

Science for science

by Michael Lamoureaux

Should private sector-funded research have a role in graduate education and faculty research? This as the question posed at a debate sponsored by the Dalhousie Graduate Biological Education and Research Symposium on Science and Business last week, and expanded upon in a series of faculty and business seminars and graduate student poster displays. Among the many topics raised was how commercially-oriented research could adversely affect graduate students by restricting their freedom to publish in the interest of protecting the commercial value of their work. Participants also heard about entrepreneurial Dalhousie professors who are currently running businesses alongside their academic research.

The symposium began with a historical overview presented by Dr. J. Farley of the Dal Biology department on the separation of science and business, and the development of a scientific elite in the Western world. According to Dr. Farley, the idea of pursuing science for the sake of science is relatively new, having originated sometime in the late 1800's. As an example of "good science coming from applied research", Dr. Farley cited the work of Louis Pasteur, a French chemist of the last century whose pioneering theories on microbiology arose from practical inquiries on producing beer, silk and the prevention of disease in farm animals.

The central issue of the symposium was brought out in the informal debate on Thursday

evening in the Dunn building, chaired by Dalhousie's Dr. Brian Hall, and focusing on the question of what role the university and its researchers should take in working with industry wants: funding research is an investment from which it expects a reasonable return. Goals must be attainable and relevant to the business; timetables are relatively short, usually on the order of months; and specific milestones must be reached to justify continued support for a given project. For industry, the university is a source of both knowledge and researchers who create and apply that knowledge and industry treats the university as it would any other resource: exploit it to improve the bottom line.

It is much less clear what the universities want from the relationship. Dr. Don Bidgood, of the Nova Scotia Research Foundation, observed that the private sector is a lucrative source of funding providing both money and state-of-the-art equipment which are hard to come by in these days of budget cuts. As Acadia's Dr. Kevin Ogilvie pointed out, lifestyle is an issue today with many researchers, which makes money more of a concern as well. Also, the transfer of technology to the marked place via industry is one way of fulfilling the mandate of the university as a provider of knowledge to society.

But there are basic conflicts as well. Participants asked how a publicly-funded institution would justify using its researchers to generate results which are privately owned and used for personal or commercial gain. Responding to National

Sea's Dr. A. Oak's observation that business expects to monopolize the products of research it funds, researchers noted that keeping this knowledge secret may not benefit society in general and moreover prevents the researcher from publishing and furthering his or her own academic career.

Discussion continued on the issue of whether the general investigation of science may be warped by channelling research into avenues of inquiry which have direct commercial applications rather than along a broad path that will increase basic understanding and perhaps result in a less tangible payoff much further in the future. The secrecy required by commercial ventures can lead to communication barriers between researchers, making coffee hours "a pretty quiet time", according to Dal biology professor Dr. David Patriquin.

A final topic raised was the issue of how universities have lost the support of the public and why they must now look beyond government for funding. These are difficult questions and while the debates and lectures exposed many of the problems, few participants appeared swayed from their original positions of either support for close industry-faculty ties or skepticism of the same. One face agreed upon was that graduate student should not be involved in research projects with potential commercial application, or at least they should be warned of, and agree to, the extreme restrictions they might

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CUP Briefs

44% increase a rollback?

TORONTO (CUP) — A confidential Queen's University proposal circulating to schools throughout Ontario recommends increasing tuition fees 44 per cent over the next five years — even before inflation is factored in.

"All we're trying to do is get fees back to a reasonable level," said Ken Snowdon, one of the authors of the document. "This proposal tries to share the cost of improving university education with the real stakeholders of the education — students, government, universities, and the private sector — and everybody should be contributing."

The provincially-recommended tuition fee is \$1,411. The document, obtained by the Ontario Federation of Students, urges a \$625 hike.

The proposal also suggests increasing provincial university funding from the current \$1.54 billion to \$1.92 billion, excluding increases related to inflation. The report advises phasing in the increase over a nine-year period.

The increases would restore funding to the level of the early '70s. This would allow universities to improve student to faculty ratios, buy new equipment, help with building maintenance and buy library books, according to the document.

It also said universities should assume greater responsibility for student accessibility and assistance by channeling funds towards bursaries and student services.

The Council of Ontario Universities is circulating the proposal to the boards of governors of the province's universities for discussion. Queen's has already accepted it.

A letter from the president and the chair of the board of governors of McMaster University to the minister of colleges and universities also proposes that students pay more.

The letter recommends restoring tuition fees to the level of the mid-60s, when they accounted for 25 per cent of university revenues, rather than the current 18 per cent.

Helena Moncrieff, Press Secretary to college and Universities Minister Lyn McLeod, said government policy is that tuition fee increases be kept equal to government hikes in university funding.

Snowdon, director of resource planning at Queen's said 30 to 40 per cent of the extra revenue from tuition fees would be channeled back into university bursaries, grants and student services.

PCB's in a can

ST. JOHN'S (CUP) — A petition demanding the removal of three 60-gallon drums of PCB-contaminated oil stored near a student studying area at Memorial University has garnered 450 signatures.

"We're a bit miffed about it," said David Babb, president of the Physical Education Society. "(The polychlorinated biphenyls) have been there for six to 10 months and we didn't know about it."

Neither did the department of the environment.

"The only problem we had was that University Works didn't tell us it was there," said Environment Investigations Divisions director Carl Strong.

But Strong said the chemicals were no big deal. "The amount of PCBs in each container is about the size of an eraser."

PCBs are toxic chemicals that were often used as a coolant for electrical equipment. Their production was restricted in 1977 after research showed PCBs caused cancer, brain disorders and birth defects on lab animals.

Department environment specialist Cathy Knight said the PCBs stored at Memorial have concentration levels under 100 parts per million.

Regulations governing the storing of PCBs were changed last fall. "Anything with a concentration of 50 parts per million or below can be stored in any municipal refuse dump," said Strong.

Removal of the oil must await a government decision about disposal. University Works director Miller Ewing suggests building an incinerator in Goose Bay.

The only PCB incinerator in Canada is located at Swan Hills, Alberta, but it does not accept PCBs from out of province.

The petition will be sent to the university administration.

"When will the students have a say over what happens here?" asked Babb. "This is a place of work — students should know."

Carleton University and the universities of Lethbridge and Toronto have more than 1,000 litres of PCBs stored on campus, according to Environment Canada documents.

According to government lists, other schools storing lesser quantities of PCBs include the Technical University of Nova Scotia, Dalhousie University, the University of Waterloo, the University of Windsor and York University's Glendon College.

The inventory — which lists more than 2,500 PCB storage sites in Canada — was released Sept. 8 following an emergency conference of federal and provincial environment ministers in Ottawa.

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