
FAUW FORUM

FACULTY ASSOCIATION OF THE UNIVERSITY OF WATERLOO NEWSLETTER

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COUNCIL OF REPRESENTATIVES

Thursday, March 16, 2000
7:00 p.m., NH 3004

ANNUAL GENERAL MEETING

Wednesday, April 5, 2000
2:30 p.m., Physics 145

**FAUW STANDING COMMITTEE
CHAIRS**

ACADEMIC FREEDOM & TENURE

Ray McLenaghan

COMPENSATION

Mohamed Elmasry

MEMBERSHIP

John Wilson

PENSION & BENEFITS

Sandra Burt

POLITICAL RELATIONS

Len Guelke

STATUS OF WOMEN & INCLUSIVITY

Alicja Muszynski

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PRESIDENT ' S MESSAGE

BY FRED McCOURT

Welcome to the year 2000, or MM, as the Romans would have it. After all last year's buildup, isn't it surprising how little difference there actually is from previous years as we start down the final year of the second millennium? Fortunately, now that the Y2K hype has passed, we can get on with our lives, and no longer be pestered with dire warnings of the potential failure of all the technology upon which so many of us have by now come to depend.

Various of our colleagues continue to negotiate on our behalves, and some progress can be reported. Professor John Wilson and his team of Memorandum of Agreement negotiators have completed their work (together with the Board of Governors' team) on Article 14, "Integrity in Scholarly Research", and it now awaits completion of negotiations on Article 13, "Member Performance Evaluation" and "Salary Structure" (final title yet to be determined due to the expanded nature of the negotiations). For those of you who may, for some reason or other, recall that I have already said much the same thing three months ago about the Article 14 negotiations, it did turn out that I was just a little overly optimistic then, and that there were several more At@s to cross and Ai@s to dot than I had thought. Despite this previous experience, though, I still believe that the performance evaluation part of Article 13 is essentially complete, and it is really only the salary structure portion that remains under significant discussion. We still hope to bring two articles before you for ratification by the end of this term.

As you may recall, drafts of replacement Policies 76 (Appointments) and 77 (Promotion and Tenure) left the Faculty Relations Committee (FRC) early in December for feedback from faculty members, and were sent on to Senate for a first reading in January. FRC is now in the process of considering comments provided and concerns raised by a number of our colleagues. Should you have specific (or even general) concerns, please convey them to any member of FRC or to John Bullen at the Secretariat. To those of you who have already sent in comments, thank you for taking the time to do so. To those of you who have not yet taken the opportunity to look over these draft policies, and especially to those of you who have tenure and/or promotion steps yet to be completed, please note that Policy 77 especially has the potential to have a significant effect on your academic futures.

It is also the time of year when the FAUW is in the throes of conducting Salary Negotiations with the University on your behalf. There has been a change to the members of the Board of Governors negotiating team: the Chief Negotiator, Dean John Thompson, has stepped aside, and has been replaced by Professor Harry Panjer as Chief Negotiator, and Dean Geoffrey McBoyle (of ES) has joined their team. Needless to say, both teams are very sorry to have lost Dean Thompson's experience and skill as a negotiator and his ability to work with people. We have held a "Meet Your Negotiating Team" session this past January 25, partly in order to allow our negotiators to comment upon how far the negotiations have proceeded, and partly in order for them to learn about any specific concerns that individual faculty members might have. Although the turnout wasn't spectacular (and, of course, it seldom is unless the negotiations have reached an impasse), many of those who did attend were able to raise a number of specific concerns, several of which our negotiators are attempting to address either directly through the salary negotiations, or indirectly through the negotiations on Article 13. While the double venue slightly complicates these issues, we are attempting to keep our two teams as up-to-date as we can; the Board of Governors team now has two members who are common to both sets of negotiations.

The FAUW also sponsored a seminar with the title "University Finances: Their Transparency and Administration Accountability" by Professor Ronald-Frans Melchers, a visiting fellow at CAUT, who has a deep and abiding interest in university finance. [We note, however, that one need not draw any connection

between his expertise in university finance and his regular faculty appointment as a Professor of Criminology at the University of Ottawa.] Professor Melchers has employed a set of standardized fiscal data supplied to him by the Statistics Canada Centre for Education Research to examine various categories of well-defined income and expenditure classes both for individual universities across Canada, and for provincial and Canada-wide averages. In particular, for his seminar at Waterloo, he compared the way in which UW manages its finances with the Ontario average. Unfortunately, we were able to provide only somewhat short notice for his seminar, and the turnout was less than could have been desired. Nonetheless, there was good representation from all parts of the university community, including some administrative personnel. The original fiscal data upon which the statistical analyses have been based have been supplied, since 1972, to Statistics Canada by the Canadian Association of University Business Officers (CAUBO). It is slightly ironic that these comparisons are based upon data originally supplied by CAUBO, which is a group that has long been considered by CAUT to be hostile towards university faculty members. Professor Melchers has kindly given us permission to make copies of his charts available to interested parties. If there is sufficient interest, it is possible that we could mount this information on the FAUW website. Finally, I would not rule out the possibility of obtaining an article for the *Forum* which compares the financial situation at UW with that of other Ontario universities.

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FAUW Elections



Nominations are now being accepted for President and Board of Directors of the Faculty Association. Nominees must have been a member of the Association for at least one year as of April 5, 2000 and must agree in writing to stand for election.

