LICENSE TO LABOUR:

A SOCIO-INSTITUTIONAL ANALYSIS OF EMPLOYMENT OBSTACLES FACING VANCOUVER'S FOREIGN-TRAINED ENGINEERS

by

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Abstract

Many professionally trained immigrant applicants receive high marks in the selection process for their perceived value to the host Canadian society and economy. Upon arrival, however, many new immigrants find that employers and industry-regulated accreditation boards do not recognize their foreign degrees and work experience. In this thesis, I interview 25 underemployed or unemployed foreign-trained engineers in Vancouver to investigate the diversity of their experiences in the labour market. I focus on how they perceive the obstacles they are facing and how they are responding to these barriers in seeking employment. This thesis is situated in a growing body of literature that considers labour markets as complex, place-contingent, socially and institutionally embedded constructs. Using a "socio-institutionalist" approach, which refutes conventional neoclassical economics' theories of labour markets as free, self-equilibrating, and uninterrupted markets, enables me to compose, then put to work, a multilogical theoretical model that examines the ways in which various institutions control, shape, and govern access to professional engineering jobs in Vancouver. In particular, I draw upon theories of regulatory, social and cultural institutions in the labour market. I find that regulatory institutions, such as the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC), create licensing obstacles that are indeed profound for new immigrants. In addition, many recent immigrants are excluded from local social networks that diffuse information about professional job availabilities; assistance is provided through inclusive immigrant and ethnic networks, but this rarely leads to professional employment. Lastly, many newcomers perceive their cultural institutional affiliation to be wanting, and so pursue Canadian academic credentials in an attempt to gain entrance into the market.

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List of Abbreviations

ABET	Accreditation Board for Engineering and Technology (US)
AIPSO	Association of International Physicians and Surgeons of Ontario
AMSSA	Association of Multicultural Societies and Service Agencies (BC)
APEGBC	Association of Professional Engineers and Geoscientists of British Columbia
BC	Province of British Columbia
BCIT	British Columbia Institute of Technology
CAPE	Coalition for Access to Professional Engineering (Ont.)
CCPE	Canadian Council of Professional Engineers
CEAB	Canadian Engineering Accreditation Board
CEQB	Canadian Engineering Qualification Board
CIC	Citizenship and Immigration Canada
CICIC	Canadian Information Centre for International Credentials
CTI	La Commission des Titres d'Ingénieur (France)
EAC	Engineering Accreditation Commission (US)
EIT	Engineering-in-Training
FNA	Filipino Nurses Association
HRDC	Human Resources Development Canada
ICES	International Credential Evaluation Service (BC)
MCAWS	Ministry of Community, Aboriginal and Women's Services (BC)
MMI	Ministry of Multiculturalism and Immigration (BC)
MNC	Multinational Companies
MCSE	Microsoft Certified System Engineer
NAFTA	North American Free Trade Agreement
P.Eng.	Professional Engineer
PLA	Prior Learning Assessment
SPEATBC	Society for Punjabi Engineers and Technologists of British Columbia
UBC	University of British Columbia

Acknowledgements

Chapter 1: Foreign-credential non-recognition: An introduction to barriers facing Canada's professionally-trained immigrants

'The New Mosaic.' Roughly one-third of Canada's population is starting to approach retirement age. A worker shortage looms without recruits from abroad. That's why attracting immigrants – and keeping them – is the country's greatest challenge (*Time* magazine, Canadian Edition, May 7, 2001: 3).

More than any other country in the world, Canada consists of individuals who, for their own reasons, might have decided to live somewhere else, but instead chose to make Canada their home. The very best of these – the most skilled, the most creative, the most brilliant – demonstrate that, notwithstanding the talented Canadians we have lost, we have also benefited enormously. This is Canada's 'brain gain' (*Maclean's* magazine, July 1, 2001: 23).

In the summer of 2001, two Canadian magazines showcased the benefit immigrants have made to the nation. On the cover of *Time*, Nirmala Naidoo-Hill, a popular news anchor in Calgary who emigrated from South Africa, is shown wearing a stampede-style white cowboy hat in front of a large Canadian flag with the caption, "Meet Canada's Future." A few weeks later, *Maclean's* offered a similar feature article in its Canada Day edition. The Philadelphia-born Charlie Biddle, instrumental in making Montreal's jazz scene world-class, graces the cover. Along with Biddle, 50 popular and successful individuals who chose to live in Canada, such as Ujjal Dosanjh, Adrienne Clarkson, Michael Ondaatje, and Deepa Mehta, are highlighted in personifying the creativity, hard work, perseverance, and interesting cultural perspectives brought by immigrants.[1] These favourable characteristics of immigrants are set up against the concern of a "brain drain" to the US and an aging Canadian-born population. "New Canadians will fill the [looming] job gap" as *Maclean's* says.

This portrayal of immigrants as enhancing the Canadian labour market contrasts, however, with a widespread concern that many highly educated or professionally trained immigrants are not able

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[1] Canadian-born people who left the country and later returned to make a major contribution to the nation are also listed by *Maclean's*.

to utilize their skills in Canada. For example, news reports present convincing descriptions of skilled immigrants delivering pizza and washing dishes (*Globe and Mail,* 1998; *Toronto Star,* 2000; Calleja, 2000; Dabrowski, 2000; *Canadian Press Newswire,* 2001a, 2001b). Having a taxi driver who is a recent immigrant with a PhD seems to have become somewhat of a Canadian truism.

Clearly, there is a discrepancy between these two portrayals. On one hand, Canada is depicted as a successful multicultural nation, where immigrants can continue their own professional and cultural practices while also diversifying Canadian society. On the other, skilled and/or professional workers are facing significant obstacles to joining the workforce in which they are trained and desired. The former is what Canada strives to be. The latter is the harsh reality that many recent professionals face arduous and often insurmountable obstacles to gain professional recognition. It is this last issue that this thesis explores.

The Issue of Immigrant Skill Underutilization

Immigrant skill underutilization occurs in many different forms and is caused by multiple barriers, making it a complex issue to understand and assess. The obstacles preventing successful integration are believed to include non-recognition of immigrants' credentials, skills, and work experience by professional associations, employers, and academic institutions, biased or discriminatory hiring and promotion practices, unclear or unavailable information about registration procedures, and language barriers (Reitz, 2001b; Spigelman, 1999; Mata, 1999; Basran and Zong, 1998; McDade, 1988). McDade (1988) describes immigrant skill underutilization as a problem rooted in multiple barriers, and which cut across a range of institutional layers. Those affected are immigrants in licensed trades and professions, non-

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regulated professions, and in other jobs at various skill levels. The result is unemployment or underemployment. Additional problems are pay inequity and employment discrimination. Immigrants are hired to use their skills, but are not paid compensating salaries (see Reitz 2001b).

This "brain waste" is becoming an increasingly high profile issue and policy makers are interested in knowing its extent and significance. Answering this call, two studies have recently been published "costing" the issue for Canadian society. Reitz (2001b) estimates that if immigrants received premiums for their education and work experience at the same rate as for native-born, and if immigrants were not disadvantaged based on their country of origin, immigrants' earnings would rise from $11.7 to $15.0 billion annually.[2] This estimate, based on census data, translates into a 20% increase in workforce earnings. Similarly, the Conference Board of Canada, based on telephone surveys, found that unrecognised learning (both formal education and work experience) affects 550,000 people in Canada, costing the nation $4.1 to $5.9 billion in income annually (Bloom and Grant, 2001).[3] This study's figures are based on self-reported estimates of foregone earnings when people were unemployed or underemployed due to unrecognised learning. The variance in these two estimated costs of skill underutilization (that is, between the Conference Board of Canada's and Reitz's estimates) derives from using different data sets and methodologies, and somewhat different sample groups, but in both cases they demonstrate that the annual macroeconomic costs for Canada are billions of dollars.

