

ONE ON ONE WITH PRESIDENT DAVID NAYLOR





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All That's Fit

How we decide what appears in *U of T Magazine*

SINCE STARTING AS EDITOR ABOUT A YEAR AGO, I'VE BEEN ASKED ONE QUEStion more than any other: "How do you choose which stories to print?"

In a university as large as U of T, we could create entire issues devoted to articles about successful alumni – many of whom are well known to Canadians. We could focus solely on promising research discoveries, fascinating moments from the university's past, entertaining tales of student and campus life, how the university is involved with communities in Canada and around the world, or plans being made for U of T's future. But none would truly capture the breadth of what is going on at Canada's largest university.

So we try to present a mixture of all of these things. In this issue, for example, is a story about Hossein Derakhshan, a former U of T sociology student who's using the Internet to lobby for political change in his native Iran. Derakhshan, 30, is one day hoping to use his profile as a well-known blogger (a kind of Internet diarist) to gain a seat on Tehran's city council and push for reform.

There's also an article about the particular conditions that lead to research breakthroughs, and a feature about how Google, the popular Internet search engine, is influencing academic libraries. You'll also find an in-depth interview with U of T's president-designate David Naylor.

When I met with Professor Naylor in June, we covered a lot of territory – his own experiences at U of T and Oxford and his priorities as president, but also tuition fees, corporate involvement in research, and student life. I asked him how he thought U of T should go about engaging alumni with the university. He responded that he thinks the university does a good of job of communicating to its grads, but needs to find more ways for alumni to have their responses heard. "We need more of a dialogue," he said.

We at the magazine would also like to engage alumni in dialogue more often. What do you think about the articles in this issue? Do you think Weblogs can prompt political reforms in Iran? What should the university do to foster more "eureka" moments among its researchers? Are there subjects you'd like to see us tackle in future issues of the magazine? We welcome letters to the editor and also invite you to send short reminiscences about your time at U of T. (The theme for the next issue is posted on our Web site under "Campus Stories.") Because we typically receive far more letters and submissions than we can print, many are published exclusively online, at www.magazine.utoronto.ca.

My questions to Prof. Naylor and his answers begin on p. 15. You'll also find questions from fellow alumni – about the university's donations policy, the planned new Varsity Centre, and non-monetary ways for alumni to contribute to U of T. We encourage you to send other questions for the president to the magazine at uoft.magazine@utoronto.ca, or to Prof. Naylor directly at president@utoronto.ca.

SCOTT ANDERSON





Soldiers' Tower Has a New Look

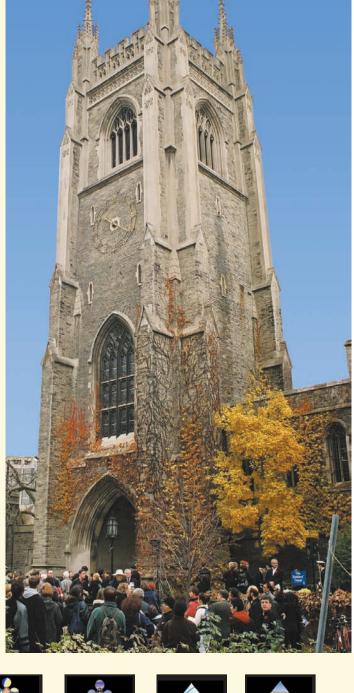
The Soldiers' Tower preserves the memory of the many members of the U of T community who sacrificed their lives in two world wars and Korea because of their belief in freedom.

On May 26, 2005, the Honourable James K. Bartleman, Lieutenant Governor of Ontario, dedicated eight new memorial stained glass windows located in the University of Toronto Soldiers' Tower. The windows, which were envisioned by the Soldiers' Tower Committee and made possible through the generous support of our alumni, help to preserve and enhance the Soldiers' Tower for future generations.

To help preserve the Soldiers' Tower, please call 416-978-2173 or e-mail annual.fund@utoronto.ca. You may also contribute online by visiting www.giving.utoronto.ca/tower

Lest we forget.

REMEMBRANCE DAY SERVICE
Friday, November 11, 2005
10:30 a.m. at Soldiers' Tower
7 Hart House Circle
St. George Campus





















etters

Better Living

Toward a more accessible, environmentally friendly U of T

STUDENTS WITH DISABILITIES DESERVE BETTER

While I am proud to hold a master's degree from U of T's Faculty of Information Studies (FIS) and am satisfied with my academic experience there, I was not surprised to read that the university received poor marks for support services

on the National Survey of Student Engagement ("Tomorrow's U of T," Spring 2005).

After accepting an offer of admission and visiting FIS in my wheelchair, I discovered that the building did not have an accessible washroom. Staff reassured me, however, that a washroom would be properly renovated. No such thing happened. Though I was vocal about the problem and was supported by faculty, staff and

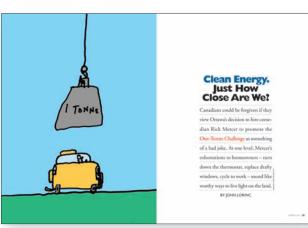
fellow students, a bathroom was not properly accessible for the entire time I was completing my master's degree. For three years, I had to make my way to Robarts Library every time I needed to use the washroom.

It is disconcerting to me that, in a nine-page article about the university's mission to build an inclusive, challenging and creative educational environment for *every* student, its efforts to meet the needs of people with physical disabilities weren't mentioned until the second-last paragraph. It read like an afterthought!

I understand that it is costly to make U of T truly accessible to people with physical disabilities, but a university interested in equality should strive to do better. Students with physical disabilities pay the same high tuition as the rest

of the university's students; they merit a concerted and sincere effort to remove barriers. U of T stands to gain from the unique perspectives and life experiences of these students, who deserve better than the frustrations I experienced.

Christina Minaki (MISt 2004) Toronto



THE NUCLEAR OPTION

I congratulate you on commissioning an article about renewable energy ("A Cleaner Future," Summer 2005). However, I was surprised that the writer, John Lorinc, omitted any reference to U of T engineering professor David Scott, who was a driving force behind the idea of a hydrogen economy. Lorinc speaks of Germany's "astonishing 14,000 megawatts of wind power" capacity but gives no indication of the actual electrical power *generated* (wind is a notoriously unreliable source of electricity). He also fails to mention that nuclear power is an environmentally benign source of energy capable of providing a bridge into a "cleaner future."

> F. H. Kim Krenz (MA 1942) Lakefield, Ont.

COOLER HEADS

Congratulations on great articles about clean energy and U of T's efforts to make the campus green. When I worked at the Ministry of Energy in the early 1990s, the provincial government and most universities were slow to adopt energy conservation programs. Professor Savan may want to consider connecting to the Deep

Lake Water Cooling System to provide air conditioning for the St. George campus. Queen's Park has decided to connect, and this should make it more economical for U of T.

> Carman Chisamore Toronto

THE AMAZING DAPHNE SCHIFF

I was delighted to see Daphne Schiff leading off Alumni Notes in the summer issue. What you

failed to mention about this amazing woman is that she was on the faculty of York University for 38 years. In June, Professor Schiff received an honorary doctor of laws degree at York's convocation for her daring and generous acts of philanthropy as a pilot. We all honour her.

Lorna R. Marsden President, York University (BA 1968 UC, LLD Hon. 1995) Toronto

Letters may be edited to fit available space and should be addressed to University of Toronto Magazine,
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M5S 3J3. Readers may also send correspondence by e-mail to uoft.magazine@utoronto.ca or fax to (416) 978-3958.

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Leading Edge

Lines of Defence

esearchers at U of T and Mount Sinai Hospital have developed Canada's first two human embryonic stem cell lines, giving scientists across the country new potential for eventually discovering treatments and cures for many chronic and fatal diseases.

"My hope - and the hope of my laboratory team - is that our step of developing the first Canadian embryonic stem cell lines will ultimately bring Canada and the world closer to treating or curing diseases such as multiple sclerosis, Parkinson's disease, Alzheimer's disease, diabetes and spinal cord injuries," says **Professor Andras Nagy of** medical genetics and microbiology and a senior scientist at Mount Sinai's Samuel Lunenfeld Research Institute.

Nagy headed a team of five scientists who have been developing stem cell lines which will be freely available to Canadian scientists - for the past two years. Embryonic stem cells are highly valued by medical researchers because of their unique ability to transform into any of the body's specialized cells, be it heart, brain, blood or bone. "Our research remains in an early phase, but [it] holds enormous promise for regenerating damaged tissues that cause incurable diseases," says Nagy.



Home Cheap Home

an effort to cut costs when purchasing a new home, buyers are missing a chance for greater savings in the long run, says Professor Kim Pressnail of the department of civil engineering. Buyers often do not request that their homes be built to energy-efficient standards that could reduce their annual energy costs by up to 50 per cent.

"The reality is that energy conservation puts dollars back into homeowners' pockets," he says. "Homebuyers often go for the least initial capital cost without considering future operating expenses, including future energy costs."

In a recent paper, Pressnail and colleagues tallied the cost of building a

model home to the minimum Ontario Building Code standards and associated energy costs. They then calculated the cost of upgrading the home to the R2000 energy-efficient standard developed by Natural Resources Canada. They found that the additional cost to the homebuyer of upgrading a \$160,000 minimum-standard home was \$5,560, but it translated into energy savings of \$818 a year.

Pressnail adds that the returns are even greater if future fuel costs are considered. "Since houses built today have a 100-year lifespan and since energy prices will surely rise, the economic and environmental case to build better houses now is even more compelling."

Buyers often do not request that their homes be built to energy-efficient standards that could reduce energy costs by 50 per cent

Why Kids Keep Quiet About Abuse

hildren who don't tell anyone about being sexually abused often come from families that have rigid gender roles and other similar characteristics, according to a U of T researcher.

After conducting interviews with 38 adult survivors of childhood sexual abuse, Professor Ramona Alaggia of social work identified several recurrent themes. She found that survivors (who did not initially disclose their abuse) often came from families where fathers were head of the household and mothers had little power. There was often family violence (spousal abuse and other forms of

child abuse) and a lack of communication. Social isolation also prevailed: the child or the family as a whole did not fit into their environment and did not have social supports, leaving the child feeling that he or she had no one safe to tell.

"It is important to identify disclosure barriers so they can be eradicated. When children are not able to disclose sexual abuse, the effects are potentially devastating," says Alaggia. "Professionals need to cultivate the necessary skills to pick up on cues and difficult-to-discern patterns of behaviour in children that may indicate the presence of sexual abuse."

When children are not able to disclose sexual abuse, the effects are potentially devastating

Foiled Again

ackers, beware: a new quantum-cryptography method designed at U of T may soon increase Internet-communication security.

Quantum cryptography uses particles of light to share encryption keys relayed through fibre optic communications. A paper published in *Physical Review Letter* demonstrates how senders can vary the intensity of laser light particles (photons) to create decoys that catch eavesdropping attempts.

This new technique manipulates a laser to create different signals of various intensities. The signals act as decoys to distract the eavesdropper from the message containing the encryption key. "Any attack will necessarily affect the decoy states and therefore be caught by the legitimate users, who will then use an encryption key only when it is guaranteed to be secure," says the study's lead author Professor Hoi-Kwong Lo of U of T's department of electrical and computer engineering and department of physics.



African Queen

he queen of Sheba was once one of the world's most powerful leaders, but there are few clues left about this woman who ruled an influential African nation – perhaps, as some archeologists maintain, in what is now southwest Nigeria.

Lynne Teather, a professor of museum studies, is working in Ike-Eri, Nigeria, to unearth the queen's complete life story and to have a new museum and interpretive centre built in her honour. Ike-Eri is believed to be the location of the queen's last home and gravesite.

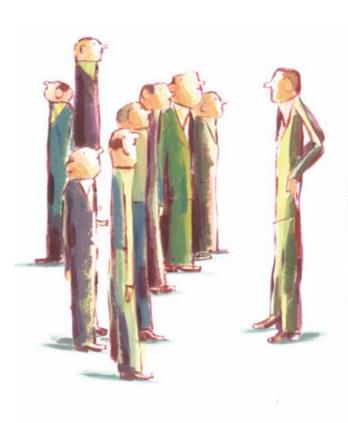
"Each year both Muslim and Christian religious pilgrims come to this site in Ike-Eri to pray and honour the queen of

Sheba – also known as Bilikisu Sungbo to those of the Islamic faith – even though Ethiopia maintains that she is actually buried in their country," says Teather. "Indigenous knowledge and oral traditions maintain that the site in Ike-Eri is the shrine of the queen."

Through the Bilikisu Sungbo Project, Teather is working to uncover the queen's history and to establish a feasibility study on the impact of tourism to the site. She wants to research how new roads to a planned museum and new employment opportunities would affect the local population.

ILLUSTRATIONS: PIERRE PRAIT, © DENNIS LEES/CORBIS

Leading dge



Teamwork Differs for Men and Women

hen it comes to leadership in the workplace, work teams made up mostly of women tend to share leadership

> roles more than those dominated by men, says Jennifer Berdahl, a business professor at U of T's Joseph L. Rotman School of Management. This,

she says, influences
how men and
women work
together on teams.
Berdahl and
co-author Cameron
Anderson, a professor
at the University of
California, Berkeley,
examined the leadership
behaviour of 169 students
enrolled in an organizational
behaviour course. Students were

divided into three types of groups: mostly men; equal numbers of men and women; and predominantly women. Each work team chose an organization to study, presented a proposal and wrote a project paper. The students also answered a questionnaire about their preferences for egalitarian or hierarchical structures in groups. "Women tended to prefer egalitarian norms in work groups whereas men favoured more hierarchical structures in groups," says Berdahl.

The researchers found that all the teams that were predominantly male or female both started off with leadership concentrated in one person. Over time, however, teams with mostly women became more egalitarian; those with mostly men continued taking direction from one person. They also found that the groups with centralized leadership received poorer grades. "In a creative-project team, it's really important to ensure there is equal opportunity for participation," says Berdahl.

Preventing Postpartum Depression

he key to preventing postpartum depression may be to provide the mother with individual support from a health professional after she has given birth, and to tailor this support to the mother's needs, says a U of T researcher.

