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# CANADA'S "THOUSAND TALENT PROGRAM"<sup>1</sup>: HOW CANADA RESEARCH CHAIR PROGRAM ATTRACTS CHINESE ACADEMICS

by Qiang Zha



## About The Author

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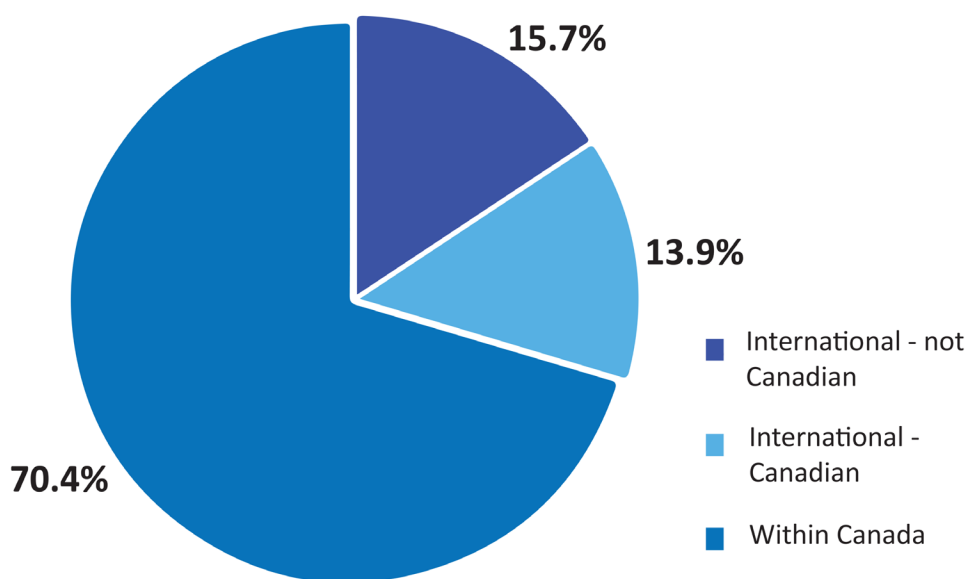
As a result of globalization, academics have become more mobile and are motivated to move to institutions that have the most favourable research funding and work environment. The university is now viewed as a magnet for academic talent from across the world, and a key institution that enhances competitiveness by connecting cities and nations to global flows of knowledge and talent. Given that fact, what factors influence and explain the direction of global brain flows? The purpose of this research is to shed light on the relative strengths of the factors that prompted a group of Canada Research Chair (CRC) holders from China to choose to work in Canadian universities, against the backdrop of the shift of the global centre of economic gravity towards Asia. Such a shift finds expression as well in the academic arena, so it is particularly interesting to track the views of Chinese scholars holding chairs in Canadian universities.

## Introduction

There is a rich literature on “brain drain” and “brain gain.” In recent years, the phenomenon of “brain circulation” has surfaced with the escalation of globalization, and attracted increasing research interest. This latter term denotes how “skilled and professional workers move between wealthy nations or return to their homelands after migrating to another country” (Spring, 2008, p. 341). Nonetheless, research on brain circulation struggles to break away from the explanatory model employed largely for studying brain drain, as well as to identify new factors/forces that capture the process and dynamics of brain circulation. In particular, the research lacks a sound framework that helps us to understand brain circulation within the developed world. This paper attempts to combine the push-pull factor theory, a widely used model for the study of international migration, with the centre-periphery framework derived from the dependency theory and the world system theory, and academic capitalism. The aim of this study is to offer a more comprehensive and richer explanation of brain circulation, using the case study of Chinese holders of Canada Research Chairs (CRC).

Canada suffered brain drain in the 1990s, in particular to the United States. The *Canada Research Chair Program* (CRCP), launched in 2000 by the Government of Canada, signalled the federal government's attempt to attract and retain “some of the world's most accomplished and promising

minds” in this global brain race. The program invests \$300 million per year towards the establishment of 2,000 research professorships in Canadian universities. There are two types of CRCs. Tier 1 positions, which are tenable for seven years and renewable, are for senior and established researchers, defined by the program as “world leaders in their fields.” For each of those positions, the university receives \$200,000 (all figures Canadian, unless stated otherwise) a year for seven years. Tier 2 CRCs, which are tenable for five years and renewable once, are for “exceptional emerging researchers” or rising stars. For each of these chairs, the university receives \$100,000 annually for five years. Each university also receives CRCP associated infrastructure funding from the Canada Foundation for Innovation (CFI) to support research for all its CRCs. As of September 2010, when this research started, a total of 1,845 Canada Research Chair positions were filled<sup>2</sup>, of which 546 were recruited from abroad. The latter were roughly split between Canadian expatriates and international scholars, as shown in Figure 1, including 344 from the US and a significant proportion from the UK. (CRCP website; The Conference Board of Canada, 2010). Notably, a substantial majority of CRC appointments has been awarded to academics within Canada. In keeping with the dual goals of the CRCP, it appears that it is more effective to retain top researchers than to attract them internationally. In fact, since the CRCP was launched, a majority of CRC recruitments came from within the university every year except 2005 (CRCP, 2009).

