

Federal stats counter claims of southbound brain drain

BY ALEX BUSTOS

OTTAWA (CUP) — There is little evidence Canada is suffering a mass exodus of talented workers to the United States, federal government figures show.

In fact, a large number of educated workers are coming into the country from around the world, contributing to a "brain gain" rather than a "brain drain", the study suggests.

According to the unpublished Statistics Canada report completed last October, approximately 32,800 university-educated people immigrated to Canada annually between 1990 and 1996.

In contrast, only 8,500 Canadians with post-secondary education left each year to the United States.

In other words, every year Canada gained almost four times the number of educated workers than it lost.

"And those numbers are very conservative," said Scott Murray, a Statistics Canada researcher and

author of the report. "The US output numbers are overestimated, while the immigration figures are underestimated."

More specifically, the study also showed that more people with master's and Ph.D. degrees immigrated to Canada than left here for the US. The only sector where international immigration did not outstrip emigration to the United States was health.

In a brief paper released last Wednesday, the Canadian Centre for Policy Alternatives argued doctors and nurses are moving south of the border because health cuts and salary caps are making it difficult to practice in Canada.

The short paper also stated that fiscal conservatives who demand tax cuts to combat the so-called brain drain are fighting a fictitious battle.

"This [government] study was an effort to inject reality into the debate on the brain drain," said Seth Klein, director of the group's B.C. office.

But according to the Canadian Taxpayers Federation (CTF), the Statistics Canada study is flawed.

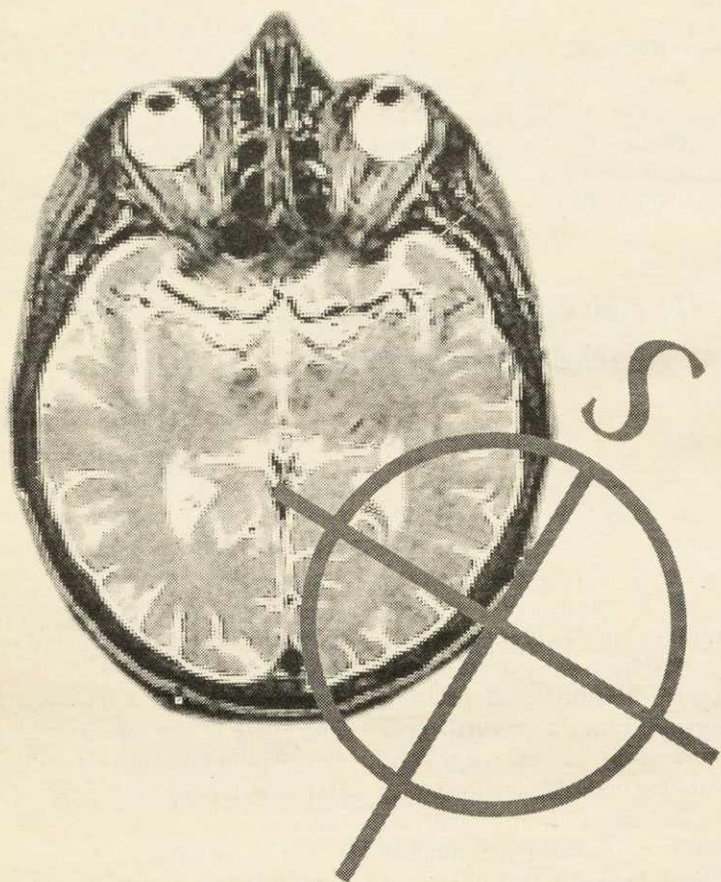
"It is very flimsy mathematics they are employing," said Walter Robinson, executive director of the CTF.

"The brain drain is real. Yes, there is a small number of professionals leaving to the United States, but their impact on our tax base is huge."

Citing a study by the C.D. Howe institute, Robinson said that in 1996, 8,600 highly-skilled managers and professionals moved permanently to the United States. In the same year, roughly 44,000 high-skilled workers went south on temporary work visas.

A high-skilled worker was defined as someone making \$70,000 or more per year.

If you look at the \$70,000 plus tax bracket, argued Robinson, you realize that even though this group makes up only 6 percent of all taxpayers, they contribute 31 percent of all tax revenue.



University of Alberta goes 3D

BY DAN LAZIN

EDMONTON (CUP) — The University of Alberta has entered the era of the holodeck.

The university last week opened an interactive, three-dimensional computer visualization room, believed to be the first of its kind in Canada.

The VizRoom, as it's called, is comprised of three screens with a projector displaying an image on each wall.

The projectors alternate between two slightly different images at a frequency of 120 hertz, providing a stereo effect which tricks the eyes into thinking it's seeing a three-dimensional image.

A hat worn by the user tells a computer which direction he or she is facing, and the computer adjusts the sequence of images to produce the correct 3D effect.

Among other things, the room

can display a 3D rendering of the university's campus, with correct surfaces mapped onto the faces of the various buildings and a resolution sharp enough to read the headline on a newspaper.

By moving a cardboard paddle, the user can navigate

"We just wanted to see if it [could] be done."

around the campus.