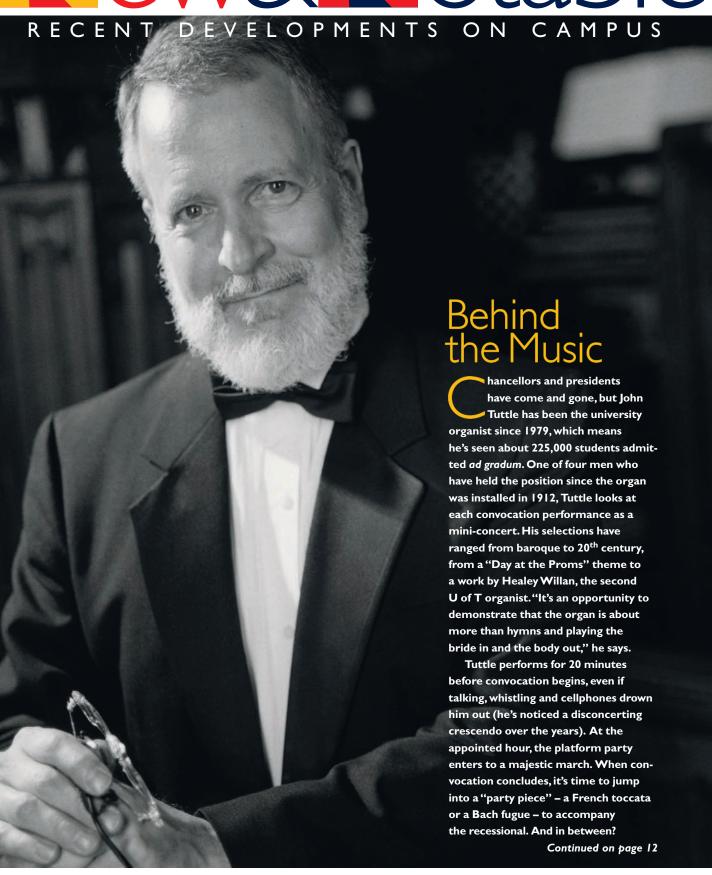
"Health professionals want to identify pregnant women who may be at risk for postpartum depression in hopes of initiating preventive strategies," says U of T nursing professor Cindy-Lee Dennis. "But in my review of studies from around the world, I found no preventive effect of any strategy initiated before birth, including prenatal classes specifically targeting postpartum depression. It's not because the interventions are theoretically weak, but it's because compliance is low – women are busy and don't attend the classes."

Dennis conducted a systematic review of trials involving 7,697 women. Her study, published in the July issue of British Medical Journal, suggests postpartum depression may be preventable. In analyzing the prevention strategies used, Dennis found an overall 19 per cent reduction in postpartum depression. Individual assessment and intensive support provided by a health professional to atrisk women after they give birth was the most successful approach; groupbased strategies weren't as effective. Risk factors for postpartum depression include psychiatric history, a significant number of life stressors and lack of support.

"Individual, flexible postpartum care provided by a health professional and based on maternal need may have a preventive effect," Dennis says.



otable





New&Notable

Appointments

ive new deans and principals
have been appointed to
the University of Toronto.

Professor Tattersall Smith, an expert
on forest sustainability, began as
dean of forestry in July. Tattersall
Smith was formerly the head
of forestry science at Texas A&M
University and his research
interests include forest ecology
and soil science.

Professor Janet Paterson's term as president of Innis College also began in July. A former chair of the department of French and associate dean of humanities, Paterson is an expert in Quebec literature and literary theory.

Professor Sylvia Bashevkin of political science is the new principal of University College. Bashevkin, known for her research in the field of women and politics, has served as vice-principal of University College.

On Nov. I, Professor Sioban
Nelson will begin her new role
as dean of nursing at U of T.
Nelson was the head of the School
of Nursing at The University of
Melbourne and is an expert in
nursing history.

Marilynn Booth, currently dean of The G. Raymond Chang School of Continuing Education at Ryerson University and a professor of nursing, will become director of U of T's School of Continuing Studies in January.

Professor Susan Pfeiffer, dean of the School of Graduate Studies and a professor of anthropology, has added a new title to her portfolio. She has been appointed to the newly created position of vice-provost (graduate education) in June, which will run concurrent with her term as dean.

CThe organ is about more than hymns and playing the bride in and the body out **)**

Continued from page 11

Tuttle does have one secret: he tucks a novel inside his program to read while the hoodings happen. (He sits through more than 15 ceremonies a year.) But when a Hart House Chorus singer or a Faculty of Music organ student approaches the chancellor, Tuttle – who has been chorus conductor since 1981 and a U of T organ professor since 1978 – gives them a big, blush-inducing wink. Once, he even stood up and snapped a picture of an astonished chorister.

To raise money for restoration work on the Con Hall organ, world-renowned soprano Isabel Bayrakdarian (BASc 1997) will be performing a benefit concert at Convocation Hall on Nov. 25. Tuttle estimates restoring the organ will cost \$150,000, but his dream is to raise a quarter million dollars and pull out all the stops, so to speak. "The organ at Yale is considered one of the great ones in the world, and millions of dollars have been spent on the organ

at Princeton," he says. "The Con Hall organ has wonderful placement in the building, the acoustics are good and it already has some of the most expensive stops, so the potential is there for it to be world-class, too."

On Sept. 7, it was Tuttle's turn to be hooded when he received an honorary Doctor of Sacred Letters degree from Trinity College. Preparing for the occasion, he recalled the words of mathematician Donald Coxeter, who received an honorary degree at one of the first convocations Tuttle played. Coxeter said he felt fortunate to have been paid all those years for what he would have done anyway. "That has always stuck with me," says Tuttle. "What a marvellous way to go through life."

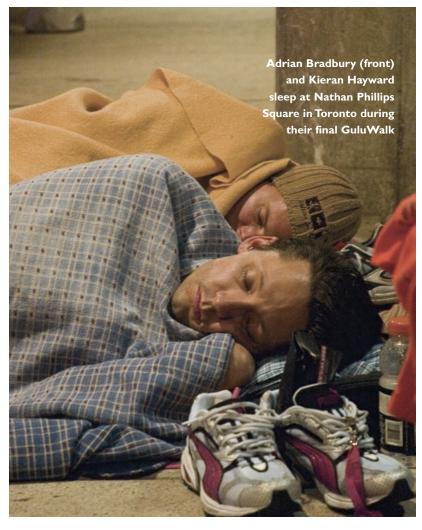
- Julia Armstrong



The Con Hall organ was installed in 1912. A benefit concert in November will raise money to restore it

Erasmus, Old English and Elizabethan Drama

he Smithsonian Institution, one of the world's leading cultural and educational centres, was the site of three lectures presented by University of Toronto professors in May. The talks ranged from "Making Sense: Meaning in Old English" to "Erasmus and His Vision" to "Elizabethan Stages: Early English Drama" and mark the first time any Canadian university or college has been invited to the institution's renowned Great Schools Forum.



Before Night Falls

is a childhood bedtime ritual inspired by fear, not comfort. Each evening at dusk, as many as 40,000 children in northern Ugandan villages pack their blankets and walk up to 12 kilometres into cities to sleep in shelters. They leave to escape nighttime raids by the Lord's Resistance Army, a rebel group that abducts children and forces them to fight the government's armed forces. To heighten awareness of the country's 19-year civil war and raise funds for these "night commuters," two U of T staff members organized GuluWalk – named for one of the cities where the children seek refuge. Every night in July, Adrian Bradbury and Kieran Hayward (PHE 2000) walked 12.5 kilometres from Toronto's east end to City Hall. They would sleep a few hours outside, then trek back to their starting point at sunrise before going to work at the Faculty of Physical Education and Health.

"We got so much more media attention than we anticipated and touched enough people that we consider it a success," says Bradbury, founder of the charitable organization Athletes for Africa. GuluWalk consumed all their non-working hours, disrupted their sleep cycle and caused a few aches and pains, yet both men say motivation was never a problem. "We always knew that July 31 would come, but for the real night commuters there is no end in sight," says Hayward.

Now that their own walk is over, the two men are planning a one-night event later this fall when mass Gulu Walks will take place in cities across the world. In December they hope to travel to Gulu to meet with children. "A kid that lives in a village outside of Gulu should matter just as much as a kid that lives around the corner from me," says Bradbury. "This kind of thing would never happen in Canada, so why would we let it happen there?" - Megan Easton





Accolades

rof. Kenneth Bartlett and Prof. David Dunne are among the 10 recipients of 3M Teaching Fellowships - the only national award recognizing teaching excellence and leadership in Canadian universities. Bartlett is founding director of the Office of Teaching Advancement, coordinator of the First-Year Seminars Program and professor of history and Renaissance studies. Dunne, a marketing professor at the Rotman School of Management, recently helped launch the Student Agency Project, in which MBA students team up with Ontario College of Art & Design students to create ad campaigns for non-profit organizations.

Two of U of T's top scholars and researchers have been elevated to the rank of University Professor, the highest honour the university accords its faculty. Prof. Mark Henkelman of medical biophysics was the first Canadian to enter the field of magnetic resonance imaging. In 2002, he started the Mouse Imaging Centre at The Hospital for Sick Children. Prof. Stephen Waddams is a specialist in private law, legal theory and legal history, and the holder of the Goodman/Schipper Chair in the Faculty of Law.

Ron Baecker, a professor of computer science and the founder of the Knowledge Media Design Institute at U of T, has recently received two prestigious awards. In April, he was elected to the international **CHI (Computer-Human Interaction)** Academy for his extensive contributions to the field. In May, the Canadian Human-Computer Communication Society presented Baecker with a lifetime achievement award. Baecker's work on picture-driven animation and the Genesys system helped launch the field of interactive computer animation.



One One

WITH U OF T PRESIDENT DAVID NAYLOR

Construction hoarding blocks an exit from the Medical Sciences Building on King's College Circle, but David Naylor encourages a visitor to peer through the cracks to catch a glimpse of the towering glass face of the new Terrence Donnelly Centre for Cellular and Biomolecular Research. "Impressive, isn't it?"

Naylor, who begins his term as U of T's 15th president Oct. 1, takes office at a hopeful point in the university's history. The Donnelly CCBR, one of several new buildings slated to open this school year, will heighten U of T's profile as a global centre for research and discovery. New facilities such as the Hazel McCallion Academic Learning Centre, the Leslie L. Dan Pharmacy Building and the UTSC Arts and Administration Building, will offer an enhanced environment for teaching, learning and research at all three campuses while showcasing the work of some of the city's (and the world's) most exciting architects. Canada Research Chairs continue to retain bright, young faculty, and new funding from the province stands to ease a decade-long strain on resources.

Still, plenty of challenges remain. Prof. Naylor joined *Uof T Magazine* editor Scott Anderson in mid-June for a discussion about the future of the university, the role of the president and the goal of creating a truly first-rate student experience.

We need to be closely attuned to students' views of the university and their experiences inside and outside the classroom, with a view to improving them?

You've spent 25 years at the University of Toronto. What is it about this institution that has made you want to dedicate a large portion of your life to it?

I get a big kick out of smart and motivated young people, and I've always enjoyed new ideas. The University of Toronto and its institutional partners far and away have more of these than any other place in Canada.

What do you reflect on most

proudly from your term as dean of medicine?

I think it was a happy and productive period for the overwhelming majority of our faculty, staff and students, but that's almost entirely about great people and good timing. An academic administrator is a little like an orchestra conductor. Sometimes you help write a little music, but there's so much talent and creativity around that your role really is to keep things organized and co-ordinated. You can pick some of the soloists, encourage all the musicians and worry about the acoustics in the concert hall. But the quality of the players ultimately matters a lot more than the person waving the baton.

What do you think is the most important role of the president of U of T?

The president has to advocate endlessly for the university because the students, faculty and staff deserve every measure of support we can bring them. The University of Toronto is the best university in Canada, and, paradoxically, that makes advocacy harder, not easier. Canadians are big-hearted but they don't warm to domestic front-runners. I look at it differently. The University of Toronto is in a tough international race and we need *more* resources to move up the standings.

Why did you want the job of president?

I view the presidency as a chance to make a difference in an institution that matters a lot – not only to the people here, but to the Greater Toronto Area, the province and the country.

Those of us with an administrative bent have had to make a choice about where we go with our scholarly lives. When I became dean, I decided to cut way back on research and give up clinical care – two things I had really enjoyed. Having made those choices, I was forced to confront certain consequences. Was I going to retool after six years as dean, go back to a research and clinical life and take on a group of new graduate students – something else I really enjoyed? Or was I going to become more immersed in the administrative life of an institution that I cared about a lot? It looks like I'm about to be fully immersed!

Do you have a guiding philosophy?

I believe in getting great people into leadership roles and letting them do their good work. We need to be closely attuned to students' views of the university and their experiences inside and outside the classroom, with a view to improving them. I'd like us to celebrate and communicate what we do well, without losing sight of the challenges we face. And we need to keep the university engaged with the wider world – at the municipal, regional and international levels.

In your career, have you had any role models or mentors?

I've learned a huge amount from many people, including those who were notionally working for me or reporting to me. The great thing about the university is that there are scores of individuals in leadership roles who are phenomenally smart and committed and idealistic about the institution and its values.

Former University of Toronto president John Evans has been an invaluable advisor and friend for many years. John was my boss from 1991 to 1998, when he served as the first chair of the board of the Institute for Clinical Evaluative Sciences in Toronto. He had the potential misfortune of trying to guide a startup non-profit corporation with a novice CEO, but he had a real gift for seeing strategic issues clearly, keeping things positive, staying out of the operational weeds and leavening all of our proceedings with humour. Later, as dean of medicine, I sought his wise counsel on many occasions.