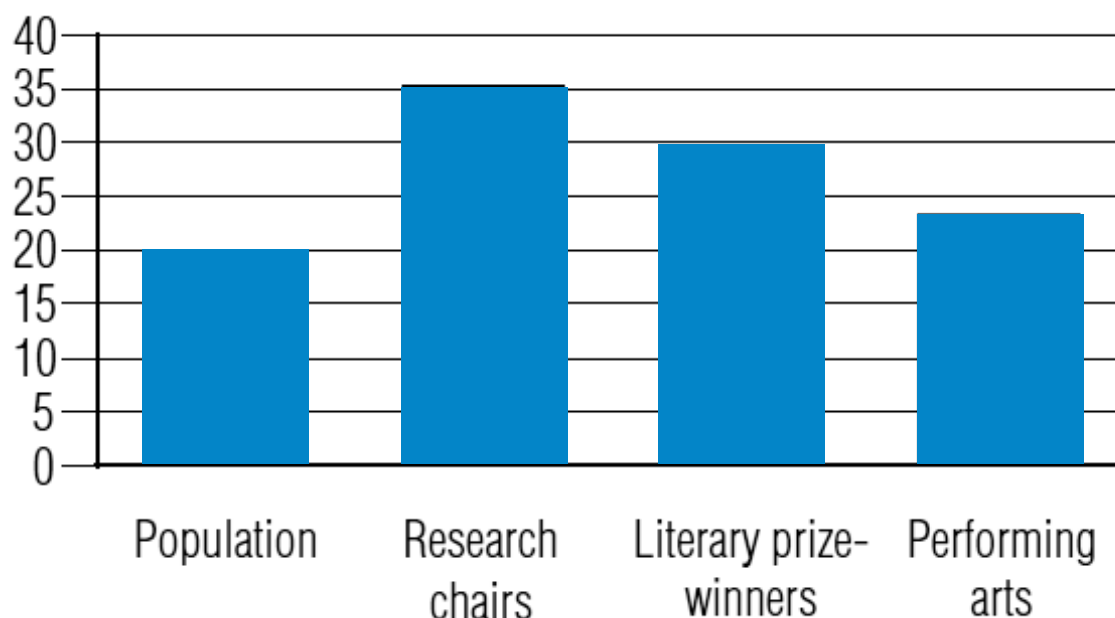
**Figure 1. Recruitment of Canada Research Chairs from Within and Outside Canada (as of November 2010)**

Source: adapted from Figure 5.6 in CAUT, 2011, p. 49.

There are many competing initiatives similar to the CRCP in other parts of the world, which affect the directions of international talent flows. These programs include the *Presidential Young Investigator Award* (CAREER) and *Presidential Early Career Awards for Scientists and Engineers* (PECASE) in the United States (providing funding up to \$640,000 over a 5-year period for junior researchers), the *Federation Fellowship Program* in Australia (offering \$221,261 per annum), the *Marie Curie Program* established by the EU (funding \$410,161 per annum), and the *Humboldt Research Awards* in Germany (valued at 60,000 Euros for one year).

Not surprisingly, close to 100 CRC holders are identified as Chinese, when those originating from mainland China, Hong Kong and Taiwan are counted. Admittedly, these Chinese CRC holders cut across all three categories in Figure 1. Yet, they are

originally and culturally international<sup>3</sup>. Therefore, a scrutiny of their decision-making with respect to working in Canadian universities may shed light on the competitive edge and attractiveness of Canadian systems of higher education and innovation, as well as what needs to be done in order to improve them. This study is significant in two ways. First, Canada, like the United States, relies to a large extent on immigrant and international talent. As of 2006, a remarkable 40.8% of university professors in Canada were foreign-born (CAUT, 2012, p. 21). Among Canada Research Chairs, “at least 35 per cent of all Chairs are foreign born,” and “Considering that foreign-born individuals comprise 19.8 per cent of the population, immigrants are clearly disproportionately represented among this important group of elite researchers in Canada” (The Conference Board of Canada, 2010, pp. 6-7). Figure 2 below visualizes this pattern of reliance.

**Figure 2. Immigrant Achievements, Canada (per cent attributable to immigrants)<sup>4</sup>**

Source: The Conference Board of Canada, 2010, p. 9.

Among the foreign-born talent, the Chinese constitute an important group. Since the 1980s, Chinese immigrants have dominated the increase of foreign-born PhDs in Canada, outnumbering those from the US and the UK, the two dominant sources prior to 1981. The US share went from a high of 24% over the 1971-1980 period to a low of 6% over the 1991-2000 period, while China's share went from a low of 2% to a high of 25% over the same period (Gluszynski and Peters, 2005). Among the faculty members in Canadian universities, the Chinese represented the largest minority group, 28.2% of all minority faculty or 4.2% of the total, as of 2006 (CAUT, 2012, p. 20). In addition, this group might be more sensitive to the shift in the global centre of economic gravity towards Asia, and in particular towards China which has emerged as the world's second largest economy in a short period. As a result, an increasing number of Chinese professionals (who historically tended to stay permanently in North America) now choose to return to China, given its

better economic and professional opportunities (Wadhwa et al., 2009). The Chinese government and universities have launched a number of timely initiatives similar to—if not more lucrative than—the CRCP. They include the *One Hundred Talent Program* (with the Chinese Academy of Sciences and offering approximately \$450,000 remuneration to each appointee over a three-year period), the *Cheung Kong Scholar Program* (with the Ministry of Education and typically providing the incumbent with \$450,000 remuneration over a five-year period), and the *Thousand Talent Program* (with the Department of Organization of the Chinese Communist Party and each appointment being valued as high as \$335,000 for start-up plus up to \$168,000 remuneration per annum), which target top researchers among Chinese expatriates. In fact, the combined effect of these programs and China's booming economy has lured some of the best Chinese researchers in the United States back to China. (*New York Times*, October 28, 2005; Hvistendahl, December 19, 2008).

Against this backdrop, this study attempts to address the following questions: Why do these Chinese CRC holders choose to work in Canadian universities? What factors do they appreciate most/least about their current positions, their institutions, and Canada? Once the terms of their current appointments end, will they stay in Canada? What can be done to improve the CRCP, in their view?

