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THE BRAIN DRAIN: A VIEW FROM STATESIDE

Peter Kuhn

At the end of November, the IRPP published a new paper, "The Brain Drain: Myth and Reality," by Ross Finnie of Queen's University and Statistics Canada. The paper is accompanied in the volume of Choices *in which it appears by five commissioned comments, including a personal perspective from Peter Kuhn, a distinguished Canadian labour economist formerly at McMaster University who now teaches at the University of California at Santa Barbara. In* Policy Options' *continuing attempt to stay on top of this issue—see earlier articles by John Helliwell, Don Devoretz and Don Wagner—here is a slightly edited version of Professor Kuhn's commentary.*

L'IRPP a publié fin novembre « The Brain Drain: Myth and Reality », une étude de Ross Finnie, de Queen's University et de Statistique Canada. Ce tout nouveau titre de notre collection Choix *inclut aussi 5 commentaires critiques, dont une réflexion personnelle de Peter Kuhn, spécialiste de l'économie du travail, anciennement de l'université McMaster, qui enseigne aujourd'hui à l'université de la Californie à Santa Barbara. Sur cette question de l'exode des cerveaux,* Options politique *a déjà publié des textes signés John Helliwell, Don Devoretz et Don Wagner. Voici une version légèrement remaniée des observations de Peter Kuhn.*

Several months after I moved to the US, a prominent Canadian academic e-mailed me a question: "What does it feel like to be a drained brain?" The question gave me pause, because it reminded me that becoming a "drained brain" was one of the most difficult decisions I have had to make in my professional life.

Since that time I have had almost two years to reflect on what my personal experiences might contribute to an understanding of Canada's brain drain question. Rather than address broad statistical issues, which Ross Finnie has handled very nicely in his new IRPP paper, "The Brain Drain: Myth and Reality," my comments offer a personal perspective based on what I have experienced first-hand: what it's like to be a skilled worker, particularly in the academic sector, on both sides of the 49th parallel. Clearly, the proper view of my experiences is as a case study, which might point out some important issues that deserve more general and thorough investigation.

Let me begin by noting my total agreement with three main points made by Finnie: First, the brain drain clearly does not consist of huge absolute numbers of people. Second, its importance is likely restricted to a few key sectors, such as higher education, technology and health, although I wonder whether the arts, entertainment, sports and management should be added to this list. Third, within each of these sectors, the most worrisome aspect of the migration to the U.S. is its concentration among those workers who are performing well above average in their chosen professions. In what follows, I add just two main observations to Finnie's analysis: I try to quantify, as well as possible, the real salary gap (including intangibles and quality of life) for skilled workers between the US and Canada. I then survey a number of possible policy remedies that emerge from this analysis, focusing on the academic sector where I have some first-hand knowledge.

Let me begin with an example, and a story. The example comes from my own profession, where I am familiar with current pay levels and trends. Entry-level salaries for newly minted economics Ph.Ds hired at U.S. research universities last year were around $72,000. At a 65-cent exchange rate this is just under $111,000 Canadian, which

is more than most Canadian full professors earn at the peak of their careers. Indeed, it is a salary not at all atypical for, say, an academic dean.

The story involves a young Canadian economist who was recently a co-applicant on a research grant with a U.S. academic. The economist shall remain nameless but has generously granted me permission to report the incident. Since U.S. granting agencies provide partial salary replacement to grantees, the Canadian economist was required to report his/her salary to the research institution preparing the grant application. Shocked by the difference between what the Canadian and U.S. researchers on the same grant would be paid, the accounting department at this institution suggested the Canadian economist be considered for a special salary supplement designed to help researchers from Third World countries.

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The above examples suggest a large Canada-US wage gap, and a correspondingly big temptation for Canadian scholars to leave. But do they really? One could argue that this large apparent salary difference is an illusion based on an undervalued Canadian dollar and a higher Canadian quality of life. While it is clear that certain highly visible non-traded goods, such as restaurant meals, are not currently priced at purchasing power parity in the two countries, a number of other factors also affect the Canada-US real salary comparison. How do these stack up? In what follows I consider a number of such factors in turn.

The overall level of income taxes in the US versus Canada is the most well-known of the factors that tend to undo purchasing power parity differences that tilt in Canada's favour. Income and consumption taxes paid by highly skilled workers are much lower in the U.S. than in Canada, and some observers engaged in hiring in my profession have argued that this effectively undoes any departures from purchasing-power parity between the two countries. I am not aware of any hard calculations, but based on personal experience this seems roughly true. Thus, if tax differences roughly offset deviations from purchasing power parity, the current exchange rate is approximately the right one to use in comparing salaries. As already noted, this does not make Canadian salaries look good.