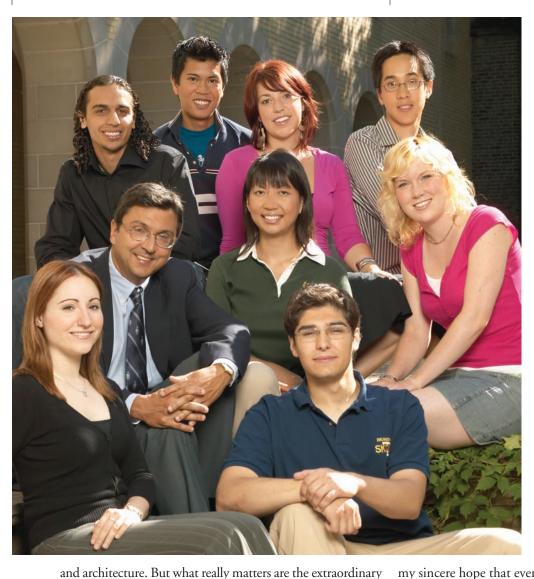
What do you enjoy most about your work?

Watching people grow and make a difference. That's why academe is so much fun. Brilliant young women and men come to us from myriad backgrounds, and they transform before our eyes from teenagers still finding their way in the world to adults ready to make their mark on the planet.

Clinical care offers different rewards – the opportunity to make an immediate and tangible difference in people's lives. That's a huge privilege. What ultimately gives you a sense of meaning in your working life is the interactions with people, be it students or colleagues or staff or decision-makers or benefactors. That set of relationships – the sense of being joined in trying to make a difference in the world – is ultimately the joy of doing these jobs.

What do you consider to be U of T's greatest strength?

People. One could look to the university's extraordinary traditions or point out the exciting dynamism of the cities of Toronto and Mississauga. One could highlight Ontario as a safe and tolerant society or call attention to our wonderful facilities



David Naylor plans to meet regularly with students to gain a better understanding of their perspectives. "Student narratives are enriching for any academic administrator to hear," he says.

At a time when the endowments of many American schools far exceed U of T's, what must this university do to procure the funds necessary to remain competitive?

I understand that our endowment is smaller than some of our American competitors'. But this country is about 100 years younger than the U.S. and one-tenth the size, and that means there are fewer foundations and fewer individuals of extraordinary net worth to make large donations. That's why we should be so appreciative of where our endowment stands today. We ought to thank the countless thousands of people who have supported the university so generously through the years. We will launch another campaign during my term, and it's

my sincere hope that everyone who has supported us before will be able to come forward again, and that we'll also gain new friends and supporters.

At the same time, this is a public university. If you think about the impact of the recent provincial budget, which will add tens of millions of dollars of new funding to the university, the type of endowment we'd need to generate that level of funding is enormous. The bottom line is that we need to push for public funding from both levels of government while talking to our friends and benefactors about all the areas where their private gifts can make the biggest difference.

And its greatest weakness?

We have to watch for two things at the University of Toronto. Despite the neighbourhoods, this can be an overwhelming place for young people. We need to enhance the student experience, and that's going to take some work.

people - diverse, dynamic, committed and far more cohesive

than many realize. This is a big place, but people forge their own communities inside it. There are a lot of neighborhoods

within the University of Toronto – and an enormous wellspring

of talent. Our alumni represent a living advertisement for the

excellence of the institution. It all comes back to the people.

The University of Toronto must also promote itself better. Doubtless there are many Canadians who have no conception of just how many of the faculty at universities from coast to coast earned their PhDs at this university. They don't recognize just how many discoveries are made here every week, and how many of the national and international prizes that Canadians take home to their universities actually come to the University of Toronto. We have to be very smart about celebrating what we have here rather than taking it for granted or letting others take us for granted. It's important that we not only continue to walk the walk of excellence but do a little more talking about who we are - with Canadians and in the wider world.

Do you think tuition fees are at an appropriate level? Should they be deregulated?

Responsible self-regulation is the way forward. We're definitely not talking about a fully market-oriented approach to tuitions in which we simply try to maximize revenue. The University of Toronto is a public institution. The brightest students should come here, regardless of their economic circumstances. When we think about tuitions, they have to be bundled with a student-aid policy.

Do I favour institutional autonomy in setting tuitions? Absolutely. Do I think that this has to be exercised responsibly, with a focus on proven accessibility and generous student aid? Absolutely.



CCWe need to ask our alumni how they would like to be involved with the university. We've become better at communicating *to* our alumni. Now we need more of a dialogue **33**

Corporate support of universities is a topic you often hear about in conjunction with academic freedom. What level of support from corporations do you think is appropriate?

Corporate funding relative to total research dollars at the University of Toronto and the affiliated teaching hospitals has been falling. In the 2003-04 academic year, corporations provided us with just 10 per cent of our total research dollars. That's about half the level it was eight years ago.

To me, the issue is less about the source of the research money than whether we have the appropriate safeguards in place. If we have the appropriate legal and ethical oversight, if we have protections of academic freedom built into contracts with public or private sponsors, then I think our faculty should be able to pursue a set of scholarly goals with those funds. I certainly respect those who are anxious about sources of funding and worried about the implications. But we also have to respect the right of our colleagues to pursue their research agenda with funds from whatever source, as long as the necessary safeguards are built in.

Tell me about a memorable aspect of your own student experience at U of T.

Arriving here from a small town and entering residence at University College was an incredible experience. It was the

United Nations. We talked late into the night about where we'd come from and what we'd been through and the world's problems. At the same time we attended classes in Convocation Hall – even back then. There were stressed TAs who clearly weren't thrilled to have a mob of equally stressed undergraduates peppering them with questions and pulling on the sleeves of their lab coats. It was a big place. But I felt at home right from the start. I will spare you the more detailed reminiscences of dormitory life, but it was an enormous amount of fun.

Considering how many students today commute to campus, it would be difficult to recreate the experience you just described for many current U ofT students.

We have to recognize that many of our students commute and offer them a range of opportunities to participate fully in campus life. That may mean more student centres. It may mean going the extra mile in programming. It certainly means asking these students what *they* can do to remain engaged, rather than assuming that this is simply a one-way street. But I don't think we can or should use the high number of commuters as an excuse for providing a less-than-optimal student experience. There are other North American campuses with commuter populations. We have to get on with studying them and figuring out how to engage our own commuter students better.

How do you plan to keep in touch with students while you're president?

I intend to meet regularly with student leaders, but I'd also like to find ways to meet students who are *not* in elected positions – who are perhaps less engaged with university life – because I'd like to understand their perspective. Surveys allow us to quantitatively compare our own situation with that of other Canadian universities and U.S. peer institutions. But there's also merit in narratives. As a doctor, I have to distinguish between a disease, classified in objective and evidence-based terms, and illness, which is the felt experience of the patient. In the same way, student narratives are enriching for any academic administrator to hear.

You Asked

Alumni question David Naylor about big tobacco, the new Varsity Centre and ways to get involved

Sometimes universities seem to value their alumni most for the money they donate. I wonder if you see non-monetary ways for alumni – particularly those who are retired and living in the Toronto area – to contribute to the university. Peter Broughton

(BSc 1963 VIC, MSc 1971)

Alumni contribute to U of T in many ways. They mentor students; serve as members of advisory councils to many departments and faculties; are actively involved in governance of the university and our ancillary corporations; and play a role in search committees for academic administrators and student-scholarship

and prize committees. Alumni are also among the most active participants in continuing education offered by U of T. But I would welcome any new ideas about how alumni can be even more involved with the university!

I stopped donating to U of T after St. Michael's College accepted a \$150,000 gift from Imasco – a major cigarette manufacturer – in 2002. What is your view of universities accepting funding from the tobacco industry?

Denise DePape (BSc 1970 St. Mike's)

As a physician with a long-standing research

As a physician with a long-standing research interest in coronary disease and public health, I understand your perspective.



Your own student experience took place at U of T as well as Oxford. What was memorable about Oxford? Can that experience be applied here?

What came alive for me at Oxford was the value of small-group learning, particularly the Oxford tutorial system. We've taken a big step forward at the University of Toronto with programs such as the 199 seminar series, Vic One and Trinity One. We can't eliminate the Con Hall experience, but offering seminar-style learning will be very important for us.

How will we know if we've served our students well?

That's an interesting question because it is so seldom asked. Completion rates matter – we don't want students to leave before they finish a degree. But we need to think more deeply about our graduates. Are they self-directed learners? Are they ready to contribute to the world? These things are very difficult to measure. Where do our graduates end up? Have we produced leaders in business, the arts, the professions, science and academic life? Are our political leaders disproportionately drawn from the ranks of University of Toronto graduates?

We want our students to go on to become leaders in whatever walk of life they choose. Continuing a conversation with our alumni strikes me as an important way of figuring out whether we're doing our job.

How should we engage alumni in the life of the university?

I think we are doing a good job communicating with alumni from different divisions in the university. What still needs some thought is how we hear *back* from alumni about the university's place in the world – how it is perceived, and how it can be improved. We need to listen to our alumni – not just

at graduation or at their 50-year reunion – to find out what they learned here, why we might feel good about what we are doing and how we might do better.

What role would you like alumni to play, ideally? What role could they play?

It would be great if more alumni could take on mentorship roles with current students. I know some divisions and campuses have initiated mentorship programs. Let's evaluate and fine-tune the existing programs and then implement them more widely.

I'd also turn the question around. We need to ask our alumni how *they* would like to be involved with the institution. We've become better at communicating *to* our alumni. Now we need more of a dialogue.

I suspect most of your waking hours will be spent on university business. If and when you get free time, what will you do?

I still have three children at home – ages 12, 13 and 15 – and none of them lack personality. I will doubtless be a long-distance tutorial assistant – and occasional chauffeur – for my eldest daughter, who is in the second year of applied health sciences at the University of Waterloo. I will enjoy that grand piano at 93 Highland. The acoustics of the drawing room are pretty spectacular, but if I get too carried away I expect the kids will drive me into the basement to tinkle on my old electric piano. And I will try to find some time to read the occasional novel and play the occasional round of golf. But it's much more likely that I'll be obsessing over my golf swing and *imagining* that I'm on the golf course. It will be a busy few years. I'm looking forward to them!

St. Michael's is a separate corporate entity and has the autonomy to determine its own donations policy. However, this has been a difficult issue for the University of Toronto at large. The university values and protects its integrity and must always be very careful with respect to donations that have the potential to damage its reputation. For example, we take very seriously the current bans on tobacco advertising, and as an institution would not pursue or accept a donation that directly or indirectly promoted tobacco products. Similarly, we would not accept a donation that compromised the right of our professors or students to assess tobacco products independently and critically.

At the same time, U of T is a community of diverse beliefs, customs, moral positions and traditions. Academic freedom is the most important value of the university. Whatever my own views may be, I must affirm that individual

faculty members have the freedom to do research sponsored by tobacco firms or to solicit donations from them, so long as the funding agreements are consistent with ethical-legal guidelines and the university's policies.

For more information about U of T's fundraising policies, visit www.utoronto.ca/govcncl/pap/policies/fundrais.html

I noticed there was no corporate advertising associated with the Varsity Centre announcement. Is the University of Toronto paying for it entirely? In this era of tight education funding, why wasn't this project privatized? Ron Woodward (MBA 1976)

The university's academic plan, Stepping Up, identifies the student experience as our number-one priority. The renewal of the Varsity site will be a huge benefit for students who will use the new Varsity Centre for academic programs,

Varsity sports, intramurals and recreation. The first phase, to cost \$16 million, will be paid for entirely by the university with no student levy.

Regarding private funding, I can report that numerous attempts have been made to redevelop the Varsity site over the years. However, the area is too physically constrained to meet the primary needs of both external partners and the university. For subsequent phases of the development we are seeking support from a variety of sources, including individual donations, corporate sponsors and private partnerships. One of the happy results of proceeding with Phase I is that we will have an athletic facility that will serve our students and other members of the university community, and be available to our neighbours.

Do you have ideas or questions for President Naylor? Please e-mail your comments to president@utoronto.ca.

WHERE DO GREAT IDEAS COME FROM? BY DAN FALK

ichael Georges didn't run naked through the streets as Archimedes did almost 2,500 years ago, but the chemistry professor at the University of Toronto at Mississauga did experience his own eureka moment in the early 1990s.

Georges discovered a specific way of constructing chains of molecules known as polymers. His technique allows scientists to build long polymer chains by adding monomers (single molecules), one after another. Because each new polymer has new chemical properties, the range of possible applications, from medicine to materials science, is virtually endless.

The process of discovery wasn't easy. Georges was working at Xerox and many of his colleagues were certain he would fail. One of the company's vice-presidents warned him that the project would be cancelled because it wasn't producing results. "I said, 'Just give me a few more months,'" Georges recalls. "Well, in February of 1992 we got it to work. And it was a big deal." The discovery is now recognized as one of the great breakthroughs in polymer chemistry of recent years. "We were ecstatic," he says.

Georges' discovery represents the kind of creativity and drive for understanding that researchers strive for in just about every field, from the arts and humanities to business and medicine. A mythology has developed around these

moments of enlightenment, and there are dozens of well-known examples from the history of science, literature, art and music. The most famous is still the story of Archimedes in ancient Greece. On seeing the water overflow as he settled into a much-needed bath, the mathematician deduced a way of calculating the density of an object regardless of its shape – and opted to share the news with the world without bothering to put his clothes on.

There is still a great deal that we don't know about eureka moments, but scientists from a broad range of disciplines, including a number of researchers at the University of Toronto, are tackling the question from several directions. They're trying to determine what conditions produce "aha" moments, how such insights are related to creative thinking and even what parts of the brain are involved. Through this research, the process of creative insight is gradually coming to light.

There are some aspects of the creative process that almost everyone agrees on. One is that the people who come up with great ideas come up with *lots* of ideas, period. These people are idea generators and better able than most to tell good ideas from bad ideas – or at least to make educated guesses as to which ideas are worth pursuing.



GREAT EUREKA MOMENTS IN HISTORY

Friedrich August Kekulé von Stradonitz The ring-like structure of the benzene molecule came to Kekulé von Stradonitz in 1864 when, at the age of 35, he dreamt of odd shapes and movements – and snakes. He later recounted the dream: "But look! What was that? One of the snakes had seized hold of its own tail, and the form whirled mockingly before my eyes. Then, as if by a flash of lightning I awoke." It remains chemistry's most famous aha moment.