## Data Collection and Analytical Framework

### *Research Methods and Sample*

A purposive sampling approach was adopted, and invitations to participate were emailed to a total of 78 CRC holders who were originally from mainland China. Thirty one of them agreed to participate in this research, and this researcher then arranged in-depth interviews with each of them. From September 2010 to September 2011, 29 Chinese CRC holders from various parts of Canada were interviewed. Two more wanted to participate in this research, but were unavailable. Notably, 15 chair-holders in this sample received their doctoral education in non-Canadian universities (9 at American universities, and the others at British, Chinese, German, French, and Singaporean universities), and 20 of them started their academic career outside Canada. Nineteen

were initially recruited internationally - mostly from the United States - to non-CRC positions in Canadian universities, and then appointed to CRCs. Seven were directly appointed to CRC positions. Their qualifications and experiences should give them the status required for professorships elsewhere, such as in the United States or China. For this reason, this paper involves comparisons among academic systems in Canada, China, and the United States, which are most relevant to this sample. Table 1 provides a breakdown of the sample. (See Below)

Given the uniqueness of the population, this study didn't seek a sample that was statistically representative, but instead placed emphasis on the participants' willingness to share their thoughts. Nonetheless, a special effort (numerous emails followed by phone calls) was made to recruit female participants, though they were still relatively small in number due to the fact that female CRCs are underrepresented in the pool for this study (7 out of 29 or roughly 24%) as well as in the general population of CRCs (25%). All interviews were conducted face-to-face at the CRC's university except for one case (a phone interview) and lasted for 1 to 1.5 hours. Each interview session was semi-structured; that is the researcher prepared a list of questions, yet all subjects were allowed to freely share their

**Table 1. Sample Breakdown by Province, Tier, Research Council and Gender**

Province	Tier		Council			Gender		Total
	I	II	NSERC	SSHRC	CIHR	Male	Female	
Alberta	1	2	2		1	2	1	3
BC	2	2	2	2		2	2	4
Ontario	6	9	12		3	15		15
Quebec	2	2	4			4		4
NB	1	1	2			2		2
NS		1		1		1		1
<b>Total</b>	<b>12</b>	<b>17</b>	<b>22</b>	<b>3</b>	<b>4</b>	<b>26</b>	<b>3</b>	<b>29</b>

Note: BC = British Columbia, NB = New Brunswick, NS = Nova Scotia



thoughts. All the interviews were recorded with the interviewees' consent, and detailed notes were taken on site by this researcher. In general, the data collection process - the cumulative total of interviews - ended with a saturation stage, when it appeared that no new information would be forthcoming.

Based on the data collected, three broad themes emerged. First, all the interviewees claimed they were drawn to Canada's cultural and social environment. As a minority and culturally distinctive group, they feel comfortable and secure living in Canada. Second, they were attracted to the academic environment in Canada and Canadian universities, of which the CRCP is a significant part. Some asserted that the Canadian academic environment mattered more to them than living conditions. Finally, though they are largely happy with their current positions and status, a considerable proportion didn't rule out the possibility of moving somewhere else if better opportunities arose. Nonetheless, they tended to show little interest in returning to and working in China permanently. In light of these themes, this paper draws on three theoretical perspectives in order to construct an analytical model: the push-pull factors theory, the centre-periphery framework, and the idea of academic capitalism.

### *Analytical Framework*

The push-pull theory is widely employed to understand the strengths of and relationships among various factors that influence international migration decisions and choices. It treats international migration as driven by push and pull factors. The push factors are the supply side reasons that influence the incentives and willingness to migrate, while the pull factors are the demand side elements that attract migrants to the receiving country. Specifically, the push factors are related to adverse domestic circumstances, and the pull factors pertain to better personal and professional opportunities in the host countries. This model can be used to explain international flows of academic talent, alongside personal preferences, academic ability, social capital, and creative capital.

In the most basic push-pull model, the migration of knowledge workers is considered a "brain drain." There is a transfer of talents from one country to another leading to benefits for the receiving country (traditionally a developed one) or brain gain, and costs for the sending country (typically a developing one) or brain drain. In the new global economy, international mobility of knowledge workers is best viewed as a brain circulation or brain exchange, instead of a one-way flow. Such increased mobility contributes to increasing two-way flows of knowledge, ideas and technology (Salt, 1997; OECD, 2002; Harris 2003). In the new contexts of globalization and knowledge economies, knowledge workers with marketable expertise are able to move freely in order to optimize their career opportunities (Saxenian, 2002, 2006; Hart, 2006; Rosenzweig, 2008). In the face of this new phenomenon of brain circulation, the basic push-pull model is still viable, yet seems to be less useful than in the past, and sometimes even problematic. Guellec and Cervantes (2002) suggest the necessity of identifying the factors that better capture migratory flows of professionals among advanced countries, although they also play a role in the case of flows from developing countries. Precisely because of its focus on and the strength of personal factors, the push-pull model carries the limitations and thus the risk of isolating individual cases from the effect of organized endeavours (like the CRCP) that normally occur and usher in impact at the system level. For this reason, this study draws on the centre-periphery framework.

Rooted in dependency theory and world system theory, the centre-periphery framework was originally created to depict inequalities across the world. It divides the globe as into two major zones. The centre zone is made up of larger, wealthier countries, which are dominant in the periphery. In higher education, the powerful academic systems of the centres have always dominated the production and distribution of knowledge. Academic institutions in the periphery zone of developing and newly industrializing nations depend on the centres for research, communication of knowledge, and advanced training (Altbach, 2006). Peripheral elites are drawn to the leading universities

in the centre zone, and tend to become culturally alienated towards their own societies. Consequently, peripheral elites are more attached to the centres in terms of their values, attitudes and behaviours, which often causes their flow to the centres, in other words, a brain drain on the part of peripheral countries.

More recently, some dependency theorists maintain that the world-wide dependence "cuts across the developed/underdeveloped division," which means that dependence may be formed among richer developed countries as well (McLean, 1983, pp. 31-32). The world system theorists further argue that underdeveloped countries can alter their positions by adopting smart competitive strategies, and move from the periphery to the semi-periphery, and even to centre, or vice versa (Wallerstein, 1974, 1984). Hence many developing countries have launched talent programs of various kinds to lure back "some of their brightest people" from abroad in order to raise their economic and technological competitiveness (Pan, 2011). As a major emerging economy, China's effort in this regard is among the most notable, and appears to capitalize on the current recession in the West.<sup>5</sup> Similarly, in order to maintain their competitiveness, developed countries are also keen to expand their brain gain. These changes and efforts add dynamism to the world-wide brain circulation. Over the years, the United States has been a super magnet and the foremost beneficiary of international talent flows, but now has to take challenges from other countries seriously.