Nomination forms have been mailed to members, and additional copies are available from the Faculty Association Office (x3787). Completed forms must be returned to the Association Office in MC 4002 by 3 p.m. Monday, March 6.

UNIVERSITY ADMINISTRATION NEEDS TO IMPROVE FACULTY SALARIES FOR COMPETITIVE AND EQUITY REASONS

Faculty are the critical component in the ability of the University to fulfill its primary mandate - the creation and dissemination of knowledge through teaching and research. Given that, it is hard to understand or justify the low priority given to faculty by the Administration in its recent budget practices. This is a change, and a change for the worse, over practices prior to 1991/92, one which bodes ill for the long-term health of the University. The evidence clearly shows that expenditures on faculty are the lowest priority of this Administration.

All the data concerning faculty remuneration and the University's treatment are negative.

First, from at least the mid-1970s until 1994/95, total faculty salaries were fairly steady at 36-38% of University expenditures, and total staff salaries were about 0.5-1.5% lower than total faculty salaries. In 1997/98, total faculty salaries had dropped precipitously to only 31.8% of University expenditures. Total staff salaries at 33.9% of University expenditures were 2.1% higher than total faculty salaries.

Second, 1992/93 to 1997/98 was a bad period for the University but a worse one for its employees. UW Operating income decreased by 6.2% and UW Operating expenditures decreased by 6.6%. However, UW staff salaries decreased by an additional 4% - a total decrease of 10.3%, and UW faculty salaries decreased by an additional 11% - a total decrease of 17.5%! Clearly, the decline in faculty salaries was not the result of a shift in resources to staff salaries, as the percentage of University expenditures allocated for total staff salaries also decreased a little.

Third, the decline in expenditures on faculty salaries is not due, to any significant extent, to a decrease in the age of faculty on average, as suggested by the Administration. The following table gives the average faculty salary and the average faculty salary corrected for age expressed in 1999/2000 dollars for 1997/98 (the last year for which I have average salaries), 1991/92 and 1977/78. 1991/92 is a very conservative reference year. It is recent and representative of the fairly flat, low salaries in the period 1983-92 which followed the previous period (1978-1983) of substantial erosion in faculty salaries. 1977-78 is a fairly conservative reference year for faculty salaries in the 1960s and 1970s prior to that previous period of erosion.

(1999/2000 DOLLARS)			
Year	Average Salary	Average Age	Age-corrected (to 47.4) Average Salary
1997/98	\$79,170	47.4	\$79,170
1991/92	\$89,430	48	\$87,980
1977/78	\$89,380	42	\$102,450

Clearly, faculty salaries have eroded substantially again in the period from 1991 to 1997. Unlike the previous decline from 1978 to 1983, where the decline in faculty salaries paralleled the decline in University resources so the faculty share of University resources remained constant, much of the current decline is a consequence of the fact that the University cut expenditures on faculty salaries much more severely than its income was cut.

Fourth, most of the decline in average faculty salaries is explained by inadequate scale increases, which also result in individual faculty members crossing the salary breakpoints and thereby getting lower selective progress through the ranks (PTR) increases at too early a stage in their careers. The percentage decreases in the faculty salary floor F and the breakpoint salaries are similar to those for average salaries.

FACULTY SALARY FLOOR AND BREAKPOINTS (1999/2000 DOLLARS)			
Year	Floor, F	2.2F Break-point	2.5F Break-point
1999/2000	\$40,310	\$88,680	\$100,775
1991/92	\$44,690	\$98,318	\$111,725
1977/78	\$49,616	\$109,153	\$124,040

AVERAGE FACULTY SALARIES

An immediate scale increase to \$45,000 plus an increase equal to the cost of living increase in May would mean that nearly all faculty now getting a half PTR increase would be entitled to a full PTR increase and nearly all faculty now above 2.5F would be entitled to a half PTR increase. Assuming that the University income and expenditures increased only by the cost of living increase, total faculty salaries would rise to about 35.5% of University expenditures B roughly at the bottom end of their historical level. If the immediate increase to \$45,000 applied only to the salary structure, that is, to F and the breakpoints but not to individual salaries, the gains in PTR eligibility would be immediate, but it would take several years (probably more than 10) for total faculty salaries to rise to 35.5% of University expenditures.

Fifth, the Administration have often argued that the net cost of PTR increases (in the past decade, this has been about 0.25% to 0.80%) has not been affordable, and required scale increases below inflation. However, in the one year (1996/97) when the PTR costs were much less than savings from retirements thereby making a scale increase above inflation affordable, the Administration abandoned that position and did not use the savings in faculty salary costs to offset the scale erosion of previous years - indeed, they did not even agree to a scale increase equal to the cost of living increase. If faculty salaries had been increased by that amount alone, salaries would still have been a little low at 34.0% of University expenditures in 1997/98, and UW total faculty salaries would have decreased from 1992/93 to 1997/98 by 11.9% - still much greater than the decrease in University income. If this had occurred as a scale increase, the faculty floor salary F for 1999/2000 would now be a somewhat more reasonable \$43,066.