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[2] Reitz (2001b) used 1996 Canada census microdata of immigrant and native-born men and women aged 20-64 with positive earnings during the previous year. To identify earnings differences related to skill underutilization, an analysis considering work experience education, minority origin, and occupational skill levels were considered. This figure represents the cost of the issue and reflects 1995 dollar values (see Reitz, 2001b: 356-357 for further elaboration).

[3] Bloom and Grant's study (2001) is based on telephone surveys with 11,755 households in Toronto, Montreal and Vancouver. 75% of the affected group who self-reported experiencing unrecognised learning were immigrants.

Economic costs, then, are high for both individual immigrants and the nation. Failure to use the skills and knowledge of newcomers translates into a labour market inefficiency as immigrants spend time looking for work, being tied up in professional accreditation procedures, or working in jobs that do not use their skills, i.e. labour inactivity and/or lower productivity. The government consequently receives lower taxes, and may need to support those looking for work by government transfers. Money also may be wasted in subsidizing the re-education of workers who return to post-secondary institutions despite having competent skills and knowledge.

Perhaps even more grave, social "costs" are incurred when skill utilization barriers exist. Mata (1999: 6) writes:

> When a large number of individuals from particular ethnic or racial backgrounds are blocked in their entry into the trades or professions there is an accumulated societal effect of higher levels of inter-group tensions, individual and collective alienation as well as generalized perceptions [of] "institutional" discrimination.

Furthermore, continued rejection and lack of recognition may lead not only to eroded skills and diminished confidence, but also to negative psychological effects of anxiety and frustration (CTFMH, 1988). Second generation immigrants lose their occupational successful role models, and perceptions of discrimination can cause inter-group tensions and overall weaker immigrant integration (Hall, 1975). All issues raise questions about the continued success of Canada's multicultural society.

Historically, the Canadian economy has benefited enormously from the contribution of immigrants in the labour market. Indeed, attracting skilled immigrants to meet the needs of the Canadian labour market has long been an intention of immigration policy (Najm, 2001; Reitz, 2001a; Pendakur, 2000; Li, 1992). Since the regulatory system was introduced in 1967, independent immigrants have been awarded greater admission points for criteria such as level of education, occupational training, and knowledge of English and French (Li, 1992; Green, D.,

1995).[4] The underlying belief was that individuals with these selected human capital

characteristics could more easily enter the workforce, and thus could make significant

contributions to the Canadian economy and society. Presently, immigrants account for 17% of the

total Canadian population (approximately 5 million immigrants in total). One million have

arrived in just the past five years (1996-2000).[5]

Canada's regulatory immigration policy has, without a doubt, impacted and raised the labour

market qualifications of incoming immigrants. Of the 290,000 skilled workers (principal

applicants) who arrived 1998-2000, 82% had a minimum of a university degree, and 65% of their

dependents had similar educational qualifications – a much higher proportion than the average for

Canadian-born (CIC, 2001a: 5, 98). Immigration policy has also shaped the counter inflow of

immigrants to meet labour market shortages in particular occupations and industries (Najm, 2001;

Reitz, 2001a; Pendakur, 2000; Green and Green, 1995; Li, 1992). For example, immigrants in

general are over-represented among professionals and "machining occupations," and large

numbers of recent immigrants are trained in the physical sciences and engineering (CIC, 2001b;

Green, D., 1995). According to Li (1992), during the post-WWII period, Canada experienced net

losses of professional and managerial workers to the United States, and without inflowing

immigrants, Canada would have experienced serious shortages of skilled labour in the natural

sciences, engineering, and mathematics.[6]

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[4] During the writing of this thesis, the federal government introduced a new Immigration and Refugee
Protection Act. Brought into affect on June 28, 2002, the new act no longer considers specific factors such
as occupation, personal suitability and age, and places greater emphasis on transferable skills, such as
language, education and experience. It also raises the minimum points required from 70/110 to 80/100.
This change indicates apprehension that occupational considerations in the old act were no longer
producing desired economic outcomes.
[5] Based on author's calculations, source of data, CIC, 2001a: 3.
[6] By 1981 the Canadian labour force would have shrunk by 28% in these areas if immigrant labour had not
been available (Li, 1992).

Despite this acknowledged historical benefit of immigrants to the development of the Canadian economy, the awareness of obstacles preventing skilled and professional immigrants from full labour market integration has been the subject of academic research and policy initiatives since the mid-1980s (e.g. Boyd, 1985; Fernando and Prasad, 1986; McDade, 1988). Recent academic studies report immigrants who arrived in the 1990s compared to their previous counterparts are experiencing lower initial income levels, taking longer to earn comparable salaries, and encountering higher levels of poverty (Reitz, 2001a; Kazemipur and Halli, 2000; Pendakur and Pendakur, 1996; Bloom *et al.*, 1995; Baker and Benjamin, 1994). A handful of provincial governments have conducted task forces, producing reports such as Ontario's *Access!* (Cumming *et al.*, 1989), Manitoba's *Issues, Trends and Options* (Manitoba, 1992), and Alberta's *Bridging the Gap* (Alberta, 1992), that focus on the difficulties immigrants experience in having their foreign academic and professional credentials fairly evaluated. Ontario's recommendations went a step further than the other provinces, promoting fundamental change away from the "certificate-based" evaluation system (where only professional and academic degrees are assessed), to an evaluation system based on "competency." Also known as PLA or PLR for Prior Learning Assessment/Recognition, this competency-based method of evaluation considers education certificates *as well as* demonstrable knowledge and expertise gained through work experience. While the Ontario government did not implement the task force's recommendations, PLA remains the most frequently discussed evaluation alternative, and has been adopted by select occupational regulatory bodies such as midwifery.

In addition, there have been recent community-based developments in Ontario and BC worthy of note. In Toronto where the issue of skill underutilization is particularly acute (53% of all skilled worker immigrants settle here), several professional immigrant advocacy groups were formed in the late 1990s (CIC, 2001a: 95). Examples include the Association of International Physicians and Surgeons of Ontario (AIPSO), the Coalition for Access to Professional Engineering (CAPE)

and the Filipino Nurses Association (FNA) (Chakkalakal and Janzen, 2001). Each group's goal is to break down systemic discrimination, but their approaches to that end differ. CAPE aims to eradicate accreditation barriers within the professional engineering licensing board in Ontario. FNA, instead, emphasizes providing social and professional opportunities for nurses of a Filipino background. In addition, there are several large and active immigrant policy and service agencies, such as the Maytree Foundation and Skills for Change.

In British Columbia, the response has also been strong, although much less so in terms of immigrant community organization. There exists a Filipino Nurses Support Group, and a Society for Punjabi Engineers and Technologists of BC (discussed in Chapter Seven), but these groups are younger and smaller that their Ontario counterparts. However, in March 1999, the Skills and Development Division (SDD) of the BC Ministry of Social Development and Economic Security, as well as Human Resources and Development Canada (HRDC) and other governmental and non-governmental partners created the *Looking Ahead* Initiative. Since its inception, it has been critical in bringing together immigrant-serving agencies, government, public post-secondary institutions, and employers together to discuss immigration integration into the labour market in the Lower Mainland and the Fraser Valley of BC (Spigelman, 1999). As a multisectoral model, it has brought the region's various stakeholders together for several forums and roundtables on issues such as qualification recognition and Prior Learning Assessments (PLA).