The notion of academic capitalism can provide a unique way to examine brain circulation among the centres. Academic capitalism explains the phenomenon of university faculty's increasing attention to market potential as an impetus for research. This puts pressure on faculty members to anticipate the vagaries of the market. (Slaughter and Leslie, 1997) Research thus becomes less "curiosity-driven" and more market-driven. In this process, systems that manage resistance—to various

degrees—to academic capitalism may appear to be attractive to those academics pursuing "curiosity-driven" research and seeking funds to support this type of research. Slaughter and Leslie (1997) considered Canada as an exception to academic capitalism, given Canadian universities' commitment to undergraduate education, basic or "curiosity-driven" research, and faculty and institutional autonomy. This is still evident, to a large extent, with Canada's belief in public universities (there is not a single sizable private university in the country), and the fact that the bulk of research dollars come from relatively stable government sources as well as non-profit organizations. Since the early 2000s, federal research funding more than doubled in Canada. In 2008-2009, "66.5% of Sponsored Research revenues were provided by Canadian government sources," while "private funding sources in the form of business donations, grants and contracts comprised 12.6% of the total" (CAUT, 2011, p. 47).

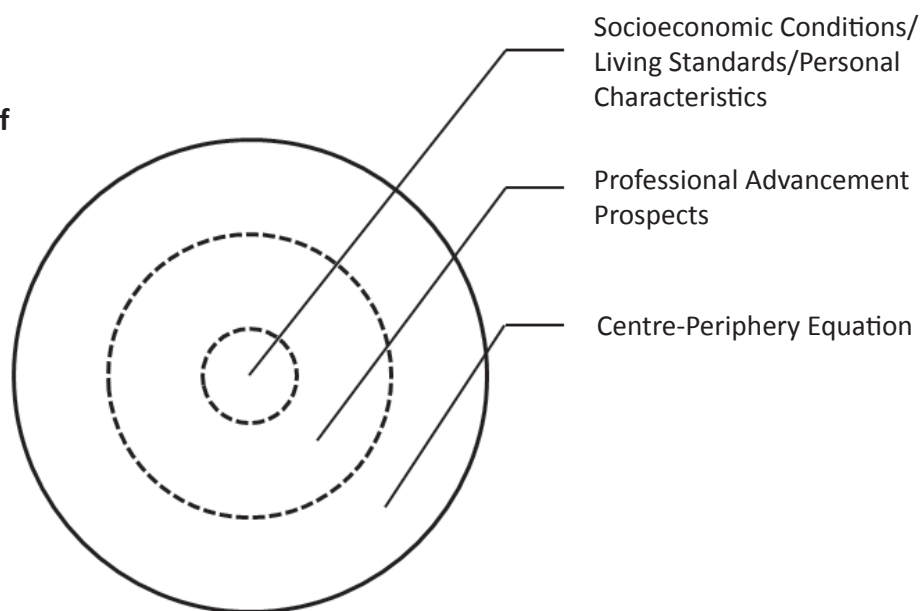
The public commitment to universities and research puts Canada in contrast to the United States where academic capitalism has been largely promoted (Slaughter and Leslie, 1997), though Canadian universities are inevitably subject to influence from their giant neighbour. This contrast might be rooted in what Lipset (1989) depicts as the "Continental Divide," which refers to the differences between Canada and the United States with respect to cultural values, behavioural norms and institutional principles. Lipset argues the differences stem from the dissimilar historical path followed by these two nations, characterizing Canada as statist, collectivity-oriented, and particularistic, and the United States as anti-statist, individualist and populist. "[Lipset] notes further the compatibility between the founding statist conservatism in Canada and socialism, as both are collectivist ideologies which embrace the idea of public mobilization of resources to fulfil group objectives" (Skolnik, 1990, p. 83). Employing the Continental Divide as a theoretical lens, Skolnik (1990) studies the differences in higher education between Canada and the United States. He concludes that

Canadian universities “are less overtly competitive with one another than are American universities,” in order to bring “comparable opportunities to a population that was sparsely distributed over an immense geographical area” (p. 90), and tend to put emphasis on equality of results. In contrast, American universities stress equality of opportunity and meritocratic competition. Further, he observes, there is a “greater materialistic orientation of the United States than of Canada” (Skolnik, 1990, p. 86). These cultural and institutional differences between Canada and the United States may help explain their different reactions to academic capitalism.

Given the above, this study argues that combining the centre-periphery equation, the push-pull theory and this characterization of Canadian academic culture can provide an explanatory model that is suitable for investigating Chinese CRC holders’ perceptions of their current positions and their future intentions. This model, as illustrated in Figure 3, draws on the centre-periphery equation to depict the general tendency of brain circulation, that is, from peripheral countries to the centre systems in general. The variations arising in this process pertain to the dynamism and opportunities infused by globalization. As the result, some peripheral

countries see and seize the opportunity to achieve economic successes, while some traditional centres find themselves in crisis. These changes could well lead to the possibility of redefining centres and peripheries globally or within a region, and naturally have an impact on the direction of brain circulation. Within this changing centre-periphery equation, the push-pull theory still works well with personal factors, explaining a large proportion of the variances associated with individual motivation and incentives in international talent flows. While traditional factors like socioeconomic conditions and living standards are still relevant, professional advancement prospects have greater weight in the decision-making of top-flight personnel vis-à-vis to go or to stay. This is because the organized efforts and institutionalized programs—even those in the developing world (e.g., *Thousand Talent Program* and the like in China)—make it increasingly possible for global talent to enjoy comparable living styles across the world. Thus, in this model, the factors pertaining to professional advancement prospects are placed in a central position, although other elements/factors embedded in the centre-periphery equation and push-pull framework may penetrate into the professional domain (through the dotted lines) and influence the final decision.

