Academic Matters

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WHO are your STUDENTS ?

Ken Steele
Knowing Your
undergraduates

Mark Bernstein
The challenges of
the professor-student

Steve Joordens
How to make students think

Amy Scott Metcalf *et.al*
How influential
are faculty today?

Joan Flaherty
Bridging the digital divide

MORE ON THE ACADEMIC MATTERS WEBSITE

Bini Toms, *A biotechnology professor from Bangalore, India reflects on studying in Canada*

Marc Ouelette, *The Academic P3 and the University as Virtual Enterprise*

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P. 3

P. 21

P. 27

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(union logo here)

Letters to the Editor

Dear Editor

The selection of articles in the May 2010 "Challenging the Academy" issue is a testament to the editorial quality of your magazine. Reading Margison alongside Ayers and Westheimer opens up a wealth of creative possibilities for "Challenging the Academy" all the while reminding us that all challenges retain paradoxical possibilities.

One that comes to mind is the pressure for "relevance". Knowledge mobilization may be insidious as Westheimer claims. However, could knowledge mobilization be imagined (paradoxically perhaps) as a democratic move to make knowledge a truly public good?

Dissociating it from commercialization, could it not nudge academics to give serious consideration to the public value of their knowledge and encourage them to consciously and purposefully communicate with wider non-academic publics?

And could not this interpretation of knowledge mobilization be part of the kind of democratic academy that Westheimer and Ayers ask us to fight for?

JO VANEVERY, RESEARCH FACILITATOR, HTTP://JOVANEVERY.CA

Dear Editor

Congratulations on the very much needed "Challenging the Academy" issue, with William Ayers "Class Warriors" and Joel Westheimer "Higher Education or Education for Hire".

It is time the university goes back to its public mission. Privatization and the focus on the marketization of degrees makes independent thinking impossible due to the pressures of prospective employers and owners which are not accountable to the democratic nature of governments.

CARLES MUNTANER, UNIVERSITY OF TORONTO
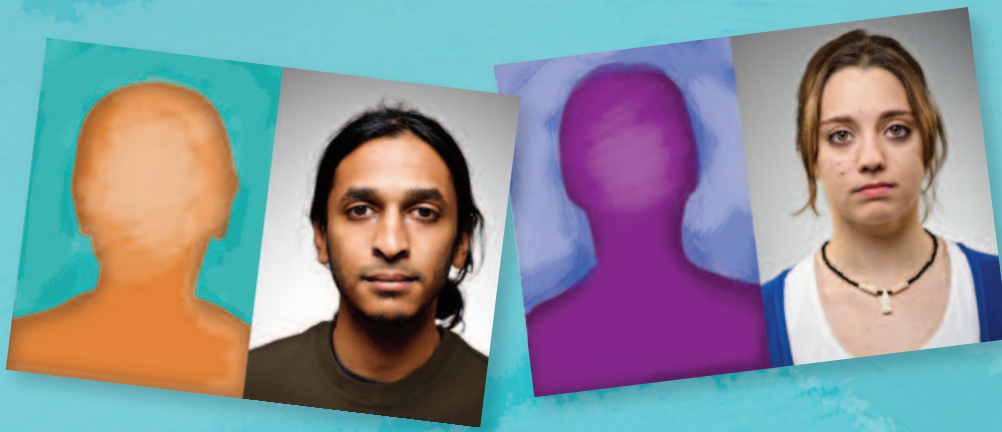
Knowing Your Undergraduates

Ken Steele

With career-oriented students seeking variety in their university experiences, universities are diversifying their appeal. The downsides are often talked about, but this evolution could well help universities in regions of population decline survive, while offering students clearer choices among a broader range of educational options.

Alors que les étudiants poursuivant des études spécialisées recherchent la variété dans leurs expériences universitaires, les universités diversifient leurs intérêts. Les inconvénients font souvent l'objet de discussion, mais l'évolution pourrait bien aider les universités à survivre dans les régions où la population diminue, tout en offrant aux étudiants des choix plus clairs parmi un éventail élargi d'options éducatives.

Over the past two or three decades, Canadian undergraduates have been steadily evolving, in ways both obvious and subtle, causing university faculty both delight and dismay. Hundreds of personal interactions in the classroom give lecturers real insight into the unique individuals they teach and cumulatively provide them with a sense of broad trends over time. Anecdotal perceptions, however, can be distorted in many ways. Students vary regionally, by subject area of interest, demographically, and in their motivation and expectations, but few faculty members encounter a significant cross-section of students

Millennium Scholarship Foundation has supported a range of research projects into accessibility, funding, and the educational motivations of traditionally under-represented groups. For the past 14 years, Academica Group has conducted the University & College Applicant Study (UCAS™) surveying more than 250,000 applicants on behalf of 40 or so colleges and universities each spring, posing more than 350 questions about student perceptions of institutions, their choices and preferences, and uncovering intriguing insights into their motivations and the most effective ways to communi-

across disciplines and across the country. In most circumstances, faculty interactions with students are weighted toward the most academically inclined, who may have more in common with their older instructors than the average undergraduate. With age and experience, nostalgia may distort memories of past generations of students. And each year first-year students get younger (while, of course, faculty get no older). Undergraduates never lose sight of the fact that they are being evaluated for their interactions with faculty and, therefore, may not be entirely frank.

These are just some of the reasons why quantitative, statistical data can provide new insights into student cohorts in the aggregate and can measure long-term trends with greater objectivity and precision than anecdotal experience. There are many sources of statistical information about undergraduate students. Statistics Canada and Human Resources Skills Development Canada (HRSDC) have gathered some data on undergraduates consistently over many years while, for the past decade, the Canada

cate with and attract students. And although there are differences between Canadian and American undergraduates, some very useful national data is also gathered and analyzed regularly by the U.S. Department of Education's National Center for Education Statistics (NCES).

A Growing Consumer Mindset

Publicly or privately, many academics lament the growing consumer mindset of undergraduate students, who increasingly seem to regard higher education as a commodity they purchase. They price shop for scholarships and bursaries and place the onus on faculty to teach rather more than on themselves to learn.[1] In many American jurisdictions, students and parents have attempted to launch "educational malpractice" lawsuits against colleges and school districts and College Parents of America conducts a national customer service survey on "College Parent Experience."[2] So things could get even worse in Canada.

But, in many ways, American and Canadian universities have both contributed to the consumer mindset of students

and parents through decades of steadily rising tuition fees, escalating levels of service and facilities, and an emphasis on the career return on investment (ROI) of an undergraduate degree: the so-called "million dollar bonus." As more and more universities brand and market their offerings to prospective students, and national and international university rankings emphasize the importance of institutional reputation, small wonder that undergraduates perceive themselves to be in a "buyer's market" in which they have myriad choices. These, and a number of other intersecting forces, have shaped today's typical incoming undergraduate and will further shape undergraduate cohorts for years to come.

Focused on Educational Return on Investment

Since 1982, the financial picture for Canadian universities has fundamentally deteriorated. Full-time enrolment has doubled, but full-time faculty complements have increased barely 40 per cent, resulting in increasing class sizes and diminishing faculty-student interaction on virtually every campus.[3] Even before the financial market meltdown of 2008 decimated university endowments and pension funds, institutions were increasingly dependent on revenues from research, patents, advancement, and, of course, tuition to balance their budgets.

Beyond question, the "sticker price" for university education in Canada has risen significantly in the past twenty years. In the 1970s and 1980s, the average Canadian university student paid the equivalent of about $2,000 in current dollars for tuition, whether enrolled in a traditional arts program or a professional program. By 2007, however, average tuition for arts students had doubled (to $4,000), for law students had tripled (to $7,334), for medical students had quintupled ($9,937) and for dentistry students had increased by a factor of seven (to $14,000).[4] Even in recent months, proposed tuition increases for some professional university programs have ranged from 66 per cent to 80 per cent to 1,500 per cent.[5] Tuitions vary widely between disciplines and also between provinces: as of 2006, average tuition fees in Nova Scotia exceeded $6,000, while fees in Newfoundland and Labrador were closer to $2,500, and in Quebec were just $2,000.[6]

Yet rising tuition has not generally made Canadian undergraduate applicants particularly price-sensitive. Where particularly high and low tuition fees are in adjacent provinces, such as Nova Scotia and Newfoundland, there has been significant interprovincial migration to lower tuition fees at Memorial University. But data from the *UCAS™ Applicant Study* suggests that tuition fees are among the least of some 50 considerations for prospective undergraduate students when determining their post-secondary destination. Financially, they are more concerned with the availability of scholarship funding, work-study options, and co-op programs as ways to fund their education.[7]

Governments and universities have defended escalating tuition fees by emphasizing the career return on investment that undergraduate students can anticipate, supposedly a million dollars over a lifetime. This emphasis on ROI has had unintended consequences. Undergraduate students are increasingly focused on employment outcomes and career-related university programs. They are attracted by higher potential earnings and also, perhaps somewhat perversely, by the suggestion of higher value implicit in higher tuition fees. For the 2010 incoming class, the perception that "grads get good jobs" is the number 4 consideration, after the academic reputation of the institution, its program, and the quality of faculty.[8] Perhaps inevitably, interest in the humanities has waned as students focus more on the direct career utility of their degree. Jeff Rybak suggests that students are even making "safer" choices of program, major, and research themes to maximize their ROI on education.[9]

Juggling School and Work

Although Canadian universities report an overall decline in part-time undergraduate enrolment over the past

1 Many of these arguments are summarized in Ivory Tower Blues: A University System in Crisis, by James Coté and Anton L. Allahar (University of Toronto Press, 2007).

2 College Parents of America hosts a website at www.collegeparents.org and a blog naturally enough entitled "Hoverings."

3 Statistics Canada and AUCC estimates, 2006.

4 CAUT Almanac of Post-Secondary Education in Canada, 2008-09.

5 In November 2009, the University of Alberta proposed tuition increases of up to 66% for some professional programs, and a new "non-academic fee." In April 2010, the University of Manitoba proposed a 54% increase in tuition for undergraduate business students, and a 78.5% increase for MBA students. In April 2010, McGill made national headlines by proposing to increase Desautels MBA tuition to $29,500, over the objections of the province.

6 Statistics Canada data.

7 2010 UCAS Applicant Study, by Academica Group.

8 2010 UCAS Applicant Study, by Academica Group.

9 Jeff Rybak, What's Wrong with University and How to Make it Work for You Anyway (ECW Press, 2007).

Undergraduates in Canada and the U.S. are studying less, working more, and taking longer to complete their degrees.

decade, the statistics may be misleading; undergrads are spending progressively less time studying and more time working at paid employment, while still being classified as full-time students. A recent meta-analysis of national datasets in the U.S. found that on average, undergraduates in 1961 spent 25 hours per week on their studies, and that by 2003 that had dropped to just 15 hours per week, despite traditional university expectations of 30 hours per week.[10] This time compression was fairly consistent regardless of discipline or hours worked at paid employment.

In Canada, too, without question, undergrads are spending more time on paid employment. Thirty-year trends in employment rates of full-time students show steady increases in employment, from less than 25 per cent of students in 1976 to about 40 per cent of male students and more than 50 per cent of female students in 2009.[11] American statistics show a very similar trend over the same period for full-time students and, in particular, detect a doubling of the number of full-time students working 20-34 hours per week since 1970.[12] Being a "full-time" undergraduate today is something rather different than it was 30 years ago.