Within BC, there is also a pilot project that specifically examines obstacles facing foreign-trained engineers in the province. This project, initiated in the spring of 2001 by the then Ministry of Multiculturalism and Immigration (under the former NDP provincial government), responds to the growing concern of non-accreditation of foreign-trained engineers in the province. Now directed through the Ministry of Community, Aboriginal and Women's Services (MCAWS) in conjunction with the province's professional regulatory board for engineers, the Association of

Professional Engineers and Geoscientists of British Columbia (APEGBC), the pilot examines the licensing and employment obstacles for newcomers to the province with engineering training. This pilot focuses on improving information about licensing procedures, and assisting a sample number of engineers to gain local experience.

Theoretical Debates and Foreign-Trained Engineers

At the same time that I saw the *Maclean's* and *Time* articles in the summer of 2001, I was also reading Jamie Peck's *Work-Place: The Social Regulation of Labour Markets* (1996). As the title implies, Peck argues for an approach to labour market analysis that is sensitive to institutional and social regulation, and to geographic differentiation. He says, labour markets are socially constructed and politically mediated. Furthermore, conventional neoclassical theory fails to appreciate that labour is not like other commodities, and a worker is not the rational, optimizing *homo economicus* who responds automatically to price signals in a market of perfect competition. To understand how labour markets function, Peck argues, we need to understand that markets are regulated, socially and institutionally embedded, and place-contingent.

As I thought about Peck's assertions and his call to "*explain* the complexities of real-world labour markets," I thought about the inability of many foreign-trained professional immigrants to enter the local labour markets within Canada (1996: 265, original emphasis). According to Peck, social relations and regulatory control mediate labour market activity. Does the way in which certain occupations are regulated differ for foreign-trained professionals than for locally trained workers? Is the experience for recent immigrants with few social contacts different from that of Canadian born workers?

If labour markets are indeed regulated by various institutions, an understanding of these institutions, and *how* they affect the ability for foreign-trained professional to find relevant employment is critical. Various studies have pointed to the existence of institutional barriers for immigrants in Canada, but there has not been a study that recognizes and brings the multiple institutional forces together to paint a complete picture of immigrants' experiences in the Canadian labour market. An in-depth understanding of these institutional influences, and immigrants' responses to the opportunities and obstacles they present, will go some way to understanding the *processes* that produce disadvantaged occupations and lower income levels.

My case study is of foreign-trained engineers in Vancouver. Largely, this decision was based on my knowledge of the MCAWS-APEGBC pilot project. It seemed to me that the existence of this project signalled unemployed or underemployed engineers in the city. Furthermore, it seemed to offer the opportunity to get inside a professional regulatory body, which are notoriously closed institutions. As it turned out, the concern for engineers had been based on anecdotal evidence, but my own finding show that there is indeed reason for worry. Nearly one-third of all skilled immigrants to the province are engineers and are choosing to settle in Vancouver. Their rates of professional accreditation are distressingly low, however.

My overarching research questions in this thesis are: Can a socio-institutional approach to labour markets provide an understanding of why many foreign-trained engineers are underemployed in Vancouver? What are the different institutions of influence? How do foreign-trained engineers encounter these various institutions of influence, and how do they shape their resources, opportunities, and strategies in response?

My research aims to offer an understanding of the social structures and institutions that bear on the process of foreign-trained engineers in Vancouver finding employment. I engage with

different theories of labour market entrance, employing a given one when necessary to peel away overlapping layers of influence on the immigrants, and to refute neoclassical theories of individual goal-seeking behaviour and uninterrupted labour market equilibrating forces. This case study, therefore, offers a chance to think through theoretical issues on the nature and regulation of local labour markets. It also considers a very real social problem facing upwards of 2500 immigrants arriving in Vancouver each year wishing to work as professional engineers.

Structure of the Thesis

This organization of this thesis is relatively straightforward. It is comprised of eight chapters, divided into four parts. Part I includes this chapter and Chapter Two. Here, I have introduced the main themes of the thesis. Chapter Two presents previous research conducted on the integration of immigrants into the Canadian labour market, and outlines recent studies that look at income levels and occupational attainments of immigrants. The economic outcomes of recent immigrants are compared both historically with earlier immigrants, and with their contemporary Canadian-born and/or Canadian-trained counterparts. The general conclusion is that immigrants are doing comparably less well.

In Part II, I consider the social regulation of labour markets. I present both the theoretical framework I employ, as well as my research methodology. In Chapter Three, I begin to unpack what Martin (2000: 456) defines as the "new socio-institutionalist economic geography," and I find three areas of literature that are germane. First, there are Peck's ideas on the influence of formal institutions and regulatory practices (state and non) in affecting employment opportunities and the functioning of the labour market. Second, there is Granovetter's (1974, 1985) notion of social embeddedness. He argues for the importance of social networks and ties within one's

community in transmitting information about employment opportunities. Third, there are

Bourdieu's concepts of social and cultural capital (1984, 1986). I use his ideas to understand how

immigrants may experience a devaluation of the personal resources available to them, and the

attempts they make to increase their cultural desirability in gaining important social and potential

employment contacts. More generally, I use the term institution in order to consider the

regulatory, social and cultural spheres that bear upon Vancouver's immigrant labour market.

Although I do not explicitly employ all three concepts in each chapter, they do underlay the

discussion, and come to the surface particularly in Chapter Seven when I discuss engineers' job

searches. In Chapter Four, I discuss methodological issues. I discuss my methods and provide a

rationale for them. I also outline the specifics of the interview schedule and my specific

methodology.

Part III comprises the substantive section of this thesis where I present my main empirical

findings. In Chapter Five, I begin the narrative of the experiences of the foreign-trained engineers

I interviewed. I outline their various pre-migration employment and settlement. Unlike most

research on highly skilled or professional migrants who are presented as purely atomized

economic agents, my discussion suggests that the choice to immigrate and to settle in Vancouver

are socially embedded decisions. The second empirical chapter, Chapter Six, continues the

narrative and considers what is commonly the second step after arrival: encountering APEGBC,

the professional regulatory body. In this chapter, I consider how APEGBC's licensing

requirements act as a barrier to realizing pre-migration employment expectations. I also

investigate how well recent immigrants understand the licensing procedures, how their

information is attained, and what affect their level of understanding has on their subsequent

strategies. I also attempt to get inside the institution to understand its seemingly opaque licensing

procedures. In Chapter Seven, I turn my attention to the subsequent job search processes

undertaken to become accredited. In trying to gain entrance into the world of professional

engineering, the interviewees explain the ways in which immigrant service agencies (formal institutions) and social and ethnic contacts (informal social and cultural institutions) influence and shape their employment opportunities.

In Part IV, the conclusion, I attempt to tie these findings together. In particular, I return to the policy ramifications and potential policy changes to make the socially controlled and regulated local labour market more hospitable to recent immigrants.

Chapter 2: Evaluating the Economic Integration of Immigrants

The purpose of this chapter is to elaborate on research about the economic integration of immigrants in Canada that I touched upon in the introduction. I review key studies, both for their empirical findings and to note the approaches they used to evaluate and/or explain immigrants' labour market performance in Canada. The first section reviews mainly Canadian, but also some American studies, that estimate income differentials between immigrant and native-born workers. In the second section, I look at occupational attainment as an alternative economic indicator. Here, the status of occupational positions and the clustering of immigrants into certain industries is discussed. In both sections, I also discuss the different perspectives used in these studies: human capital, institutional, and discrimination/racialization approaches.[7] Finally, I present recent data on Vancouver's immigrant labour market, as well as preliminary findings on foreign-trained engineers. Together, the three sections set the context for understanding immigrants' disadvantaged labour market position, and in particular, foreign-trained engineers' job searches in Vancouver.