**Figure 3. Model for Understanding Brain Circulation: the Case of Chinese CRCs**





## Analysis and Discussion

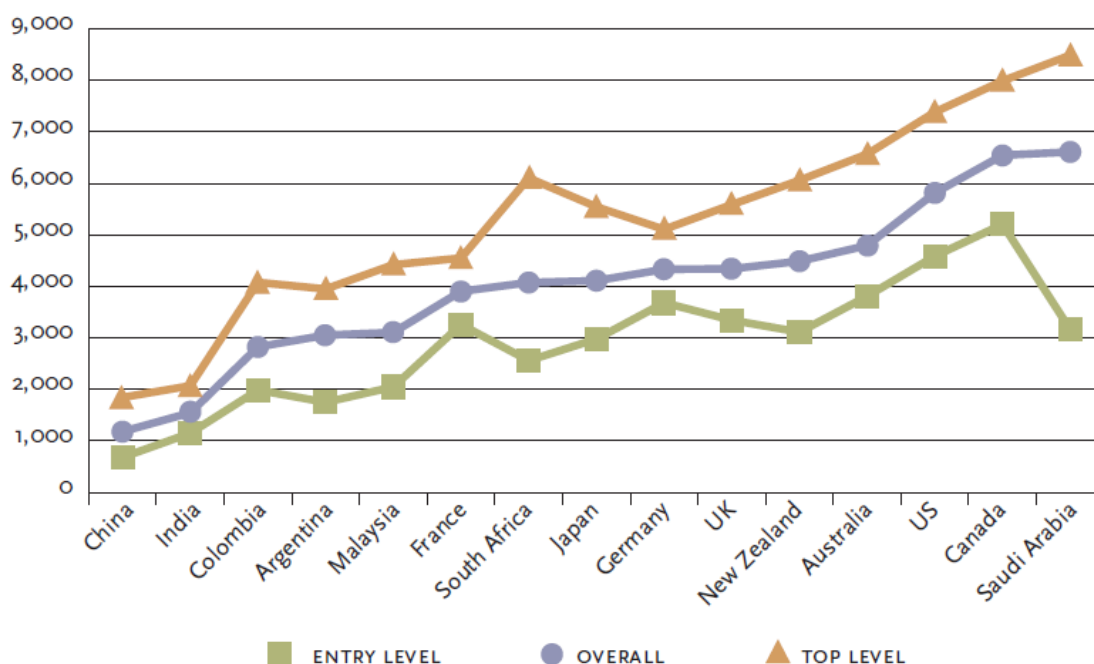
### *Canada's Open and Inclusive Society Makes It a Big Draw*

The analytical model outlined above can be applied to the Chinese CRCs' responses to the interview questions. First of all, with no exceptions, they profess a high degree of satisfaction with the living environment in Canada, citing such pull factors as political and social stability, and cultural diversity. In many senses, this is not surprising, and was even anticipated when the study was being designed. That's partially why the push-pull framework was considered in the first instance. It turns out most of their accounts of the factors relating to family and life considerations that favor Canada can be understood through this lens, and are in line with Canada's public image and reputation. Over the years, Canada has consistently been ranked among the most livable and reputable countries. Based on a recent survey, the Reputation Institute (2011)

describes Canada as the best place to live and work. The survey findings show a high correlation between a country's external reputation and talent flows. Not incidentally, another study finds Canadian university professors to be among the best salaried in the world (Rumbley et al., 2008), in particular the lower ranked faculty, as illustrated by Figure 4 below.

The results of the OECD Programme for International Student Assessment (PISA) are similar. PISA surveys 15-year-olds in the principal industrialized countries, and assesses their educational achievements (on reading, mathematics and science competency) at the end of compulsory education. Again, Canada is constantly ranked high. In 2009, Canadian students ranked 6<sup>th</sup>, behind only Finland in the Western Hemisphere (OECD, 2010). PISA results have been gaining influence worldwide, and are likely to influence the decision-making of international talented individuals. When they weigh their choice of work destination, they will consider the education and schooling available to their children.

**Figure 4. Combined Entry-Level, Top-Level, and Overall Average Monthly Salaries (World Bank PPP\$)**



Source: Rumbley, Pacheco, and Altbach (2008), p. 23.

Also, culture and values are important. Repeatedly, this researcher heard the respondents expressed their appreciation for the easy access to Chinese culture and community in Canada. Indeed, the Chinese population has grown to over 1.3 million across Canada, making the Chinese the largest minority group and the Chinese language the third most common mother tongue, next only to the two official languages, English and French. This gives the Chinese CRCs a sense of home, and is a tribute to Canada's multiculturalism policy, which arguably flows from a mosaic rather than a melting pot approach. Multiculturalism has become an official policy of Canada, which portrays Canada as an open, tolerant and inclusive society (Mooers, 2005). A number of respondents shared their reflections on the resonance between Canadian mainstream values and socialism - which echoes Lipset's observation - and cited it as a pull factor. Traditional Chinese values also place priority on collective well-being. Most of the Chinese CRCs surveyed attended university in China in the 1980s and thus bear a strong sense of such idealism, though today's China is probably more aligned with capitalism, or state capitalism.

*Exceptionalism to Academic Capitalism Is an Asset for Canada*

There is no doubt that the Canadian social, cultural and natural environments attract the Chinese CRCs, but it is questionable if this is the most important factor in their decision-making. Indeed, many of them indicated that their top priority was their career, which is not surprising, given their outstanding career trajectories. Naturally, their success increased their aspirations for the future. They might well choose to work elsewhere if they do not see promising career prospects in Canada. In this regard, Canada's exceptionalism to academic capitalism serves as another big pull factor, as explained by a Tier 2 CRC recruited from an American research institute:

In the US, researchers routinely spent 1/3 to 1/2 of their time to write proposals...Even though you get grants, you have little time to do research, but have to hire others to do it while you look more like a research manager...The Canadian approach helps to overcome downturns in one's career. Everyone can experience ups and downs in research. If your area is not popular anymore, it is hard for you to get any funding in the US.