Moving away from the overall level of compensation to its structure, Canadian academic compensation lacks two features of U.S. compensation that make the U.S. especially attractive for academics who are above-average performers in their field, or who are in fields that are in high demand. One is a substantial component of salary that is directly linked to one's research output, called "summer money." Established researchers receive summer money as part of the research grants they win from institutions like the National Science Foundation (NSF). Newly hired faculty are typically offered two to three years of start-up summer money by their university, to help them get established in the grant-writing process. Typical amounts of summer money are two- to three-ninths of one's annual salary. Thus, the correct starting U.S. salary in my profession is more like ((1 + 2/9) x $72,000), which is $88,000 U.S., or $135,000 Canadian. This is more than double typical starting salaries in Canada. It is noteworthy that this (approximately) 2/9 summer premium is, in a sense, performance-linked: it can continue for a lifetime, but only if the individual in question remains a successful grant applicant.

The second aspect of compensation structure that makes the U.S. an attractive destination for those Canadians who are above-average performers in their fields, or who are in high-demand fields, is the greater reliance on merit pay and market-based pay in U.S. universities. The lack of such pay in Canada is partly attributable to a high level of faculty unionization. For example, a large majority of Ontario universities now have unionized faculties; the general antipathy of unions to merit- and market-related salary differentials is well-known. Similar problems exist in the minority of universities that remain non-unionized. The top U.S. universities face no such constraints and pay hefty premiums to top scholars whose work is in high demand. In fact, the U.S. academic labor market has come to resemble the market for professional athletes, where bidding wars among several universities for top talent are not uncommon. In addition to market-based pay, many U.S. universities, including the University of California system where I work, offer meaningful regular merit raises to productive senior scholars, a practice that is, to my knowledge, either very rare or non-existent in Canada.

The relative reluctance of Canadian universities to tolerate merit- and market-based pay differentials, both within and across departments, makes a U.S. destination even more attractive for precisely those individuals Canada presumably most wants to keep.

Academics and other skilled workers place a great value on the ability to keep learning new things in their work. They do this partly out of love, but also because the financial incentives in their professions reward knowledge. Because one of the best ways to ensure continued learning is to have bright, stimulating colleagues, the quality of one's current and future colleagues is one of the most important factors involved in choosing a workplace.

Although the presence of well-trained and stimulating colleagues is a more intangible aspect of the job package, it interacts with the tangible salary component in an important way. Low starting salaries (by international standards) offered by Canadian departments can make senior Canadian researchers who might otherwise be happy with their own salaries skeptical about their university's ability to attract exciting younger colleagues. Thus, salaries matter not just for their own sake but for the kind of working environment they can produce. This fact, again, puts Canada at a disadvantage in attracting and keeping top scholars.

A colleague of mine who recently left Canada was approached before his departure by his department chair, who emphasized the downsides of a move to the US: crime, pollution, drugs, no public health insurance, decaying public schools, etc. Aside from its questionable effectiveness as a way to encourage one's best employees to stay, it is worth examining the validity of this claim as it applies to the highly-skilled "brains" who might be drawn to the U.S. by higher salaries.

The U.S. locations in which drained brains are likely to live and work are not "average" places. To the contrary, as Robert Reich argued in a perceptive and prescient book, skilled workers, whom he calls symbolic analysts, tend to congregate in very specific U.S. locations such as Princeton, New Jersey; New York's Westchester County; Austin, Texas; Bethesda, Maryland; Raleigh-Durham, North Carolina; and Palo Alto, California. These locations are distinguished by the presence of one or more first-rate universities and by a very high quality of life. A recent survey of recent U.S. economics Ph.Ds from top schools (who, stereotypically, care only about their work) revealed a surprising emphasis on the quality of life in the location they were choosing.

Because of the specific locations where skilled workers tend to congregate in the US, most of the "downsides" mentioned by my colleague's chair are simply non-issues for highly skilled workers moving there. The areas in question tend to have a pleasant climate and lifestyle, in addition to low pollution, crime and an absence of drugs (for example, drugs were much more prevalent in my children's Canadian schools than in their current schools). High quality health care is provided by one's employer. In most of these aspects the U.S. is at least comparable to Canada.