Undergraduates in Canada and the U.S. are studying less, working more, and taking longer to complete their degrees. On average, students take five to six years to complete their "four-year" undergraduate degrees. Just 29 per cent of undergraduates at public U.S. universities complete their degree in four years. A further 26 per cent take five or six years to complete.[13] Just one quarter of university students today follow the path of the traditional, full-time, residential undergraduate. If these trends continue, universities may have to rethink the model of an immersive, four-year, undergraduate degree program. Indeed, many schools have already started experimenting with three-year accelerated programs, part-time offerings, and distance education to serve these "non-traditional" students.

Careerism in a Tough Economy

Student advocates claim that the increase in employment by full-time students and the increasing time to complete a degree are a direct result of rising tuition fees. However, the opportunity cost of a student forgoing employment to spend an extra year in university far exceeds the cost of tuition, so it seems unlikely that these trends are being driven by purely financial factors. Instead, they appear to be linked to rising careerism and concerns with employment outcomes among all undergraduate applicants; students want a balanced resumé, including academics and work experience, by the time they graduate and hit the job market.

Canadian undergraduates have shown a steadily increasing emphasis on career outcomes in contemplating post-secondary education. In 2010, fully 99 per cent of university applicants indicated that their reasons for applying to university included "career preparation" or "career advancement" up from 95 per cent just one year earlier.[14] By comparison, only about three-quarters of applicants indicated their motivations included "personal or intellectual growth" or "increasing knowledge," and a paltry one-third indicated a desire to "give back to society." Annual application volume reports from the Ontario University Application Centre demonstrate quite clearly that undergraduate applicants respond in weeks or months to shifts in the economy and labour market forecasts. The market of prospective students responds far faster to economic changes than the program offerings at our universities.

Better Informed Education "Buyers"

Over the past 14 years, more and more information channels have become available to prospective Canadian undergraduates contemplating their postsecondary options. Institutional websites have risen rapidly in importance and are now the most accessed and reportedly most influential information source, used by 94 per cent of undergraduate applicants (up from 88 per cent in 2008).[15] Many university websites contain tens of thousands of pages of information, online course calendars, and downloadable viewbooks or brochures. The internet has also multiplied and extended the impact of word-of-mouth through social media. More than 80 per cent of Canadian undergraduate applicants are regular

10 Phillip Babcock and Mindy Marks, Leisure College USA: The Decline in Student Study Time (American Enterprise Institute for Public Policy Research, August 2010).

11 Statistics Canada Labour Force Survey, cited in Anne Motte and Saul Schwartz, Are Student Employment and Academic Success Linked? (Canada Millennium Scholarship Foundation Research Note #9, April 2009.)

12 US Department of Commerce, Census Bureau, Current Population Survey, October Supplement, 1970-2007.

13 IPEDS (Integrated PostSecondary Education Data System), US Department of Education, National Center for Education Statistics, Spring 2007, graduation rates component.

14 Academica Group, UCAS Applicant Study, 2009 and 2010 data.

15 Academica Group, UCAS Applicant Study, 2008-2010 data.

16 Academica Group, UCAS Web Usage Survey, 2009.

17 Academica Group, UCAS Applicant Study, 2008-2010 data.

users of Facebook, as much as 90 minutes per day.[16] Some universities have leveraged YouTube and iTunesU to deliver sample lectures and campus tour videos to a wider audience, while students have published less formal video (to say the least) of residence parties and campus life.

The rise of the internet has ushered in an information explosion for prospective undergraduates, but the current generation is also accessing other forms of information to an unprecedented degree. In the past few years, university applicants have increased their use of printed university viewbooks (from 65 per cent in 2008 to 81 per cent in 2010) and program

40 per cent each for applicants overall). Canadian high school seniors are not yet being deluged with print materials by mail, phone calls, and personal appeals as their American counterparts are, but they are accessing information about university choices to an unprecedented degree. In many ways, this is the best informed generation of university "consumers" ever.

Faced with More Choices

In many parts of Canada, the number of youth is in decline, so prospective university students face few anxieties about university acceptance.

or faculty brochures (from 70 per cent in 2008 to 78 per cent in 2010).[17] Applicants have reported steadily increasing use of high school liaison presentations (now 64 per cent of undergraduate applicants in Canada), regional university fairs and high school guidance counselors (now both at 49 per cent), Maclean's rankings (now 44 per cent), formal campus tours and open houses (now about 41 per cent each).

Applicants' heightened appetite for information has been met with greater transparency and efforts at communication by universities themselves. Increasing use of websites and print materials has only been made possible by additional investments in web content and increased press runs of brochures and viewbooks. Rising attendance at regional university fairs and at the Ontario Universities Fair in Toronto (now attracting in a single weekend more than 100,000 prospective students and their parents) has led universities to make larger investments in displays and staffing. And applicants are reporting steadily increasing frequency of contact from universities by email and telephone (now about

They believe they are in a "buyer's market" for higher education. As universities have begun branding and marketing regionally and nationally, crossing traditional "catchment areas" and competing more aggressively with each other for students, applicants are becoming aware of more institutions and conscious of a greater degree of choice. This may be accelerated by centralized application centres like those in Ontario and Alberta, which make it effortless for prospective students to "shop around" for programs.

Universities are competing for students not only through innovative program offerings and generous financial aid but also by more overt promotional strategies. Some are conducting online contests for prizes ranging from iPads to SmartCars to tuition discounts. Many institutions guarantee residence accommodation for first-year undergraduates; some, such as Lakehead University, guarantee scholarships at particular grade averages, while the University of Calgary guarantees completion of a four-year degree within four years. The University of Regina now guarantees employment within six months of graduation. Although these "guaran-

Today's undergraduate students have more diverse and varied choices for postsecondary education and are likely to pursue more complex educational pathways on their way to the workplace.

tees" actually require significant commitment and effort from the student, the overall impression is increasingly one of education as a product for sale, satisfaction guaranteed. It remains to be seen whether such guarantees proliferate or if, in fact, they are a temporary fad that will fade over time.

Today's university students, focused on career outcomes and ROI, are also more open to considering other categories of postsecondary education. Although most high school seniors applying to Canadian universities are not considering community college as an alternative, more than half of university applicants over age 25 are perfectly willing to do so.[18] Canada's community colleges are increasingly offering applied degrees, joint and collaborative degrees, post-degree diploma programs, and career-oriented education aimed at either university graduates or traditional university applicants. Nine institutions across Canada have branded themselves polytechnics (although most are not formally so designated by their provincial ministries). Their association, Polytechnics Canada, is working to educate the public about this new category of degree-granting college conducting applied research. Some colleges and universities are working together to create hybrid institutions, such as the University of Guelph-Humber and Seneca@York, offering prospective students "the best of both worlds"; namely, a more hands-on, career-oriented university education. And of course the cooperative education model pioneered at the University of Waterloo fifty years ago has fostered the expectation among many university applicants that they should be able to gain real-world work experience during their undergraduate education and, in many cases, earn significant money while still a student. Today's undergraduate students have more diverse and varied choices for postsecondary education and are likely to pursue more complex educational pathways on their way to the workplace.

More Heterogeneous than Ever

Any overview, however, of trends affecting Canadian university applicants risks oversimplifying an entire generation because undergraduate students are more heterogeneous than ever. More mature applicants are returning to school, more Aboriginal youth are pursuing higher education, more new Canadians and first-generation Canadians are applying to university, more international students are choosing to study in Canada, so incoming student cohorts are more diverse than ever. Declining fertility rates in Canada will ensure that our nation's youth popula-

tion will be more and more a result of immigration, and future classes of undergraduates will continue to be more and more diverse demographically.

Compounding this demographic diversity, applicants from different provinces and those entering different disciplines have discernibly different expectations and motivations for pursuing a university education. While career outcomes and institutional reputation is vital for virtually all students, applicants to the arts and humanities are somewhat more attracted by international exchanges, campus amenities, and student life, while business applicants are more focused on co-op opportunities, institutional rankings, and entrance requirements. Applicants to the sciences are somewhat more interested in research capacity, both high-profile research being conducted at the institution and the opportunity to participate in research as undergraduates. Social science applicants are measurably more concerned about finances, while computer science applicants are interested in learning with the latest technology.[19]

As prospective Canadian undergraduates become more diverse, more focused on career outcomes and financial ROI, better informed and more aware of the variety of postsecondary options available, we can reasonably expect our universities to become more responsive to economic and labour market shifts, more innovative in interdisciplinary and applied programs, and more competitive and data-driven in marketing their programs to potential students. Undergraduate students are a heterogeneous group, seeking a variety of rather different university experiences, and forward-looking universities are finding ways to distinguish themselves on the basis of learning style, research expertise, campus experience, and employment outcomes. This diversification of institutional approach and positioning not only helps ensure the survival of longstanding universities in regions facing population decline but also serves Canadian students by offering them clearer choices among a broader range of educational options. AM

Ken Steele is senior vice-president of education marketing for Academica Group Inc.

The challenges and joys of the professor-student. At age 51, a neurosurgeon returns to school.

À l'âge de 51 ans, un neurochirurgien retourne aux études et découvre les défis et les joies d'être à la fois professeur et étudiant.

Back to school days

Mark Bernstein

I was a student for a long time. Perhaps I still am, and perhaps I always will be.

After high school I did a four-year degree in physics before medical school. Internship and surgical residency then consumed nine years, including two years' research training at the University of California in San Francisco. I joined the neurosurgery staff at Toronto Western Hospital in 1985. In addition to being a student, I have also been a teacher. During the last 25 years as an academic neurosurgeon, I have been a professor at the University of Toronto. I have taught high school students, undergraduate science students, medical students, graduate students, neurosurgery residents, clinical fellows, and peers. I have lectured all over the world and have had the thrill of teaching other surgeons in operating rooms in Asia, Africa, and North America.

Being both student and teacher is a big part of who I am. So when in 2001, a senior colleague recognized my growing interest in bioethics and suggested, "Bernstein, why don't you

enroll in the two-year professional masters in bioethics at Toronto's Joint Center for Bioethics?" it took me 13 seconds to say, "Wow. Neat". Thirteen days later, I submitted my application and paid my tuition. I started in September 2001 and graduated in 2003. It was a professional, non-thesis, masters, and it was based on classroom learning with voluminous reading and many written assignments. I was still head of neurosurgery at my hospital, engaged in the practice of neurosurgery, as well as teaching and research.

My class included six local students and six international students. I met and became friends with several international students: a neurologist from Zimbabwe, a family physician from Uganda, a research administrator from India, a Pakistani obstetrician. The local students were also diverse: doctors, nurses, and administrators. The classroom in many ways was a microcosm of the global village: male, female, straight, gay, white, black, Protestant, Jew, Catholic, Muslim, Hindu, idealist, pragmatist, Utilitarian, Kantian. The age of

the students ranged from 32 to 55; I was the second-oldest student.

The courses included material ranging from the extremely conceptual to the very practical. One could bring issues from their own lives and jobs and previous life experience so that in many ways the master's became highly personalized, which made it especially relevant.

There are obvious challenges to mature learners going back to school. The most obvious and important is time management. How does one carve out the average 20-plus hours per week required while working at one's "day job"? The answer is simple. Good time organization and the passionate desire to learn the material are the main ingredients. Motivation allows any possibility; time constraints are trumped by passion every time. Another challenge is financial, both the real costs of tuition and reading materials and the income lost from time spent at studies. Perhaps the most subtle challenge is the stress stemming from the fear of failure, the concern that being a student again after a long hiatus will not be like riding a bicycle, that the skills needed will not come back quickly.