His observations are very much echoed by another Tier 2 CRC recruited from within Canada:

The core of Canadian values is about peace and sustainability (which I initially misinterpreted as mediocrity and attempting nothing). [Similarly] the current practice of CRCP works well to achieve the synergy between the individual and the institution. Research is a conversation between human and nature, and directed by heart, not just brain. Valuable breakthroughs often come from passion, not pressure. [In this sense], the American highly competitive environment works well for technological innovations, but not necessarily for discoveries in sciences.

as well as from two Tier 1 CRCs, both recruited from within Canada:

CRC and NSERC programs encourage you to have long-term planning...This is particularly important for interdisciplinary research...It would be risky if you have to write a report every year as in the US, and spend a lot of time writing proposals one year ahead at a time.

The less competitive environment [in Canada] allows you to pick up those problems that require very deep thinking, while you have to rush in the States where people tend to have a materialistic mentality...ideas are hard to judge in their initial stage.

Indeed, the CRCP is characterized by a longer funding term than the average of similar initiatives elsewhere, as outlined above. As a matter of fact, Canadian faculty are more sheltered for their research activities compared to their American counterparts, in two ways. First, Canadian researchers do not have to earn or otherwise cover the indirect, overhead and infrastructure costs of research in Canadian universities. They are free insofar as academic

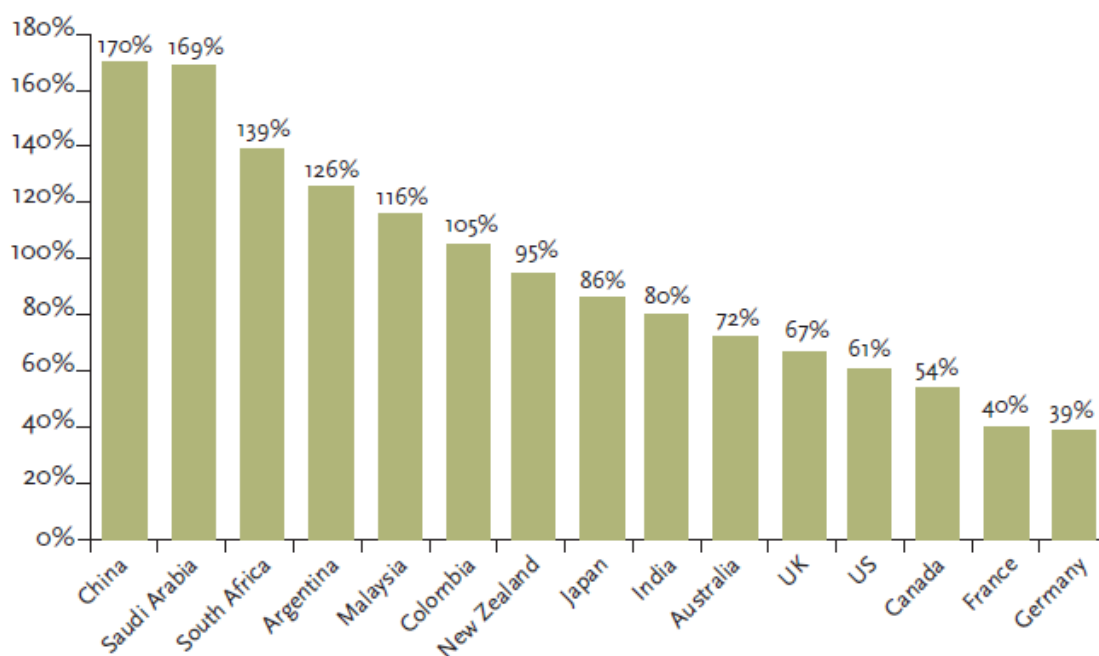
researchers are concerned. Second and surprisingly, Canadian faculty enjoy more time for research. The 40-40-20 workload distribution among teaching, research and service is standard across Canada, while the typical distribution even in top research universities in the United States is 50-30-20, and in many cases is closer to 55-25-20 (NCES, 2005).

Arguably, the opposite of academic capitalism might be academic egalitarianism. Canada's relative exception to academic capitalism appears to find expressions with less competition for research funding and a relatively egalitarian dispersion of research funds, and also with faculty compensations and academic autonomy. Rumbley et al. find that while "Canada registers some of the highest academic salaries," salaries of Canadian academics show "just a 54 percent increase over the course of a career" (Rumbley et al., 2008, p. 36). When this figure is compared to an average increase of 94%

from entry to top levels across the world, it casts an image of egalitarianism on Canadian academia, which is clearly depicted in Figure 5 (see below). The characteristics of Canadian faculty salary structure appear to favor lower rank faculty members over their senior colleagues.

There is also a strong tradition of academic autonomy in Canada. Skolnik (1990) observes that the "American emphasis on outcome assessment of universities for purposes of accountability for public funds is foreign to the Canadian scene" (p. 91), and "public universities in Canada are in many respects treated by government like...crown corporations" (p. 92). More recently, a multi-national survey entitled *Changing Academic Profession* confirms there is "a strong commitment to academic freedom that is consistent with the tradition in Canada of emphasizing the public functions served by our universities and the assumption that...they should

**Figure 5. Percent Difference between Entry and Top-Level Average Monthly Salaries (World Bank PPP\$)**



Source: Rumbley, Pacheco, and Altbach (2008), p. 25.

quite properly be accorded high levels of relative autonomy" (Metcalf et al., 2010, p. 20). In general, Canada's relative resistance to academic capitalism, largely out of the traditional belief in public universities and academic autonomy, seems to warrant a sort of shelter to those who seek a "purer" and more collegial environment suitable for pursuing curiosity-driven and interdisciplinary research.