A final indication that the priority assigned by the University to proper compensation for faculty has declined is the following. In 1999, the Administration argued before the arbitrator that Faculty Association arguments about total faculty salaries as a percentage of the University budget are outside the terms of reference of the Memorandum of Agreement B that the Faculty Association could argue only for a particular percentage scale increase, and the rest was the Administration's business only. Of course, this is nonsense since the fraction of the University budget allocated to faculty salaries obviously impacts on both the number of faculty (and therefore workload) and their average salaries and clearly is a "terms and conditions of employment" matter. This is a significant change in the Administration's position. In 1985, the Administration representatives (D. P. Robertson, Vice-President, University Relations, Dean R. G. Marteniuk, and R. L. Fowler, Classical Studies) and the Faculty Association representatives

agreed in principle to the following item which subsequently was ratified by the Board of Governors and by the faculty at a General Meeting:

It is also agreed that the percentage of the University budget spent on faculty salaries is a useful index for monitoring the University's commitment to faculty resources, although it could be misleading if used in isolation. Acknowledging that the University is committed to promoting the well-being of all its faculty members and to providing support for their work to the maximum extent that its resources allow, it is nevertheless consistent with placing a high priority on salaries to plan, at least in the short term, for a minimum percentage of the University's operating budget to be allocated to the faculty salary budget. Currently a level of 37.2% (typical of 1975-80 levels) seems an appropriate target. This target and the components of its calculation should be reviewed periodically.

Obviously, both the Administration and the Board of Governors in 1985 considered it appropriate for salary negotiations to include negotiations about the percentage of the University's expenditures allocated to total faculty salaries. Faculty salaries and workload (assuming a larger complement) would obviously be much more competitive and fair now, if the percentage of the University's expenditures were not so far short of both the target in 1985, and the range in effect for at least the two decades prior to 1995.

Unfortunately, UW faculty have also lost ground relative to faculty at other Ontario universities. From 1991/92 to 1998/99, the scale increases for our comparison group and for all Ontario universities were about 1.8% and 2.6% greater on average respectively than those at UW. Last year's settlement did nothing to correct this; if anything, we lost more ground.

We are heading into a period when it is going to be crucial for the health of universities that they be able to compete effectively in retaining existing faculty and hiring new faculty. The recent history described above has not left the University of Waterloo well positioned to meet that challenge. It is crucial that the Faculty Association's compensation team negotiate a good contract for the next few years which restores some of the losses over the past several years and re-establishes funding for faculty as a high priority of the University. I hope all of you will provide your support and encouragement to the negotiating team in this important work on our behalf.

Ian F. Macdonald
Chemical Engineering

A MODEST PROPOSAL

(For the New Millennium University)

Preamble

It does not take a crystal ball to gaze into the future of Canadian universities. Plain inspection of what has happened in the last two decades is sufficient to convince the unbiased observer that great difficulties loom ahead.

The most important change has occurred in the way the government finances the university. Here we have seen a slow but steady shift from full support to partial financing; and the divestment trend appears to be independent of political party affiliation. Predictably, and with government encouragement, the university has responded to this evolutionary pressure by raising tuition fees and resorting to periodic, fund-raising campaigns.

The consequences of these decisions have been clear for at least ten years. Firstly, the tuition fee increases have introduced a big incentive to expand enrolments and retain students as long as possible. And since the former implies that more and more unqualified students are admitted, the latter objective can be reached only by a precipitous decrease of academic standards. Consequently, the curriculum has been watered down, bird-courses have proliferated, and exams have become laughable exercises conducted with deceitful pretension. Secondly, the financial resources acquired through gifts from (or partnerships with) the private sector are rarely without strings attached; and in any case they exert a powerful influence on the ability of the university to implement its avowed mission.

As if these drawbacks were not bad enough, the current financial model fosters the most objectionable sin of a modern, post-industrial, and deconstructed society; that is, inefficiency. To see this, one has to look no further than the professors. At the peak of their career path, they draw a salary of the order of \$100 K per year for their contributions as teachers (2/5 of salary), researchers (2/5), and administrators (1/5). They teach, on average, three term-courses per year; thus, their teaching contributions cost the university, on average, \$13-14 K per course. On the other hand, when the same courses are taught by sessional instructors (graduate students, visiting professors, former high-school teachers, etc.) the cost to the university is only \$5-6 K! As for research (the other big chunk of a professor's salary), with the exception of a

few scientists and engineers most research done at universities is banal and does not contribute a cent to the GDP of the country. If you want examples, just consider that somebody received a doctorate from York University for a thesis on "the sociology of the doughnut shop"; an Australian researcher produced a study on "calculating the optimal way to dunk a biscuit"; and a Norwegian medical scholar enlightened society by "carefully collecting, classifying and contemplating which kind of containers his patients chose when submitting urine samples".

This inefficiency would never be tolerated in the private sector. But nothing can be done in the current university system, because professors are tenured. Oh, they will tell you that tenure and academic freedom are essential protections so that they can pursue and teach knowledge and truth, even (especially) when the truth is painful to some people. But the insincerity of this rhetorical stance is clearly visible in the actual behavior of most professors: They never stand up for anything but their self-interest (through their unions); they are always "collegial", which is code for refraining from speaking the truth if it offends individuals or groups; and they are not ashamed of compromising academic standards if this will make students and administrators happy. As an example of the latter, the University of Alberta offers to English majors a fourth-year course entitled "Reading Oprah".

There is no doubt that this situation will continue to deteriorate, and that the modern university will soon be in dire need of restructuring. It is similarly indisputable that there exists only one mechanism suitable to this arduous task: The Market! This is then the basis of the following proposal.

Proposal

The idea is very simple. In order to avoid the ills of the current system, the university should raise funds in the Stock Exchange. For example, the IPO of the University of Waterloo (uwinc.com, say) would be gobbled up very quickly by investors who can see the potential of the place. Here are a few of the factors that militate in our favor.