Income Differentials

Income Differentials: Common Comparison with the US

The economists Barry Chiswick (1978) and George J. Borjas (1984) were the first to study the economic plight and declining fortunes experienced by American immigrants. They also popularized the human capital model approach for understanding their economic plight. The basis

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[7] I borrow the idea to group perspectives under these three headings from Bauder *et al.* (2001: 46). These perspectives certainly overlap at times, but also help understand the different approaches and methodologies used.

of the human capital approach is that an individual's relevant workforce characteristics, e.g. education level, training afforded by work experience, and language skills, are conceived as the capitalized value of the productive investments made in that person (Lipsey and Ragan, 2001: 331). The model therefore highlights difference in an individual's human capital investment as the basis of heterogeneity in labour incomes. Generally, the higher cost and time needed to acquire skills for a particular job, the higher the compensating wage. Under the human capital model, workers with comparable workforce value and productivity should receive comparable incomes. Chiswick (1978) uses this model to evaluate earnings of foreign-born white adult men compared to native-born men in the US with similar human capital variables, and has two major findings. First, immigrants earn noticeably less than native-born Americans when they first arrive in the US – the "negative entry effect." Second, after spending 10-15 years in the US, immigrants' earnings rise to reach parity with native-born Americans – the "assimilation effect." [8] Chiswick hypothesized that spending time in the new country enabled immigrants to improve language skills, learn customs, and generally improve their local human capital through "Americanization" and knowledge of the labour market.

Borjas (1985), however, criticizes Chiswick's paper for bracketing together different immigrants into one cross-sectional data set. The problem, Borjas argues, is that dissimilar experiences in different time periods are not represented. Using census data within a longitudinal approach that compared cohorts of immigrants' income levels against that of their native-born counterparts, Borjas determines that each cohort of immigrants experienced low initial earnings, thus supporting Chiswick's initial empirical findings. [9] The rate of assimilation, however, progressively slowed with each succeeding cohort. This leads Borjas to conclude that since the

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[8] See Benson and Dupuis (1998) for further elaboration on the assimilation/integration effect.
[9] Borjas's studies were based on US Census data between 1940 and 1980. "Cohort" is used to describe groupings of immigrants by fixed differences, such as their age at time of migration (e.g. 20 year old immigrants in 1980 compared to 20 year old immigrants in 1990).

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1950s, immigrants had not been able to reach parity with the income levels of the native born, and so they remain disadvantaged throughout their lifetime in the US.

Since these preliminary findings, Borjas has used cohort analyses to find that the skill levels and the economic power of immigrants in the US have been steadily declining over the past 5 decades. He reveals declining earning levels, lower labour force participation rates, and fewer workweeks with each wave of immigrants (1992). Borjas argues that the single most important cause in explaining economic successes is the national origin mix of the immigrant flow. As immigrants in the US increasingly originate from Latin America and Asia rather than Europe (the traditional source), the decline of skills among immigrants is attributed to the lower levels of economic development and lower educational standards in these new source regions (1992).[10]

Canada- Comparable General Earnings Trends

Using the American studies as a point of comparison, Canadian scholars have found analogous earnings differentials among immigrants in Canada. Similarly to Borjas, both Baker and Benjamin (1994) and Bloom *et al.* (1995) use Canada census data with human capital models and cohort analyses to determine the experiences of male immigrants (in all immigrant classes) in Canada. Not only do both studies find that immigrants' initial earnings positions are *continually* worsening, but the rates of assimilation are also declining for recent cohorts "such that they can never expect to assimilate fully in the sense of catching up with comparable Canadian-born men" (Bloom *et al.*, 1995: 995).

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[10] Individuals from nations with lower per capita GNP are believed to generally have fewer skills and are less productive in the labour market (Borjas, 1992: 46).

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Bloom *et al.* (1995) correlate these disadvantaged income levels with the changing source-country composition (as did Borjas). The authors find that economic assimilation is most difficult for arrivals from Asia, Africa, and Latin America. Immigrants from Europe and America also experience an initial disadvantage, but to a lesser degree. Baker and Benjamin (1994) instead focus their enquiry more explicitly on the role of education in the labour market. On the one hand, they note that immigrants tend to be more highly educated on average than the native-born population, yet they find a *declining rate of return* for educational credentials for immigrants educated *outside* Canada. In other words, they conclude, foreign credentials are discounted or not recognized by Canadian employers.

In contrast to the above studies, an internal Citizenship and Immigration Canada (CIC) report titled "The Benefits of Immigration" was released in the Globe and Mail (Tuesday, April 9, 2002) with the headline, "Immigrants prosper over time, study says." Based on IMDB data that links immigrant landing data with tax records, the report is quoted as stating, "*Skilled workers* adapt quickly, exceeding the Canadian average as soon as *three* or *four years* after arrival," which differs considerably from Bloom *et al.* (1995) and Baker and Benjamin's (1994) findings on the general experience of *all* immigrants (Freeze, 2002: A6, emphasis added). By highlighting the experience of skilled workers, the report ignores other classes such as refugees and family reunification who do *not* do as well, and stresses that immigrants who were chosen for their economic potential are in fact performing well in the labour market. Another CIC report based on 1995 IMDB data shows that immigrants with university degrees in BC exceed average provincial incomes after only *six* years of permanent residency. Immigrants with 13 years of education, trade certificates and non-university diplomas reach parity after approximately *twelve* years (Strategic Policy, Planning and Research, 1999). However, many immigration economists, such as Don DeVoretz, discount these IMDB findings because limitations of the data omit immigrants who do not file taxes or emigrated after experiencing difficulties in Canada. In response to the study,

DeVoretz said, "This is a very confused and misleading analysis of immigrant performance," and many academics still believe that immigrants face substantial difficulties and encounter difficult economic conditions for many years (Freeze, 2002). [See also Akbar and DeVoretz (1993); Abbot and Beach (1993); Beach and Worswick (1993).]

If one disregards CIC's findings, the similarities between the Canadian and American findings are somewhat surprising considering the different immigration selection processes. Whereas the US immigration policy is founded mainly on family reunification, the Canadian model is based on using immigration to supplement its skilled labour force (Najm, 2001; Pendakur, 2000; Li, 1992). As a result, education and skill levels of immigrants to Canada are commonly believed to be higher on average, adding needed skills to the Canadian workforce, and improving labour market quality. Additionally, since 1965 the US has received fewer professional, skilled, and semiskilled immigrants as a proportion of their total intake compared to Canada (A. Green, 1995). Nonetheless, empirical results generally suggest that immigrants in both Canada and the United States are earning comparably *less* than native-born counterparts.

Differences Among Immigrant Groups in Canada

Studies on the economic integration of immigrants have also focused on racial/discrimination perspectives. This approach presupposes that immigrants are disadvantaged in the labour market because employers or regulatory boards cannot disassociate a worker from the colour of his or her skin, and this disadvantages them in hiring and evaluation processes. Studies based on this assumption attempt to determine if earnings differentials exist *within* immigrant groups by ethnicity and/or visible minority status.[11] Many of these studies use human capital models for study control purposes, but assume that is primarily processes of racial discrimination that

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[11] Visible minority is a term used on census forms for persons to identify themselves as non-Caucasian in race or non-white in colour, and who are not Aboriginals.

produce income differences. For instance, Akbari (1993) uses 1986 census data to conclude that earning gaps exist for a number of ethnic minorities in Canada, including visible and non-visible minorities. A more recent study using 1996 census data also found both men and women immigrants have lower net earnings than native-born, but visible-minority immigrants are further disadvantaged (Li, 2000). Reitz and Breton (1994) determine that black and Asian immigrant men and women in comparable occupations and education levels earn less than white male and female immigrants respectively. And Chistofides and Swidinsky (1994) find an average wage gap of $2.00 per hour less for visible minorities compared to whites. Pendakur and Pendakur (1996) bring these multiple visible-minority and ethnicity differences together by alternately considering as determining variables immigrant status, occupation, industry, education levels, previous experience, place of residence in Canada, and/or official language knowledge in their analysis. They determine that visible-minority immigrants economically do much worse than "white" immigrants even if they were educated in Canada.[12] Specifically, they find that human capital variables of place and level of education only partially explain earnings differentials among immigrants (p.25), although they are more successful in explaining gaps faced by immigrant women than men. In summary, earnings among immigrant ethnic groups in Canada are not equal, with visible-minority immigrants particularly disadvantaged.