Albert Einstein ► In 1907, at age 28, Einstein was working in the patent office in Bern, Switzerland, when, by his own account, a "breakthrough came suddenly one day." Instead of keeping his mind on his work, his thoughts wandered to,"If a man falls freely he would not feel his weight." Einstein's response to his thought was immediate:"I was taken aback. This simple thought experiment made a deep impression on me." By linking accelerated motion and gravity, Einstein eventually created his masterwork, the general theory of

relativity. However, it took him eight years to work through the mathematical details. ▼Sir Paul McCartney The tune for McCartney's

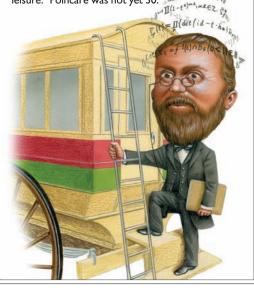
most successful song came to him fully developed in 1964. "I woke up one morning with a tune in my head and thought,

song in history.

'Hey, I don't know this tune - or do I?"" Friends and colleagues eventually convinced the 21-year-old Beatle that the tune wasn't a known jazz melody, as he suspected. It was something new. In The Beatles Anthology, McCartney reveals that for several weeks the

working title was "Scrambled Eggs." The lyrics: "Scrambled eggs, oh, my baby, how I love your legs - diddle diddle - I believe in scrambled eggs." With its new title, "Yesterday," and much-improved lyrics, it has become the most-recorded

▼ Jules-Henri Poincaré In a famous essay titled "Mathematical Creation," the mathematician Poincaré recalled an aha moment involving a particular kind of mathematical construct known as "Fuchsian functions." For two weeks he struggled to prove a particular property of these functions, but writes that he "tried a great number of combinations and reached no results." A few days later he left his home in Caen, France, to join some colleagues on a geological excursion to Coutances, where he recalls boarding an omnibus. "At the moment when I put my foot on the step the idea came to me, without anything in my former thoughts seeming to have paved the way for it," he wrote. "On my return to Caen, for conscience's sake I verified the result at my leisure." Poincaré was not yet 30.



Georges is a good example of an idea generator. "Ideas pop into my head in the middle of the night," he says. "They pop into my head when I'm driving to work – sometimes when I'm in traffic and not even thinking about my work." The corollary, of course, is that most of those ideas lead nowhere. But a good scientist isn't discouraged by such temporary setbacks. "Eighty-five to 90 per cent of my ideas don't work," says Georges. "But it doesn't mean that they weren't good ideas - you have to try these things until you get one that actually works. And then you get your breakthrough."

Nobel Prize laureate John Polanyi, U of T's most famous

chemist, agrees. He points to James Watson's account of the discovery of the structure of DNA, which is recounted in Watson's popular book The Double Helix. Watson tells how his research partner, Francis Crick, ran into a Cambridge pub one day screaming about the breakthrough. Polanyi believes that such moments, while memorable, are the exception rather than the rule. "Most people who run into pubs saying they've found the secret of life have already been to several other pubs and are drunk," jokes Polanyi. In his own lab, Polanyi says that researchers who burst in to announce that they've made a great discovery often come back the next day with a sheepish look on their face, forced to admit they've made a mistake. Most discoveries rest on long, laborious research efforts.

"I'm convinced that before Archimedes did what he did, he must have performed similar experiments quite a few times," Polanyi says. Georges confirms that his breakthrough with polymerization did not come overnight. "I had the idea, but it didn't work immediately," he says. "I probably worked six days a week, 10 hours a day.... It took eight to nine months of solid work."

Even if such insights come only after periods of intense concentration and mental focus, there is some evidence to suggest that they form a distinct type of mental process. Jordan Peterson, a U of T psychology professor studying personality, motivation and achievement, looks at such moments of insight in terms of pattern recognition. All of the months (or years) of searching for a solution to a problem are like having a partial pattern – say, one-third of a pattern, he says. "And then when you hit upon the right combination of events in the external world, that fills in the last two-thirds," Peterson explains. "All of a sudden you can see something as complete instead of partial, and that's an aha moment - where the juxtaposition of what you know and what you experience enables you to understand something in a completely novel way." In the Archimedes case, the external stimulus was the sight of the bathtub overflowing; with this new information, his theory of density and displacement was complete. Such eureka moments, Peterson says, allow you to "see that two things are related in a way that you never thought before, and this often opens up a vista of possibility."

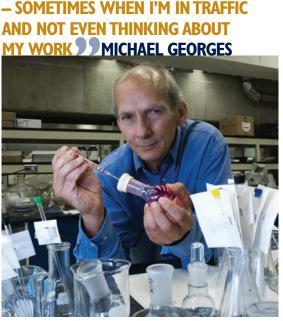
Peterson's research sheds light on how the minds of creative people differ. One key, he says, is a low level of latent inhibition. Our brains are constantly struggling to make sense of

> the flood of information streaming in via our senses. Some of these pieces of information are vitally important. Others - in fact, the vast majority - are completely irrelevant. Latent inhibition refers to a person's ability to ignore the great bulk of unimportant information. A person with higher latent inhibition is better at filtering out redundant or useless information – but may be less creative. Those with lower latent inhibition do a poorer job of filtering and may be more creative.

> "The world is way more complicated than it appears to you unbelievably more complicated," Peterson says. "So a lot of what your brain does is filter out information. What you perceive at the end of that intense process of filtering is a very narrow, select and specialized slice of the world."

Peterson recently examined this idea with researchers at Harvard University in Cambridge, Mass. The team looked at Harvard undergraduates who had either published a novel or book of poetry, recorded and sold a musical composition, patented an invention, had their artwork displayed in a gallery or made a significant scientific discovery. The researchers found - perhaps not surprisingly - that these young men and women scored higher, on average, on IQ tests. They also had lower levels of latent inhibition; compared to their peers, their brains saw a greater number of objects and situations as new and worth examining. "The creative people that we studied had more permeable filters so that more information came through," says Peterson.

He believes that the study could shed light on the centuriesold debate over a link between creativity and madness. Allowing a small number of novel ideas into your brain could be beneficial; granting hundreds of useless ideas the same attention could be extremely harmful. "Imagine you have a § hundred ideas. Ninety of them are probably useless, and eight 2



IDEAS POP INTO MY HEAD IN THE

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of them are probably downright pathological. You've got to get rid of those and only keep the two that might be useful," he says. "If there's going to be more information getting through, you better have a more efficient sorting mechanism. And if you don't, then perhaps you're more prone to psychotic disorders."

In other words, there may be a fine line between creativity and psychosis. Those who can handle the flood of thoughts and images flowing into the brain may become great artists, writers or scientists; others may find themselves overwhelmed by the torrent of information.

Coming up with novel solutions to a problem is what psychologists call "divergent thinking." People good at divergent thinking do well at insight problems and show creative achievement in their lives. Colin DeYoung, a graduate psychology student working with Peterson, has studied insight in the laboratory. His aim: to determine why some people are more insightful than others.

In one set of experiments, subjects were given a standard set of insight problems (word problems or riddles that subjects puzzle over until they suddenly "get" the answer). DeYoung observed a correlation between a subject's success at insight problems and the person's history of creative achievement (based on a standardized questionnaire, similar to the one

used in the Harvard study). He believes that a set of basic mental abilities underlie both kinds of achievement. Divergent thinking is one such mental ability. Its main value is that it allows you to reframe a problem. This takes more than knowledge and intelligence; it requires that you look at the world (or at least a small slice of it) in a new way. "It's not enough just to be smart," says DeYoung. "Being smart might tell you there's something wrong with the way that you're looking at the world. But then you have to be able to step out of that and somehow generate a new pattern, a new way of looking at the world."

the 1920s, Graham Wallas, a British educator, political theorist and psychologist, described the four stages of creativity as preparation, incubation, illumination and verification. The third step represents the aha moment. Although subsequent studies have confirmed this general pattern, declared over whether the eureka moment is merely the culmination of the confirmed this general pattern, declared over whether the eureka moment is merely the culmination of the confirmed this general pattern, declared over the culmination of the confirmed this general pattern, declared over the culmination of the culmination o whether it represents a distinct kind of mental activity. Some recent research into brain activity suggests the latter.

Mark Jung-Beeman, a cognitive neuroscientist at Northwestern University in Evanston, Ill., investigated the phenomenon by giving people a series of word problems. The subjects were given three words, such as "fence," "card" and "master," and were then asked to think of a single word that would go with each of the words to form a compound word. (In the example, the answer is "post" - as in fencepost, postcard and postmaster.) As they tackled the problems, the participants' brain activity was monitored using both FMRI (functional magnetic resonance imaging) and an EEG (electroencephalo-

gram). The result: When the subjects felt they had solved the problem in a moment of insight, there was increased activity in part of the brain's right temporal lobe; specifically, the anterior portion of the superior temporal gyrus (STG). The right STG is involved in a variety of linguistic tasks, from deducing the theme of a story to "getting" a joke. When the subjects claimed to have solved the problem methodically, without a specific moment of insight, the STG was less active.

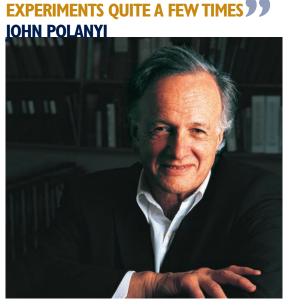
The finding, says Jung-Beeman, lends support to the idea that what the brain does during a eureka moment is qualitatively different from what it does during general problem-solving. Even so, the brain is hard at work before the moment of insight occurs. "I still

don't know what mechanism is most important when the brain solves such a problem," Jung-Beeman says. "Is it making a connection? Is it really just a switch? Or is it the unconscious processing that you were doing ahead of time? Which of these features is critical, or is it some combination of them? I'm not completely sure."

Jung-Beeman is planning further studies to finely dissect the cognitive processes behind insight, to test how broadly his findings describe other kinds of problem-solving and to look for factors that either facilitate or inhibit insight.

or educators and policy-makers, perhaps the greatest challenges are discovering what strategies help foster eureka moments and how creative thinking can be encouraged. There is vast literature on the subject – but few firm conclusions.

One lesson from history is that greatness seems to breed greatness. Historians suspect that it may be more than a coincidence that a single environment often gives rise to a number of great thinkers. Southern England in the second half of the 17th century, for example, produced physicist Sir Isaac Newton, architect Sir Christopher Wren, astronomer Edmond Halley,



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and scientists Robert Hooke and Robert Boyle. "Being surrounded by people who actually have made discoveries of note is hugely important to making discoveries of note," says Polanyi. Such minds, he says, can serve not only as an inspiration but also as a reality check. "It is part of the process of discovery that you need to have razorsharp people around you, to prevent you from fooling yourself into thinking you've solved something," he says.

At U of T, visionary planners are designing new facilities that will bring together razor-sharp people from particular disciplines as well as top researchers from allied but distinct disciplines, giving them opportunities to interact. The new Terrence Donnelly Centre for Cellular and Biomolecular Research (Donnelly CCBR) is a case in point. The research centre, nearing completion on the north side of College Street just west of University Avenue, will house some 400 researchers and faculty members from the medical, biological and physical sciences. It will feature an innovative open-concept design – lots of glass and open spaces – to encourage scientific "mingling," along with state-of-the-art classroom and laboratory space. The new building "will mix up scientists from many different areas that don't normally bump into each other," says James Friesen, a professor emeritus of the Faculty of Medicine and one of the originators of the Donnelly CCBR concept, along with medical colleague Cecil Yip. "It's not only your 'normal' biomedical researchers - geneticists, molecular

biologists, cell biologists and so forth – it's stem-cell people, chemists, engineers, computer science people, physical chemists – the kind of people who, so far, in universities usually stick to their own departments."

A similar breadth of exposure is probably desirable at all levels in the university setting, beginning with the undergraduate experience. At U of T's Office of Teaching Advancement (OTA), faculty members are encouraged not only to teach their students the material they need to know to pass the course, but to expose students to their research and give them a sense of why they're excited about a particular field. "We really do encourage our instructors to look at teaching as a creative exercise," says Kenneth Bartlett, director of the OTA, "so they can tell their students that learning is not a passive endeavour. Students aren't just empty vessels to be filled; they are living organisms to be excited and trained and developed, so that they can then go forward and extend knowledge as well as receive it."

Exposing students to more than just what's between the covers of their textbooks is clearly a desirable goal; at the same time, educators and administrators can also take steps to

CAN MACHINES BE CREATIVE?

Computers can do all sorts of things once considered the exclusive domain of humans. But will they ever be truly "creative"? The question is challenging both computer scientists trying to build intelligent machines and psychologists trying to understand the workings of the human mind.

Recent years have brought what appear to be breakthroughs in artificial creativity. A Princeton psychologist has programmed a computer to improvise modern jazz, while a professor emeritus of the University of California, San Diego, has created a machine that produces works of art. But is this real creativity – or are these machines simply carrying out orders fed to them by their human programmers?

John Vervaeke, the associate director of U of T's program in cognitive science, says the answer isn't as clear cut as one might expect.

In some ways, the human brain and a computer are similar, he says. Both handle "symbolic processing," such as adding up a list of numbers or reading a sentence. Similarly, humans and computers are both capable of "distributed"

parallel processing" involving tasks with many interacting variables, such as predicting the weather. But there's much more to human cognition than these reasonably well-understood processes.

"There are aspects of mentality that I don't have a clue how to program into a computer," Vervaeke says. "Consciousness: nobody knows what consciousness is. Intentionality: you have mental states that are about things, you think about things. How that works, we don't know." Another is the problem of subjectivity, the fact that every human being has a unique view of the world. "The degree to which consciousness and intentionality and subjectivity play a role in creativity — and I imagine they're huge — I have no clue, and nobody else does either."

For now, tasks such as speech recognition or programming a robot to navigate a complex environment are keeping researchers busy. Today's computers are fairly good at solving clearly defined, quantifiable problems, but struggle whenever a problem is ill-defined – the kind where true creativity would come in handy. – D.F.

remove potential obstacles to creativity. Bill Buxton, a designer and consultant who has taught in U of T's computer science department and still advises graduate students, believes there's a real danger in having young people narrowly focus their studies. He says Canadian Nobel Prize winners almost all "have a near-professional competence in something outside of what they won the Nobel Prize for." At least two of the winners in chemistry and medicine, for example, have significant talent in art and theatrical writing – "precisely the types of programs that are being cut from the school system," says Buxton.