First of all, over the last ten years we have increased the managerial resources of the university through a wise re-engineering of faculty and staff. Furthermore, the important new managerial positions have been

filled in accordance with the rigorous, private-sector principles of TQM. A second positive factor is our reputation for innovation and for training the Leaders of Tomorrow. Finally, we are already under way towards uwinc.com, as can be seen by the recent expansion in the IT area. It is difficult to see how all these factors would go unnoticed on Bay Street and Wall Street.

With the operating funds coming from the Market, the CEO of uwinc.com would have the power to restructure the corporation rationally. The first priority, of course, is the elimination of non-productive sectors. For instance, when the main purpose of the university was the education of young men and women (in the liberal arts tradition) it made sense to have departments such as Philosophy, Fine Arts, or Classics. Their main mission was to encourage and help young minds to think for themselves and to appreciate the finer aspects of life. But the ability to think for oneself is not a commodity; in fact, it is an impediment to the development of a modern, well-adjusted employee and consumer. And although a wide appreciation of the Arts would marginally increase the revenues of museums and opera houses, these are dwarfed by the economic benefits of theme parks, professional sports, rock music, and high-tech gadgetry.

The deleterious aspects of thinking cannot be overemphasized. The ability to think for oneself inevitably leads people to question everything, and to disbelieve anything that is not supported by hard evidence. If this ability were shared by a large number of individuals, then productive enterprises like Advertising and Televangelism would quickly go bankrupt, with enormous losses to our society. Even worse, serious thinking tends to produce intellectual turmoil, uncertainty, and a sense of inadequacy—hardly the correct frame of mind to successfully emulate Bill Gates!

The new corporate university would be able to do away in one fell swoop with the wasteful practice of having professors teach. Since training students for jobs rather than old-fashioned education would be the mission, the entire program could easily be computerized and run in well-equipped laboratories super-

vised by a computer technician. Instead, professors would be expected to dedicate themselves to full-time R&D under the supervision of a mission manager. Their basic salaries would increase, and they would be given stock options to marry their productivity to their greed. Their career paths would be determined not only by the number of papers published in a year, but also by the patents they produce and by the numbers and sizes of the grants and contracts they get.

The students, on the other hand, not only would be admitted for free (except for a nominal fee to cover the cost of keeping track of them), but would also be paid a salary which would increase as their training performances got better. This would create an incentive for the brightest ones to achieve and be recognized by private sector firms as prime candidates for hiring. The rest of the students would still be able to graduate, as long as they had average intelligence and exercised a modicum of diligence, and they would naturally be able to find employment in government agencies.

Under the rules of the Free Market, an efficient corporate university would be rewarded financially, while an inefficient competitor would have to accept being taken over cheaply by a winner. Therefore, the students would benefit either way; which proves that the rules of the Market are not incompatible with sensitivity toward the weaker members of society, in contrast to the propaganda routinely put forth by the touchy-feely, bleeding-heart liberals of various political stripes.

The transition from the current, wasteful structure, to the efficient, Market-based university will be accomplished in a very short time. Those professors who do not like the prospect have only themselves to blame. We at Waterloo, with our enviable reputation for innovation, should continue along the path already taken; but we should speed up the process, in order to beat the competition and be soon in a position to effect a corporate takeover (hostile or otherwise) of WLU and Guelph. After that we would be ready for U of T!

G. Tenti
Applied Mathematics

The FAUW Forum is a service for the UW faculty sponsored by the Association. It seeks to promote exchange of ideas, foster open debate on issues, publish a wide and balanced spectrum of views, and inform members about current Association matters. Opinions expressed in the Forum are those of the authors, and ought not to be perceived as representing the views of the Association, its Board of Directors, or of the Editorial Board of the Forum, unless so specified. Members are invited to submit letters, news items and brief articles. Please send items to the members of the Editorial Board, or to the Editor. Current and past issues of the Forum are posted on the FAUW Website. If you do not wish to receive the Forum, please contact the Faculty Association Office and your name will be removed from the mailing list.

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At The Edge of a New Dark Age: The Corporate Takeover of Higher Research And Education

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Professor of Philosophy
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When I first began tracking the corporate models movement into public education in the late 1980s, I saw opportunistic administrators riding on the coattails of public relations newspeak. On digging more deeply, I realized the corporate agenda's objectives, methods, motivations and standards of excellence are not only different from, but the opposite of those of education. My book, *Unequal Freedoms: The Global Market as an Ethical System*, analyses why in its chapters on the "knowledge economy."

In historical overview, an ancient pattern can be seen. Global corporate attacks on the world's evolved civil fabrics resemble the barbarian attacks on western civilization around 17 centuries ago. A triumphal incapacity to think beyond the narrowed chinks of a furiously acquisitive mind-set, and the wanton and systematic destruction of any form of life that does, together propel the mindless horde. History is re-occurring, with tides of money-demand rather than war-horses the vehicle for stripping the world of its civil wealth.

The place of economics, business and even science faculties in this invasion is to occupy the resources of higher education on behalf of reducing costs and increasing revenues for corporate investors, a final goal that is dressed in slogans of "efficiency," "scientific progress" and "national competitiveness." But there is a defining interest that is clung to while true believers trumpet the millenarian fantasy of "freedom from all barriers to capital and commodity movement."