Declining Returns to Education

Under the rubric of income differential studies, there have also been recent attempts to focus on the affect of institutional barriers. These studies focus on the relationship between education and

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[12] Pendakur and Pendakur's findings are somewhat tempered because their analysis was limited to the "wage labour market," which comprises 87% of all working men and 93% of all working women. However, immigrants and Canadian-born visible minorities are much more likely to be self-employed that Canadian-born whites. The authors' findings, therefore, have the potential to *over-estimate* earnings gaps among minority groups, as the authors themselves indicate (p.4).

employment, and assume that the non-recognition of credentials by employers or professional regulatory boards (as institutions) is creating or perpetuating the income disparity. For example, Li (2001) examines the market worth of immigrants' credentials based on whether they were educated in Canada or abroad. Through the use of 1996 census data, Li subdivides the working population into four categories: native-born, foreign-born, and whether the degree attained was Canadian or foreign.[13] The categories are: i) Canadian-born (assumed Canadian education); ii) foreign-born, immigrated before 12 years of age (assumed Canadian education); iii) foreign-born, immigrated between 12-24 years of age ("mixed" credentials); iv) foreign-born, immigrated after 25 years of age (assumed foreign degree holder). The proxy of "visible minority" is also used to determine if race is a factor. Li argues this four-fold categorization, admittedly based on rough assumptions about place of education and self-declaration of "race," enables an assessment of the market value of Canadian or foreign credentials for a given type of holder.

Based on Li's four categories, one-quarter of all degree holders in Canada received their education abroad, and 52% of all immigrants hold foreign-credentials. When annual earnings are considered, Li found that foreign-degree holders are significantly disadvantaged *unless* they are white. For example, a white Canadian male earns on average $52,000 a year. A white male immigrant with similar foreign credentials earns $54,000, whereas a visible-minority man with similar credentials attained abroad earns only $38,000, a difference of $14,000. The situation is even more striking for visible-minority women with foreign degrees. They earn a strikingly lower $25,500 a year compared to their white Canadian-educated female counterparts (2001: 30). For women, Li's conclusions also support Beach and Worswicks's (1993) findings of a "double-negative" (based on gender and immigrant status), but add the disadvantage of both foreign credentials and visible-minority status. Li's study illustrates that the negative effects of immigrant

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[13] This study excludes the Atlantic Provinces where data on age of immigration for immigrants is not collected (Li, 2001: 27).

status, foreign-credentials, visible-minority status, and gender are individually detrimental, and together compounding.

Reitz (2001a) similarly investigates the role of education and declining earnings among immigrants relative to the native-born population, but within a frame of institutional change in Canada. Reitz asks if the expansion of education levels across the nation, and the changing nature of labour market activity in Canada towards a growing "knowledge economy," has affected the employment experiences of immigrants arriving in Canada between 1970-1995. Using Census microdata files from 1981-1996, Reitz compares education levels of incoming immigrants with the average levels for native-born Canadians, and finds a decline in the former educational advantage of immigrants over Canadians. When considered within a shifting economic structure towards a growing professional quaternary sector, Reitz believes there has been an increased emphasis on educational credentials within the Canadian economy. Therefore, while educational qualifications of immigrant cohorts are increasing, market evaluation of their skills has altered because more native-born Canadians now possess higher educational degrees. The "professionalization" of the workforce, meaning an increasing proportion of the labour force is working in professional and managerial positions has also been noticed elsewhere (e.g. Hamnett, 1996).

If Reitz is correct, and there is an overabundance of degree holders, it may lead to an "exacerbated problem of 'credential inflation' " (Brown, 1995: 37). Overcrowded markets of qualified labour results in employers relying on the "status" or recognizability of credentials, giving a clear disadvantage to immigrants with degrees that are unknown or difficult to understand because of language barriers.

Immigrants' Occupational Attainment in Canada – General Trends

The studies reviewed above indicate that immigrants in Canada (some more than others) are dealing with continually decreasing income levels. But income is only one way to measure the economic success of newcomers. Investigating the occupational attainment of immigrants is an alternative approach. Looking at where in the labour market immigrants work makes it possible to determine if there are clusters of immigrants in low-profile jobs, or in certain industries, or if pay inequity is an issue, i.e. immigrants are attaining their intended occupation in Canada but are receiving unequal pay for their work (see Reitz, 2001b). Through the lens of occupational attainment additional insight can thus be gained into those forces influencing labour market activity of recent immigrants. Most research within this area is correspondingly from the institutional and/or discrimination perspective.

Limited occupational mobility among immigrants has long been recognized in Canada. Monica Boyd's (1985) study was one of the first to highlight the difference in the relationship between educational credentials and occupational attainment for foreign-born and native-born men in Canada. Using 1973 Labour Force Survey data, and controlling for relevant human capital characteristics, Boyd found immigrants attained on average significantly lower occupational positions than native-born. When country of origin is controlled, Boyd finds "the pattern of occupational status conforms closely to historical images concerning the cultural, social, and occupational desirability of origin groups" (p.441). Non-traditional source country immigrants (i.e. non-Europeans) were channelled into urban labour markets performing work at a lower occupational status. Only immigrants from Great Britain and the United States exceed or match the occupational status of Canadian-born males. Boyd speculates foreign-born men of certain origins are 'handicapped' occupationally because their foreign degrees are not judged fairly because of existing social and cultural stereotypes.

Similarly, McDade (1988) documents long-standing interest in the need to reduce barriers that have created an occupational disadvantage for immigrants in Canada. Because of difficulties in obtaining systematic information about professional registration procedures, McDade is inconclusive about the scope and significance of the barriers facing immigrants seeking recognition of academic and occupational qualifications. Nonetheless, McDade recommends provincial and federal governments reassess professional regulatory registration procedures.

Sixteen years ago, AMSSA, the Affiliation of Multicultural Societies and Service Agencies of BC also suggested that non-recognition of credentials is a significant barrier to occupational success (Fernando and Prasad, 1986). Through interviews with 80 under-employed and unemployed professionals in Vancouver and Kelowna, the authors found that many newcomers face considerable difficulty in securing employment in their trained profession (1986: 58). The interviewees most commonly identified the lack of recognition by potential employers of skills and education as the main barrier (35% of respondents). Inadequate language skills, the depressed economy, and the inability to obtain 'Canadian experience' were also noted as significant obstacles. Basran and Zong (1998) over a decade later, surveyed East Indian, Chinese, Taiwanese, and Hong Kong immigrants in Vancouver with professional qualifications to ascertain their labour market experience. Nearly three-quarters of respondents indicated that they experienced downward occupational mobility in Canada, with 79% of respondents attributing this to non-recognition of their skills. The study also shows that among immigrants the cause of occupational disadvantage is commonly attributed to institutional barriers and inappropriate mechanisms in evaluating educational credentials. Basran and Zong (1998) further note that individual inhibiting factors, such as a lack of experience, or incompetent language skills, are difficult to perceive separately, and are often interpreted by immigrants as racial discrimination.