"Those great ahas – they're like magic," he says. "But it's not magic how it happens. As a culture, as individuals, you can take steps to greatly improve the probability of it happening."

"The best thing you can do is get the brightest minds you can, give them the best facilities and trust them," says Friesen. You don't know where it's going to go, but you do know that it's going to lead to some very interesting places."

Dan Falk is a Toronto science journalist and the author of Universe on a T-Shirt: The Quest for the Theory of Everything.



Most readers didn't believe he was back in Iran. But on his Web site, Hossein posted only the comments of those who accepted what he said. For several days he filtered the comments he received, censoring anyone who questioned his position and amplifying those who believed his line. After a week, he began getting e-mails that read, "I know you're in Tehran. Why don't you contact me?"

"I finally posted a photo with me holding a copy of that day's New York Times in front of a Toronto landmark," Hossein says, laughing. "I wasn't in Iran." The prank was a lesson in political manipulation. "This is exactly what the Iranian regime is doing to people. They're controlling the information and making people think the truth is what they filter. It happens all the time. This kind of filtering of the truth, this is what I'm fighting against." When Hossein did eventually arrive in Tehran in June he took a photo of himself holding a local newspaper, to prove that he was there.

Perched on a stool in a coffee shop near Victoria Station in London, England, Hossein, 30, gets a kick from retelling the story. He looks like an Iranian version of the American comedic actor Jack Black - thinner but with the same wide mouth and bright, engaging laugh. It was a couple of weeks after the July 7th bombings – not a particularly funny day to be in London. Nor was it the best time to be traversing the city as an Iranian man with dark features and a heavy backpack. The sound of blaring sirens echoed in from the road, and he had to raise his voice as we talked.

Since September 2001, Hossein has been using his Web site to loft ideas, observations and political criticism back toward Iran. Unfortunately for him, and most of the young Iranians 5 who read his site, the election was won by hardliner Mahmoud

issidents

Can a blogger bring political change to Iran? By Craig Taylor Hossein Derakhshan was born in Tehran in 1975 to a religious family. His father, a conservative businessman, has sold Persian rugs for more than 20 years. His mother is more of a risk-taker, says Hossein, who figures he inherited this qual-

ity from her. He has two younger siblings – a brother and a sister.

At the age of seven, he was enrolled at Nikan Institute, a religious private school in Tehran where students were given IQ tests and subjected to rigid guidelines about haircuts and clothes. Studying humanities was unheard of. Education, in the opinion of the school and most of its teachers, consisted of science and math and a firm grounding in religious theory. Hossein bristled at the school's strict rules and narrow course offerings. "I never do things I have to do," he says. "I've always resisted what's forced on me. I'm a rebel. I thought, 'Why should I study things that are not directly helping me understand society?' At the end of the day you become a tool in some other people's hands."

Hossein left Nikan in 1992, before his final year, to attend a public school. The youth at his new school came mostly from poor neighbourhoods, but he also encountered a wealthy, westernized contingent who provided him with a connection to the pop culture of Tehran. He met other people his age

with diverse interests – music, painting, the arts. His last year of school proved to be an awakening of sorts, and a break from the religious stridency and homogeneity of the previous years.

After finishing school, Hossein made another important connection. In 1995, a friend of his brother taught him how to communicate by computer using a modem. This was not the Internet – not yet – but rather 30 people linked to each other by computer via an operating system that supported the Persian language. There were forums and chat rooms, and Hossein could page whoever was online. It was a fascinating new world, he says. "That network changed my social circle again," he says. "These people were quite westernized."

Hossein used his newfound electronic forum to stir up debate

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about Iranian society and whether the Supreme Leader should be accorded so much power. The network's conservative moderators eventually suspended him, but Hossein had already received his first taste of writing for an audience. During the first few months of the tenure of Iran's reformist president, Mohammed Khatami, he wrote a daily column about the Internet for one of the largest reformist papers, Asr-e Azadegan. At the time there were fewer than 200,000 Internet users in Iran, and Hossein believes he may have played a role in introducing many of his compatriots to the World Wide Web.

If you are young and ambitious, Iran is not a good place to stay these days," says Hossein. "There are limits to whatever you want to do – from having fun to studying to making money." So in December 2000, he packed up and left Tehran for Toronto. About two years later, he signed up for courses at U of T. As a student, he was involved with the Iranian Association

and continued working on his blog, which, by 2004, was starting to get noticed. "Hossein's popularity has skyrocketed in the last year," says Ronald Deibert, an associate professor of political science at U of T and director of the Citizen Lab at the Munk Centre for International Studies. "He's become very influential in the Iranian dissident community."

With his Web site, Hossein hopes to fight against what he sees as a hypocritical culture in Iran that stems back centuries to when Persia was being invaded and its people had to live double lives in their home and outside. "I'm not a rude person, but I want to separate myself from those reformists who are saying we have to use a sanitized, non-violent language," he says. "I've been using the same language people use on the streets. When you're writing a diary or Weblog, it's natural to say that last night we had dinner and we opened a good wine and drank and it was a good experience. Because it's an Islamic taboo, there's no mention of drinking in public in the media. By mentioning this, I'm trying to break the taboo and bridge the gap between my personal and public life. Hypocritical language can only produce hypocritical politics. If you want to break that cycle you have to introduce and use another language that is frank, blunt and true."

Hossein rails against the ambiguous, poetic tradition of Iranian writers, especially those who live outside the country and aren't forced by the regime to soften their words. "A lot of Iranian Weblogs are full of this quasi-literary stuff that is not saying anything," he says. "It's self-contradictory. You have

no idea what this guy is talking about." His idea of political discourse is more straightforward and candid. It comes from a source that might not be very well known to Iranians - The Daily Show's Jon Stewart. Hossein believes Stewart, the American cable-television comedian, is speaking the language of today's politicized youth.

A community has sprung up around Hossein's Web site. The comments under Hossein's postings - some from visitors with names like Ironic Iranian - weave from English to Persian and back again. There are passionate rebuttals, quotes from the philosopher Wittgenstein, and the kind of biting criticism of Iran that could never appear in print

in Iran. Hossein's success as an exiled writer has boosted his cachet with the reformists in his home country. On his trip to Tehran, he visited the reform candidate Mostafa Moin and talked with the politician's aides and strategists, who viewed him as a means of potentially influencing younger voters. (Moin even had his own Weblog during his unsuccessful run.)

Back at the London coffee shop, excitement creeps into Hossein's voice. A young person entering Canadian politics might set goals like changing the Liberal Party from within. Hossein wants to do nothing less than change the Iranian constitution to even the balance of power between the elected politicians and the Supreme Leader. Why not think big? "They've done it once 16 years ago when Khomeini was still

"Hypocritical language can only produce hypocritical politics. If you want to break that cycle you have to introduce and use another language that is frank, blunt and true"

alive," he says. "It could be done again with international pressure and some political partisan activity." He'd like to see a Persian version of www.meetup.com, the Web site that organizes political and social groups in various cities, such as the French-speakers club of London. He'd like to see the number of non-governmental organizations grow in Iran. Most of all he'd like to see the Internet used to its potential in a country where upwards of 70 per cent of the population is under 30 and there are thousands of Weblogs. "Weblogs could have a huge political influence in Iran and Tehran," he says. "I was thinking of using this network to win a seat on Tehran's city council."

After hinting at his own political aspirations he walks back onto the streets of London and away from the noise of Victoria, toward a few policemen watching over Buckingham Palace. "Someday," he says while passing tourists in Union Jack T-shirts, "I hope Iran will be like this country," but, he says, without the police presence, the lingering threats of violence: Iran's had too much of that already. Hossein gestures over toward Buckingham Palace. "Someday in Iran I'd like to see a ceremonial leader and a group of elected politicians who make the real decisions." It will take a fight. It will take more than a Web site to change his country. But a good blog is a good start.

Craig Taylor writes for The Guardian in London, England.



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Infinite Librar

Researchers are welcoming Google's plan to digitize millions of books, but the implications for libraries are profound

By Devin Crawley

he traded his khakis and opencollared shirt for a monk's robe, the bearded Rev. William Craig would not look out of

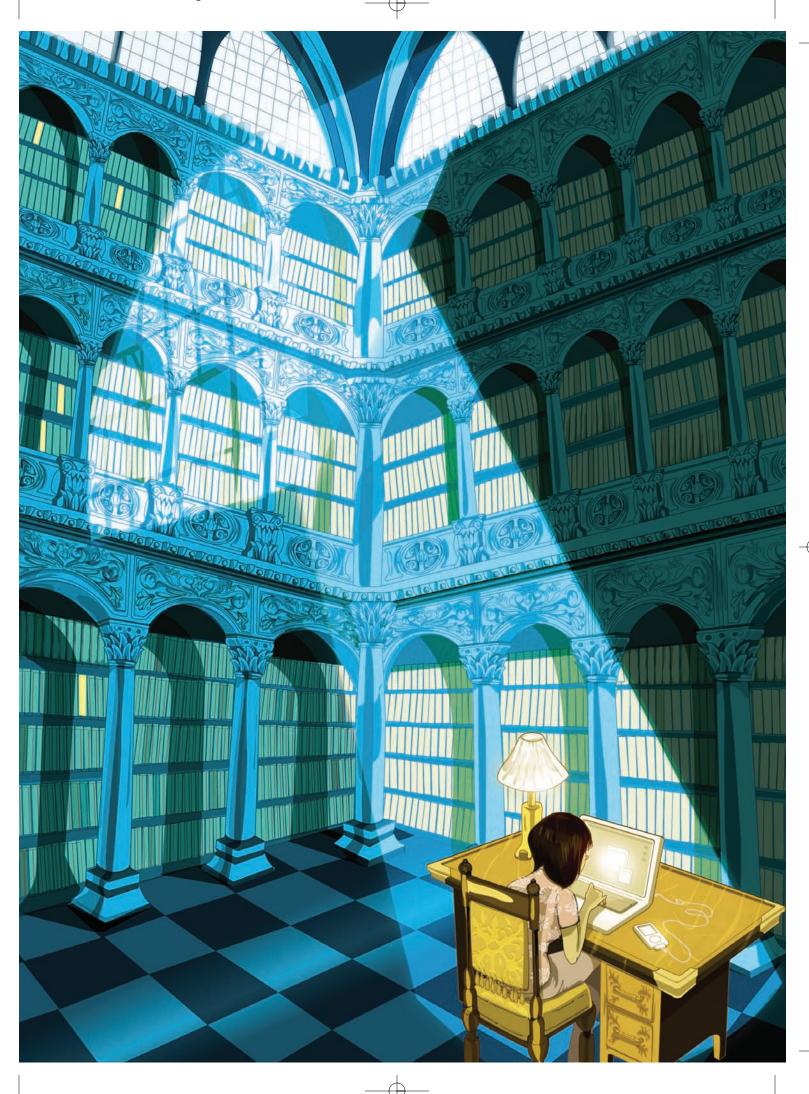
place in a dank medieval library. But this is 2005, and the Anglican priest doesn't need to roam the dark, mouldy corridors of a medieval library to do research.

In the cafeteria of Robarts Library at the University of Toronto, Craig, a doctoral student in theology, pulls out his wireless laptop computer, launches an Internet browser and calls up a digital book from the library's electronic collection. The print version of the 221-volume Patrologia Latina, a massive 19th-century collection of a thousand years of church doctrine, would fill dozens of shelves. Yet Craig can scour the full text of every volume simply by entering a few words into the search box on the screen.

Academic research has changed remarkably since Craig began his student career in the 1970s. "When I was an undergrad, we didn't have personal computers," he says. Now he can find primary sources central to his thesis - on the 1604 Hampton Court Conference of King James I of England with a few clicks of his mouse. Digital resources such as Early English Books Online, which contains nearly 100,000 page-by-page reproductions of books published between 1475 and 1700, have made research "infinitely" easier, says Craig.

Thirty years ago, card catalogues and printed periodical indexes ruled the library system. Then the digital revolution arrived. Computers replaced card catalogues and microfiche in the mid-1980s. Encyclopedias that appeared on CD-ROMs in the early 1990s gave way to easy-to-search electronic indexes and other reference databases on the World Wide Web.

But those early milestones were only a prelude. Thanks to the development of more powerful computers and larger databases, the number of library resources available in E digital form is expanding rapidly. U of T's electronic collection now includes almost 40,000 journals, more than 50,000 e-books and 1,000 indexes and other online reference tools. However, U of T's e-collection is Ξ



still dwarfed by the 15 million books and periodicals held by the university's 32 libraries.

Peter Clinton, the director of information technology services for U of T Libraries (UTL), says the last few years have seen a quantum leap in the availability of full-text electronic materials whole articles and books rather than just brief citations or abstracts. As a result, students and faculty can do an increasing amount of research from their computer desktops. Not surprisingly, they check out materials from the library less often. Over the past decade, the circulation of print items at UTL has dropped 20 per cent, due mostly to falling demand for print journals. In the field of physics, the latest research is published *only* in electronic form. When it comes to searching for library resources, students "want it now, they want it fast and they want it to work like Google," says Clinton.

Visit UTL's Web site and you'll discover just how influential the pop-

ular Internet search engine has become. Front and centre on the home page is Google's colourful logo. Click the link and you land on a page with the message, "There are limits to searching Google Scholar and you may find better quality information through the University of Toronto Libraries' databases." The wording is mild, but it's evidence of the growing competition between academic libraries and major technology companies, such as Google, Yahoo and Amazon.