This interest was put starkly by a 1998 international summit, "The Canadian Education Industry" which glowed at the prospect of the public riches now accessible. "Last Year's summit introduced the \$700 billion education growth industry. This education for profit industry will continue to grow." And certainly it has. Now backed by a recent World Bank manifesto on "world-wide education reform" and by proposed Articles on Services of the World Trade Organisation, the corporate agenda has moved to position itself for a control of not only classroom education, but academic research itself.

§ Here is what the World Bank now openly envisages for all education in its 1998 paper, "The Financing and Management of Higher Education: A Status Report on Worldwide Reforms." Education decision-making, it says, "will shift not only from government, but from higher education institutions and especially from faculty and from] inappropriate curricula unrelated to the needs of the emerging economies. Performance budgeting will undoubtedly [be tied] to acceptance of principles of rational [i.e., self-maximising] actors who respond to [monetary] incentives."

Students, the Report prescribes, are "customers" and should pay "the full cost" of their corporately modelled service, and borrow at "market-set bank rates." "Entrepreneurship on the part of institutions, departments and individual faculty," it concludes, "is [already] growing almost everywhere and adding revenue to institutions and benefit [sic] to society." Make no mistake. This is a plan for systematic takeover of public education and higher research, a bigger prize in net money value than past colonial occupations. The hidden pattern of our age is that the domestic public sector has replaced the external colony as the target for private capital occupation and growth.

§ Here is what the Canadian AgriFood Research Council's 1997-2002 "National Strategy" distributed by relevant Research Offices says to University researchers (emphases added): "Increasing competition for research funding will demand that Canada identifies its research strengths and capabilities to *focus on those areas with highest value and return on investment. Priorities for applied research are set by the marketplace via partnerships eg. industry funds research that fits their priorities.* Augmented private sector participation in research priority setting will ensure scientists have access to the *appropriate market signals, are aware of the technology requirements of industry, and can focus their research appropriately.*" How, we need to ask, can such an agenda be compatible with the University's constitutional commitments to academic autonomy and to the search for truth free of interference by powerful external interests?

§ Here is what Professor Ann Clark reports in a recent paper to an October 1999 Conference of the Canadian Association of University Teachers in Ottawa: "At the University of Guelph from 1987 to 1997, provincial funding decreased by 69% [while] business/industry funding increased by 117% c government has channelised and harnessed the public research capability of Canada to the service of proprietary (industrial) interests. >Non-proprietary research c of the sort that benefits everyone c - is of no interest to industry sponsors." Dr. Clark identifies integrated pest management, organic farming, management-intensive grazing and small-scale producer co-operatives as complementary alternatives to factory-processed livestock and genetically-engineered commodities. But, she reports, that they have received "virtually undetectable amounts allocated to support." "Industry agendas," she observes, "are systematically inserted into permanent tenure-track and support positions at every level of Canadian academia. Thus the roughly \$10 million (1998 figures) which industry invests to support proprietary research at Guelph allows it to leverage [by infrastructure use] a healthy chunk of the much larger (roughly \$250 million) taxpayer investment at the university." This is a general strategy of the corporate war to control all publicly funded research.

§ Here is what Dr. Arpad Pusztai, whose research on genetically modified potatoes showed severe gastrointestinal tract damage to rats, said of the industry s treatment of independent research on genetically modified foods: "I can say from my experience if anyone dares to say anything even slightly contra-indicative, they are vilified and totally destroyed." Dr. Pusztai s research has since been vindicated by publication in the prestigious medical journal Lancet (16 October 1999). The co-author of this research has written me since that "this research was government funded and the work was potentially stopped by the highest authority in the country, although denied by 10 Downing Street."

§ As a member of the Animal Care Committee and Sub-Committee at Canada's and arguably the world s foremost bio-tech research institute, I worked to introduce one optional category of Purpose of Animal Use on experiment protocols which recognised the fact that many experiments are performed on animals to "reduce costs or increase revenues for private enterprises" as their "primary purpose." My supporting argument was that this category of choice was required so that university researchers did not misrepresent the justification of experiments on animals by concealing their primary purpose. No university researcher denied the reality of this primary purpose. Indeed a critic rejected the proposal on the grounds that no relevant

research could be performed "unless there was a profit in it." Another researcher in the field observed that "there is hardly any studies done now that are not for profit." But after the motion was passed by the Committee, it was repressed by administrative decision. Agricultural-area researchers on campus report a widespread fear that the future funding of any of their work will be jettisoned if they ever question this steering of research grants, activities and priorities towards serving the for-profit interests of private corporations.

Corporate control of publicly funded research is fuelled by a competitive grant scrambling for funds increasingly and exclusively tied to corporate profitability. Government research funding at all levels has been re-engineered to serve private marketplace interests, including foreign corporations, whose sole objective is to achieve maximum monetised returns to external shareholders. All rationalizations of this occupation process repress a basic fact c that the *search for truth by the sharing of knowledge and the resources for achieving it is oppositely structured to the quest for monetised profit by for-profit corporations through private appropriation of knowledge and resources.*

But corporate slogans of "global competition," "accountability" and "performance indicators" mask the takeover c *turning the objectives of the corporate agenda into the very meaning and vocation of public institutions themselves.* Once you accept that the transnational right of corporations to overturn public laws is "free trade," and imagine that this "free trade" is truly more freedom for citizens, the mind has already collapsed into confusion. But this newspeak slogan is reproduced everywhere even by the most outspoken critics. "National survival" then comes to mean more rights to foreign corporations. "Greater efficiency and productivity" becomes lower wages and costs for our own labour and resources. And "rising prosperity" is more corporate monetisation of goods formerly free in nature and the civil commons.