Differences in occupational attainments among ethnic and immigrants groups are also reported. Hiebert (1999) uses custom cross-tabulations from the 1991 census correlating occupations with gender and select ethnic groups in Vancouver, Toronto and Montreal. Specifically, in Vancouver Hiebert finds Filipino women are occupationally clustered as housekeepers and childcare workers, and a large proportion of Vietnamese women segmented in textile and non-textile fabrication (1999: 353-354). Large numbers of Filipino men work as cleaners, janitors, and in the health care profession (but not as doctors), and Vietnamese men tend towards cleaning or textile/fabrication work. South Asian men who otherwise are spread across a variety of occupations are disproportionately represented as taxi drivers. At the opposite end of the pay-scale spectrum, Jewish men are grouped in legal and medical doctor positions, as are Jewish women. In comparison, British male and female immigrants (the traditional source-country) are fairly evenly spread across occupations.

Looking more broadly at the relationship between skills and ethnic groups in Montreal, Toronto, and Vancouver, Pendakur and Mata (1999) using 1960 census data find that many Canadian immigrants who arrived with "low human capital" (mainly those from Southern Europe and Asia) tend to fill voids left vacant by more mobile Canadian-born workers. The former cluster within low-skill occupations such as construction, manufacturing, and "needle" trades, and lived in small, tight, ethnic communities.[14] Immigrants who arrived with higher levels of skill and education (those from USA, Eastern Europe, and South Asia) did not live in tight, ethnic clusters. Instead, a substantial number of them spread into the broader Canadian society and became self-employed. This finding is particularly interesting because it suggests that highly educated immigrants who experienced structural accreditation barriers that prevented their full acceptance into the paid workforce, and the personal disappointment of unrecognised credentials, managed to

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[14] Level of human capital upon arrival was calculated through correspondence analysis of education and industry-employment sector.

overcome these barriers by working for themselves. Finally, Li (2000) notes that while increasing numbers of immigrants are resorting to self-employment, they tend to have lower earnings compared to salaried incomes. This may imply that although self-employment is less lucrative, it is an option that permits immigrants to use their skills and education, if no one else will.

Lastly, looking at immigrants' probability of attaining high-skilled professions, Thompson (2000) finds place of origin and education to be the two most significant controlling factors. (Many other variables were tested but deemed less significant.) To attain professional employment, having appropriate education is essential. However, *despite* possessing the appropriate levels of education, immigrants from countries other than the UK, US, Germany or the Netherlands, had a reduced likelihood of obtaining high-skill employment

The Vancouver Context: Immigrant and Labour Market Figures

In this section, I provide employment indicators for immigrants in Vancouver. Unlike the much more nuanced studies outlined above, the figures presented represent all "immigrants" in Vancouver, making no distinction among ethnic groups, visible-minority status, industry of employment, place of origin, and so on. Even so, such general figures present a fuller illustration of immigrants' local labour market activity in Vancouver.

First, it should be noted that the economic impact of immigrants on all of Canada's urban centres has been, and continues to be, profound. Over the recent period of 1981-1996, 2.1 million people landed in Canada. Of these, 85% chose to settle in urban areas, and 12% chose Vancouver (Prime Minister's Caucus Task Force on Urban Issues, 2002: 23). By 1996, there were 339,000 immigrants living in Vancouver, accounting for 35% of the population (CIC, 2000).

An individual can immigrate to Canada through one of 10 selection classes. These fall broadly

under the three main themes of economic, family, and humanitarian classes, reflecting the

multiple goals of Canadian immigration policy. Figure 1 illustrates both the rapidly increasing

preference to settle in Vancouver, as well as the high proportion coming in through the economic

class comprised of business entrepreneurs, skilled workers, and investors. Roughly 50% of

immigrants over this period in Vancouver arrived through the economic class, which is

considerably higher than the 40% national average.

Figure 1: Recent Immigrants by Immigration Class, Vancouver CMA, 1981-1996.
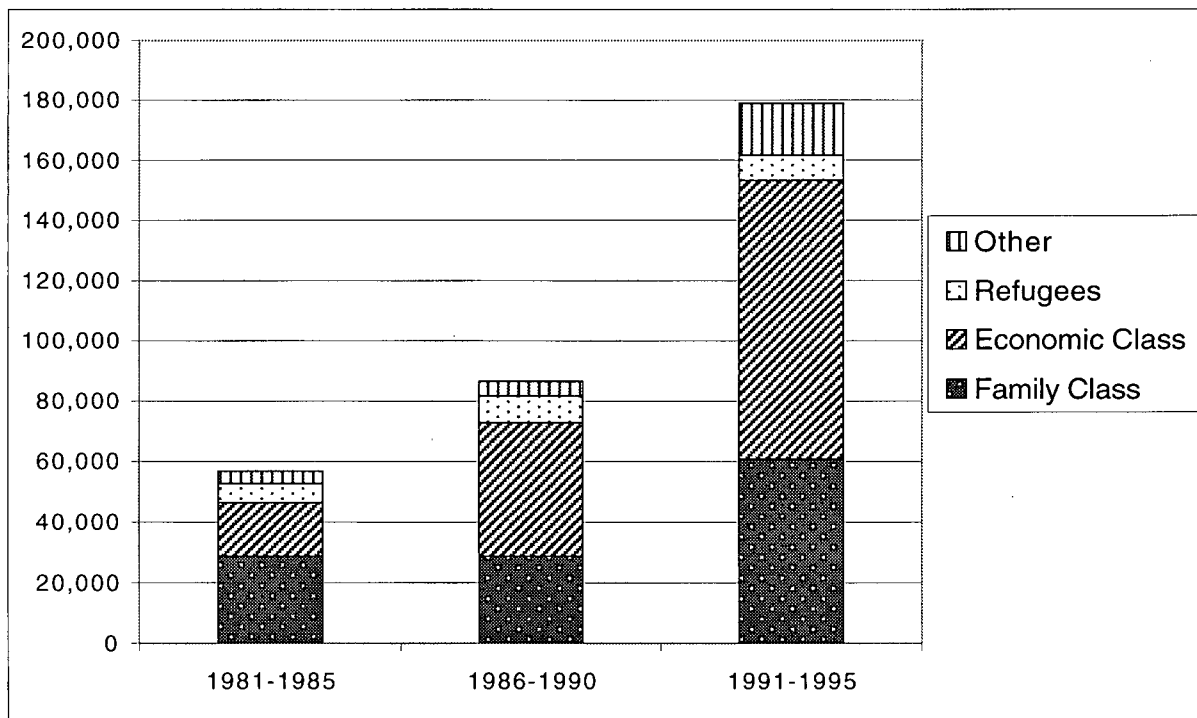
Source: CIC2000.

Characteristics

According to 1996 census figures, some general characteristics of immigrants coming to Vancouver are that they are highly educated, largely in the working-age population, and more likely to be trained in physical sciences and engineering than the Canadian-born population (CIC, 2000). Table 1 showing education levels, illustrates that among both men and women, immigrants are proportionately more highly represented among university graduates (25% vs. 17% and 19% vs. 15% respectively). Considering that the Canadian-born population in Vancouver is more highly educated than the average Canadian city by a considerable margin (CIC, 2001:21), the high levels of educational qualifications observed among immigrants are telling of the emphasis placed on the education selection criteria in the selection process.

Table 1: Highest Level of Education (Persons Aged 15 and Over), Vancouver CMA, 1996 (percentage distribution)

	Less than grade 9	Some high school	High school diploma	College or trade diploma	University degree	Number of persons
Women						
Canadian-born	4%	25%	27%	29%	15%	437,000
Immigrated before 1981	16%	20%	21%	29%	14%	149,400
Immigrated 1981-1990	16%	19%	24%	24%	17%	73,100
Immigrated 1991-1996	14%	20%	24%	22%	19%	84,900
Men						
Canadian-born	4%	26%	24%	29%	17%	426,900
Immigrated before 1981	11%	17%	17%	35%	20%	145,400
Immigrated 1981-1990	10%	21%	23%	25%	21%	65,000
Immigrated 1991-1996	9%	22%	23%	21%	25%	73,700

Source: Citizenship and Immigrant Canada, January 2001: 20.