### *The Changing Centre-Periphery Equation Is a Double-Edged Sword*

By taking advantage of the multiculturalism ideology and exceptionalism to academic capitalism, Canada has benefitted from changes in the centre-periphery equation and performed well in the global talent race, in particular when the stronger centres like the United States are experiencing the pain of a major recession. Nevertheless, given these advantages, Canada is not yet near where it should be in regard to attracting global top researchers. This study has not interviewed those who rejected CRC position offers or those who chose to leave Canada after (or even before) their CRC terms ended. However, it has identified with the current sample a tendency that changes with the centre-periphery equation could also turn some of Canada's advantages into disadvantages. In the interviews for this study, this researcher encountered some complaints about Canada placing too much emphasis on egalitarianism. A Tier 1 CRC recruited from within university expressed his frustration as follows:

[My university] treats CRCs very differently from other universities. CRCs are not distinctive from the rest of faculty – do not want to make two categories of faculty, and try not to differentiate and affect merit evaluations etc...[This practice] creates a lot of pressure when you have CRCs – when you come to renewal, you are compared laterally with others who are only doing research, doing no teaching.

He might feel better if he had known that another Canadian university allowed its Tier 1 CRCs to renew their terms only once—though the CRCP stipulates all Tier 1 chair-holders may renew their

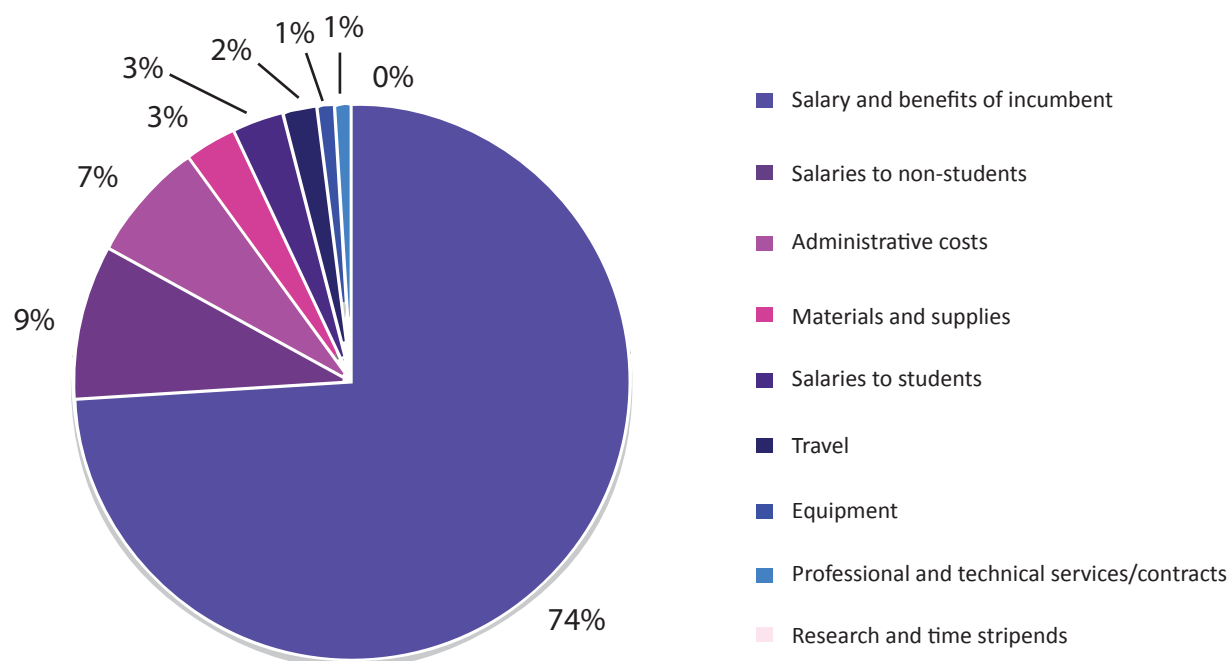
terms indefinitely—in order to rotate the positions among others who are qualified. Another Tier 1 CRC recruited from a major American research university shared his view of career ceilings in the Canadian context:

The Canadian relaxed environment is only good for the few geniuses, but most people would need pressure... In the US, senior professors cannot go to sleep—feeling the threat that young scholars will overtake them... In Canada, there is no incentive or encouragement system— [which is] different from China, Japan, Korea and also the US. In the US, a major discovery, a paper in *Nature* or *Science*, will get a letter from the president [of your university], but here [there is] no recognition, sometimes you even have to hide it...I have a sense of a ceiling here—[that I] cannot go to a higher level.

Indeed, there have always been those in Canada who criticize the CRCP for decreasing morale among faculty "due to greater segmentation of the faculty crops" (R.A. Malatest and Associate Ltd., 2004, p. iii), or by rewarding elite "stars" at the expense of others (Polster, 2002, 2007). Such a force could well lead to a non or minimum-differentiation policy and practice towards CRCs on Canadian campuses. In addition to this perceived flip side of Canadian egalitarian culture, there are many voices complaining about deficiencies in research funding, which again are blamed on the egalitarian approach to distributing research resources. Below is an excerpt from the response of a Tier 1 CRC recruited from within university:

In the US, a successful professor has many sources of funding – EPA, NOVA, NASA, NSF, so many sources – and can maintain a very large research program, but not in Canada – only NSERC, [there is] no other source of funding...NSERC sprinkles money around, everyone gets some. [It] tries to support young and established, [adopting] the small and even funding policy, which is not that bad, but it means funding is very limited compared with situation in the US – Canada has no such fertile source.

Some complaints focus on the way in which the CRC allocations are used. Instead of supporting research directly, the bulk of the awards (74%) is now used

**Figure 6. Allocation of CRC Awards: 2007-2008**

Source: adapted from Chart 3 in CRCP (2009), p.8.

to cover the incumbents' salaries, which would otherwise be provided for in the university budget. Figure 6 gives a detailed account of how CRC funds are allocated. This might be considered a form of egalitarianism: rather than using the CRC funds as personal awards, the funds are largely used to cover at least part of the chair-holders' salaries, while the money freed up from the university budget can be used for other purposes and benefit many others. Put another way, the individual CRCs do not have much discretion over the allocations that are provided with their appointments, since they are largely controlled and utilized by their universities for collective purpose.

