exhibit behaviour that strongly resembles REM disorder in humans. They are working to establish whether abnormalities in the glycine system in humans are involved in this disorder. Scientists believe it’s possible that REM disorder is an early warning sign of Parkinson’s disease, a progressive neurological disease that affects more than a million North Americans. If this is the case, then treatment for Parkinson’s could begin upon a diagnosis of REM disorder, rather than several years later. So far, 80 to 90 per cent of people diagnosed with REM disorder go on to develop Parkinson’s or other neurodegenerative disorders such as Alzheimer’s. Peever believes that over time, the REM disorder-neurodegenerative disorder correlation will likely become even stronger. “I would be shocked if those numbers don’t turn out to be higher – even up to 100 per cent,” he says.

For anyone who still doubts the seriousness of sleep and its disorders, surely that’s a wake-up call. But knowing that some of the world’s leading scientists are working on solutions may help all of us rest a little easier.

Marcia Kaye (marciakaye.com) of Aurora, Ontario, is a magazine journalist and bestselling author specializing in health issues.

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Annual General Meeting

Tuesday, June 16, 5:30 pm
Great Hall of Hart House

Guest Speaker: **DR. JAMES ORBINSKI** (MA 1998 SGS)

Topic: **HUMANITARIANISM, CITIZENSHIP AND GLOBAL HEALTH**

Dr. James Orbinski is co-founder and chair of Dignitas International - a medical humanitarian organization, professor of medicine at St. Michael's Hospital, University of Toronto and former international president of Médecins Sans Frontières (MSF).

RSVP by June 8 (acceptances only). Space is limited.

A complimentary barbecue will follow in the Hart House Quadrangle.

To register or for additional information go to alumni.utoronto.ca/utaa, call 1-888-738-8876 or e-mail lorraine.gillis@utoronto.ca



Photo by: Derek Sharpton



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All about Alumni



River Rambler

Helen Mills explores Toronto's past through its lost waterways

Helen Mills would like Toronto's Lost River Walks participants to come away with two things: a new awareness of the waters that flow unseen beneath their feet, and a commitment to turn off the tap when they brush their teeth.

"We tell the fascinating story of the city when it was a place of deep ravines, babbling brooks and primordial forest," says

Mills (BA 1973 Woodsworth). "But we also try to get people to appreciate their intimate connections to our water systems and empower them with simple conservation strategies."

Since Mills helped launch the Lost River Walks in 1995, close to 15,000 people have taken the guided hikes jointly run by the Toronto Green Community and the Toronto Field Naturalists. The walks follow underground creeks and >>>

Screen Saver Film savvy helped Brett Hendrie land one of Hot Docs' top jobs

PART OF BRETT HENDRIE'S JOB IS TO WATCH MOVIES. But the U of T film grad's profession involves more than curling up on the couch with a bowl of buttered popcorn. "It's work," says Hendrie, 30. "I'm taking notes."

As the managing director of Toronto's Hot Docs Canadian International Documentary Festival, Hendrie (BA 2001 Innis) watches 200 to 250 films between January and April. He and a Hot Docs team choose the 150 movies for the largest documentary film festival in North America, which this year runs from April 30 to May 10. "We look for films that will capture the imagination of the audience, that expose them to new people and new worlds," he says.

Picks from past years include *In the Shadow of the Moon*, which features Apollo astronauts talking about their space travels. It went on to win Grand Prize at the Boulder International Film Festival. The festival also screened *Anvil! The Story of Anvil*, which charts the ups and downs of the aging Canadian metal rock group. It snagged a Los Angeles Film Festival Audience Award.

Hendrie directed his own feature-length documentary, *Frosh Forward*, in his final year at Innis. The film follows five students during their first year at U of T. While it reveals that their expectations about university are inaccurate, the students aren't disappointed by what they discover. "First year is a challenging year, and that's what I wanted to show," says Hendrie. Orientation leaders have screened the flick during Frosh Week.