A Dark Age ultimately inhabits the mind. Education is its antidote. But the new Church of Higher Shareholder Value not only has the media as its pulpit and party governments as its puppet. It has become the selector of higher research itself. The last Dark Age had the excuse of an illiterate and dirt-poor population. This one does not. This mindlessness and inertia are in the end a breakdown of public capacities for intelligent thought and action. The good news is that the collapse of the WTO juggernaut first in Paris and then in Seattle may mean that this capacity of the civil commons is at last re-awaking from an induced slumber.

Book Reviews



THE UNIVERSITY MEANS BUSINESS: UNIVERSITIES, CORPORATIONS, AND ACADEMIC WORK

JANICE NEWSON AND HOWARD BUCHBINDER
GARAMOND PRESS, 1988, \$14.95

Although this short little book (91 pages of text) was published more than ten years ago, it is still quite relevant today. Two quotations should serve to illustrate its applicability to the situation at the University of Waterloo:

"To the average faculty member, deans are increasingly perceived as managers and less as academic leaders. They are seen as representing not the will of the collegium but the decisions of management."

"The diversification of the academic work-force, the separation of research, teaching, and service, and the attack on tenure are marginalizing the faculty within its work-place. If these trends continue, the academic voice will become increasingly peripheral in decisions that affect the directions of the university... Rather than exerting a collective presence as members of an ongoing collegium, academics will be more reliant for their jobs on the administration, which will constitute the most stable and ongoing component of the institution."

The stated goal of the authors is to describe the situation at Canadian universities in the mid-1980s, and to suggest what the future may hold. For the most part, they describe and do not advocate, although in the last section, entitled *Strategic Alternatives*, they do suggest rethinking the liberal model of the higher education more along the lines of a polytechnic university. Despite a rather dry and academic style, I found the analysis to be accurate and penetrating.

Jeffrey Shallit
Computer Science

UNIVERSITIES FOR SALE: RESISTING CORPORATE CONTROL OVER HIGHER EDUCATION

NEIL TUDIVER
CAUT SERIES, JAMES LORIMER & CO.
248 PP., \$19.95

This is the first in a projected series of monographs from CAUT, and the topic is certainly timely and of interest to us all. Unfortunately, Tudiver, a professor of social work at Manitoba and former president of their long-unionized Faculty Association, felt he could not support his thesis without extensive coverage of the history of universities in Canada, including unionization and collective bargaining, challenges to academic freedom, scope and control of both research and basic university infrastructure funding, governance, and intellectual property. In a book of less than 200 pages, this required drastic condensation. The result is a welter of examples, statistics, and references to a bibliography running more than 35 pages in small type. Yet there is no index, thus restricting its use as a reference.

Tudiver's thesis, drastically simplified, seems to be that without the restoration of unrestricted public funding and a strong defense of autonomy by unionized faculty associations, there is no hope for universities. He envisions no role for anyone but the individual researcher and the independent academic senate, and appears to view the '60s as a halcyon period of generous governmental support and academic freedom. Yet that was also a time of hasty expansion, erosion of quality in hiring and tenure, and perpetuation of the old model of the exclusionary academy. According to Tudiver, peer review can be a mechanism for rewarding excellence. But it can also foster hermetic, self-aggrandizing pocket universes of researchers increasingly irrelevant even to their fellow academics in closely-related disciplines, let alone the rest of society. Surely we need checks and balances as much as government and corporations.

The tale of Nancy Olivieri, subject to attempted censorship by a sponsoring drug company, without support from her employers (University of Toronto and the Hospital for Sick Children) gives us pause. Yet we continue to seek corporate financing for our research, paying perhaps slightly more attention to the terms of engagement. And what choice is there for universities, while waiting for the other shoe to drop on Harris' postsecondary restructuring, and for Paul Martin to take his turn in the federal driver's seat? My colleagues look to industry involvement not solely for financial advantage but because they wish to work on problems which can have a real impact. When a spinoff firm like Certicom turns esoteric research on number theory (once considered proudly "useless") into a billion dollars in market capitalization, does that invalidate the academic worth of the work?

I am in favour of unionization. My own research has not a scrap of commercial value. I am quite leery of corporate culture and values, and favour broad-based education in liberal and critical values over narrow vocational training. Yet this book does not speak effectively to me. My eyes drift over the page, numbed by the staccato rhythm, and I long for the focussed eloquence of an Ursula Franklin or a John Polanyi. There is no sense here of the old judo trick of redirecting an opponent's energies rather than doggedly reacting to them. This book will appeal even less to those who accept in large measure the current technical and entrepreneurial orientation of UW. Who, then, is its potential audience? Perhaps only people like Neil Tudiver, deeply involved in collective representation, and the deputy ministers and university presidents who have to deal with them. The rest of us have to wait for a better guide on how to strike a balance between idealism and pragmatism, and how to reconcile the contradictory yet often valid visions of the university held by the diverse players involved in the policy process.

Prabhakar Ragde
Computer Science

WHO 'S NEW AT WATERLOO?

Michele (Mike) Mosca joined St. Jerome's University and the Department of Combinatorics & Optimization last summer as a tenure-track Assistant Professor of Mathematics, and is a member of the Centre for Applied Cryptographic Research.