Google Scholar, a service started late last year that's still in its testing phase, is the company's first foray into academic research. It allows users to search collections of proprietary electronic journals and a variety of online repositories of scholarly papers. A Google Scholar search on "exosolar planets," for example, returns 54 academic essays on the subject, ranked roughly in order of the number of times they've been cited. Within just a few months, Google Scholar has established itself as a rival to powerful multinational companies such as Thomson and Elsevier that offer huge (and, for libraries, hugely expensive) databases of scholarly material. Some librarians say that Google underperforms its rivals in the currency and quantity of its search results, while others declare that its simplicity is a huge advantage. "Google Scholar works. And it works in a way that presents very few of the hoops that we make students jump through to use our library databases," writes T.J. Sondermann, an academic librarian and prominent blogger on library issues in the U.S.

UTL is not so conciliatory. The library is attempting to teach researchers that its resources are more specialized,

"Google Scholar works. And it works in a way that presents very few of the hoops that we make students jump through to use library databases"



in-depth and targeted to particular fields. Carole Moore, UTL's chief librarian, says the problem is not that students use Google's main search engine but that they use it primarily because they are unaware of alternatives. "Many students have a limited idea of how to search and of what they're finding," she says. UTL is conducting seminars on the use of library materials and Moore notes that once researchers are aware of what the library has to offer, they tend to lose their dependency on the search engine. "If researchers know how to use the databases, then that actually does bring them in for materials because it's not all online," she says.

However, Google isn't standing idly by. The company is developing another service called Google Print that may encroach even more on the traditional turf of libraries. Last December, it announced a partnership with the New York Public Library and four major university libraries – Harvard, Stanford, Oxford and Michigan – to digitize millions of their books. Publishers are expressing concerns about copyright protection, but even if Google

limits itself to works in the public domain, the implications for academic libraries are profound. A Google search of the text of millions of instantly available digital books would be a more compelling first choice than even the largest library catalogue of physical volumes.

As Google expands into the academic realm, some argue that libraries should simply bow to its strengths. John Wilkin, a librarian at the University of Michigan in Ann Arbor, believes that the company's dominance in online searching is inevitable. He says that libraries should "cede the generalist role to Google" and allow it to become a universal search engine for library materials. "We all love Google for its quick and dirty approach," says Patricia Bellamy, a reference librarian at the Robarts Library. But Moore doesn't share Wilkin's view that libraries should relinquish their core business to Google. "I really don't think we would want a world that was totally controlled by one search engine," she says, noting that Google's for-profit status puts it in a compromised position as an academic research tool compared to the non-profit neutrality of UTL. She adds that Google's mandate is not to support academic research but to make a profit. If a service such as Google Scholar became unprofitable, the company might decide to stop supporting it.

compete with Google, UTL, like other academic libraries across Canada, is facing short- and long-term challenges. In the short term, UTL must match Google's ease of use. This means replicating the company's one-stop search

box. For libraries plagued with many different ways of gaining access to their diverse collections, as UTL is, creating a single search box to retrieve a broad range of materials is an obvious step toward making research more convenient for students. Currently, researchers must deal with separate entry points for the print catalogue, electronic index and abstract databases, ebooks and e-journals, and UTL's own scanned digital collections. Since 2002, however, UTL has been working with the libraries at all of Ontario's universities to create the Ontario Scholars Portal, a single-box search engine that covers 7,300 electronic journals and 65 electronic indexes. Clinton says that the library is about six months away from its ultimate goal of tying its print catalogue, databases and catalogued Web resources to a single search. He admits that Google is innovating quickly, but says that libraries - and the electronic database vendors whose products they buy – are beginning to catch up. "Google, and in particular Google Scholar, has been a wake-up call for many of the information vendors," he says.

Over the long term, the library is thinking about new ways that digital materials can be stored, packaged and delivered, says Moore. Like Google, UTL is digitizing books, but its focus is on its unique collections used by the U of T community and other Canadian researchers. So far, UTL has scanned thousands of rare illustrations of human anatomy, explorers' documents and early Canadiana from the university's rare-book collection. Progress has been slow, but last September UTL began a pilot project

with a non-profit organization called Internet Archive to digitize books using a robotic scanning machine provided by the archive. Under the arrangement, U of T pays Internet Archive 10 cents US for every page scanned. Internet Archive, which is based in San Francisco, keeps one copy to add to its digital collection and U of T keeps one copy.

One year into the project, UTL has paid for about 2,000 scanned titles, ranging from a copy of a 1475 edition of St. Augustine's *City of God* to war memoirs and literary texts. Over the

next two years, the project will digitize all of the known editions of books and print material – about three million pages in total – by John Henry Cardinal Newman, a 19th century Christian theologian. The effort, a joint project of three American partners and St. Michael's College at U of T, should enable researchers to detect subtle changes in Newman's language that would otherwise take years to discover, says Jonathan Bengtson, the chief librarian of John M. Kelly Library at St. Mike's. "Such analyses will lead to a deeper understanding of the development of Newman's thought," he says.

oogle's somewhat grandiose mission is "to organize the world's information and make it universally accessible and useful." With a market valuation in July of more than \$80

billion US and quarterly earnings of \$343 million US, the company is in a far better financial position than UTL. The library system is stretching its resources to the limit to compete with the ease and scope of Google as well as preserve its traditional collections and services. Unlike Google, which publicly announced that it plans to spend up to 30 per cent of its earnings on new product development, UTL has no capital for innovative projects. While UTL has managed to maintain its acquisition spending in real terms, it has had to contend with university-wide funding cuts that in the past decade have led to a 30 per cent reduction in library staff.

In the 2003-04 academic year, UTL's total acquisition budget was \$25 million, of which about half was spent on scholarly journals. Because some members of the university community prefer the print format, while others request electronic, UTL often acquires both – frequently at a higher cost, and with the associated headache of storing all those volumes. The university recently spent \$6 million on an off-site, climate-controlled preservation space, to keep two million books. "I spent 10 years seeking this facility, because we're out of space," says Moore. Located near U of T's aerospace building in Downsview, the warehouse is expected to be enlarged to hold five million volumes by 2020.

As UTL attempts to secure a role for itself in the Google Age, it's reconsidering its traditional reliance on publishers and vendors and beginning to act a little like a publisher

itself. Last year, for example, the library developed T-Space, a university-wide digital repository that holds thousands of documents, including course materials and unpublished scholarship that would previously have fallen outside the library's mandate to collect. Modelled on a similar repository developed by the Massachusetts Institute of Technology, T-Space lets students download specialized course materials and allows faculty to post papers and research findings in a public venue without first having to find a publisher.

"Writing a dissertation is still not easy, but research is a lot more fun when the wealth of the world's knowledge is at your fingertips"

As UTL boosts its technological capabilities, Moore likens the direction that the library is heading to a much earlier forebear – a medieval library. These institutions of the Middle Ages were not only book storehouses but places where manuscripts were rewritten and information was combined and republished in new ways, she says.

As for Rev. Craig, who has watched the world of print expand into the broader possibilities of digital texts, the library has become an even more stimulating place to be. Writing a dissertation is still not easy, but he says that research "is a lot more fun" when the wealth of the world's knowledge is at your fingertips.

Devin Crawley (MISt 2004) is a librarian and writer in Ottawa.



Tust*

*faith, belief, hope, conviction, confidence, assurance, certainty





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Great Gifts



Learning about Learning

he Institute of Child Study will celebrate its 80th anniversary next year and has kicked off an \$8-million capital campaign with a major gift from the grand-children of one of its earliest benefactors.

Leighton Goldie McCarthy – a former member of U of T's Governing Council and the first Canadian ambassador to the United States – donated his residence at 45 Walmer Road to U of T in 1952. The facility became home to the Institute of Child Study (ICS) the following year, but now lacks sufficient space for the 200 children enrolled in the nursery-

to-Grade-6 laboratory school and more than 150 faculty and graduate students who work and study there.

The recent donation from McCarthy's grandchildren and the Hope Charitable Foundation will help fully modernize the Walmer house at ICS, which will be officially named the Leighton Goldie McCarthy House. "I visited my grandfather at the Walmer home while studying

at U of T in the 1940s," says McCarthy's grandchild Ernest Howard (BA 1950 TRIN). "With the restoration and renovation of the Walmer home, we can pay tribute to a great Canadian and a great Canadian learning institution."

"We deeply appreciate this gift from the McCarthy Family and Hope Foundation," says Professor Jane Gaskell, dean of the Ontario Institute for the Studies of Education of U of T (OISE/UT). "Renovating the space will allow us to use it in ways that will further benefit children's education."

OISE/UT is also seeking a leadership gift to name the

Institute of Child Study and to support the construction of a new building behind Leighton Goldie McCarthy House. The new facility will include classrooms and a gymnasium for the laboratory school, and provide the institute with space to host conferences and workshops, community outreach programs and visiting researchers.

– Elizabeth Monier-Williams 🤄

space will allow us to use it in ways that will further benefit children's education



Great Gifts

Science Librarianship Established at UTM

indy Thuna is a librarian, but it's a good thing she's not much of a shusher.

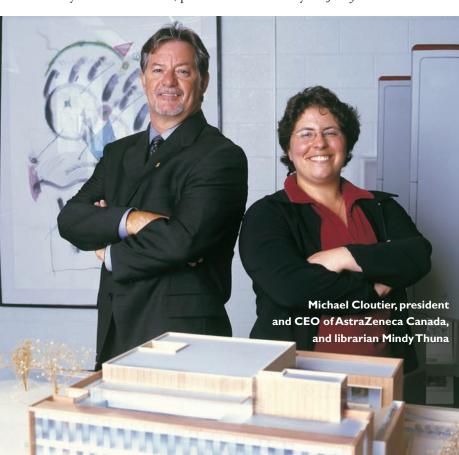
As the new AstraZeneca Science Liaison Librarian at the University of Toronto at Mississauga, Thuna's job will be to spread the word about UTM's expertise in science information.

AstraZeneca Canada, a Mississauga-based pharmaceutical company, established the science liaison librarianship earlier this year with a \$250,000 gift. Thuna, who works at the UTM library, will provide reference services, offer instruction to classes and help develop the library's science collection. She will also support relationships between UTM faculty and Mississauga's thriving pharmaceutical, biotechnology and health-care sector. "We believe this librarianship is a key element in building an educated and prosperous community in Mississauga," says Michael Cloutier, president

and CEO of AstraZeneca Canada.

Today's science librarians are information sleuths, sorting through mountains of information and teaching students, faculty and community members how to do the same. "We needed a librarian with strong science credentials," says UTM chief librarian Mary Ann Mavrinac. "And Mindy is perfect for the job."

After earning an undergraduate degree in paleontology and a master's in vertebrate morphology, Thuna taught at Brock University in St. Catharines, Ont. She worked at Fossil Butte National Monument in Wyoming, where she designed educational programs for the general public and schools, and later spent six months in public education at the National Museum of Kenya. "I like to take complicated concepts and make them easier for others to understand," she says. – Jenny Hall



Educating CEOs

new approach to business education developed at the Joseph L. Rotman School of Management – which teaches students how to create their own problem-solving models – received a big boost this summer with a \$10-million gift from the Canadian Credit Management Foundation.

The gift is the second major donation from the foundation and its president, Marcel Desautels. A previous \$10-million gift, in 2000, established the Marcel Desautels Centre for Integrative Thinking. Roger Martin, dean of the Rotman School, says the additional funds will be used to recruit new faculty to the centre, expand its teaching and research activities, and develop the world's first truly integrative business school curriculum.

The traditional model of business education - which divides business into functional areas such as marketing, finance and operations - has changed little since it was introduced at Harvard University almost 100 years ago. The problem with this approach, says Martin, is that contemporary business challenges rarely fall within a single function but "sprawl messily" across them. Rather than using existing models to solve problems, managers must be able to create entirely new models. "Today's climate requires businesspeople to be more flexible, agile and creative than ever before," says Martin.

Desautels himself has observed that business schools are teaching outdated skills. "During my career, I recognized that business students were not graduating with the full complement of skills necessary to help their new organizations address real-world challenges," he says.

- Matthew Fox

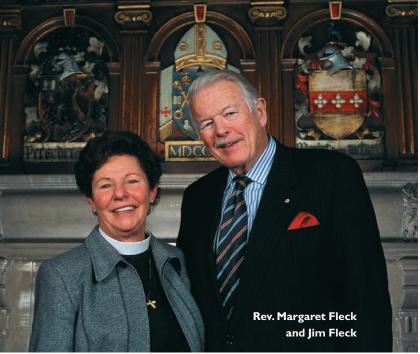
A Divine Campaign

ev. Margaret Fleck's strong spiritual ties to Trinity College have inspired her husband, Jim Fleck (LLD *Hon.* 2002), to donate \$1 million to Trinity's "Faith in Divinity" campaign.

The campaign will create the Margaret E. Fleck Chair in Anglican Studies, to be held by the Faculty of Divinity's dean, Canon David Neelands, and his successors. William Waters, a business and academic colleague of Jim Fleck's and professor emeritus of the Joseph L. Rotman School of Management, has donated \$250,000. Additional donors are being sought to reach the campaign's \$3-million goal.

The Flecks believe establishing a chair will help ensure strong leadership at the divinity school. The chair also enables the couple to give back to a community that has provided Margaret (MDiv 1982, DD *Hon.* 2000) with enormous encouragement.

"I spent 22 years raising our four children and another stimulating seven years in youth ministry at a Toronto parish," she says. When she entered the Master of Divinity program at Trinity College, she had no intention of seeking ordination. Instead, she thought she might become a lay minister and contribute to a greater awareness of lay ministry in the Anglican community, particularly as it relates to women. "Once again, I discovered that our creator is a God of surprises, challenges



and love. I sought ordination, and much to my surprise and joy I was ordained in the Anglican Church of Canada in 1982."

Trinity is no stranger to the Flecks' philanthropy. "The chapel services and my spiritual growth experiences at Trinity prompted Jim and me to sponsor the Humphrys Chaplaincy at the college in 1995 in memory of my mother, who encouraged her children's spiritual growth and involvement in the church community," says Margaret.

Jim is proud of his wife's achievements. "Margaret's commitment to the Faculty of Divinity at Trinity, its influence on her life journey and all that she's accomplished make this gift in her honour seem most fitting." – Elizabeth Monier-Williams

The Margaret E. Fleck Chair in Anglican Studies will help ensure strong leadership at the Faculty of Divinity

of T's Faculty of Law will name a classroom in a planned new facility after one of its most famous alumni, Supreme Court of Canada Justice Rosalie Silberman Abella (BA 1967, LLB 1970).