Hendrie, who manages the Hot Docs organization, landed his job in 2004 – a fitting role for someone who worked part-time at an investment firm and bank, and sold tickets at the Hot Docs box office as a U of T student. "It's a good gig," he says. – *Susan Pedwell*



My Favourite...

Prank



In 1957, members of U of T's Engineering Society made news with the world's first ICBBBM: the Intercontinental Beer-Burning Ballistic Missile. We had assembled a missile containing a great quantity of beer, packed with enough explosives to fake a convincing 'takeoff.' In fact, the thing was designed to disintegrate on detonation. But someone faked a photograph of it flying through the air above campus and sent it to the *Toronto Star* – which took us seriously enough to print it alongside a story about our 'major scientific breakthrough.'

Angus Bruneau BASc 1958



To see a picture of the missile, visit www.magazine.utoronto.ca and click on "All About Alumni."

>> streams through various city neighbourhoods. "I consider this a very eccentric interest of mine, so I've been flabbergasted to see how many people are engaged with it," says Mills, who studied philosophy at U of T.

Born in South Africa, Mills and her family moved to Calgary when she was 15, and then to Toronto three years later. She was intrigued by the oddities of the street grid, and her curiosity intensified while working as a courier after graduation. But the sudden dead-end streets and snaking roads remained a mystery to her. Then she took a course at U of T in the 1980s that examined the city's physical geography. "I finally understood that these little distortions are symptomatic of rivers and creeks that were there before," says Mills, who owns an organic gardening service and a courier business that support her full-time environmental activism.

Mills and other Toronto Green Community members have been mapping the city's underground waterways for 14 years. Most of the maps are available at www.lostrivers.ca – including one of Taddle Creek, which once flowed through the St. George campus. In 1859 the creek was dammed just east of University College to create McCaul's Pond. It was covered over in 1883 when nearby population growth caused the pond to become dangerously contaminated.

The creation of a sewer system rescued the city from repeated cholera outbreaks, but many of Toronto's rivers and creeks were buried in the process. "It's a story of heroic engineering and public health, but it's also a very sad story from the perspective of nature," says Mills. "We have a lot more understanding now of how things can be done better – I like to call that heroic ecological engineering." – *Megan Easton*



Fungi Magic Director Ron Mann pays homage to an unusual obsession

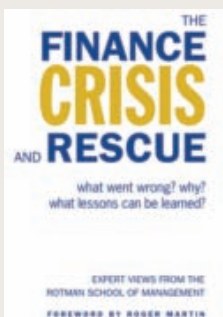
BEHOLD, THE UNPOETIC MUSHROOM. Squat in stature, with a bland complexion and faintly displeasing fungal odour, it lacks the excitement of its stir-fry contemporaries: the vibrant carrot, the exotic bok choy, the piquant red pepper. Other than a few well-known varieties, which we thoughtlessly slice into our salad (button), barbecue (portobello) or toss into a pasta sauce (cremini), who among us gives this spore-producing structure a second glance?

In his new documentary, *Know Your Mushrooms*, director Ron Mann (BA 1980 Innis) showcases the attributes of the fine fungus. Mann travels to the annual Telluride Mushroom Festival in Colorado, where fungophiles gather every August to attend lectures, test culinary dishes and take trips of the more hallucinatory sort.

One of the most fascinating people Mann meets is Larry Evans, a self-professed mushroom gypsy who spends his days “chasing the rain” in his dented hatchback, driving from Alaska to Mexico – wherever the mushrooms are at their plumpest and in season. Through his eyes we can see their beauty, and the beauty of obsession. Evans investigates samples with the panache of a wine connoisseur. He wafts one under his handlebar mustache, proclaiming it “a little bit like cucumber and a little bit like bad fish.” His Holy Grail is the Alaskan morel, which he gathers, sells and eats by the crateful.