The advantages of going back to school as a mature learner, however, are myriad and mitigate in spades the challenges described above. First and foremost, when mature learners go back to school they do so because they really want to, not because their fellow high-school graduates are going to university and they need to follow suit, not because their parents expect them to, and not because they need training for a job (because they already have one). Consequently attending school as a mature student is in many ways a much richer and less confining experience than the educational experience most of us have had as undergraduate and graduate students. There are no, or minimal, outside influences, coercive forces, or prescriptive texts at play, only internal drive. The material becomes more relevant because a mature learner brings perspective and life experience to the questions asked and the lessons learned in class. The older learner can also try to solve problems using methods and knowledge acquired through career and life experience. Other advantages of returning to school later in life include personal reinvention, not just to improve one's enjoyment and productivity in the work place but also to improve one's self-esteem and sense of personal value. Re-education is also an excellent way to help combat career burnout.

A return to school can also lead to academic advancement, partly as a result of professional colleagues becoming more aware of one's work, especially those fields a returned scholar may be exploring for the first time. For example, in the case of my own work as a student of bioethics, I chose to address various ethical questions and dilemmas encountered in the day-to-day world of neurosurgery. This not only helped me explore difficult problems using new vocabulary and new thinking but also, after an assignment was turned in and marked, I polished and converted most of the essays into manuscripts that became published in peer-reviewed publications. This elevated my ethics profile in the surgical and neuroscience communities and exposed colleagues important to me to ethics, a field of study exceedingly rare in the surgery and neurosciences literature. How many articles in the clinical literature had addressed the moral philosophy of full disclosure of surgical error, from a Kantian perspective? Now at least there is one, mine.

Another ineffable joy was the ability to relive the student experience, such as animated chats with fellow students and professors, social events at people's homes, the excitement of meeting a deadline for an assignment, the satisfaction of doing meaningful and creative work, the reunion with new-found soul mates when classes reconvened, the wearing of jeans and running shoes during the weekday in downtown Toronto. Networking and friendship are also very rewarding for academics. Since my masters studies ended, I have maintained contact with classmates in Africa, India and, of course, Toronto.

My return to school as a mature student has had an immense and positive impact—both practical and philosophical—on my life as a neurosurgeon, educator, researcher, administrator, and person. My challenge after graduating was to keep up my momentum in reflecting, and acting on bioethics, but I have managed to do so. Since graduation, I have taught ethics to surgery residents and bioethics students, ranted about ethics to my neurosurgery partners and other clinicians every chance I get, mentored the students who help me perform research in ethics, written and published extensively on various topics in ethics, and lectured around the world on ethics. It was a life-changing move for me at age 51 and has made an enriching career in academic neurosurgery even better.

I highly recommend further education for mature professionals and academics. They just have to make sure they are motivated and well organized, so that the student life doesn't get in the way of a "day job." AM
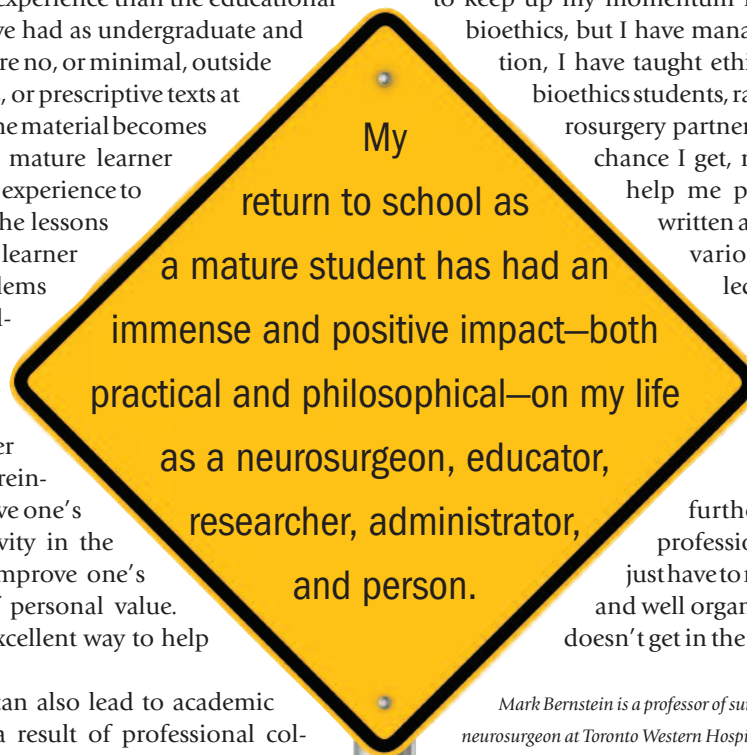
Mark Bernstein is a professor of surgery at the University of Toronto and a neurosurgeon at Toronto Western Hospital. He has a strong interest in caring for patients with brain tumours, in bioethics, and in teaching surgeons in the developing world. He is a perennial student.

My return to school as a mature student has had an immense and positive impact—both practical and philosophical—on my life as a neurosurgeon, educator, researcher, administrator, and person.

YOU CAN LEAD STUDENTS TO KNOWLEDGE, BUT HOW DO YOU MAKE THEM THINK?

THE CHALLENGE OF TEACHING CRITICAL THINKING

Steve Joordens

The psychological defences students have get in the way of learning critical thought. How can university teachers encourage student to confront these defences?

Les défenses psychologiques dont sont armés les étudiants entravent l'apprentissage du raisonnement critique. Comment les professeurs d'université peuvent-ils enseigner aux étudiants à affronter ces défenses?

Like many new professors, perhaps, I initially thought that my primary responsibility in the classroom was to present course content to my students in a manner they would find interesting and informative. I was sharing the knowledge that formed the core of the course that I was teaching. Sharing knowledge is important, but I now believe that it comes second in terms of what universities should be delivering to their students.

More important is teaching students how to work with knowledge: how to think critically and creatively, form considered opinions, voice those opinions in a clear and efficient manner in either written or spoken form, and modify those opinions in light of new information. Teaching students how to think well and to communicate their thoughts clearly helps them in virtually all life's contexts, from board rooms to operating tables. Moreover, given the existence of the internet and ever more efficient search engines, acquiring knowledge is relatively easy; using it in novel and relevant ways is more challenging.

Unfortunately, teaching students how to think is difficult not only on account of logistic issues (i.e., the time and

resources involved) but also because of challenges in terms of the psychological defences students have that get in the way of learning critical thought. Recent internet-based resources are providing new ways of surmounting the logistic barriers to open-ended assignments (e.g. www.peerScholar.com), which means that professors now have the means of including open-ended assignments in virtually any course context, thereby providing the students with the practice they need to hone their skills. But to maximize the effectiveness of this practice it is important that the psychological barriers to thought be understood. What are these barriers and how can they be surmounted?

The goal state

When attempting to solve a problem it makes sense to first define the goal state. The goal of effective thought is captured well by William James, the Jimi Hendrix of thought. James spent a great deal of time thinking about issues and communicating his thoughts clearly. Thus, his view on thought, as presented below, represents the perspective of an expert.

> The process here is always the same. The individual has a stock of old opinions already, but he meets a new experience that puts them to a strain. Somebody contradicts them; or in a reflective moment he discovers they contradict each other; or he hears of facts with which they are incompatible; or desires arise in him which they cease to satisfy. The result is an inward trouble to which his mind till then had been a stranger, and from which he seeks to escape by modifying his previous mass of opinions. He saves as much of it as his can for in this matter we are extreme conservatives. (William James, 1907)

James's last sentence is a massive understatement. What is represented in this quote is the sort of process we want our students to engage in, but this process, I argue, does not represent the manner in which most students come to opinions. It is a process that incoming university students have little experience with. Moreover, every student has defences in place that work against this sort of rational re-arrangement of opinions.

Ubiquitous indoctrination

We are not born with the capacity to reason. In fact, the sort of deep reasoning skills thought to underlie such phenomena as moral decision making often do not develop until the teenage years or later. However, from birth each of us is surrounded by a world filled with others who hold opinions. As Skinner put it, "Society attacks early, when the individual is helpless." We are surrounded by those who believe certain perspectives are correct and, through processes of indoctrination and modelling, we come to accept these perspectives ourselves in the absence of rational thought. These indoctrination processes are especially powerful if the perspective under consideration is ubiquitous or if espoused by people for whom we have respect or admiration.

Thus, students who enter our classrooms do indeed come in with a "stock of old opinions", but many, if not most, of these opinions were not born of rational thought. Rather, they are opinions adopted from one's family, culture, and other relevant aspects of one's pre-university context (e.g., the media). These opinions may include views that do not fit together but, absent critical thought, these incongruities may remain undetected, a claim highlighted by example later in this article.

What is an educator to do? How does one effectively introduce their students to rational thought, if such thought is not natural to them? To some extent, this challenge contains aspects of teaching any new skill; for example, teaching the processes involved in playing a musical instrument. Any skill is developed by repeated exposure to effective practice. For practice to be effective, students have to see the value of the practice and need to be given the right practice experience. However, when it comes to critical thought, they also need to understand that critical thought is not only a skill that needs practice to develop but also that, troublingly, attempts to practice it are often directly opposed by psychological defences.

Confirmation bias

If one re-reads the James quote, he provides an answer for how best to teach critical thought: merely expose students to some contradiction in the views they hold or present them with some new information that conflicts with the views they hold. In either case, that should kick start an investigation and reformation of one's opinions so that they fit together, or fit with new information.

However, psychological research shows that when it comes to changing opinions, simply exposing one to contradictory information does not suffice. If people of either a liberal or a conservative political perspective are exposed to information supportive of either a liberal or a conservative perspective, conservatives remember the conservative information, and liberals remember the liberal information. Humans in general seek out information that fits with their current views while not attending deeply to information that does not, a phenomenon called confirmation bias.

Thus, the process described by James reflects how an "open mind" works, but a truly open mind is something the majority of us do not possess. Instead, we hold

opinions formed on the basis of modeling and indoctrination and keep those opinions in place thanks to processes like confirmation bias. The first step to teaching critical thought, then, is to open students' minds by opening their eyes to confirmation bias.

Given this, it should not be surprising that research suggests one of the best ways to foster critical thought is to expose students to the literature showing both its importance and how difficult it is to teach. From my experience, two examples from the real world, one past and one present, serve these goals in different ways. The example from the past shows the challenges and importance in a "safe", detached manner. The example from the present emphasizes the extent of the psychological defences to critical thought, especially when such thought implies profound changes in behaviour. This present-day example transforms the issue from the abstract to something the students can truly feel.

Examples, past and present

Slavery has existed for centuries in virtually every culture known to humanity. For most students the slavery that comes to mind is pre-Civil War American slavery. During this time, slavery in the southern U.S. states was everywhere. No white person in the South could not come into direct contact with the practice of one human owning another.

I ask my student to imagine being a white person in that context: being raised (indoctrinated) in a place where it was viewed as normal for white people to own African slaves, where white people could literally do what they wanted with "their property", and where slaves who defied the situation were viewed as being justifiably subject to punishment. I challenge them to put themselves in a family where parents, siblings, relations, neighbours, co-workers, friends, and respected community leaders find this situation reasonable. Would *they* also find it reasonable? Would *they* grow up to purchase slaves themselves? Do they *really* think they would resist the indoctrination, think about slavery rationally, and challenge what had become a deeply ingrained social norm that was defended by many respected leaders who were at the time considered rational? History suggests that many Americans of that time accepted slavery without much thought. But, some Americans did engage in a Jamesian thought process and came to the following ideological inconsistency. When the American colonies were promoting their independence from the British Empire, they rested their case primarily on the arguments contained in the Declaration of Independence. The Declaration states that "all men are created equal" and that all people have the right to "life, liberty and the pursuit of happiness". For those with open minds, it was obvious that one cannot reconcile the practice of slavery with these principles.