The VizRoom can be used for studying the ways which people find their way around, says computer science prof. Benjamin Watson.

Alternately, placing a patient up on a high virtual building could be used to study and cure acrophobia.

"Virtual reality has been

shown to be effective with those sorts of problems," Watson said.

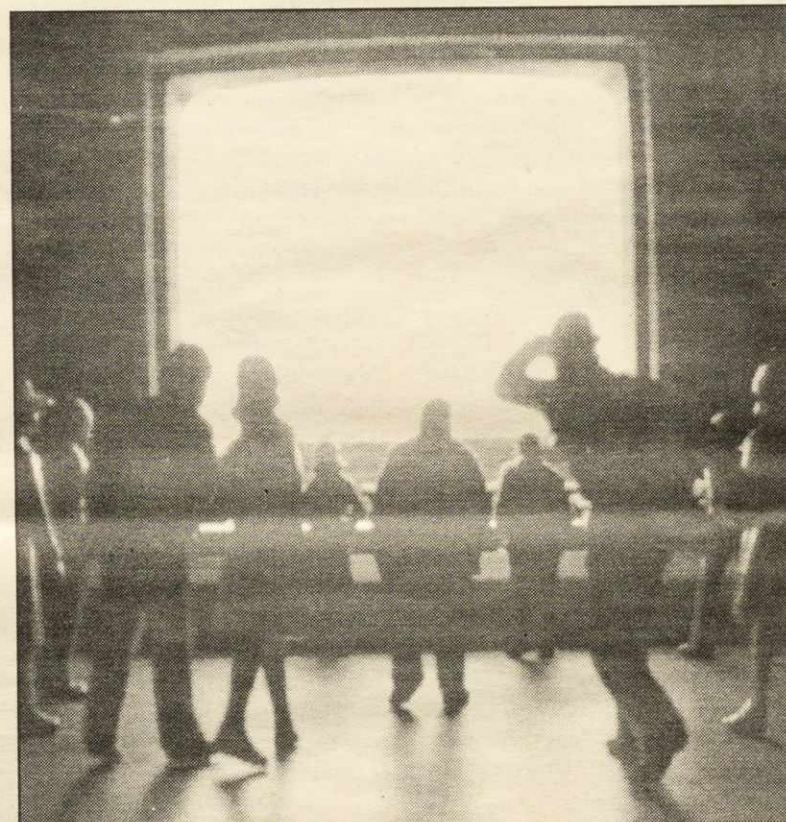
The room was developed by fellow computer science prof. Mark Green, who explained that the university has been working on virtual reality technology since 1986.

The project, which is powered by a four-processor Silicon Graphics Onyx 2 computer, took about eight months and \$500,000 to construct.

"We just wanted to see if it [could] be done," Green said.

The technology will be made available to other researchers at the university and possibly rented to outside businesses.

The department may also try to design a cheaper version, which would cost about \$100,000. Commercial versions cost anywhere from \$1.5-million to \$6-million.



THE VIZROOM: TV you can step right into.

Focus on Environment

Build on your degree with one of these dynamic, practical, post-graduate environmental programs to enhance your qualifications in today's job market!

Environmental Management

Ecosystem Restoration

Environmental Assessment

Geographic Information Systems

These two-semester (eight-month) programs start in September

Our NEW CAMPUS located in NIAGARA-ON-THE-LAKE, ONTARIO features state-of-the-art laboratories and facilities to complement our 68 acre on-site Living Laboratory.



The Centre for ENVIRONMENTAL STUDIES

NIAGARA COLLEGE of Applied Arts & Technology

135 Taylor Road, R.R. #4
Niagara-on-the-Lake, Ontario
L0S 1J0

(905) 641-2252
ext. 4470

or fax (905) 988-4309
or e-mail:
enviro@niagarac.on.ca

www.niagarac.on.ca

Carleton University

Ottawa, Canada
K1S 5B6

Graduate Studies in Electrical and Computer Engineering in Canada's Technology Capital

Leading faculty, national and provincial Centres of Excellence, excellent facilities and extensive industry interactions make Carleton THE place for cutting-edge research in:

- communications systems
- computer and communication networks
- computer systems and software engineering
- signal processing
- systems and machine intelligence
- telecom management
- computer-aided circuit design
- digital, broadband, RF and MMIC integrated circuit design
- high speed interconnects and packaging
- microelectronic fabrication and process development

Four excellent graduate programs:

- M.Eng. and Ph.D. in Electrical Engineering
- M.Eng. in Telecommunications Technology Management
- M.Sc. in Information and Systems Science

Programs open to students with backgrounds in Electrical, Computer or Systems Engineering, Computer Science, Physics, or equivalent. Strong students without this background are eligible for the M.Sc. degree program. Excellent funding packages are available.

Education for Life

www.carleton.ca/ece

Systems and Computer Engineering
Tel: (613) 520-2600 Ext. 1511
Email: gradinfo@sce.carleton.ca

Electronics Engineering
Tel: (613) 520-5754
Email: gradinfo@doe.carleton.ca

www.carleton.ca/ece