Mann explores every possible aspect of the fungi world, including health and environmental benefits and, of course, the psychotropic features of magic mushrooms. He interviews Gary Lincoff, who co-led the Telluride Mushroom Festival for 25 years, about his first mushroom trip when he travelled to, um, “outer space – somewhere near the Andromeda Galaxy.” The tie-dyed, bongo-playing tripsters also make a brief appearance, but the film isn’t a one-note lampoon, which a movie on mushrooms could have easily lapsed into.

Mann excels at tapping into the emotional experience of those consumed by their *idée fixe*, and captures this passion during Telluride’s mushroom parade. The procession, which includes men dressed as giant mushrooms, is led by a psychedelic Dumbledore wearing a magician’s hat and cape. The scene is half phantasmagoric, like something out of a Lewis Carroll novel, and half lowbrow *Trailer Park Boys*. But whether viewers see the paraders as inspiring or noisome, you know the revellers wouldn’t care. They are lost in the elation of paying homage to the almighty mushroom. – *Stacey Gibson*



The Finance Crisis and Rescue: What Went Wrong? Why? What Lessons Can Be Learned?

School professors and one business journalist who contributed to *The Finance Crisis and Rescue* (Rotman/UTP Publishing). This accessible primer diagnoses the problem from several perspectives, but is short on potential cures.

In one of the collection’s best essays, journalist Michael Hlinka (BA 1980 VIC, MBA 1986) pinpoints the cause of the catastrophe when he

It might be years before we know the full ramifications of the global financial crisis, but its origins are clear, according to the 10 Rotman

says that too many Americans defaulted on their mortgages at the same time after banks issued mortgages to people who couldn’t afford them. No one accurately assessed risk, or considered what would happen if housing prices fell.

Many commentators have said that greater regulation of the finance industry is needed, but Hlinka argues that what is truly required is a shift in mindset. Once upon a time, if you wanted to buy a house, you made a 25 per cent down payment and paid off the mortgage over 25 years. North Americans, he says, could do worse than to revisit this simple precept.

– *Scott Anderson*

The Two of Us

Ben and Larissa Bathgate



BEN AND LARISSA BATHGATE (NÉE SCHNEIDER) met while undergrads at University College and, after several years of a long-distance relationship, they married in 2006. Ben (BA 2001 UC), a former president of the University College Literary and Athletic Society, is now a lawyer at Lang Michener LLP. Larissa (BA 2003 UC), who majored in performance at the University College Drama Program, is a singer in Toronto's musical theatre scene.

Ben Our first meeting is hard to forget. I had just entered my fourth year of a BA in peace and conflict studies, and had volunteered to be a Frosh leader. During orientation, I led a group of first-year students to the SkyDome for a Blue Jay's game. I was wearing the obligatory blue body paint and playing the part of the overzealous Frosh leader in the stands when the Blue Jay's mascot, Diamond, joined the fracas. My blue skin turned a shade of red when Diamond sat on my lap and heaped affection on me, before she walked away with a wave of her feathered wing and a wink of her animatronic eye. A few days later on campus, "Diamond" introduced herself *sans* the big blue bird costume, and the human side of the romance began.

Larissa Ben and I never seemed like the perfect match. He was the logical, pragmatic lawyer-in-waiting; I was the musi-



The current Blue Jays mascot, Ace

"My blue skin turned a shade of red when the Blue Jays mascot sat on my lap" – Ben Bathgate

cal theatre enthusiast. He loved sports; I was passionate for the arts. Sometimes I wonder whether our relationship was built on the complimentary baseball tickets that I received as the Blue Jays bird. After graduating, Ben moved to Halifax, then Germany, and I often stowed away in his luggage. We watched our differences become assets, and learned to covet them. As we backpacked through Europe while Ben was on exchange at a law school in Germany, Ben was the exacting tour guide, whereas I was the eager interpreter. His yin to my yang, his Sonny to my Cher or something like that. And now we've learned to share everything – including a mortgage.