Abolitionists promoted this ideological inconsistency widely. Did others then engage in their own Jamesian thought process and alter their opinions accordingly? Many did not, especially those for whom abolishing slavery would have resulted in a major life change. In fact, early abolitionists frequently met with violence including, in some cases, being lynched. It took a civil war to bring about the complete abolition of slavery, in 1865.

Why did non-abolitionists need so much convincing? There was an economic issue to consider. Many slave owners produced merchandise in a manner the depended on the relatively cheap labour force (i.e., the slaves). But consider as well that they—along with that majority of Southeners who did not own slaves—had grown up in a context where most people they associated with accepted slavery as a given. Fate casts its die, and people end up playing certain roles. A world without slavery would likely seem naïve and unrealisable. To these people, it wasn't inconsistent to back simultaneously the Declaration of Independence and the institution of slavery.

For many students, these last statements leave them feeling incredulous. How could one not see the horrors of slavery for what they were? How could one put economic benefit, or tradition, ahead of the dignity of every human being proclaimed by the Declaration? This is where I find it most useful to turn the tables and put my students in the position of those in the southern U.S. states, albeit with respect to a different issue.

Sometimes trickery has its place in education. A sleight of hand can capture attention—and thought—in ways a straightforward presentation might not. With this in mind, I introduce the following quote implying it might be a quote from one who had deeply considered the juxtaposition of slavery and the Declaration and emerged as a born-again abolitionist:

> I seem to move around perfectly easy among people, to have perfectly normal relations with them. Is it possible, I ask myself, that all of them are participants in a crime of stupifying proportions? Am I fantasizing it all? I must be mad!

But then the quote continues:

> Yet everyday I see the evidence. The very people I suspect produce the evidence, exhibit it, offer it to me. Fragments of corpses they have bought for money. (J. M. Coetzee)

The issue that Coetzee is highlighting is the argument by many that humans should stop exploiting animals for food and other purposes (e.g., clothes, research). This issue is similar to the slavery issue, at least in the sense that it involves subjugating others for its own end. It is no longer about one race dominating another but about one species dominating others; otherwise the arguments are the same.

What makes this example powerful is that, unlike the slavery example, the majority of students eat meat. That is, they, as well as most of you reading this article, are on the pro-slavery analogue of this issue, making it possible for an educator to directly challenge the basis of this opinion. Is it an opinion formed by indoctrination and modeling? Or have we come to our position via a rational thought process? If the former, then what happens when we are confronted with other opinions we hold that contradict the view that eating meat is OK? The beauty of this examples comes from this confrontation; not only does it directly engage students in a Jamesian thought process of their own, but it also does so in a way that makes the psychological defences palpable. Students feel the defences to thought. Shall we try?

First, what is the rationale for eating meat? Meat tastes good. Yes, there was a time when meat also provided an important and efficient source of protein and other nutrients that were very difficult to come by any other way. But those days are gone. There are many forms of non-meat protein available now; we do not "need" to eat meat, as so many healthy and long-lived vegetarians demonstrate. Given this, the question becomes whether eating meat is in accord, or not, with other opinions a person might hold: this question is the very heart of the Jamesian thought process.

Are you worried about the environment, and do you hold the opinion that humans should be doing everything possible to reduce emissions? If so, do you know that a 2006 United Nations report documented that emissions from meat production are greater than the emissions from all forms of transportation combined? If you think this cannot be true or you would have heard about this before, consider the role played by the media in terms of indoctrination. How many stories have you heard about hybrid cars? If you stopped eating meat, or even reduced your consumption, you would have a greater impact than if you chose to drive a hybrid.

Are you one who believes it is good to reduce pain and suffering in the world? If so, do you know that the majority of meat you eat is produced in "factory farms", which are not farms but rather are enclosed spaces in which each animal has a space approximately the size of its body. Animals are not allowed to move freely, are some-

times continually restrained, and invariably suffer insanity before the time when they are finally killed. They live lives of pain and suffering, both physically and mentally.

Do you believe that health is a positive thing and that we should do all we can to promote it? If so, you should not eat meat. The two primary causes of premature human deaths now are heart disease and cancer, both of which are linked to eating meat. Yes, our bodies evolved as meat eating machines, but in prehistoric times, those machines died of other causes well before our arteries could clog and before cancer played much of a role. We live longer now, and our body-machines are healthier when meat is eliminated or reduced to a minimum.

These three arguments, and there are more, all illustrate how the opinion "it is good to eat meat" clashes with three other opinions most of us hold dear: "we need to care for our environment", "reducing pain and suffering is good", and "being healthy is good". These four opinions should not reside in the same mind. We should forget the environment, become pro pain, and strive to be unhealthy, or we should stop eating meat.

If you are at all like my students, you feel uncomfortable now. You feel the psychological defence mechanisms at work. You now have two choices. One is to simply assume that I have somehow tricked you, that there must be a good reason to eat meat given that so many people do it, and then think about this no more. That is, accept indoctrination over rationality. The other choice is to think about meat eating, read about it, and learn more. Resist the defence, open your mind to the arguments, and see where they lead you. Don't be surprised if they lead you, slowly but surely, to a vegetarian restaurant.

Conclusion

Teaching students the importance of critical thought, and the defences that impede it, should be viewed as one of, if not the , central role of universities in society. For students to really appreciate the importance of critical thought they need to see how it can change the world, as it did when slavery was abolished. For students to understand truly the psychological defences to thought, they need to experience them directly, preferably in a palpable manner. The meat eating example provides just such an experience. It is an uncomfortable example because it leads one to reflect seriously on their behaviour and the impact it has, but that is exactly the point. AM

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The Race to
GLOBALIZE
HIGHER EDUCATION
in Canada

January 21-22, 2011
Sutton Place Hotel, Toronto

KEYNOTE SPEAKERS INCLUDE:

Pollster Andre Turcotte, Carleton University, "Public perceptions of the internationalization of higher education in Ontario".

Glen Jones, Ontario Research Chair, Post-Secondary Education, OISE/ University of Toronto, - "Globalizing universities: the Canadian context".

V. Lynn Meek, Director, Centre for Higher Education Management and Policy, University of Melbourne," The Australian experience of internationalizing higher education".

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How influential are faculty today?

Responses from the Canadian professoriate

Amy Scott Metcalfe, Donald Fisher, Yves Gingras, Glen A. Jones, Kjell Rubenson, and Iain Snee

How are the pressure to publish or perish, fiscal austerity, and the growing ascendancy of managers combining to affect the influence of faculty on academic life?

Comment la pression de publier ou périr, l'austérité fiscale et l'ascendance croissante des cadres s'amalgament-elles pour s'ingérer dans l'influence qu'exercent les professeurs sur la vie universitaire?

To what degree are faculty engaged in institutional decision-making and in the governance of both formal and informal structures of higher education? How influential are we?

For more than a half-century, faculty associations and consortia of faculty associations have sought to protect academic autonomy and the tenure system, but today they face new challenges. Institutionally, the Canadian academic profession is challenged by shifts in hiring practices and workload expectations. In the last two decades, faculty labour has become increasingly influenced by external drivers, creating a tense environment on many North American campuses. As the authors of *Faculty Careers and Work Lives: A Professional Growth Perspective* noted in 2008, there is an organizational "narrative of constraint" on American campuses, where "faculty are subject to unfair tenure systems, work expectations, mission creep, managerial reform, chilly climates, and a lack of support and mentoring". Yet, despite these constraints, they found that faculty individually and collectively continue to "survive" in the academy and that the profession continues to be attractive to new-

which involved 14 countries. Canada was not represented in the 1992 Carnegie study, making the 2007 CAP study the first time that many of the questions used in the international project had been asked of Canadian faculty. Thus, although the Canadian CAP project has not resulted in a dataset that can be compared with the 1992 Carnegie survey, it has provided an opportunity to assess the academic profession in Canada.

The Canadian CAP sample includes full-time faculty from doctoral-medical, comprehensive, and primarily undergraduate universities in nearly the same ratio as the Canadian university population (see Table 1). Female faculty, however, were somewhat over-represented in the sample, at

Table 1: Demographics of full-time Canadian university faculty

Characteristics	Faculty in Canada, 2005-2006*				CDN CAP	CDN CAP	CDN CAP	CDN CAP	CDN CAP
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Male	67.3				59.1				
Female	32.7				40.9				
White		84.2				85.0			
Visible minority		15.8				15.0			
Canadian citizen at birth			59.0				68.1		
Canadian citizen (2007)			86.8					89.5	
Assistant professor				28.0					28.7
Associate professor				32.0					35.3
Full professor				34.0					36.0
Other teaching title				6.0					0.0
	100.0	100.0		100.0	100.0	100.0			100.0
N=	38298	38298	38298	38298	982	1008	955	797	1152

Source: CAUT Almanac, 2008

comers. Is survival, however, enough? To what degree are faculty engaged in institutional decision-making and in the governance of both formal and informal structures of higher education? How influential are we?

The question of faculty influence was addressed by a multi-national survey known as the Changing Academic Profession (CAP) project. The CAP survey aimed to revisit some of the themes explored by the First International Survey of the Academic Profession, conducted in 1992 by the Carnegie Foundation for the Advancement of Teaching,

40.9 per cent compared to the actual percentage of female faculty in the population (32.7 per cent). Citizenship status of the respondents in the sample was close to that of the faculty in the general Canadian university population.

Beliefs about locus of decision-making

Several questions on the CAP survey pertained to the management and governance of academic work. Survey respondents were asked, "At your institution, which actor has the primary influence on each of the following decisions?"

Table 2: At your institution, who has primary influence on decisions?

Type of Decision	Gov't or External stake-Holders (%)	Inst'l mgrs (%)	Academic unit mgrs (%)	Faculty comm. or boards (%)	Ind. faculty (%)	Students (%)	N=
Selecting key administrators	4.7	47.9	12.3	29.6	5.3	0.2	939
Choosing new faculty	0.1	3.5	10.5	77.0	8.9	0.0	970
Faculty promotion & tenure decisions	0.3	11.6	18.1	66.0	4.0	0.0	968
Determining budget priorities	3.4	60.2	30.4	5.6	0.5	0.0	955
Determining the overall teaching load of faculty	0.3	28.4	51.4	16.5	3.5	0.0	954
Setting admission standards for U/G students	1.5	40.4	21.3	34.6	2.1	0.1	952
Approving new academic programs	7.3	36.5	16.7	38.2	1.3	0.0	957
Evaluating teaching	0.1	10.0	23.9	19.2	4.3	42.6	961
Setting internal research priorities	2.0	26.8	18.9	17.0	35.2	0.1	924
Evaluating research	7.9	12.7	21.3	38.2	19.8	0.2	916
Establishing int'l linkages	1.2	37.0	12.3	5.2	44.0	0.2	916

Table 2 reports the percentage distribution of these responses, which follow a predictable pattern across the six groups.