According to the literature reviewed earlier in this section, immigrants experience difficulty in finding employment on arrival. If we look at unemployment rates at given education levels, this

seems to be the case in Vancouver (see Table 2). For instance, the unemployment level for recent

male immigrants with university degrees is 13% compared with 6% among immigrants who

landed in the 1990s, and 3% among the Canadian-born male population. While these figures do

not provide any insight into the impediments, they suggest that there is an adjustment or

assimilation process for immigrants in finding employment regardless of education. In fact,

immigrants who landed before 1981 have lower unemployment rates than Canadian-born at all

education levels.

Table 2: Unemployment rates by level of education, ages 15 to 64, Vancouver CMA, 1996

Women	Less than grade 9	Some high school	High school diploma	College or trade diploma	University degree	Average
Canadian-born	24%	11%	8%	6%	4%	7%
Immigrated before 1981	12%	9%	7%	5%	3%	6%
Immigrated 1981-1990	26%	16%	12%	9%	8%	12%
Immigrated 1991-1996	35%	22%	19%	15%	16%	19%
Men						
Canadian-born	18%	13%	9%	7%	3%	8%
Immigrated before 1981	8%	9%	7%	6%	4%	6%
Immigrated 1981-1990	19%	15%	13%	10%	6%	11%
Immigrated 1991-1996	20%	18%	13%	14%	13%	15%

Source: Citizenship and Immigration Canada, January 2001: 46.

Employment, however, does not imply skill utilization. There remains the possibility of unequal

pay levels or different statuses of occupational attainment. Albeit highly aggregated, Figure 2

shows that immigrants who find employment are less likely to find work that utilizes their

credentials. Jobs held by university graduates are grouped into four skill levels: Level 1 indicates

the lowest skill rating with no formal education required, Level 2 requires secondary education plus specific job training, Level 3 requires college level education or trade apprenticeship, and Level 4 is the highest rating, used for jobs that require a university education (CIC, 2001: 54). The table illustrates that jobs attained by recent immigrants require lower skills than the jobs of the Canadian-born. For instance, recent immigrant women in Vancouver with university educations are most likely to obtain jobs that require only a secondary school degree (37%); merely 34% of immigrant women find employment that utilizes their university education. For university-educated immigrant men in Vancouver, over half (51%) find employment at Level 4, although this is significantly lower than 68% of the Canadian-born who do so. These figures also suggest that over time, Vancouver immigrants become more likely to obtain employment requiring high skill and/or education.

Figure 2: Skill level of jobs of university graduates (men, aged 25-64), Vancouver CMA, 1996 (percentage distribution)
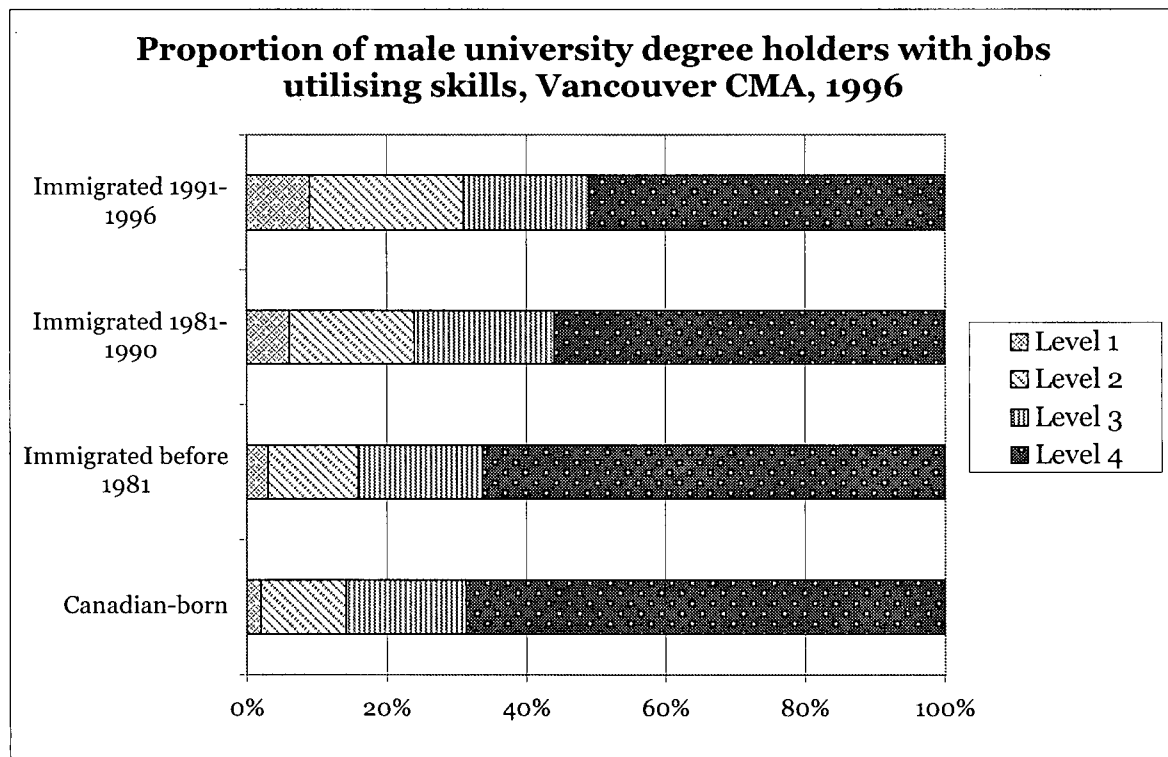
Source: Citizenship and Immigration Canada, January 2001: 54.

Foreign-Trained Engineers in Vancouver

In Vancouver the absolute and proportionate number of immigrants declaring upon arrival that

they intend to work as engineers is growing (see Table 3). Principal applicant (PA) refers to

skilled workers who were chosen under the independent immigrant category for their human

capital attributes that are anticipated to make contributions to the local economy.[15] Over the 10

year period shown in Table 3, there has been a 20-fold increase in the number of skilled

applicants arriving who wish to work as engineers. This has increased from 3% of all incoming

principal skilled workers to nearly one-third of the provincial total; 98% of foreign-trained

engineers are choosing to settle in Vancouver.

Table 3: Landing Data of Immigrants Declaring Engineering as Intended Occupation in Vancouver, BC

	Principal Applicants to BC	PA's declaring 'Engineer' to BC	PA's declaring 'Engineer' to Vancouver	'Engineer' as % of PA's	'Engineer' in Vancouver as % in BC
1991	4107	115	94	3%	82%
1992	3672	173	153	5%	88%
1993	4978	468	414	9%	88%
1994	5614	715	647	13%	90%
1995	7509	1010	888	13%	88%
1996	9976	1430	1307	14%	91%
1997	10153	1665	1596	16%	96%
1998	7171	1462	1394	20%	95%
1999	7675	2089	2045	27%	98%
2000	8196	2506	2444	31%	98%

Source: Author's calculations, based on data from LIDS 2000.[16]

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[15] The principal applicant is in comparison to any dependents (spouses or children).
[16] See Appendix 1 for kinds of engineering considered.

While there is no data available to determine how many of these immigrants obtained

employment as licensed engineers, I have received unpublished figures on approximately how

many people receive a professional engineer license in the province (P.Eng.) from APEGBC.[17]

According to APEGBC, they receive approximately 700-750 applicants for the P.Eng each year.