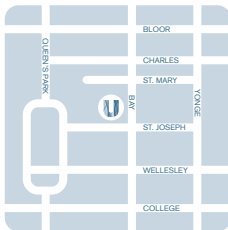


A Walk to Remember Actor Christopher Plummer (LLD Hon. 2003) and Michael Wallace, executive director of Theatre Museum Canada, look over memorabilia from the Stratford Festival's first season in 1953. The items were on view at the new Macdonald Heaslip Walkway of Theatre History, which opened in October. Located in Hart House Theatre's main entrance, the space contains a rotating collection of Canadian performing arts history and is the first permanent home for Theatre Museum Canada. William and Nona Macdonald Heaslip funded the walkway through a leadership gift to the Hart House Theatre campaign. "Unlike literature, sculpture, painting, even film, the theatre is ephemeral. It flowers and is gone. So it is important beyond measure to record its passing, to capture its glory, to cherish its history, to honour its artists," said Plummer, the official speaker at the opening gala. The current exhibition, "Revival: Remembering Theatre in Canada," is curated by U of T museum student Alison Little.

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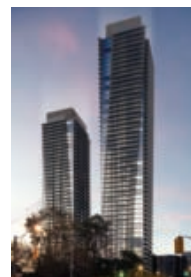


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First Person

“This Is a Generational Struggle” Captain Bruce Rolston wonders how long Afghanistan’s calm facade will remain after peacekeepers leave



MY MORNING JOURNEY BY SUV takes me out the gate of Kandahar Air Field and over to the nearby Afghan National Army base, “Camp Hero.” On the way, I travel by Syed Pacha school, built for the children of Afghan soldiers by foreign well-wishers. It is painted a beautiful two-tone blue, the brightest and cheeriest sight for miles.

I soon find out that the school’s second floor is uninhabitable; the contractor put no rebar in the concrete, and the whole edifice will be lucky to avoid a major collapse during my short six months in Afghanistan. The plumbing in the washrooms goes nowhere, and there is no provision for electrical power. Locals try to organize some form of instruction on the first floor, although there is no realistic prospect of the school getting an actual teacher. But I’ve got to admit: it’s a great paint job.

In Afghanistan, we visitors tend to focus on the facades we’ve created. Even those Canadians who see right through *Potemkinesque* school-painting stories can still be gulled by tenuous fables about how the Afghan armed forces are rapidly improving under our tutelage. I know I sure was, before I got here. But the end state is *so* much farther away than getting the school’s light switches working.

This is a generational struggle, where the enemies are the pervasive ignorance, opportunism and despair that come with more than 30 years of strife. I work with the Afghan army, where few soldiers can read or write more than their names.

My closest Afghan colleague, a 55-year-old major, is one of the most educated officers in his 3,000-man brigade. And yet he’s never read a military history book, has never heard of Napoleon and can’t name a single war movie he has ever seen. He never saw the point, really: his entire life experience has been circumscribed by war in a way I can still barely comprehend.

He’s not alone: no one I have met over the age of 25 in this country believes their future holds anything more than their past did. Indiscriminate killing and civil war is their normalcy, and their only surprise is that war hasn’t returned here to Kandahar sooner. And so, the only time or place they trust is the here and now. Any aspirations for permanence – like putting rebar in the walls instead of hocking the NGO-supplied steel for cash – seem pure folly.

Those not so jaded and battered down are all still too young to have the influence the Afghans need. The last few years of relative peace have been formative for Afghanistan’s soldiers and future leaders. But, assuming young leaders come forward, they are still two decades away from being in a social position to do anything about their country’s situation. Were Western forces to leave here today, it would take at most a single bout of fighting for that prospect to vanish. Canada is leaving regardless, in 2011, we are told. I fear when we do go, we will find we had all the lasting impact of a flash flood on this reddish desert – the kind that occasionally comes through here in the winter months, shifting the unexploded ordnance around to new and surprising places.