Michele was a student at St. Jerome's from 1990 to 1995, and obtained a BMath in C&O and Pure Mathematics. He held the K.D. Fryer Fellowship as an undergraduate and was awarded the Faculty of Mathematics Alumni Gold Medal upon graduation. He took up a U.K. Commonwealth Scholarship at the Mathematical Institute, University of Oxford, and completed an MSc (with Distinction) in Mathematics and the Foundations of Computer Science in 1996. He stayed at Oxford to pursue a DPhil in Quantum Computation, spending much of his time researching abroad at sites such as the Los Alamos National Laboratory, New Mexico. He organized Oxford's first seminar series in Quantum Computation, supervised students, and was invited to speak at several international conferences and workshops, from California to Estonia.

Quantum Computation is the theory of computing that takes into account the quantum nature of the universe. Up until the early >80s, the theory of computing implicitly referred only to Newtonian physics, which was shown to be inadequate nearly a century ago. Over the past few decades, experimentalists have moved from *observing* quantum phenomena to *controlling* quantum phenomena. It thus became necessary to study the effects of quantum physics on the theory of information processing.

Quantum physics offers a qualitatively different way of processing information and opens up a world of opportunity. Consider, for example, the task of communicating information secretly. By communicating with quantum particles, such as single photons of light, we are able to obtain secret communication protocols whose security rely on the Heisenberg Uncertainty Principle (that is, the laws of physics).

This application contrasts most modern day cryptography which relies on the assumed difficulty of some mathematical problems. In 1994, it was discovered that quantum computers can efficiently solve these mathematical problems, thereby rendering modern cryptographic codes insecure. The catch, however, is that it is proving very difficult to build quantum computers capable of manipulating more than 2 to 10 quantum bits (qubits), whereas thousands of qubits are necessary to break today's cryptosystems.

Michele's contributions to this field (with collaborators from Europe and North America) include a unifying theory of quantum algorithms, development of the "polynomial-method" of studying the limitations of quantum computers, a theory of quantum self-testing gates, and realizing the first experimental implementation of a quantum algorithm.

At Oxford, Michele was a member of Wolfson College, where he served for two years as an elected member of the Governing Body and, since 1998, was the Robin Gandy Junior Research Fellow in Computation. He started the Wolfson College Table Football Club and represented Oxford on several occasions, most recently when Oxford humiliated Cambridge in the 1999 "varsity" match. He also led the Wolfson Softball Club. For nearly three years, Michele was a member of the Wolfson College Boat Club, attaining the status of senior cox. He was involved in training several crews and coxing dozens of races on the Thames in Oxford, London, and Wallingford, as well as in Cambridge. At UW Michele is a member the UW Rowing Club and looks forward to warmer weather so that he can get on the water. During his first year at Waterloo, Michele is teaching introductory combinatorics and a graduate course on quantum information processing.

ANALYSING SALARY PROSPECTS FOR UW LIBRARIANS

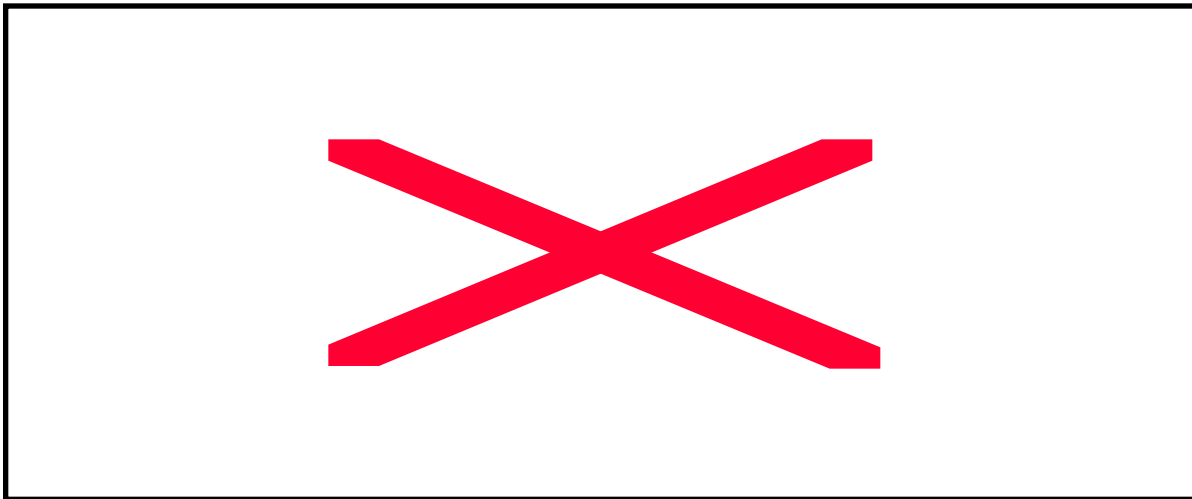
Amos Lakos and Anne Fullerton, UW Library

Professional librarians at UW have been following the recent discussions about the deterioration of faculty salaries at UW and the comparisons to salaries at research universities like U of Toronto and undergraduate focussed universities like Wilfrid Laurier. We can empathise. The salaries of UW librarians have also deteriorated. Our university and library have invested heavily in hardware and software to support research and teaching but not into professional staff salaries.