Notably, such complaints are more likely to come from Tier 1 chair-holders. This is consistent with the findings of previous research on CRC experiences. Grant and Drakich (2010) investigate the experiences of 60 CRCs, classifying their responses into three categories: good, bad, and ugly. They find that "Tier 1 Chairs are more likely to have an ugly experience" (p. 27), as shown in Table 2. Admittedly, Tier 1 CRCs normally have much higher status in their own fields, and are thus more likely to take advantage of academic capitalism to gain higher prestige and larger rewards. This is especially true in the context of a changing centre-periphery equation, where both advanced and emerging economies are keen to

**Table 2. Experiences of the CRCs by Tier**

Experiences by Percentage	Tier 1	Tier 2
Good	70%	78%
Bad	16%	22%
Ugly	14%	0%

Source: Adapted from Table 2 in Grant and Drakich (2010), p. 28.



attract global researchers and anxious to offer them preferential policies and conditions. This, however, is not the norm in Canadian academic culture. Rather, Canadian academic culture emphasizes respect for group rights (Skolnik, 1990, p. 93).

This raises concerns over the effect and sustainability of the CRCP, which is mandated "to help Canadian universities attract and retain the global research stars of today and recruit Canada's research stars of tomorrow" (Government of Canada, 2000). Based on a limited sample, this study shows that while the CRCP has demonstrated strength with retaining and attracting "rising stars," it appears to be less appealing to "shining stars." Among this group, would those rising stars remain in Canada when they become shining stars sooner or later? In fact, some Tier 2 chair-holders also voice complaints. One said he had been given new courses to teach, while subject to enormous research pressure. At one point, he doubted if it would be worthwhile to renew his appointment. Another Tier 2 CRC lamented about an "anti-CRC" culture in his university, since CRCs were often denied access to internal funding, on the basis that they had been handsomely supported by the awards.

## Concluding Remarks

Canadian universities appear to enjoy a unique advantage in the global brain race which rests on a combination of Canada's prevailing collectivist and multicultural ideologies, and their integration into academia. This is in line with the open system view of the university. Van Vught (1996) views public higher education as a system located within a suprasystem consisting of the social, political and economic environment. This system is open in the sense that there is always an interaction with the environment, through which universities come to accept certain values, and adapt to structures and processes judged to be important by the environment. Put another way, universities are better understood as embedded within broad social and cultural contexts.

The expansion of Canada's advantage thus should stem from the healthy and organic interactions among these elements in the contexts in which Canadian universities operate.

A certain degree of exceptionalism to academic capitalism is attractive to the rising stars. Yet, too much emphasis on academic egalitarianism could turn Canada's advantage into a double-edged sword, because it could erode the experiences of more established chair-holders. The sample of this research clearly manifests this paradox: on the one hand, Chinese CRC holders are drawn by Canada's egalitarian, less competitive environment; on the other hand, they want to be recognized as distinctively meritorious and be rewarded accordingly. The call for differentiation seems to be evident with the domestic chair-holders as well, despite the resistance and backlash (Grant and Drakich, 2010; Axelrod et al., 2011). Thus there need to be some careful efforts to balance and reconcile Canadian cultural values in favors of a less competitive environment with the meritocratic nature of the CRCP. Needless to say, this equilibrium is subtle and challenging, but pivotal, in the Canadian context.

Arguably, Canada has quietly started embracing academic capitalism (Metcalf, 2010), yet egalitarianism remains a strong cultural characteristic. In other words, egalitarianism might be a feature of the social and professional environment in which academic capitalism now operates in Canada. "As the land of a single standard of state-funded health care for all, Canadians are generally apt to trade off a little excellence for a lot more equity," Zaretsky (2012, p. 35) rightly observes. If so, this equilibrium should now be demanded from both sides of the spectrum, academic capitalism (or a neoliberal trend in the broad sense) and egalitarianism, and becomes even delicate and difficult. Over the years, Canada has developed a pattern of absorbing and somehow relying on foreign-born talent. This pattern demonstrates Canada's competitiveness in the global brain race, yet at the same time forces

Canada's participation in brain circulation, a process that may feature a sense of temporariness in terms of brain gain or brain drain. As this study illustrates, despite the huge assets Canada possesses, it has not done as well as it should have in the global brain race. Canada cannot afford complacency, but

bears the urgency—in particular against a recovering United States and nations like China and India that are emerging quickly—of expanding its pull factors to increase Canadian universities' attractiveness to global top researchers. After all, top talent draws top talent from elsewhere.

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## Endnotes

1 In 2008, the Chinese Government launched a scheme called the "Overseas High-level Talent Introduction Program," which is commonly referred to as the "Thousand Talent Program." According to China's national development strategic goals, the Central Government wanted to introduce around 2,000 scientists and leading talents to China within 5 to 10 years. The first group of people targeted were Chinese elite researchers working overseas and willing to return to the country with the aim of boosting China's innovation capability. As for benefits, the *Thousand Talent Program* offers a one-time start-up allowance of 2 million *yuan* RMB (approximately \$335,000), a residency permit and/or a permanent resident visas for foreigners and their families. Universities, research institutes and state-owned enterprises that receive the appointments would typically sweeten the deal with an annual remuneration ranging approximately from \$134,000 to \$168,000, as well as other preferential policies.

2 The CRCP allocates chairs to individual universities on the basis of each university's three-year rolling average of research grant funding received from the three national granting agencies: the Canadian Institutes of Health Research (CIHR), the Natural Sciences and Engineering Research Council (NSERC), and the Social Sciences and Humanities Research Council (SSHRC). Each university nominates a researcher or researchers to fill its allocation.

3 Some researchers use the term "foreign born" in this context, but it is not consistent with the definition used in this study. This term often fails to differentiate between those who have immigrated to Canada at a young age and those who come as adults and are truly international. Without exception, the research participants in this study completed their university education in China. In other words, they all came to Canada as adults.

4 This chart is constructed using immigrants' proportional performance of holding Canada Research Chairs, winning the Scotiabank Giller Prize and the Governor General's Performing Arts Award.

5 Most recently, with launching of the *Thousand Young Talent Program* and *Thousand Foreign Talent Program*, China is expanding the scope of talent recruitment to young and non-Chinese researchers.

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