When I was a younger man, I visited the United Nations building in New York. I’d read so much about it as a child, and believed this global institution was our future. But when I arrived in New York I saw a building that was falling apart around me, with broken headphones and switches in the General Assembly, dripping water, peeling paint. It was one of the great disappointments of my life. Walking around Kandahar Air Field today, with the cracked remnants of 1950s architecture everywhere, I feel the same foreboding: a suspicion that this place, Afghanistan, *is* the normal state of humanity. That all our magnificent accomplishments – all we enjoy in our own country and hope to pass on to our descendants – may itself only be a pretty school front that will not outlast our collective indifference.

Bruce Rolston (BA 1995 VIC) is currently serving as a captain with the Canadian military’s Operational Mentoring and Liaison Team in Kandahar Province, Afghanistan. He is on leave as a manager with University Advancement at U of T.

60 Seconds With

Alison Jutzi



THOUSANDS OF FROCKED HOPEFULS VIED LAST YEAR for the role of Maria von Trapp in an Andrew Lloyd Webber production of *The Sound of Music*. The top 10 competed live on CBC's reality show *How Do You Solve a Problem Like Maria?* U of T theatre and drama studies grad Alison Jutzi (BA 2001 UTM) made it onto the show, only to be the first to go. But the experience has left her feeling like she can climb every mountain, as **Lisa Bryn Rundle** found out.

What was it like being on the show?

I went into it thinking that it was just going to be a televised audition but really it was a reality show. You become a character on a television show.

Did you find yourself performing “good reality-show character”?

I was trying to be my most friendly, funny self.

I never wanted to be caught scowling on camera so I was always trying to be very positive – my eyes wide open.

Was there a lot of inter-Maria backstabbing?

There were people who got cut who were surprised, and there was some anger about that. But we mostly focused on getting our performances ready. No sabotage.

I found it painful to watch the “So Long, Farewell” send-off for the eliminated Maria. How did it feel doing it?

Honestly, I was happy I got to sing a song I feel comfortable with. But I was in total shock, too. I didn't feel bad until later. I remember changing out of my dirndl and crying.

Is there a post-Maria support group?

No – we're all still thriving. Things have actually been really good for me. I've been doing film and TV.

Maria was the biggest, hardest audition I'd ever done. So now I can go for things and tell myself, “At least hundreds of thousands of people aren't watching me fail right now.” I feel like I can try anything. And that makes me feel really confident in myself.

And do you have confidence in sunshine?

I have confidence in sunshine *and* rain *and* that spring will come again. But mostly I have confidence in me.

You've come out with a comedic folk CD called Sandals. What is comedic folk?

I write satirical songs. I call it folk because it's just me and my guitar. And I make fun of things.

Give me a comedic-folk answer to the question “How Do You Solve a Problem Like Maria?”

Um.

I kind of want you to say “with duct tape” or something like that.

I don't want to be so negative. That wouldn't be very Maria!

Milestones



The Hon. Allan J. MacEachen (MA 1946) and **Dr. LaVerne Kindree** (MD 1947) were recently named to the Order of Canada. MacEachen was named an officer for his public service career as a senator and cabinet minister. Kindree was appointed a member for his work as a health-care practitioner and philanthropist. **Peter Munk** (BASc 1952) received a promotion to companion for his contributions as an entrepreneur and a philanthropist.