In fact, for one public good that is particularly relevant to highly skilled workers, the U.S. has, in my personal experience, a substantial advantage. This is the quality of public education specifically geared to children who are bright and motivated and who wish to excel. Because schools are something highly educated parents tend to care passionately about, it is particularly unfortunate that the public schools my children encountered—in a desirable Canadian neighborhood—exhibited an astonishing reluctance to promote and encourage excellence, among both students and teachers. The same culture of "levelling down" prevailing in the unionized universities seemed to be present in our children's public schools, where offering extra challenges to more-motivated children was at times frowned upon as unfair, at other times just too much bother. Our children's current schools, which are also public schools, challenge children of all abilities and backgrounds. The contrast could not be more stark.

A final, undeniable aspect of amenities is the weather. While Canada has some milder and highly desirable enclaves, such as West Vancouver, it is an inevitable and unfortunate fact that, by international standards, even the nicest parts of Canada have a harsh climate. While one might wish to deny that highly skilled workers are motivated by such factors, the evidence on continued U.S. population flows to the south and southwest, and the accelerating demand by America's best and brightest to live in these areas strongly suggests the contrary. While the Canadian climate is, of course, not a policy parameter any government can control (though I sometimes wonder why the Canadian government is so eager to support anti-global warming initiatives!) I raise the climate issue to make the following point. If Canada's climate is seen as a minus by most would-be immigrants (especially for those not accustomed to it), it is not absurd to argue that to really be able to

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attract top talent Canada needs to offer a compensating wage premium to encourage those people to locate here, much as Alaska and Canada's territories offer higher wages to encourage people to locate in their regions. Simply eliminating the large after-tax wage gap may not be enough.

In sum, attempts to argue that intangibles, including such things as socialized medicine and high-quality public schools, somehow make up for lower cash salaries in Canada, do not hold water for highly skilled "brains." (They may very well apply to lower-income individuals but this is not at issue in the brain drain debate.) Policymakers hoping to retain top talent in Canada—indeed, those who hope to attract it to Canada—need to take this into consideration.

Twenty years ago Canadian universities offered relatively competitive salaries to those in the US, often outbidding US universities for top talent. Many talented people came north at that time in what was probably a healthy two-way exchange of brains. This is no longer the case.

The above discussion of attracting foreign talent to Canada raises the issue of foregone opportunities. In fact, the most insidious, and hardest to measure, aspect of the brain drain concerns the quality of the workers and scholars Canada would have been able to attract over the past decade or so had it offered a more competitive working environment. Twenty years ago Canadian universities offered relatively competitive salaries to those in the U.S., often outbidding U.S. universities for top talent. Many talented people came north at that time in what was probably a healthy two-way exchange of brains. This is no longer the case. The occasional, highly visible departure of well-known Canadian academics to the U.S. in recent years is only the tip of a much bigger iceberg. Importantly, because it concerns the quality of the workers who would have come to Canada had things been different, the size of this iceberg cannot be measured by counting the total inflows and outflows of Ph.Ds from Canada, as some analysts have attempted to do.

A final point about real salary differentials is that the various dimensions of compensation discussed above interact in important ways. My family's situation is an example, albeit a highly personal one: Had the local public goods (in our case, essentially the schools) been better, Canada's lower salaries and higher taxes would, I believe, have seemed acceptable. Or, had our after-tax salary been high enough to allow us to purchase a private alternative to what we felt was a sub-standard public product, this would have been acceptable as well. But with all these dimensions working together, the camel's back was broken.

In a classic 1987 article on immigration, George Borjas argues that the United States would do well to encourage immigration from countries that have greater wage equality than it does and to discourage immigration from high-inequality countries. The reason is that the U.S. will attract the "stars" from the high-equality countries, who can raise their salaries by moving to the US, but will disproportionately attract labor-market "lemons" from high-inequality countries. The principle, though not the degree, is the same as that which prompted highly-educated scientists and engineers to flee East Germany for the West during the Cold War.

According to Borjas' argument, the U.S. is making out very well with its Canadian immigrants because its labor market rewards exceptional ability and effort much more. One obvious policy solution, of course, is to raise the level of earnings inequality in Canada, but this strikes me as both unnecessary and unlikely to be acceptable to much of the Canadian public. It is unnecessary because, as Ross Finnie has shown, the brain drain is concentrated among the top-performing workers in a few key sectors. To address the problem Borjas identifies, Canada needs to raise inequality only among highly qualified Canadian workers. Certainly, poverty within this group is not an issue, so allowing pay differentials within this group to more accurately reflect differences in achievement and in demand for specific fields of knowledge might be one way to allow Canada to retain its best workers at minimal social cost.