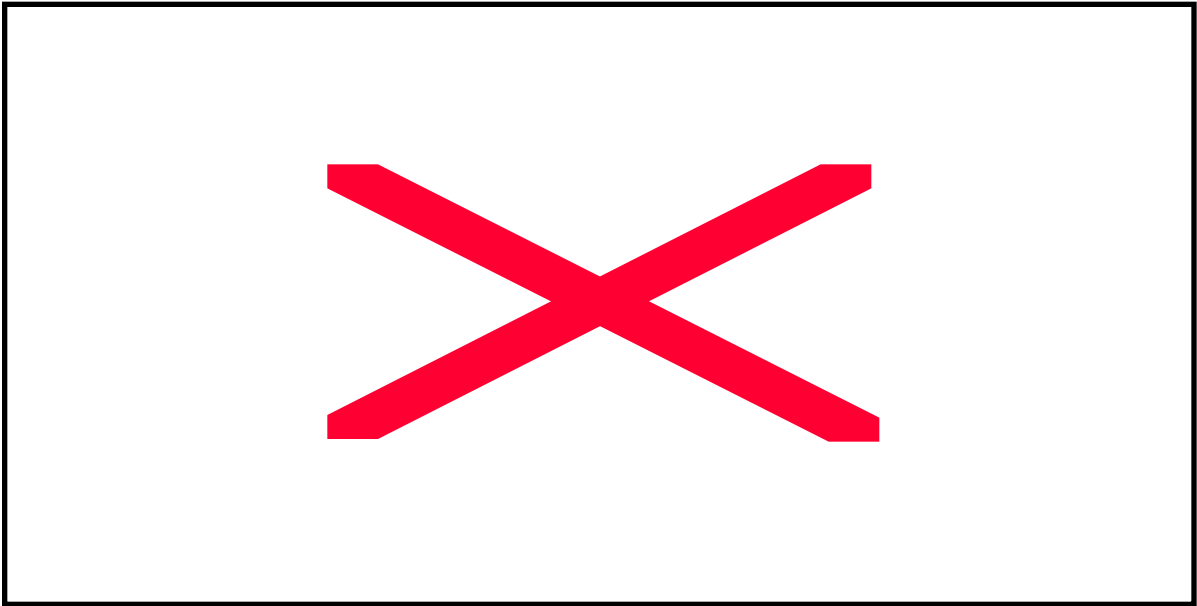
Just how far have we slipped? According to the most recently available data from the Canadian Association of Research Libraries (CARL, 1998/99), UW Library Professional staff salaries rank 21 out of 27 in Canada. The average UW salary is \$3,400 below the national average. If we look just at the research libraries in Ontario, our average salaries rank 9 out of 10. In this case, the average UW salary is \$6,080 below the Ontario provincial average.

As members of the Tri-University Group of Libraries (TUG), we work very closely with the librarians at Guelph and Laurier, providing joint services like TRELIS and collaborating on collections building (especially electronic journals and databases) and collections sharing. When we compare our salaries to those of our TUG partners, the disparities are evident across all career levels. The latest CAUT data (1999/2000), which provides salary grid information, compares Ontario salaries by rank. Our minimum starting salaries (Librarian 1) rank 7th while Guelph and Laurier rank 2nd and 3rd respectively. At the career rank of Librarian 3 (figure 1), our minimum salary has dropped to 10th place. It will be argued that UW never hires at the minimum level. However, none of the other libraries do, so the relative differences are still valid.

Just as the salary structure for faculty contributes to low salaries, so too does the salary structure to which librarians' salaries are tied – namely the Hay scale or the USG salary grades as they are called at UW. Each



librarian rank is tied to a USG grade with a minimum, a maximum and a job rate that is the midpoint above which it is difficult to move. Librarians' annual merit increases depend upon how close one's salary is to the job rate. The figure below contrasts the impact of the UW salary structure over a librarian's career compared to the salary outcomes at Guelph and Laurier.



These figures, with additional data concerning our salary issues, were presented to the university librarian, Murray Shepherd, who has forwarded these concerns to the Associate Provost, Gary Waller, to whom the Library reports. It is possible they may decide to reclassify the librarian ranks up 1 or 2 grades. However, given the underlying structure of the USG grid, our analysis shows that the discrepancies described above will still exist without a fundamental change to the salary grid. We believe it is time to have a new structure. We will be investigating how salaries are determined at our comparative libraries over the next few months.

The University of Waterloo is ranked number 1 by reputation in Canada among similar universities. When will UW invest in the faculty and librarians who contribute significantly to that ranking?

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New from CAUT

AFFINITY VISA CARD. CAUT has launched a new affinity credit card program with Bank One International. Brochures with application forms are available in the FAUW Office (x3787).

HERTZ MEMBER BENEFIT PROGRAM. CAUT has announced a new car rental program with Hertz Canada. This program will complement the already existing program with Budget Rent-a-car and offers another alternative for CAUT members.

The Hertz program offers a 10% discount for CAUT members on Hertz *standard* daily, weekly, weekend and monthly rates (all car classes) for rentals in Canada and the United States. A 5% discount is available on Hertz *Leisure* daily, weekly and monthly rates. Various discounts are also available in Europe and other international destinations.

A small supply of ID cards with upgrade coupons are available in the FAUW Office (x3787). Members can also avail themselves of the plan without a card by providing the booking agent with the CAUT program number: 1158791.

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Information on these and other CAUT affinity programs is available on the CAUT Website at <http://www.caut.ca>

Your Council of Representatives

The Council of Representatives will meet with the FAUW Board of Directors on Thursday, March 16. If you have any questions or concerns that you would like to have discussed, please contact your representative. If your department/school does not have a representative, please consider serving in this capacity. The Council normally meets twice yearly. Contact John Wilson (x2108) or Pat Moore (x3787) for more information.

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