Government or external stakeholders were reported as being the least influential actors for the decisions mentioned in the item. A similar lack of influence was reported for students, except on the evaluation of teaching, where they were perceived to have the most influence (42.6 per cent). Individual faculty were not seen as influential, except in setting internal research priorities (35.2 per cent) and establishing international linkages (44 per cent). On this latter item, institutional managers were also perceived as being influential (37 per cent). Institutional managers were thought to be the most influential group when it came to selecting key administrators (47.9 per cent) and determining budget priorities (60.2 per cent). This group were perceived to be influential when it came to setting admission standards for undergraduate students (40.4 per cent) and approving new academic programs (36.5 per cent). As one might expect, faculty committees and boards were also considered to be influential on the latter item (38.2 per cent). A large majority of the respondents concluded that faculty committees and boards were influential when it came to choosing new faculty (77 per cent) and making faculty promotion and tenure decisions (66 per cent). Similarly, the highest proportion of our respondents perceived this group to be influential at evaluating research (38.2 per cent). Finally, while academic unit managers were thought to be influential by a sizeable minority on most items, it was only when it came to determining the overall teaching load of faculty that a majority of respondents (51.4 per cent) regarded them having a primary influence.

In terms of personal influence in helping shape key

Table 3: How influential are you in shaping key academic policies?

	Very or somewhat Influential (%)	A little or not at all influential (%)
Department Academic policies		
Assistant professor	55.1	44.9
Associate professor	61.6	38.4
Full professor	75.6	24.4
Faculty or school Academic policies		
Assistant professor	15.0	85.0
Associate professor	30.5	69.5
Full professor	48.8	51.2
Institution Academic policies		
Assistant professor	3.2	96.8
Associate professor	10.8	89.2
Full professor	25.7	74.4

academic policies, faculty reported they were the most influential in their departments, relative to other administrative levels (faculty or school and institution). When we cross-tabulated the responses to this question with academic rank, we found a consistent pattern (Table 3). At each policy-making level, a larger proportion of faculty judged that they were "very" or "somewhat influential" the higher the rank. The perceived lack of influence by full professors at the faculty or school (51.2 per cent) and institutional level (74.4 per cent) was intriguing, given the predominance of a bi-cameral mode of governance in Canadian universities.

Table 4: Who regularly evaluates your...

By whom is your teaching, research, and service regularly evaluated?	Teaching (%)	Research (%)	Service (%)
Your peers in your department or unit	39.7	45.4	45.1
The head of your department or unit	61.2	54.0	60.3
Members of other departments or units at this institution	11.8	16.7	13.3
Senior administrative staff at this institution	28.9	32.2	30.8
Your students	88.2	2.3	3.3
External reviewers	8.7	57.1	8.9
Yourself (formal self-assessment)	38.6	34.8	29.4
No one at or outside my institution	2.8	4.6	9.8

Teaching was seen as being regularly evaluated by students (88.2 per cent) to a greater degree than other institutional actors, which corresponds with the influence of students over teaching evaluations, as mentioned above. The research function was reported to be most regularly evaluated by external reviewers (57.1 per cent), although "peers in your department or unit" (45.4 per cent) and department heads (54.0 per cent) were perceived to be regular evaluators of research. A majority likewise perceived department heads as the ones who evaluate "service" (60.3 per cent).

INSTITUTIONAL CULTURE AND MANAGEMENT STYLE

While a majority of faculty members in the Canadian CAP survey felt that the management style at their institutions is top down, they were split in their responses about whether they felt that "top-level administrators are providing competent leadership" (see Table 5). They were also nearly evenly split on their responses to the statement that "lack of faculty involvement is a real problem", with slightly more people strongly agreeing or agreeing (39 per cent). Most respondents agreed they were "kept informed about what is going on" at their institutions (45.5 per cent strongly agreeing or agreeing) and that their administration "supports academic freedom" (60.9 per cent). Interestingly, most respondents indicated they disagreed or strongly disagreed that "students should have a stronger voice in determining policy that affects them" (41.3 per cent).

Overall, the response patterns recorded for the most part are predictable in terms of stratification by institutional type and rank. The perception of influence over decision-making and governance decreases with institutional size and, one might infer, the bureaucratic management style that accompanies working in a large institution. Although lacking longitudinal information within the survey, these results suggest that faculty governance is eroding, at least at the institutional and faculty/school levels of authority. Full professors do not perceive themselves to be as influential as one might predict, given the hierarchical structure. This conclusion tends to confirm the literature that documents how the role of senates has diminished as Canadian universities have become more corporate. These findings are consonant with other research that reports

Table 5: Views on the following issues...

Issues	Strongly agree or agree (%)	Neither agree nor disagree (%)	Strongly disagree or disagree (%)
Top-level administrators are providing competent leadership	38.2	23.7	38.0
Lack of faculty involvement is a real problem	38.9	28.3	32.8
Students should have a stronger voice in relevant policy	24.1	34.7	41.3
I am kept informed about matters at this institution	45.5	25.4	29.0
The administration supports academic freedom	60.9	24.6	14.5

increasing centralization of decision making and the view that even when faculty participate, they have little influence on the mission or direction of the institution. Faculty within comprehensive universities perceive themselves having more influence than we might predict. We are uncertain about what to infer from this, but it might well be related historically to the more democratic approach to governance that was adopted by a number of these institutions at their inception. One thinks of examples like York and Simon Fraser universities.

Faculty in the Canadian CAP survey regarded themselves as being the most influential as collective decision-makers (i.e., working as committees), in areas relating to core academic activities such as choosing new faculty, promotion and tenure review, approving new academic programs, and evaluating research. At the individual level, faculty saw themselves as being most influ-

faculty agreed their universities were characterized by a "cumbersome administrative process", a "top-down management style", and "poor communication" between management and themselves. Yet, in conclusion, our findings strongly suggest the academic profession in Canada is far from being in crisis.

The future of academic governance and institutional management in Canada may be influenced by the changing fiscal realities of postsecondary education. While the strength of faculty associations may be characteristic of the Canadian academic profession, their presence does not guarantee a similarly strong academic senate. In 2008, the Canadian Association for University Teachers struck an ad hoc advisory committee on governance to examine the role of academic senates and the involvement of faculty in key decisions at Canadian universities. The advisory committee found that many faculty collective agreements contained language that

The future of academic governance and institutional management in Canada may be influenced by the changing fiscal realities of postsecondary education.

ential in setting internal research priorities and establishing international linkages. Faculty saw academic unit managers, who are often faculty members acting as department head, as the most influential in determining the overall teaching load of faculty. Students were seen as the most influential in the evaluation of teaching.

An explanation for the general perception that faculty were not influential at the institutional level might well be found in the impact of the structural bifurcation of career lines between researchers and administrators that has occurred over the last two decades, coupled with the increased pressure placed on faculty to research and publish. The former factor is referred to elsewhere as the dichotomy between "faculty" and "management professionals". Our own results contain ample evidence of a performance orientation that translates into increasing pressure to raise research funds and make research a central part of academic work. Working together, these two factors could mean that faculty are increasingly content to leave governance to academic managers, particularly as their own time is more and more devoted to research.

The CAP survey reports a strong commitment to academic freedom that is consistent with the tradition in Canada of emphasizing the public functions served by our universities and the assumption that, as institutions, they should quite properly be accorded high levels of relative autonomy. This also links to the idea that the academic profession is the "archetype" of professionalism. Alongside what might be regarded as a very positive aspect of academic culture in Canada, we found a clear and pronounced dissatisfaction with the way our universities are governed. A majority of

limited the power of the academic senates, and it recommended that university faculty revisit these agreements to amend the wording to strengthen the role of faculty governance or, at least, clarify the power of senates in relation to the office of an institution's president and its governing board. While it is important that faculty have retained control over the decision making that pertains to teaching and research, a growing concern, as reflected in the CAP data presented above, is that the financial decisions of Canadian universities are removed from faculty review and may be increasingly an administrative responsibility. AM

Bridging the Digital Divide

A Non-Technical Approach to the Use of New Technology in Post-Secondary Teaching and Learning

Joan Flaherty

Now that faculty are dealing with the digital divide, there is only one choice. And the way to pursue that choice is to remember that faculty are perpetual learners.

Maintenant que les professeurs abordent le fossé numérique, un seul choix s'impose. Et la façon de poursuivre ce choix consiste à ne pas oublier que les professeurs sont des apprenants perpétuels.

One and a half lines in an e-mail started me on a journey that may be one of the most vexing—and important—in my teaching career. The e-mail was directed toward the 13 faculty members at my university who had enrolled in an upcoming course-design workshop, and it ended with this last-minute suggestion: "If you use Twitter, Flickr, Delicious, etc., or have a blog, the tag for the institute is GuelphCrDI, so capture it! Tag it! And share it!"

The recipients of that message were, no doubt, divided into two camps: those who could skim easily across that sentence, untroubled by semantics or phrasing and those who hesitated, stumbled, re-read—and still did not grasp its meaning beyond recognizing references to newer forms of digital technology. I fell into the latter group. Membership in this group is not a comfortable place to be these days, because it suggests ignorance about a topic—emerging technologies—that some claim should be the foundation of post-secondary pedagogy. This claim, however, is countered by those who argue that a pedagogical approach centered around digital technology panders to students' desire to be entertained, reinforces already weak attention spans, and erodes through neglect students' higher-level cognitive skills.

Arguments on both sides have merit, but the language used to advance these arguments is often divisive and emotion-laden. And always lurking just below the surface is the element of ageism: those who don't champion the technology fear being cast as aging Baby Boomers, covered in chalk dust and fearful of what they don't understand. Those who do champion the technology contend with speculation that they themselves are its unwitting victims, whose compulsion to text surreptitiously during faculty meetings and student exams calls into question their ability to provide a balanced, mature perspective.

Because gross generalizations are seldom the precursor of effective pedagogy, this article attempts to present objectively the arguments of both camps and offer an approach to connect the two groups on either side of this Digital Divide.

Arguments for the Increased Use of Technology-Based Pedagogy

1. Learner-centerdness

Central to this debate is the current generation of post-secondary students, born between 1980 and 1994, and their particular learning style. Marc Prensky, an avowed—and frequently cited—proponent of more educational technology, describes the most salient feature of this generation as

their lifelong immersion in digital technology. Computers, cell phones, video games, and digital music players have been their constant and, therefore, indispensable toys and tools since birth—hence the term Digital Native to describe these students and hence the claim that by the time they arrive on campus, they've spent more than 10,000 hours playing video games.

This prolonged exposure to digital technology, together with the notion of brain plasticity, has led to another, more scientifically-based claim: Digital Natives have developed brains that are different from those of their parents—and those of their professors. Neuroscientist Gary Small explains this difference between young and old as a "brain gap", whereby daily, lifelong exposure to digital technology, such as computers, video games, and search engines such as Google and Yahoo has literally shaped the way our students think: certain neural pathways have become strengthened through habitual use, while others have weakened through infrequent use. The result has been likened to brains that are "hard wired" to prefer speed, multi-tasking, and non-linear access to information—and to have a low tolerance for lectures, lengthy text, and passive forms of acquiring information. If that's the case, the bored faces in the lecture hall and the persistent web surfing throughout the tutorial session aren't necessarily examples of discourteous student behaviour. Instead, they may be evidence of the ill fit between the traditional teaching approaches and Digital Native learning styles.

The June 2009 report from Demos, a UK think tank, echoes this view. The 90-page report addresses the issue posed by its title, *Why Higher Education Must Embrace Technology*, in part by arguing that emerging technology's visuals, sense of immediacy, and ability to communicate simultaneously all target the Digital Native's learning profile. In doing so, this technology also narrows the gap between the student's in-school and out-of-school worlds. The result, presumably, is a smoother transition from home life to school life as the burden of having to move from a technology-rich world at home to a technology-limited (or perhaps even banned) world at school has been lifted. For these reasons, the British report encourages universities to make greater use of tools such as Twitter and online forums and to recognize faculty who are technology advocates for their teaching and leadership.