Friends and colleagues of Justice Abella donated \$1 million toward the creation of a new moot courtroom in recognition of Abella's contributions to the administration of justice in Canada, her commitment to social advocacy and her appointment to the Supreme Court in 2004. "It's fitting that one of the most important classrooms at the law school, where students learn the art of advocacy in a courtroom setting, will be named in Rosie's honour," says Ron

A Room of Her Own

Daniels, the former dean of the law school.

Justice Abella was born in 1946 in a displaced persons camp in Germany; her parents had survived the Nazi concentration camps. When her family immigrated to Canada in 1950, her father was not permitted to practice law because he was Jewish. Abella took up her father's interest in the subject, graduating from U of T's law school in 1970. Her sons Jacob (LLB 1998) and Zachary are also law graduates. Abella became Canada's first female Jewish judge in 1976 and has long fought inequality in the justice system. "Rosie's unwavering commitment to social justice and human rights places her among the most important

graduates our law school has ever produced," said Daniels on the occasion of her Supreme Court appointment. "She embodies our highest ideals and aspirations."

The Rosalie Silberman Abella Moot
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PHOTOGRAPHY: SUSAN



Great Gifts



Fantastic Voyage
rade 10 students at Pelican Falls

rade 10 students at Pelican Falls
First Nations High School in northwestern Ontario made this traditional birchbark canoe and sent it on a
special voyage this spring – to U of T's First
Nations House, where it now hangs on display. Students at the school, which is located
in the Lac Seul First Nation near the community of Sioux Lookout, learn ancestral
skills by making canoes and snowshoes from
traditional materials. U of T's First Nations
House provides outreach and information
about higher education to high schools and
offers culturally supportive services and
programs to U of T's aboriginal community.

Keeping Kids Safe

ecent major gifts to the Faculty of Social Work will help combat Internet bullying and other forms of online child abuse and improve welfare services for children and their families.

Cyber abuse is a growing problem in Canada, as two Toronto independent schools learned last April. In a case that made national headlines, a handful of Grade 10 students posted anti-Semitic statements on an Internet message board and sent equally offensive e-mail messages to their peers at another school.

But the problem can be difficult to detect and even harder to fight because material on the Internet changes so rapidly and messages can be posted and sent anonymously. Now, with a \$500,000 donation from Bell Canada, University of Toronto social work professors Faye Mishna and Robert MacFadden will investigate ways to reduce online bullying and abuse. They aim to help youth services agencies, schools and parents recognize when a child is suffering from cyber abuse and devise ways to stop the harassment. They will also work with governments and businesses to create policies to protect children online.

A \$150,000 donation to the faculty from the Jessie Ball duPont Fund, an American foundation with an interest in community-based problem solving, will also benefit children and their families. In partnership with community agencies, social work professor Cheryl Regehr is developing guidelines to prioritize physical, emotional, sexual and mental abuse cases to ensure that children at greatest risk receive the care they need.

Researchers will work out of U of T's new National Institute

for Evidence-Based Social Work, which aims to create treatments and interventions for social problems based on the best available research evidence. Jim Barber, dean of the Faculty of Social Work, says this emphasis will enable institute researchers to address the underlying causes of social problems, rather than respond to their symptoms. When fully operational, the institute will develop programs in four fields: children and family, diversity and social justice, gerontology, and physical and mental health.

Barber says the institute's collaborative approach is expected to produce more cost-efficient social policies, better interventions, and, eventually, lower caseloads for front-line social workers. "We're hopeful this approach will yield comprehensive solutions in our field," he says.

– Elizabeth Monier-Williams

A \$500,000 donation from Bell Canada will help U of T researchers investigate ways to reduce online bullying and abuse



Newly minted U of T PhD grad Gerald Dunlevie, pictured above with his wife, Lucile Wakelin, celebrated his 76th birthday in May 2005. Incorrect information appeared in the summer issue.

EXPLORE THE WORLD

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September 15 - 22 Istanbul (Turkey) \$2,945



October 6 - 16 Peru's Inca Trail \$2150 + air





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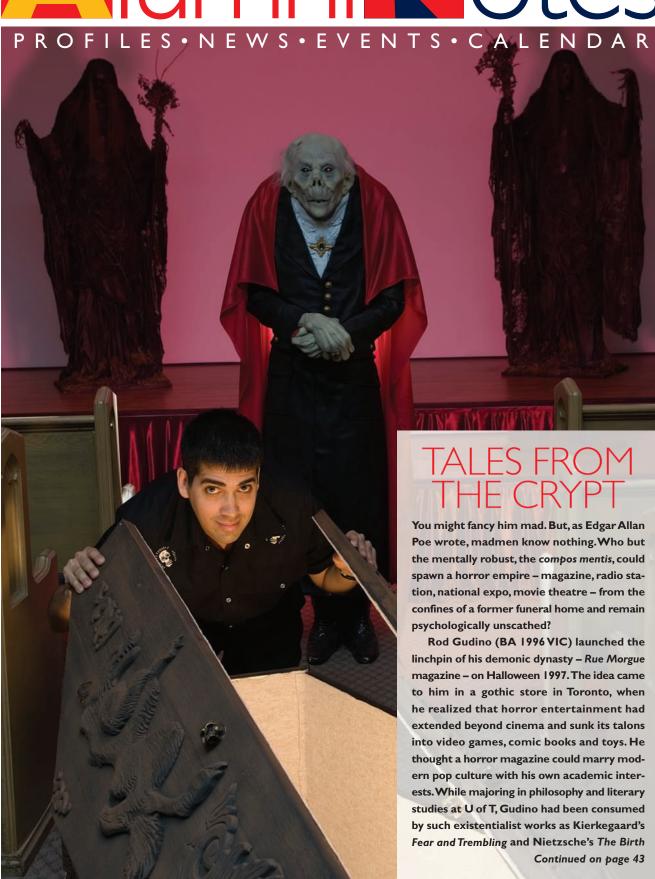
After coming to Canada from Burundi in 2001, Natacha Nsabimana learned English, found a social network and a place to stay, and discovered her place at U of T. Having completed the Transitional Year Programme, she is entering her first year at U of T as a full-time arts student.

Thanks to the generosity of Annual Fund donors like Dr. David Ouchterlony (BPHE 1962, MD 1966), she has the resources she needs to pursue her dreams.

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otes



You might fancy him mad. But, as Edgar Allan Poe wrote, madmen know nothing. Who but the mentally robust, the compos mentis, could spawn a horror empire - magazine, radio station, national expo, movie theatre - from the confines of a former funeral home and remain psychologically unscathed?

Rod Gudino (BA 1996 VIC) launched the linchpin of his demonic dynasty - Rue Morgue magazine - on Halloween 1997. The idea came to him in a gothic store in Toronto, when he realized that horror entertainment had extended beyond cinema and sunk its talons into video games, comic books and toys. He thought a horror magazine could marry modern pop culture with his own academic interests. While majoring in philosophy and literary studies at U of T, Gudino had been consumed by such existentialist works as Kierkegaard's Fear and Trembling and Nietzsche's The Birth Continued on page 43

T

Alumni Notes



All Violent on the Western Front

ruesome, unnatural and violent things happen in David Cronenberg films: bodies mutate, limbs fall off, heads explode. But the brutality in his new feature, A History of Violence, strikes a more familiar chord. A hard-working family man foils an attempted robbery in a small-town diner – killing two thugs but saving the lives of his customers and friends. There are no scientific experiments gone scarily wrong, no strange phenomena or fearsome parasites – just the frontier-style drama of man killing man.

"It's got a very classic, iconic Americana feel to it," says Cronenberg (BA 1967 UC, LLD *Hon.* 2001) of the film, which had its North American première at the Toronto International Film Festival in September. Critics have called *A History of Violence* Cronenberg's most accessible film in years, comparing it favourably to classic American Westerns in the style of director Sam Peckinpah or John Ford.

The script is an adaptation of a 1997 graphic novel by John Wagner and Vince Locke, and centres on what happens after the killings turn the diner's owner, Tom, into a national hero. The father of two tries to return to his old life, but is confronted by a

mysterious and threatening man who accuses Tom of having wronged him in the past.

Cronenberg says he was drawn to the screenplay partly because of an "urge to come to grips" with the Bush Administration's "Wild West" approach to the world. However, he says *A History of Violence* is not an overtly political film ("it's covertly political"), and explores the effects of bloodshed at a personal level. "I want the audience to be exhilarated and therefore complicit in the violence, and then to be repelled by the consequences of that violence," he says.

One of Canada's best known directors, Cronenberg shot his first film, *Transfer*, in 1966 while enrolled in the English literature program at University College. (Cronenberg began his studies in organic chemistry, but soon switched when he realized that it wouldn't help him fulfil his goal at the time of becoming a "scientist who wrote fiction.") The no-budget, 16-mm short about a psychiatrist and his patient was shot in a field during winter.

What keeps the 62-year-old inspired by filmmaking after almost 40 years? "It's so difficult," he says. "Each project brings its own set of challenges." – *Scott Anderson*

Kudos

Nobel laureate and a religious among those who received honorary degrees at spring convocation this year. Very Rev. Lois Wilson, a former moderator of the United Church of Canada, received a doctorate of laws. Wilson was a member of the Canadian Senate from 1998 to 2002 and the first Canadian president of the World **Council of Churches. Nobel Prize winner** Sydney Brenner, who received an honorary doctor of science degree, has been at the forefront of genetics research. His contributions include the discovery of messenger RNA and how the order of amino acids in protein is determined. Two legal pioneers also received honorary doctor of laws: Hon. Justice John C. Major (LLB 1957) has helped shaped legal dialogue as a Supreme Court of Canada judge and worked at the law firm Bennett, Jones, Verchere for 24 years. **Aharon Barak of Israel** has held the highest offices of the judiciary, including the attorney general for the state of Israel, justice of the Supreme Court of Israel and president to the Supreme Court of Israel.

—

CGudino had a stroke of good luck when one of Toronto's oldest funeral homes came on the market. "It's just a dream place, really," he sighs."

Continued from page 41

of Tragedy – "both very much rooted in the concepts of anxiety and fear and dread," he says. "I understood pop culture would support the magazine, but it could also be a platform to explore other ideas and be intellectually interesting for myself."

The magazine is a witches' brew of mixed media, philosophical meanderings and what could be described – depending on the strength of one's stomach – as lowbrow gore. Recent issues have featured essays on the literature of H.G. Wells; zombie comics by George Romero (director of *Night of the*

Living Dead); reviews of horror video games; and a column called "The Coroner's Report" – a ghoulish take on the Harper's Index that features demonic trivia (to wit: it took 1 minute and 17 seconds for the first criminal to be executed in the electric chair).

Gudino has slowly expanded his underworld dominion to include Rue Morgue radio – an online radio station that plays a selection of macabre music – and the annual Festival of Fear, held at the Metro

Toronto Convention Centre. The gathering is Canada's largest horror expo, and this year featured such celebrities as Linda Blair (the maniacal head-spinning child in *The Exorcist*) and fiendish writer and director Clive Barker.

Last November, Gudino had a stroke of good luck when one of Toronto's oldest funeral homes, at Dundas St. W. and Keele St., came on the market. It now serves as head office for him and his staff of nine. ("It is just a dream place, really," he sighs. "I'm still kind of pinching myself.") The decor looks as though Debbie Travis's gothic doppelgänger came in, pointed her stave and hatched funeral-home chic. A figurine of Leatherface from

The Texas Chainsaw Massacre sits on a computer top, while posters of such dark alternative films as David Lynch's Eraserhead decorate the walls. A row of faux-granite tombstones — with the names of staff members past and present — line the main hallway. (One particularly valued former staff member is immortalized with the epigraph, "Her subscription has expired.") Caged rats Ben and Willard, named after rodent horror flicks from the 1970s ("Ratsploitation films," jokes Gudino), share office space with the magazine's editors.

Gudino's latest endeavour has been to convert the funeral home's chapel into a 100-seat movie theatre, where he shows weekend creepfests to locals. The room also doubles as a wedding chapel: the first black wedding was held there in June, where the tattooed bride – resplendent in a strapless black gown and carrying blood-red roses – was given away by her beaming father.

At the end of a long day, Gudino – like Nosferatu retiring to his inner sanctum – retreats to his dwelling in the upstairs quarters of the funeral home. Does he sleep peacefully? Certainly. Have any possessed entities visited him? Not yet. However, the police once told him that someone had been murdered in the backyard and that lights in the house often flicked on and off at night. (They eventually confessed to lying.) The one drawback of Gudino's home isn't spectral stalkings, but rather a practical matter. His apartment was formerly used by a mortician to give embalming lessons to students. "You can still," he says, "occasionally smell the embalming fluid." – Stacey Gibson



Spring Reunion

hirty years and geographical distance haven't kept members of the physiotherapy class of 1975 from staying connected. The group gathered at the President's Garden Party at 93 Highland Ave. in June. The event was part of this year's Spring Reunion, a threeday event in which hundreds of grads came back to visit their alma mater. The Class of 1975 was one of the honoured graduating years.





ALUMNI EVENTS

New York

Sept. 29. Canadian Universities Alumni Reception. Penn Club of New York. 30 West 44th St., New York. 6-8:30 p.m.

Seattle

Oct. 7. **Canada Gala**. The Westin Seattle Hotel. 1900 5th Ave., Seattle, Wash. 6 p.m.

Toronto

Nov. 22. Join fellow alumni at the University of Toronto Alumni Association's **Annual General Meeting**. Guest speaker: President David Naylor. 89 Chestnut Residence, 89 Chestnut St.