In the rest of this article I offer three concrete policy suggestions aimed specifically at the brain drain in Canada's academic sector. All of them are based on two premises. The first is that, given the current funding situation and political climate, a large, across-the-board salary increase for Canadian university professors is simply not going to happen. The second is Borjas' insight that raising pay inequality to more accurately reflect an individual worker's productivity in the immigration source country helps prevent other countries from cherry-picking its top talent.

- Increase the proportion of salary going to merit- and market-based pay in Canadian universities. One way to do this is, of course, for universities to make aggressive salary counter-offers to their own professors who receive job offers in the U.S., offers which should take into account some of the tax and other differentials outlined in the last section. But this is not enough, for two

reasons. First, if it becomes apparent that the only way a scholar can raise his/her salary is by generating an outside offer, a policy that relies exclusively on offer-matching will encourage job search. Second, given the economic environment described in the last section, it is very hard to turn a U.S. offer down once it has been generated. Thus, measures that recognize above-average achievement before it is too late are required. Such measures require offering sizable real salary increases to scholars of all ages and incomes who publish in the highest-ranked international journals in their field. Fields or departments which adopt the nihilistic postmodern position that no objective measure of research quality exists should reasonably be allowed to languish without a merit pay budget.

In this area, the recently established Canada Research Chairs are a step in the right direction, but Canadian universities' recent collective decision to put a hefty overhead "tax" on them leaves them less than credible as means of attracting new talent from outside the country or, for that matter, of luring most expatriate Canadian scholars back to Canada. Rather than taxing this inflow of federal money, Canadian universities would do well to supplement it with various forms of matching funds (as my current university does when an outside donor endows a chair) to create a truly excellent and desirable package.

- Allow salary differentials across fields of study to reflect differences in demand. Forcing the same bureaucratic salary structure onto fields with very different levels of demand in the current labor market means that, ultimately, one attracts and retains top scholars only in those fields that are in low demand.
- Have Canadian granting agencies such as the Natural Sciences and Engineering Research Council (NSERC) and Social Sciences and Humanities Research Council (SSHRC) start paying summer salary to their most highly-ranked applicants.

The above recommendations may not seem very substantial but, if truly taken to heart, would in fact mean a major change in the organizational culture of some Canadian universities, away from an emphasis on equality and bureaucracy and toward excellence and adaptability. The changes would require a great deal of courage on the part of any administrator who ushered them in.

Finally, it is worth pointing out that the above recommendations are particularly aimed at the academic sector. Together with the health sector, universities have the distinction of being a Canadian public-sector industry competing for workers with a U.S. industry that is partly and in fact, at the top, substantially private. The changes suggested above are likely more relevant to those kinds of sectors than others which are largely private in both countries.

The current real salary gap between Canada and the U.S. is very large for top performers in the academic sector. While one cause of this is just a lower overall wage level in Canada, another—one much more amenable to policy changes—involves the structure of wages within the academic sector. I have argued that considerable progress in reducing or perhaps even reversing the brain drain might be made at low social cost by allowing the structure of wages in Canadian universities to more accurately reflect individual merit and market demand.

Peter Kuhn is Professor of Economics at the University of California, Santa Barbara.

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Finnie on the Brain Drain The brain drain is a problem that needs to be addressed. However, the problem is of a very different nature than many might imagine. The brain drain is, first, certainly not a question of great hordes of Canadians leaving *en masse*, since current outflows are small by historical standards...

Nor do the data indicate that great swaths are being cut through the ranks of our "best and brightest"; the flows are simply not very large even at the high end, as for example, measured by individuals' income levels. Several thousand "higher income" (generously defined) departures per year (to all destinations) would simply not seem to be grounds for panic, especially when many of these individuals will come back at some point with new skills and valuable experience to lend to the country.

That said, the brain drain is a significant problem in the sense that certain specific groups of highly skilled workers are leaving in substantial numbers and will be missed, including doctors and other health-care workers, university professors, engineers and scientists and others in R&D activities generally and the high-tech sector in particular, and those at the top end of the income ladder.

Ross FINNIE, *The Brain Drain: Myth and Reality*