2. A strategy to strengthen the university's competitiveness

But Demos has another agenda besides enhanced

student learning when it advocates increased technology in the classroom. Increasingly, university administrators are realizing just how useful technology can be terms of supporting their institution's competitiveness, perhaps even survival, in the global marketplace. Technology is presented as a way for British universities to cope with reduced public funding, vigorous competition, increased demand fuelled by high unemployment, and increased student diversity—all challenges that certainly resonate here in Canada, as well. Indeed, a well-thought-out, more strategic use of technology would allow any university to become more flexible and accessible, opening its virtual doors to a bigger student body, including the sprawling international market. And underlying these advantages, of course, is the financial incentive: virtual classrooms are relatively cheap to build and even cheaper to maintain.

3. Workplace literacy

The need for digital literacy in the workplace is so apparent that it hardly needs reference. Harvard Business School's Andrew McAfee blogs (appropriately) on one essential theme: the engine behind American business competition is information technology (see his blog at http://andrewmcafee.org/blog/). Jack Welch, former CEO of General Electric, famously signaled its importance over a decade ago when he encouraged older managers to learn about the Internet from young employees. Today, this process is known as "reverse mentoring", and it has spread to encompass knowledge transfer in the workplace about iTunes, text messaging, wikis, blogs, and social networking sites.

And digital literacy is not just needed on the job. Increasingly, it's needed to get the job. An estimated 68 per cent of employers in the United States use social media such as Facebook and Twitter for recruiting purposes.

In other words, to succeed in a work world that's increasingly based on digital technology, students need—and expect—to be immersed in this world throughout their post-secondary education.

4. High-level cognitive skills

In 2008, the National Council of Teachers of English (NCTE), a 60,000-member American organization, released its definition of 21st century literacies, along with six related learning objectives. Noting that "technology has increased the intensity and complexity of literate environments", the NCTE document identified as first among its learning objectives the need to "develop proficiency with the tools of technology". The remaining objectives implicitly refer to the potential learning outcomes of using these interactive tools of technology: collaborative, cross-cultural problem-solving; construction of knowledge to be shared globally; analysis and synthesis of multiple streams of simultaneous information; creation and evaluation of multimedia texts; and attention to the ethical responsibilities required by these complex environments. These learning objectives all fall within the top tier of Bloom's taxonomy—and together they illustrate an important argument for technology-based pedagogy: its potential to allow learners not just to consume knowledge but also to create it.

A recurring theme throughout Don Tapscott's *Grown Up Digital* is the power of technology to elevate its youthful users to "become smarter than their parents ever could be". For example, the argument goes, hours spent playing video games leads to heightened skills in visual processing; spatial coordination; discovery through trial and error and hypothesis testing; cooperation with opponents; creative problem-solving; and strategizing. Consequently, by virtue of their life-long digital immersion, many students are said to be arriving at the post-secondary classroom with impressive proficiency in these higher-level skills. Given their capabilities, a focus on the lower-level cognitive skills of acquiring, knowing, or memorizing factual knowledge is boring for students and wastes their time. The Internet, after all, provides quick access to any facts the students will likely ever need. Post-secondary educators, therefore, should focus mostly, if not solely, on furthering the students' higher-level skills using the technologies that fostered these skills in the first place. Technology proponents argue that to do otherwise represents a step backwards (or, more accurately, a refusal to move at all), ignoring the students' current capabilities and the educational potential of emerging technologies to take these capabilities even further.
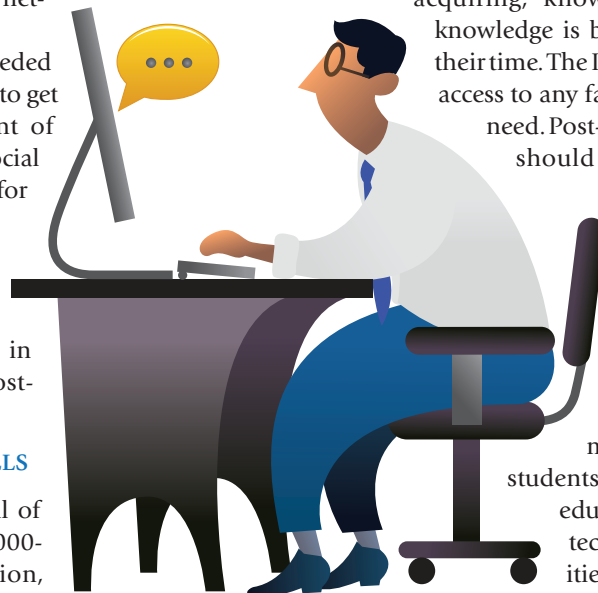
> Teenagers who spend more time with their peers than with anyone else may lack role models who will set high standards and enforce the discipline needed to achieve them.

Skepticism About the Increased Use of Technology-Based Pedagogy

The counterparts to the ostensibly quick-thinking, parallel-processing—but definitely young—Digital Natives are the Digital Immigrants, those who were born before 1980 and who, therefore, did not experience digital immersion from birth. Because of their lesser exposure, this group is less likely to possess the technological ease and fluency of the Digital Natives. They include among their numbers most post-secondary faculty. And they are perceived by some as a significant obstacle to the educational progress represented by increased technology-based pedagogy: "I think the problem is the faculty—their average age is 57 and … (their) model of learning is pre-Gutenburg. We've got a bunch of professors reading from handwritten notes, writing on blackboards".

Not surprisingly, this kind of rhetoric—the kind that suggests an inverse relationship between faculty age and teaching ability—leads to some impassioned responses from the other side of the Digital Divide. A summary of those responses follows.

1. The use of digital technology can promote "intellectual laziness"

By encouraging "horizontal modeling"

Professor Mark Bauerlein's thesis is contained in his book's title *The Dumbest Generation: How the Digital Age Stupefies Americans and Jeopardizes Our Future"* (2008). He cites study after study that suggests Digital Natives in the United States—and presumably Canada—know little about politics, history, literature, science and, except for celebrity gossip, current events.

Digital immersion for this generation means hours spent on the Internet socializing with peers and following pop culture. A multi-year, comprehensive, ethnographic study based on interviews with more than 800 American youth and their parents, *The Digital Youth Project*, confirms this last point. It uses the terms "always on communication" and "hypersocial" to describe young people's use of social networks, instant messaging, and mobile phones. However, time spent on Facebook and MySpace, which are popular websites among students, means less time spent on more intellectually valuable pursuits, such as reading books and forging
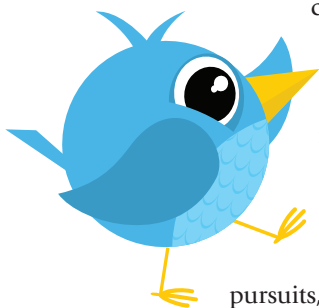
relationships with their elders, people who in earlier days acted as mentors and role models. In short, teenagers who spend more time with their peers than with anyone else may lack role models who will set high standards and enforce the discipline needed to achieve them.

By undermining "deep reading" and therefore analytical skills

The following scenarios are frequent topics of conversation—and commiseration—in faculty lounges. Students come to class not having read the assigned text. In fact, in anticipation of not reading, they may not have even have purchased the text. Students ask questions throughout the semester that indicate they haven't read the syllabus, at least not in its entirety. They skim; they scan. If a text is online, they click onto the next link, seldom returning to that unfinished page.

But students aren't the only ones doing this. In an article entitled "Is Google Making Us Stupid?" (2008), Nicolas Carr, former editor of the *Harvard Business Review,* describes his newfound impatience with reading books or lengthy articles and wonders if the Internet is to blame:

> What the Net seems to be doing is chipping away my capacity for concentration and contemplation. My mind now expects to take in information the way the Net distributes it: in a swiftly moving stream of particles. Once I was a scuba diver in the sea of words. Now I zip along the surface like a guy on a Jet Ski.

Dismissing the above as a baseless complaint, an anecdotal effort to foist the blame for one's own intellectual laziness on modern technology, would be easier if the work of Herbert Simon, Nobel Prize recipient, had not presaged this dilemma almost 40 years ago. The relationship between hours spent on the Internet and a reluctance—or inability—to read lengthy text may be explained by Simon's explanation of the attention economy, in which, he warns, "a wealth of information creates a poverty of attention …". In other words, we risk losing the ability to pay attention when too much vies for our attention. Trying to pay attention to the over-abundance of digital information that confronts everyone—but particularly, given their high usage, Digital Natives—means that we're probably spreading our attention too thinly.

And all of that puts us at risk of "turning into 'pancake people'" who have sacrificed the analytical depth of

thought that reading fosters for a superficial breadth of knowledge garnered from "zipping along the surface" of online information.

By encouraging the "myth" of multi-tasking

Some technology proponents would disagree with the above sentiment by arguing that Digital Natives know how to handle "an overabundance of information" through multi-tasking. In a Salon.com interview, social critic and author Hal Niedzviecki describes this generation as "constantly on the move, instantly Twittering, Twitpic-ing…they'll be doing that at the same time they're blogging and updating their status and making little movies and sending them to YouTube". And all this, a faculty member might add, while they're sitting in the front row of a lecture.

Scientific evidence, however, suggests that multi-tasking is a myth. When people think they are multi-tasking, they are actually engaged in "continuous partial attention", switching back and forth between competing activities. The resulting performance will likely be inefficient and error-prone, particularly if the task at hand is a challenging one. There's a reason, in other words, for legislation banning texting while driving.

But perhaps the most obvious—and visceral—evidence that people tend not to handle multi-tasking well comes from London, England, in 2008 "when Brick Lane, the fashionable east London street, announced that it was henceforth padding its lampposts as a preventive measure against the growth of 'talk and text' injuries that were maiming thousands of the young hipsters who amble along it".

2. Digital immersion can lead to constant yet weak connectivity

Problems of errors, inefficiencies, and bruised limbs are all relatively benign, though, compared to a more insidious threat faced by digital technology users: the need to always be in the information loop—even though the information is almost always banal and superficial. Blackberry users who set up their devices to alert them immediately to each incoming e-mail and students who repeatedly check for Facebook updates may be exhibiting the same syndrome as the terrier who barks incessantly once you've left for work: separation anxiety.

This anxiety exacts a high cost. Being in a state of constant alert for any new contact or bit of news places a strain on one's physical and emotional health. Compromised health is a high cost to pay, particularly when the relationships fostered though this constant connectivity tend to be weak,

resulting in a pseudo-cyber commu-nity (e.g., Facebook "friends" whom the user doesn't actually know; myriad blogs that no one reads). Indeed, the founders of Twitter attribute their technology's appeal to the fact that "it's connection with low expectations" of any real commitment.

And perhaps low expectations of any real achievement. A constant digital presence—and the pseudo-community it links the user with—may discourage a state of being often cited as the hallmark of great achievers; namely sustained (and solitary) reflection and contemplation. Marx had the Reading Room of the British Museum, Thoreau had Walden Pond, and Einstein, the private world of his own imagination. From this perspective, the path to achievement—and often to personal well-being—is not through multi-tasking and constant contact with others, states often associated with Digital Natives and their use of technology but through the opposite: focus, mindfulness and even meditation.

3. Not all post-secondary students are digital natives

Recent studies of first-year university students in Australia confirm what most faculty have observed in their classrooms: apart from Google, cell phones, and e-mail, students vary considerably in their technological proficiency and preferences. For example, most of the 2,000 students surveyed in one study had never created a website, kept a blog, participated in a web conference, used RSS feeds, or contributed to a wiki. A pedagogical approach that argues for enhanced use of digital technology based solely on student age is based on a thin foundation. And students who don't neatly fit the Digital Native profile risk falling through the cracks of this thin foundation.

