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# STUDENT EDUCATION SHOULD BE FLEXIBLE

It has been suggested at Science Council that the whole method of educating graduate students needs broadening, says Prof. Armstrong. And I think the broadening will have to start with the faculty. They graduated from the same sort of narrow system and now they are perpetuating it."

What's suggested, in short, is that society take a close look at the theory of graduate education, and decide what it wants. It's possible that some other method of broadening education may have to be developed. "We have to consider the cost of producing PhDs," says Dr. Moyls, "and ask, if they are not destined for specific jobs, are they worth the cost? We have to decide what is the best sort of education." It's a worthwhile question because estimates of what it costs to produce a PhD range to figures in excess of \$100,000 with the federal government paying 70 to 80 per cent of the cost.

Until such a re-evaluation is made, there are short-term ways of alleviating the job-shortage problem, most of them involving better communication. "I don't think any serious, bright student should be deprived of the chance to try graduate school," says Dr. Moyls, "but I do think he should be made aware that a PhD is no longer necessarily a guarantee of a job."

Already the rate of enrolment in graduate schools at UBC is decreasing. In 1968 graduate enrolment rose 26 per cent over the previous year; in 1969 it was up only 9 per cent. It is expected to increase by 6 per cent this year and by 5 per cent next year.

Prof. Armstrong also suggests the efforts to bring educated immigrants into the country should be halted. "Canadian Immigration is painting an awfully rosy picture of the job situation here," he says, "despite re-

ports of a job shortage for these people. They should not be encouraging wholesale immigration at this point."

Art Smolensky, among others, suggests that Operation Retrieval, started in brain drain days to retrieve Canadians working in other countries, be halted immediately. "There's not much point to bringing people back if we can't get suitable work for people who want to stay," he points out.

But the problem isn't that simple. If the state of the job market is cyclical in nature, cutting graduate enrolment could be a foolish move. In fact, says UBC Acting Dean of Graduate Studies, Dr. Ben Moyls, "if I were a freshman right now, I'd have to give serious thought to going into chemistry. In five or ten years, there may be a crying need for chemists." And the failure of those involved throughout the world to predict the present situation suggests it will be equally difficult to predict changes in the future.

Some action, however, has been taken on foreign enrolment in Canadian graduate schools. A year ago, the NRC announced that students working on NRC operating grants had to be landed immigrants; it has been the rule for some time that students on direct NRC fellowships must be Canadians or landed immigrants. The Canada Council has also taken similar steps.

"We don't object to foreign students being educated in Canada," says Art Smolensky, past president of UBC's Graduate Student Association, "but we do feel that money for them should come out of the external affairs budget."

Adds Dr. Moyls: "I'm in favor of supporting people who come from foreign countries, because after all, our students have been educated in other countries, primarily the United States and Britain, for years. But I think our

obligation to find these students jobs is not so strong, if they do stay in Canada after graduation. And since the Canadian taxpayer is paying for the graduate schools, I think preference should be given to Canadian students."

The quarrel over whether Canadian universities should endeavor to hire more Canadians is becoming more and more of an issue on both patriotic and economic grounds. The GSA brief last year recommended that, at the very least, the practice of giving a two-year income tax holiday to foreign nationals be reassessed; a minority recommendation asked that tenure not be given to non-citizens of Canada. Other groups have asked that Canada adopt policies similar to those of the United States, whereby prospective employers must prove there is no one in the United States capable of doing the job in question.

The argument hinges on the questions of faculty mobility and faculty excellence. "We have to have the freedom to choose," says Prof. Armstrong. "Everything else being equal, I think I would hire a Canadian, but we must have that choice." At the base of this argument is the fear that faculty chosen for qualifications of birth or citizenship are not necessarily chosen on academic qualifications as well. But those who favor open hiring over a closed shop are aware of the problems it can cause.

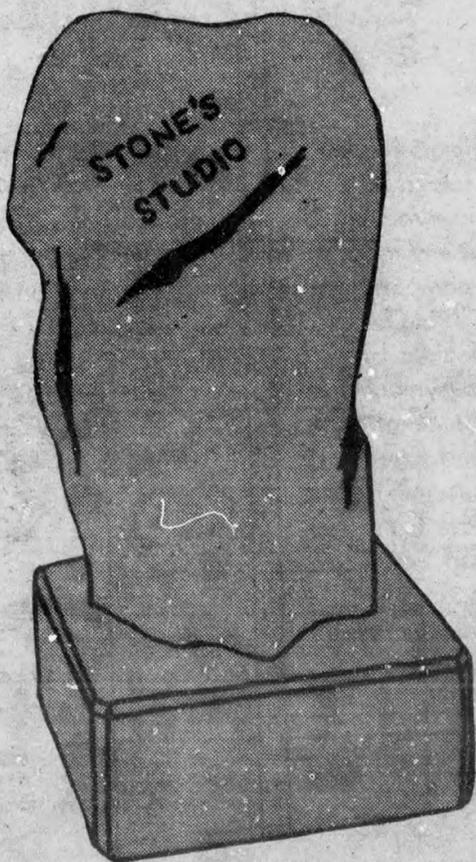
"My inclination is to get the best person for the job," says Dr. Moyls, who admits he is pulled both ways in this situation. "But the objection among graduate students is that this doesn't happen all the time, that the existence of the 'old-boy' network ensures that it doesn't. While on the one hand we want to get the best possible people to be professors, on the other hand, we can't leave the graduates of Canadian universities high and dry."

The question of foreign content also crops up in the context of the job market in industrial research in Canada. Suggestions have been made that foreign companies, with head offices in their home countries and only branch plants in Canada, tend to do most of their research at home. But if past experience is any indication, foreign ownership in this context is a non-issue since Canadian-owned companies spend a smaller proportion of their profits on research in Canada than do foreign-owned companies. And while regulations setting out the proportion of profits that must be used on research and development might help, there is a more fundamental problem involved here and in other parts of the PhD job situation.

Prof. Armstrong points out what he considers the basic aspect of the problem: "From the point of view of society, this shortage of jobs for PhDs may be quite a good thing. Perhaps the people we're graduating will now have to take a broader view of employment, take an interest in society as a whole and not just in their particular narrow area. The people we are producing have a highly narrow view; they are extreme specialists in one part of their field. The question is, 'Are these people really as useful as their degree says they should be?' Instead of training a man to do work in physics or chemistry, we are training him to work in say, metallo-organic chemistry. Well there's only one job in all of Canada in that field."

Professor Armstrong suggests that when doctoral students claim they can't get a job, they really mean they can't get exactly the job they want, in the precise field in which they did their graduate research. "They should be more flexible," he argues.

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