The Women's Executive Network named the following U of T alumni to its 100 most powerful women in Canada list: **Sonia Baxendale** (BA 1984 VIC) of CIBC; **Sandra Hanington** (MBA 1992) of BMO Financial Group; **Shirley Hoy** (BA 1973 VIC, MSW 1975), CEO of the Toronto Lands Corporation; **Shelly Jamieson** (BA 1980 VIC), head of the Ontario Public Service; **Neena Kanwar** (BSc 1979 VIC) of KMH Cardiology and Diagnostic Centres; **The Hon. Margaret McCain** (BScSW 1955), New Brunswick's former lieutenant-governor; **Rosemarie McClean** (MBA 1997) of the Ontario Teachers' Pension Plan; **Dr. Bonita Porter** (BSc Pharm 1974, MSc 1978), Ontario's deputy chief coroner; **Elisabeth Ross** (MHSc 1999) of Ovarian Cancer Canada; **Jodi White** (BA 1969 VIC), past president of the Public Policy Forum; and **Mary Jo Haddad** (MHSc 1998), president and CEO of the Hospital for Sick Children. Three U of T students were named in the future leader category: **Sadia Rafiquddin** of Trinity College is a member of the college's G8 Research Group; **Rumeet Toor** (BA 2006 UTM) is a master's student at OISE and president of Jobs in Education, an Internet job site; **Jasmeet Sidhu** of Trinity College is founder of the Peel Environmental Youth Alliance.



PHOTO: COURTESY OF UNIVERSITY COLLEGE ARCHIVES

1945

The Bond of Victory

U of T students celebrate triumph in Europe during the Second World War

On May 8, 1945, the *Globe and Mail* trumpeted words that Canada and other Allies had been waiting for since 1939: “This Is Victory.” Germany had surrendered the day before, and Allied conquest in Europe was complete.

Swaying gracefully in front of University College, serenaded by music from speakers strapped to a Volkswagen, U of T students paid elegant homage to VE-Day. Their education, until now, had transpired against a backdrop of compulsory military training for male students, national service training for women and regular listings in the *Varsity* of students killed or missing in action.

The photo predates the famous *Life* picture, taken on VJ-Day three months later, of a sailor buoyantly kissing a

nurse in New York’s Times Square. Both photos capture the same optimistic aura. In natty overcoats and polished oxfords, the students cast a lightness of step and spirit that only the very young – those with more future than past – can project. But, of course, the war in the Pacific continued, and another kind of innocence would end that August with Hiroshima’s nuclear dawn.

U of T would soon experience a post-war boom: enrolment catapulted from 7,000 in September 1944 to 17,000 in September 1946. Almost half of all students were veterans – returning after having learned far too much in a different sort of classroom.
– *Stacey Gibson*

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Spring Reunion 2009

**MAY 28 TO
JUNE 1**

For alumni who graduated in a year ending with a 4 or 9, there's no better time to come back to campus. Reunite with old friends, relive memories and experience five days jam-packed with activities. Sit in on lectures by well-known U of T professors and alumni, including astronomer Ray Jayawardhana and artist Charles Pachter, as part of Saturday's Stress-Free Degree. Take a campus tour and stop by Alumni House at 21 King's College Circle for free refreshments all day Saturday, May 30.

To find out about more than 60 Spring Reunion events at the colleges, faculties, U of T Mississauga and U of T Scarborough, and to register, visit www.alumni.utoronto.ca/springreunion or call 1-888-738-8876.

Questions?
Call (416) 978-5881

May 28, 6-9 p.m.
SHAKER
Proof Bar & Sky Lounge
220 Bloor St. W.

May 28, 7-9 p.m.
25th Anniversary Event
Panorama, 51st floor
Manulife Centre
55 Bloor St. W.

May 29, 10 a.m.
**Chancellor's Circle
Medal Ceremony**
Great Hall, Hart House
7 Hart House Circle

May 29, 12:30-2:30 p.m.
**50th Anniversary
Luncheon**
Stop 33, 33rd floor
Sutton Place Hotel
955 Bay St.

May 30, 10 a.m.-1 p.m.
**Stress-Free Degree
Lectures**
Sidney Smith Hall
100 St. George St.

May 31, 1-4 p.m.
**Black Alumni
Association BBQ**
New College Quadrangle
300 Huron St.

June 1, 6:30-9:30 p.m.
LGBTQ Pride Kickoff
The Bata Shoe Museum
327 Bloor St. W.

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