An Approach to Reconciling the Two Sides
I must lie down where all ladders start,
In the foul rag and bone shop of the heart
W.B. Yeats

The arguments offered by camps on either side of the Digital Divide point to the major challenge facing post-secondary educators: both sides of the argument make sense. Both sides present compelling and logical (albeit often anecdotal) evidence that suggests we should support, and yet also be skeptical of, the increased use of technology-based pedagogy.

We are, therefore, left with only one choice: to search for a way to reconcile both sides. This may be an onerous task, but it's not a new one. The economist E.F. Schumacher framed our challenge years ago when he said, "the true problems in living ... involve reconciling opposites". And, fortunately, F. Scott Fitzgerald provided the motivation to pursue this problem when he pointed out that, "the test of a first-rate intelligence is the ability to hold two opposed ideas in the mind at the same time, and still retain the ability to function".

If our goal as educators is to help our students acquire a "first-rate intelligence", then surely our fundamental task is to model the process by which this goal can be achieved. We have to embrace the sound evidence and the good sense presented by both sides of the Digital Divide, no matter how opposing or contradictory those sides may appear, especially at first glance. To do so is not just our challenge; it is our obligation as educators.

Fortunately, it's also our heartfelt desire, one that resonates with who we really are. Perpetual learners. Most of us, after all, never stopped being students. A love of pursuing our own studies led to a faculty appointment that involved, almost incidentally, teaching. But our heart's desire is to learn. And understanding the Digital Divide, especially in light of the technology's rapid proliferation, offers many ongoing learning opportunities. There is an opportunity to learn more about technology-based pedagogy from camps on both sides and an opportunity to learn from the one side that matters the most in this debate (and the one side that has the highest likelihood of hands-on expertise in the subject matter): the students.

Universities haven't traditionally given much credibility to decisions based on the heart. But that's where we'll find the priority that unites us all: our love of learning. Remembering this priority will help us accept—and figure out how to apply—the sound arguments both for and against technology-based pedagogy. And in doing so, we'll bridge the technological divide that separates us from our teaching colleagues and from our students. AM

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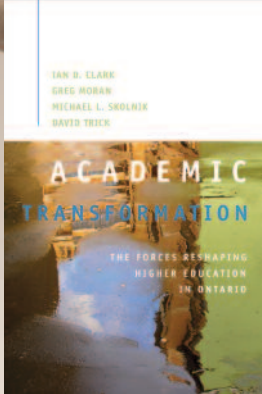
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Is the teacher-researcher
faculty model just too expensive?

A review essay by Ken Snowdon

The authors of *Academic Transformation* argue the current faculty model of teaching-research is too costly, short-changes students of variety, and relies excessively on part-time faculty. Does their case stand up to scrutiny?

*Les auteurs d'*Academic Transformation *soutiennent que le modèle actuel, qui exige des professeurs une part d'enseignement et une autre de recherche, est trop dispendieux, prive les étudiants de variété et dépend excessivement des professeurs à temps partiel. Est-ce que leur cas résiste à un examen approfondi?*

The past three decades have witnessed significant change in higher education in Ontario. Since 1980, enrolment has more than doubled in Ontario's universities, and research activity—as measured by sponsored research funding—has increased by a factor of 12. Over that time, the university sector has also witnessed the emergence of new institutions and a host of branch campuses in many Ontario locales. The growth of the sector has been remarkable, and there is much to celebrate.

At the same time, however, the marked increases in the level of activity have spawned extraordinary pressures on many fronts, from putting the "bricks and mortar" in place to hiring enough faculty. Ontario's universities continue to be faced with many challenges: increased enrolment, improving access for under-represented groups, playing a lead role in the federal and provincial governments' innovation agendas, and acting as the catalyst for economic and social development.

With the province now facing considerable financial stresses, the likelihood of significant new investment in higher education is not high, although the McGuinty government has pledged to fund further increases in enrolment. Given the financial circumstances of both government and universities, it is not surprising to find considerable interest in proposals that might offer some lower cost options, hence the interest in *Academic Transformation: The Forces Reshaping Higher Education in Ontario*. The basic thesis of *Academic Transformation* is that the "present approach to the provision of baccalaureate education in Ontario is not sustainable and is in need of significant modification." In support of the thesis, the authors argue that the current teacher-researcher model is expensive, provides insufficient variety and relies on part-time faculty. The authors also point to "statements from the universities themselves that they do not have sufficient funds to fulfill their mission...." The solution? The authors provide a set of suggestions that boils down to more government intervention, including the creation of teaching-focused undergraduate institutions, the expansion of college mandates, and an Open University.

The authors always offer some interesting perspectives and opinions about higher education in Ontario but, at times, would benefit from the provision of more data. For example, the authors argue that the current model namely, the provision of "baccalaureate education exclusively through publicly funded universities in which faculty typically spend only 40 percent of their time on teaching" is expensive relative to other systems. Yet there is limited data to support the argument. Expensive relative to what? The college system, other models, other jurisdictions? Expensive to whom? The

student, the taxpayer? The absence of some fundamental comparative indicators, such as the public investment in universities relative to provincial GDP, provincial tax effort, per capita spending, and relative "net" tuition levels would help put the argument in context. Statistics Canada, for example, reported in 2009 that combined public and private expenditure on university education in Ontario, expressed as a percentage of GDP, was similar to the Canadian average.

The authors' argument about "insufficient variety" rests solely on the similarity of the degree-granting authority accorded the universities and "the lack of mandated institutional differentiation by mission, function, areas of study, educational philosophy or approach to program delivery." Do the facts support the argument? A simple comparison of student enrolments by program by institution actually demonstrates considerable differences in discipline "mix" and the mix of undergraduate, professional, and graduate programs. Further analysis would point to major differences, by institution, in the composition of the student body, the "character" of the institutions, and program delivery, not to mention the unique learning environments associated with the numerous affiliated and federated institutions that are an important part of Ontario's university sector.

The increased reliance on part-time faculty is a reality. In some disciplines the use of part-time faculty is regarded somewhat more positively than the authors acknowledge—bringing the hands-on experience of practitioners to the classroom in a variety of disciplines such as law, business, engineering, fine arts, and education. Further, some part of the increased reliance on non-full-time faculty is also directly related to increases in doctoral enrolment in more recent times and the use of doctoral students as instructors, a normal part of the graduate education experience in many disciplines. Nevertheless, the increase in part-time faculty is regarded as a problem by the authors, and its cause they attribute to the "long-term shift among full-time faculty towards greater research responsibilities and reduced undergraduate teaching loads." One could argue that the real issue is why the number of full-time faculty did not keep pace with increases in research activity and enrolment. That is, why have acknowledged changes in activity, sanctioned and encouraged by government, led to the greater use of part-time faculty rather than the hiring of more full-time faculty? And to address that question we turn to the adequacy of funding.

References to funding in *Academic Transformation* provide an assessment that essentially suggests two things: first, per student revenue has more or less kept pace with inflation and, therefore, the real issue is not revenue but costs; and second, the likelihood of increased funding is remote in light
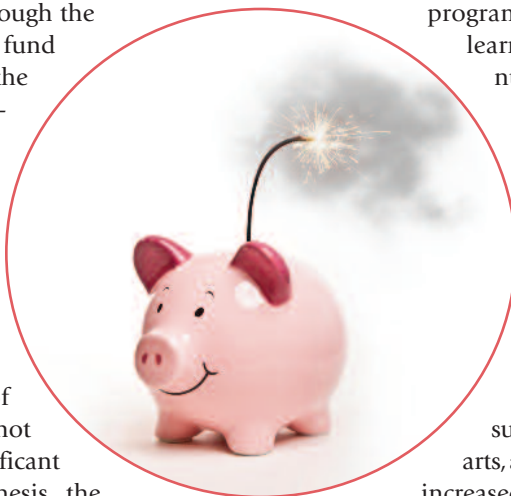
The research literature makes it clear that investing in higher education is a positive benefit to individuals and society.

of the global recession and competing public priorities. The assertion that revenue has kept pace with inflation is technically correct but glosses over a number of realities. For example, part of the increased revenue was earmarked by government and/or by students for new activities, for the expansion of existing activity, and for qualitative improvements. These earmarked funds were therefore not available to offset inflation. At the same time, the significant increase in research activity, directly linked to federal and provincial "innovation agendas", was not matched with adequate funding for either indirect institutional costs or the direct cost of faculty time, thus becoming yet another new claim on per student funding. In fact, if the preceding realities are factored into the funding equation, it is clear that universities have been faced with considerably more demands while receiving fewer real resources to meet those demands.

With respect to costs, faculty compensation has outpaced general inflation over the past decade or so, largely reflecting the basic law of supply and demand. The very rapid increase in enrolment that occurred from the late 1990s onwards resulted in major increases in demand for faculty. The federal government's innovation agenda, coupled with programs to encourage more faculty positions (e.g. Canada Research Chairs), led to further demand for faculty and heightened competition. Yet production of Ph.D. graduates actually stalled during the latter part of the 1990s, a consequence of funding cut-backs that marked the mid-1990s. The effects on faculty compensation were predictable: increased starting salaries and faculty compensation increases that outpaced inflation.

As for the likelihood of funding being increased, governments have to make choices about the value of their investments. The research literature makes it clear that investing in higher education is a positive benefit to individuals and society. Nevertheless, *Academic Transformation* essentially rules out increased investment in higher education as an option, given competing public priorities and straitened provincial finances. The absence of any evaluation of the case for more public investment is a major shortcoming in the book, as is the lack of a serious discussion regarding tuition and other forms of private investment.

Turning to the proposed solutions, *Academic Transformation* calls for more direction from government: to mandate differentiation, to force collaboration, to expand college mandates, and to create new kinds of institutions. It is

worth pointing out that the provincial government already controls tuition levels, the level and distribution of operating and capital grants, the funding of new programs, ancillary fees, the establishment of new institutions, and has legislative authority over the sector. Nevertheless, building the case for more central planning is a pervasive theme in *Academic Transformation*. Missing in this narrative is reference to the rather heavy-handed approach to collaboration imposed by the ministry and to the fact that, within a few years of the collaboration's start, the government had to revisit the arrangements and add considerably more funding. Also missing is any discussion of alternative approaches.

In developing their argument in support of government-mandated differentiation the authors suggest "the one-size-fits-all funding mechanism...has militated against the kind of institutional differentiation that has evolved in many other jurisdictions...." Yet, one could just as easily argue that the basic elements of the core-funding mechanism served the province and Ontario's universities reasonably well from the mid-1960s through to the mid-1990s. That mechanism had the flexibility to meet emerging needs, as evidenced by major new funding envelopes that recognized research overheads and expanded accessibility in the late 1980s, in addition to special funds for faculty renewal, equipment, and secondary school reform. The problem with the funding mechanism, one might argue, is that from the mid-1990s onwards it was ignored in favour of a series of targeted funding envelopes, which remain as constant reminders of the perils and pitfalls of central labour-force planning and "hands-on" government intervention.

The suggestion to expand the community college mandates seems to be premised on two beliefs: that there is not enough collaboration between the college and university sectors (forced or otherwise) and that college education is less expensive to the province. With respect to collaboration, while indicating a desire to continue with collaborative efforts, the colleges want to secure their own degree-granting authority. Yet, interestingly, according to a study released in late 2009, colleges in Toronto and Ottawa appear to have capacity problems meeting existing college program demand.