For details on all alumni events, and to confirm times, visit www.alumni.utoronto.ca

LECTURES

The Chancellor Jackman Program for the Arts

Oct. 2 to 6. **J.S. Bach: The Poetry and Politics of Bach's Early Cantatas.** A series of *BachTalks* by music scholars and artists, exploring the relevance of Bach. Presented at the International Bach Festival at U of T. All *BachTalks* take place at Walter Hall, Edward Johnson Building, 80 Queen's Park. For festival information, (416) 862-2224 or www.internationalbachfestival.ca

School of Continuing Studies

Sept. 25. The Goods on Consumerism. Joseph Heath, professor of philosophy and co-author of *The Rebel Sell: Why the Culture Can't Be Jammed* leads the Philosophy Café discussion "How not to criticize consumerism." 158 St. George St. 11 a.m.-1 p.m. Free, but registration is required for course number SCS 1574 at www.learn.utoronto.ca, scs.registrar@utoronto.ca or (416) 946-7695.

UTM

Oct. 4 to Dec. 6. The School of Continuing Studies' **University Lecture Series** features scholars and experts in areas such as cancer research, crime investigations and wind energy. The series costs \$165 or \$150 for Later Life

Learners (55+), plus a \$12 registration fee. The Mississauga Central Library, 301 Burnhamthorpe Rd.W. Tuesdays from 12-1 p.m. Register at http://learn.utoronto.ca/uoft/network/lectureMississauga.jsp or (416) 978-2400. For information, (416) 946-7564.

UTSC

Nov. 2. **33rd Annual Watts Lecture featuring Dr. Sheela Basrur**, Ontario's Chief Medical Officer of Health. 7-9 p.m., ARC Lecture Theatre, AC 223. Academic Resource Centre, 1265 Military Trail. www.utsc.utoronto.ca

Oct. | Opening Gala for The Interna-

CONCERTS

Faculty of Music

tional Bach Festival featuring University of Toronto Symphony Orchestra. Raffi Armenian, conductor. Highlight: J.S. Bach's Concerto for four pianos in A minor. \$17 (\$9 senior/student). 7:30 p.m. MacMillan Theatre, Edward Johnson Building, 80 Queen's Park. The International Bach Festival at U of T runs Oct. 2 to 9 and features Grammy awardwinning conductor Helmuth Rilling. For information and tickets, (416) 978-3744 or www. internationalbachfestival.ca

EXHIBITIONS

Thomas Fisher

Rare Book Library

Sept. 26 to Dec. 21. Bibliophilia Scholastica Floreat: Fifty Years of Rare Books and Special Collections at the University of Toronto. An exhibition celebrating the golden jubilee of U of T's rare books and special collections department. 120 St. George St. Monday to Friday, 9 a.m.-5 p.m. (416) 978-5285, www.library.utoronto.ca/fisher/exhibitions/current.html

The Justina M. Barnicke Gallery, Hart House

To Oct. I. From Canvas to Stage: The Group of Seven and Contemporaries at Hart House Theatre. During the early years of Hart House Theatre, Group of Seven members Lawren Harris, J.E.H. MacDonald and Arthur Lismer contributed to set and

costume designs. This exhibition includes elements of these works.

7 Hart House Circle. Monday to Friday, II a.m.-7 p.m., Saturday and Sunday, I-4 p.m. (416) 978-8398, www.utoronto.ca/gallery

Blackwood Gallery, UTM; Doris McCarthy Gallery, UTSC

Sept. 14 to Oct. 23 at Blackwood Gallery. Sept. 14 to Oct. 30 at Doris McCarthy Gallery. **Euan Macdonald: Two Places At Once.** Macdonald works in several media in order to distil meaning down to its essence. This exhibit includes drawings and video works.

Blackwood Gallery, 3359 Mississauga Rd. N. (905) 828-3789, www.utm.utoronto.ca/services/gallery. Doris McCarthy Gallery, 1265 Military Trail. (416) 287-7007, www.utsc. utoronto.ca/dmg

University of

Toronto Art Centre

Sept. 13 to May 1. The Art of Devotion: Byzantine and Post Byzantine Icons from the Malcove Collection includes works dating from the 14th to 18th centuries. This exhibition highlights those dedicated to Mary and the Christ Child, and icons representing Christ and important Christian saints.

\$5 general admission; \$3 for seniors/students; free to U of T students and Art Centre members. 15 King's College Circle. Tuesday to Friday 12-5 p.m., Saturday 12-4 p.m. (416) 978-1838, www.utoronto.ca/artcentre

THEATRE

Hart House Theatre

Sept.14-24. **Oleanna** by David Mamet. Directed by Graham Cozzubbo.

Nov. 16-26. **Romeo and Juliet** by William Shakespeare. Directed by Jeremy Hutton.

Tickets \$20; seniors and students \$12. (Season subscribers save up to 25 per cent.) 7 Hart House Circle. (416) 978-8849, www. harthousetheatre.ca





The Lure of Cryptic Crosswords

By Marcel Danesi

rthur Wynne, an English-born editor at the *New York World*, introduced a "word-cross" to his newspaper's weekly "Fun" pages on Dec. 21, 1913. A typesetting error two weeks later caused the puzzle to appear under the title "Cross-word," and the name stuck.

Readers inundated Wynne with requests for more crosswords, and the puzzle became a local craze. In 1924, the American publishing company Simon & Schuster printed the first crossword book. Each volume came with a pencil and eraser and a penny postcard, which buyers could mail to the publisher to request the answers. The first three books sold nearly half a million copies. Soon jewelry, dresses and ties featuring crossword designs appeared. A song called "Cross Word Mamma, You Puzzle Me (But Papa's Gonna Figure You Out)"

became a hit in 1924. A Broadway musical revue called *Puzzles of 1925* featured a scene in a "crossword sanatorium," for people driven mad by their crossword obsession.

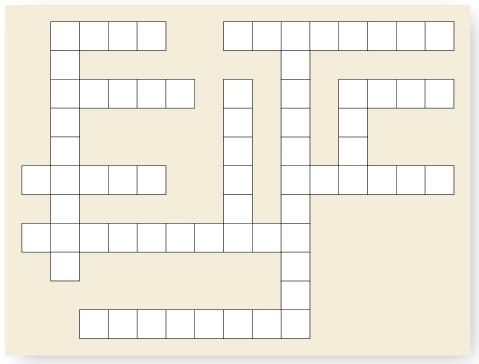
Of all the genres of crossword puzzles, the cryptic crossword is one of the most addictive – and the most challenging. Its creator was the British crossword-maker Edward Powys Mathers, who was known to his puzzle audience as Torquemada (the name of a notorious Spanish Grand Inquisitor) because his puzzles were "torturously" difficult. Mathers composed crossword puzzles for the *Saturday Westminster* in 1925 and then for the *Observer* in London from 1926 until 1939.

Unlike traditional crossword puzzles, cryptic crosswords use

wordplay. Consider the following clue: *Used to be healthy, so breathe out* (6). The answer is exhale, which means "breathe out," as the clue tells us in part. Notice however that "used to be" = ex and "healthy" = *hale*. This is called a "double meaning." Consider a second clue: Elvis crumpled jeans (5). The answer is Levis, which are "jeans," while "Elvis" is an anagram of Levis (the word "Elvis" is "crumpled"). In a "hidden word," the answer actually appears in the clue. For example, the answer to the clue Secretly preparing rooms for guy getting married (5) is groom. ("Secretly" tips off the reader that there is a hidden word in the clue.) Wordplay is what gives cryptic crosswords their vexatious appeal.

The following cryptic crossword concerns university life. Its clues involve anagrams, double meanings and hidden words. No numbers are used in the grid, but readers should be able to figure out where to locate the answers by the word length. E-mail uoft.magazine @utoronto.ca or write to 21 King's College Circle, Toronto, M5S 3J3 for the answers.

- 1. Famous rebel directs faculty (4)
- **2.** Building hides bed or makeshift cot (4)
- **3.** College queen (8)
- 4. Troubled star of the faculties (4)
- 5. Calling graduates in assembly (11)
- **6.** Song to secretly calm a mate referring to ivory tower (4, 5)
- 7. Superior specialization (5)
- **8.** Dessert route (6)
- 9. Beginner rankled hen farms (8)
- **10.** Store deals with specialized knowledge (10)
- **11.** Small key (5)
- 12. Mac's up, revisiting school (6)





Campus stories

What Inspired You

A creative entomologist, a long-distance runner and a helpful TA

THE "FLASHER" AND THE POET

Sometime during U of T's history, some person or committee must have decided that the botany and zoology departments, which were located on opposite sides of the St. George campus, were becoming too scientifically distant from one another. So a botany professor was transplanted into the zoology building and a zoologist was placed in the botany department.

By the time I arrived on campus in the 1980s there was no longer any trace of a botanist in zoology. The botany building, however, was still graced with the presence of the brilliant blackfly geneticist Dr. Klaus Rothfels, a rotund man from central Europe with ruddy features and a distinct shuffling walk. Apart from some much-cited scientific work, he was famous for two things: swimming from his Toronto Island home across the inner harbour at every fair-weather opportunity, and a rumour that he wore lederhosen. The rumour was never proven because he was only ever seen in his laboratory coat, bare shins protruding out the bottom. (What he wore underneath was the subject of much speculation.) Almost everyone who saw him for the first time said the same thing, sotto voce. "Good heavens, he looks like a flasher!'

Klaus was actually rather shy and barely said a word to me or my fellow botany grad students. He did, however, bring in some exceptional students. The one I knew best was Jan Conn, now a top-ranking medical entomologist and a distinguished Canadian poet. Her first book, *Red Shoes in the Rain*, was published in 1984; four more have followed. Conn flew regularly to Guatemala and Brazil and elsewhere to collect blackflies. At the same time, she wrote lush poems



CThe magic that emerged from this odd conjunction surely epitomizes what the University of Toronto aspires to achieve >>>

full of magenta anthuriums, tarantulas and tropical hallucinations. Never have I met another scientist who was as likely to be awarded a Canada Council for the Arts grant as a Medical Research Council grant.

So there I was spending time with a natatory flasher and a larva-collecting poet. The scenario was already so improbable that, if you'd ever read *The Hitch-hiker's Guide to the Galaxy*, you'd fully expect a whale to fall from the sky at any moment. For this, I owe my eternal thanks to the long-lost administrators whose inspiration was to graft a zoological branch onto a botanical tree in the university organizational chart. The magic that emerged from this odd

conjunction surely epitomizes what the University of Toronto aspires to achieve. Richard Summerbell (PhD 1985) Utrecht, the Netherlands

RUN, PAULA, RUN

In the early 1970s I took a ski conditioning course at U of T. The instructor used to make us run for 12 minutes. One day, in the Hart House change room, I met a young woman who said she'd just run five miles outside. I almost fell over backward. "You ran five miles?" She snorted as if to say that was nothing. It never occurred to me that a woman could run that far.

I have been a long-distance runner for more than 30 years now and was the third-ranked female marathoner in Canada for a short period in the mid-1980s. I also completed one ultra-distance event and particularly love off-road running. While I don't race anymore, running remains a vital part of who I am. And I would love to know the name of that woman who opened my eyes to a life of fitness, pleasure and adventure. I am truly indebted to her.

> Paula Pick (MLS 1972) Oro Station, Ont.

GREECE FOR GRADS

John Staples was my TA for a secondyear Russian history course. He was kind, helpful and always willing to give students his time. I remember confiding to John that I was uncertain about whether to continue my education, and he said I showed a great deal of promise as a student. He suggested that I consider Greece. Visions of whitewashed houses against deep blue seas sprang to mind and I suddenly became very interested in going to grad school. "But why Greece?" I asked. "Not Greece," he replied. "CREES - the Centre for Russian and East European Studies."

I had come from a working-class family and was the only child to attend university. I had never considered grad school an option. John made me realize that my interest in Russian history and politics could be pursued further at CREES - a program that opened up broader vistas of travel, language training and study.

The greatest thing about U of T is not its magnificent architecture and worldclass research facilities, but the people that come here to learn and help educate others – people such as John Staples. ■

> Gina Stephens (BA 1996 NEW, MA 1998) Toronto

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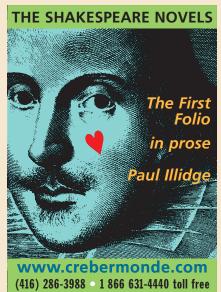
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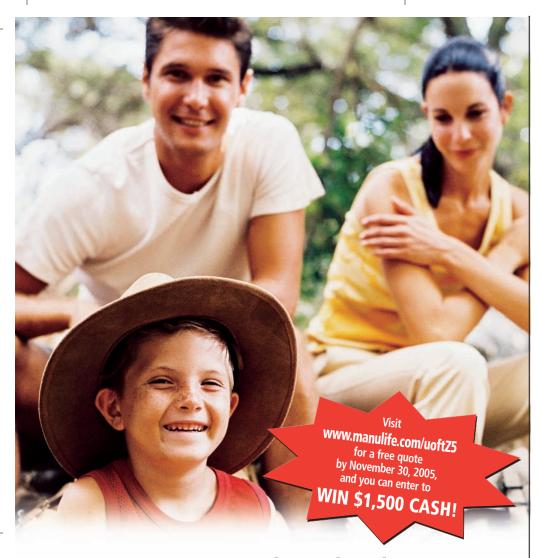
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okingBack BY EMICHAH RYNOR **Embroidered Tales** ometimes there's more to a tapestry than meets wanted, the king usually received). And so, Abraham the eye. Case in point: this medieval woolen wall introduces her as his sister, thinking this might spare hanging, which was donated to the Pontifical his life. It does, but the king promptly summons Sarah Institute of Mediaeval Studies at St. Michael's College to his bedchamber. Luckily for Abraham and Sarah, in the mid-1990s. On display at the John M. Kelly God appears to Abimelech in a dream and tells him Library, the handwoven European tapestry is as pleasthe truth. The king is not too pleased to have been lied ing to the eye as a 1950s Christmas card. But the scene to, but Abraham has one more card up his sleeve - he it depicts - the fateful first meeting between the patrireveals that he wasn't really lying as Sarah is both his arch Abraham and Abimelech, king of Gerar (left) half-sister and his wife (incest laws have changed over is fraught with tension. Though he may not show it, the centuries). The king, thankful that he didn't com-Abraham is actually fearful the king will kill him to get mit the unforgivable sin of adultery, forgives Abraham

to his beautiful wife, Sarah (in those days what the king

and the rest of the visit goes off without a hitch.





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