With respect to college costs, the only data offered in the book indicates a provincial college grant per student of approximately $5,000-$5,500 per year versus a provincial university grant figure of $3,100-$5,800 for students in general arts and science programs, first year arts and science honours programs, upper—year arts honours programs, and commerce, law, and fine arts. If the public investment in both sectors is relatively similar, it seems reasonable to ask if the return on investment is similar ? Are graduation rates the same? Are employment rates the same? Are incomes the same for college and university graduates? Are loan default rates the same? Moreover, expanding the colleges' mandate could, in fact, lead to arguments for more college funding. Since this particular piece of *Academic Transformation*'s argument is

based on "costs," a more detailed examination of costs (and return on investment) would be helpful in assessing the strength of the argument. It would also be interesting to know how much benefit there would be if college mandates were expanded. Would access be improved? Would the quality of the learning experience be improved?

The authors' arguments for expanding college mandates also slide over particularly tricky issues, such as province-wide collective bargaining for college faculty. The authors note, on the one hand, the existence of a college workload formula but make scant reference, on the other hand, to the impact of the workload formula on costs, college compensation levels, or the use of part-time instructors in the college system. In contrast, they devote a fair amount of time to these factors in the universities, thus leaving the reader with a rather one-sided view of cost drivers in the post secondary sector and the ostensible relative inefficiency of the universities.

Academic Transformation suggests that the creation of a "new teaching-focused university sector" would be less expensive and provide a better learning experience. Evidence for the "less expensive" assertion focuses on teaching loads; the assumption is that teaching loads would be higher in a teaching-focused university sector, so that the cost per course per full-time faculty member would be lower. The arithmetic suggests a teaching-focused university sector employing full-time faculty with heavier teaching loads would be less expensive than the current system, if the current teaching-research universities employed only full-time faculty (with lower teaching loads). But, in fact, the current system employs more than just full-time faculty. Therefore arguing that a teaching-focused sector would be "less expensive" than the current reality may not be the case. In fact, according to *Maclean's Magazine,* it is clear that the "best" undergraduate institutions in Canada (Mount Allison, Acadia) spend as much or more per student than the so-called research universities in Ontario.

Perhaps a teaching-focused institution would provide a better learning experience, but that assertion deserves considerable scrutiny as well. What constitutes a better learning experience? Is there any evidence that the supposed teacher-focused learning experience in the colleges, for example, is better (or worse) than the university learning experience?

The idea of teaching-focused institutions is also premised on the assumption that research should be confined to a few institutions. Federal and provincial research initiatives over the past decade have already focused a considerable amount of resource-intensive research on a select group of institutions. But the reliance on peer-adjudicated competitions is a far cry from the government decree suggested in *Academic Transformation.* Moreover, the use of "networks" and peer-adjudicated processes have helped ensure that all institutions (and faculty) are provided with the opportunity to participate in the innovation agenda. Perhaps encouraging those aspirations and focusing on allocation processes that pay some attention to excellence and quality is

a strategy that, in fact, strengthens higher education and research and development.

There are alternatives to the central planning views espoused in *Academic Transformation.* In 1996 the Advisory Panel on Future Directions for Postsecondary Education argued that "excellence, differentiation and the effective use of resources are best encouraged in a less regulated environment than Ontario now has." A decade later Bob Rae re-affirmed the importance of "self-government and institutional flexibility" in *Ontario: A Leader in Learning.* An argument could be made that the careful balancing of self-regulation, competition, and collaboration that characterized the development of the university system was (and remains) a better model than the heavier hand of government. That the provincial government has not often exercised its full authority to set mandates could, perhaps, be interpreted as enlightened public policy!

Throughout the past 15 years or so the postsecondary system in Ontario has been subjected to one intervention after another by both the federal and provincial governments. In the mid-1990s federal transfer payments were slashed, to be replaced within a few years by a suite of federal initiatives directed at individuals (student assistance, tax expenditures) and institutions (research). Though perhaps well-intentioned, the federal initiatives often turned out to have an unforeseen impact. Too often they involved squabbles between the federal and provincial government that focused more on turf than the well-being of students or the sector. Too often they were dictated with little consultation — a practice shared by the provincial government — and the subsequent implementation problems then had to be addressed and re-addressed, and re-addressed again. In the meantime, the province stepped up its effort to run the universities from Queen's Park, unleashing a hail of targeted funds and severely restricting increases to core operating funds. In the absence of a coherent provincial or federal postsecondary policy, the interventions have meant that planning on campuses has degenerated to a term-by-term exercise, with attendant turmoil, tension, and anxiety.

The bottom line? *Academic Transformation* provides an interesting perspective on higher education in Ontario, and parts of it are thoughtful and provide some insight into at least some of the factors transforming postsecondary education in the province. To the extent that it helps spark debate about the level of investment in higher education, about the evolving role of Ontario's colleges and universities in addressing access and research challenges, and about the intricate network of related public-policy imperatives, it will be seen as an important contribution to the literature. But its overemphasis on structural change risks deflecting attention from the real issue: the level of investment in higher education and the factors that truly matter to successful student learning and the success of the innovation agenda. AM

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Humour Matters

Steve Penfold

Plagiarism: How about a Canada Research Chair in Surveillance?

BY NOW, STUDENTS probably think all my courses are about plagiarism. I seem to talk about it constantly: reviewing its definition, enumerating its many versions, and warning of the pernicious consequences of doing "It". Legalistic warnings take up almost as much space on my syllabi as the list of lecture topics or tutorial readings. Every time I open my email, someone is reminding me to be vigilant, to design plagiarism-proof assignments, and to report all transgressors to the appropriate authorities.

Indeed, the Big P has become the social disease of the new millennium. The Internet, we are told, has made cheating easy and impersonal. No more need to borrow your room-mate's old paper; no more need to re-type last year's take-home test. Just Google, click, copy, and paste. Researchers report that more than 70 per cent of students admit to cheating at some point in their university career, a statistic that has administrations scrambling to enforce codes of academic integrity.

And then there's TurnItIn.com, a commercial service that will scan student work against its 130-million-essay database and report any similarities. This site has us poring over colour-coded e-essays and perusing statistical reports that tell us there is a 45 per cent chance that an essay is plagiarized. Now, if someone would develop a website for actually marking essays or for generating letters of reference— "There is a 65 per cent likelihood that Bill Jones should go to grad school" or "MarkItUp.com

informs me that 35 per cent of this paper is well researched and intelligent"—then we'd really be onto something. As it stands, though, I feel like I've been awarded the Canada Research Chair in Surveillance.

Let me be clear: the Academic Matters folks decided to call this is a humour column (though my rants and ramblings rarely rise to that lofty goal), but cheating isn't funny. It is dishonest and unfair. It is a form of theft. Worst of all, to my mind, it wastes everyone's time—students hand in assignments but learn nothing, professors do marking without teaching anything. A plagiarizer could have just handed in 15 blank sheets of paper. I could have just stayed at home to watch Battlestar Galactica. Plagiarism is the worst perversion of all the very best things about a university: thinking, inquiry, intellectual growth.

No doubt this view is evidence that, when it comes to a university education, I'm a sentimental old chap. So I'm hardly about to defend cheaters, who are just another invasive species of consumerist thinking, ratcheting up the rhetoric of utility around education and inducing still more legalistic responses from universities. In my revolution, plagiarizers will be first up against the wall after drunk drivers and people with good fashion sense.

But when I ran my syllabus through MoralPanic.com, I was informed that there is a 75 per cent chance that 95 per cent of this energy is being wasted. I'm not sure what to make of statistics about cheating, since I

don't imagine it's easy to get reliable data in a survey about dishonesty. And technology has always allowed students to fudge matters. I suppose our professorial forebears complained about typewriters, which severed the act of creation from actual handwriting. Who knows how that term paper got produced? Probably Northrop Frye had some thoughts on the place of fonts in the decline of a humanistic education.

I mean, 50 years from now, all these syllabistical warnings are going to look like those Cold War civil defence films that taught students to duck and cover in the event of nuclear attack—period pieces that rather missed the point. In my experience, few students read the syllabus carefully anyway, and as soon as the tone goes bureaucratic, their minds (like mine) turn off. And with deference to Surveillance.com, I suspect that most cheaters get caught in that old-fashioned, somewhat humanistic way—a paper that is too good simply sets professorial bells ringing. I suppose, in the end, I'm old fashioned enough to believe that part of having academic integrity is starting from the proposition that students are honest adults—a premise, I'll admit, that is somewhat difficult to run through a webpage.

Steve Penfold is Academic Matters' *humour columnist. He moonlights as an associate professor of history at the University of Toronto.*

Mark Rosenfeld

Understanding university students

"WHO ARE TODAY'S university students?" The answer to that question is not so neatly encapsulated in a simple response.

Ken Steele notes in the lead article of this issue that students are a diverse group looking for variety of university experiences. They differ regionally, demographically, and by expectation and motivation. They are ethnically diverse. They are both younger—and older—than in the past. Indeed, mature students—those typically older than 25—make up an increasing number of undergraduate students.

Much attention, however, still focuses on the young undergraduates, who comprise the bulk of students at university. Both anecdotally and through numerous surveys, we know there are common threads unifying this diverse group. As Steele observes, they are more likely to view universities as career preparation than as a path to "personal or intellectual growth". Only a minority are motivated to pursue their studies in order to "give back to society." They tend to view higher education as a commodity to be purchased and, as consumers, look for the best scholarships and the best return on their educational investment. Undergrads are also more likely to have paid work while studying "full-time," a situation applicable to more than half of women students and approximately 40 per cent of men.

Steele observes that universities have contributed to students' consumerist perspectives through ever-increasing tuition fees, an emphasis on the financial value of a university education, and aggressive marketing campaigns that highlight facilities and services.

These trends are accompanied by student anxiety about the growing cost of university education, an uncertain labour market, and financial insecurity.

Much is made of the cultural shift today's students represent compared to the generation of middle-aged faculty who teach them. The impact of technology is frequently underscored. In a recent Chronicle of Higher Education article, "Will the book survive generation text?" Carlin Romano worries that technology and a dramatically changing culture of communication is undermining the willingness and capacity of students to engage intellectually in any sustained manner.

Romano writes that "... [y]oung people hear, through the apotheosis of tweets, blog posts, Facebook updates, and sound bites as the core of communication, that short is always smarter and better than long, even though most everyone knows it's usually dumber and worse." He then muses, half-seriously, that the recent tongue-in-cheek Penguin publication *Twitterature* by two University of Chicago undergraduate students could be the new Coles notes of world classics for the current generation of students. In that 140-character universe, Hamlet becomes: "@OedipusGothplex—Gonna try to talk some sense into Mom because boyfriend totally killed Dad. I sense this is the moment of truth, the moment of candour and—"

Is this overwrought? Are such concerns simply an academic version of the age-old lament "What's the matter with kids today?" Certainly, as other have suggested, the students who today tweet, text, and adjust their Facebook settings during lectures are the modern-day equivalent of those who read comics and passed notes to each other 30 years ago. And now, as then, are also students with a desire and dedication to learn.

But, there are some more fundamental concerns at issue here. As universities increasingly focus on responding to the market of prospective students—a market that is highly sensitive to economic change and perceived opportunity—what is the future of programs which have been a critical part of a university education but no longer are viewed as having an economic return—by the student market or the university? Does a finely-tuned attention to market demand mean, for example, the demise of the liberal arts? How "adaptable" can universities become without sacrificing the ability to provide the knowledge and critical thought that ideally underpins a university education? And what role can faculty play in all of this?

The articles in this issue provide some very thoughtful perspectives on these and other concerns. AM

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