Only 150-200 of these are "new" applicants, likely meaning they are immigrants. The other

applicants have either been licensed elsewhere in Canada and moving through inter-provincial

mobility, or are moving up from the Engineer-in-Training (EIT) program, meaning that they have

had their engineering education recognized, and have been meeting the four years of working

experience under the supervision of a licensed engineer, the natural progression for recent

graduates of "accredited" engineering programs.[18] The "new applicants," therefore, are generally

immigrants who need to apply for licensure to work in Canada.[19] According to APEGBC, nearly

all "new" applicants were awarded a P.Eng. But, the figure of 150-200 is shockingly lower than

the almost 2500 people who landed in Vancouver last year who declared engineering as the

desired profession. Seemingly there are barriers that prevent large numbers of foreign-trained

engineers from even applying for a license. APEGBC's licensing procedures and immigrants'

experiences with the association will be discussed in Chapter 6.

In Conclusion

This chapter reviewed published studies, census figures, and immigrant landing data to set the

context of immigrants' labour market integration and economic performance in Canada, and

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[17] IMDB data is available fore "Architects and Engineers" at the national level that would show the number of immigrants submitting tax forms for work in these professions. This is not a useful comparison, however, because the LIDS data that I have is for BC only. To receive IMDB data for provincial levels is prohibitively expensive.
[18] Approximately 15-30 foreign-trained engineers with non-accredited degrees are in this EIT category.
[19] APEGBC describes those in the non-accredited degree category to be mostly immigrant applicants with offshore engineering degrees. This also includes applicants who have science degrees and are writing exams to make up the difference, but this is rare.

Vancouver in particular. From this literature, several key trends are noted. While immigrants have historically earned less than average Canadians upon arrival, income differentials declined as they remained in the country. Since the 1990s, this differential has become more stubbornly ingrained. This is seen in lower initial earnings, lower rates of employment, and lower rates of return to educational levels and skill. While there is discussion and debate about the causes of this downturn, ranging from changes in immigrants' source countries and the number of visible-minority immigrants, to an increasingly knowledge and credential-based economy, there is general agreement about the difficult and worsening situation facing immigrants. However, much of this research emphasizes labour market or economic outcomes as indicators, and merely looks at causal factors in hindsight to the study. I argue that this understanding of immigrants' experiences is at arms-length for little is known about the actual process of seeking and attaining employment. Entrance into the labour market is a social process that is affected by *multiple* institutions and factors that shape the opportunities, and approaches taken by immigrants. In the next section, I will review a body of theoretical literature that argues that labour markets are socially controlled and regulated, and I use it to understand the ways in which foreign-trained engineers encounter the world of paid employment in Vancouver.

Chapter 3: Theoretical Approaches to Local Labour Markets: Interacting Influences and Methods of Conceptualization

In Chapter Two I provided a general overview of studies on immigrant labour market performances in Canada. These studies, all of which were quantitative in nature, look for differences in patterns of occupational attainments or income levels among immigrants compared to the native-born. Some adopted human capital perspectives, and attribute economic differences to workforce characteristics. Most others, however, recognize that there are complex exogenous forces at work within the labour market, and which contribute to immigrants' disadvantaged position.

In this chapter, I aim to explore more deeply the forces that influence the functioning of labour markets, and in doing so I delve into a debate between the neoclassical theory of self-regulating labour markets, and an institutionalist view that propounds labour markets are regulated and controlled by social forces. I then review literature on the social nature of labour markets. I trace the development of the perspective from institutional economics and economic sociology. I then discuss three main institutions that influence the functioning of labour markets and behaviour within labour markets recognized as germane for this study: first, regulatory bodies and state institutions, usefully presented by Jamie Peck; second, networks of social relations, discussed by Mark Granovetter; finally, occupational and cultural competence, associated with the tradition of "cultural capital" established by Pierre Bourdieu. In compiling these literatures, I establish the tripartite institutional perspective (regulatory, social and cultural institutions) that becomes the theoretical foundation for the substantive chapters in Part III.

The Neoclassical Tradition versus the Social Nature of Work

Conventionally, neoclassical economics forms the basis for understanding how markets work in capitalist society (Smith, 2000). According to neoclassical theory, free markets are best because they are self-equilibrating, elegantly bringing complex supply and demand functions together by an uninterrupted and uncontrolled price mechanism. In turn, the free workings of the price mechanism, neo-classicists believe, leads to allocative and distributive efficiency.

Within neoclassical theory, labour (along with physical capital and land) is a "factor of production" and its market price fluctuates in accordance with the balance of supply and demand. When there is a high demand for labour in a certain occupation and its price is high, rational, goal-seeking individuals respond by investing in education and training that will allow them to work there, thereby amassing what Gary Becker (1975) termed "human capital." Such investments lead to a more knowledgeable and productive worker who is compensated with a higher wage.

Then why are immigrants with *similar education and training* as the native-born not able to obtain the same occupations or compensating wage? Why do chronic inequalities seem to exist? What is influencing and preventing their involvement and directing them into less lucrative employment that fails to recognize their skills?

According to Ron Martin (2000: 456) the reason is that the free market is not always free, rather, "The labour market is a prime site of social, institutional, and regulatory practices."[20] For example, government policies or professional regulatory boards affect who can work in certain professions. Similarly, a worker's familial ties may affect his or her choice to not accept shift

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[20] Many critiques of the neoclassical approach have been made elsewhere, including from within economics itself (see Smith, 2000: 544 for elaboration).

work. More generally, believing labour markets function as a commodity market is "to deny the *social* nature of human labour and productivity activity" (Peck, 1996: 2). In contrast to the model proposed by neoclassicism, I will adopt what Martin (2000: 456) has called "the new socio-institutionalist economic geography." Consequently, I will regard labour markets as complex, *socially constructed* and *politically mediated* structures that are influenced by *institutional forces* and *power relations* (e.g. Amin and Thrift, 1995; Peck, 1996; *Regional Studies*, 1996; Martin, 2000). Moreover, labour markets have a "local level of operation" and exist within a specific spatial setting and context (Martin, 2000; Peck, 1996). The challenge, therefore, lies in understanding how labour markets are socially regulated and constructed. This chapter seeks to unpack theoretically the prime institutional forces that operate on labour markets, and what then can be used to address the particularities of the labour market for engineers in Vancouver.

The 'Social Embeddedness' of Labour Markets and New Institutional Economics

Acknowledgement that finding a job is essentially a social process draws inspiration from the wider academic literature of economic sociology, regulation theory, institutional economics, international political economy (Peck, 1996: 97), and organization theory (Amin and Thrift, 1995: 51). Each in their own way portrays institutions and social structures as critically influential determinants of economic activity. These bodies of work have diverse origins, and differ according to the particular structure or institution they emphasize. They complement each other by offering a common critique of neoclassical economics, and by recognizing external influences of power. I will briefly elaborate on two of these wider fields: economic sociology and an institutionalist approach because I draw largely on their concepts of social structures and institutions in the tripartite framework I adopt.

The new or 're-emerging' field of socio-economics or economic sociology stems from Mark

Granovetter's (1985) now classic paper on "social embeddedness." Granovetter's central thesis

builds upon Karl Polyani's (1944) work and his "substantivist" school in anthropology to argue

that economic activity is not always based on rational calculations for individual gain. Instead,

Granovetter writes:

> Actors do not behave or decide as atoms outside a social context, nor do they adhere slavishly
> to a script written for them by the particular intersection of social categories that they happen
> to occupy. Their attempts at purposive action are instead embedded in concrete, ongoing
> systems of social relations (1985: 487).

Granovetter believes that social structures constrain, support and/or derail individual goal-seeking

behaviour (see also Portes and Sensenbrenner, 1993). People are cognizant of expectations and

responsibilities deriving from networks of personal relations, and incorporate these concerns into

economic activity. However, Granovetter does not suggest people are "oversocialized," or simply

obedient and overly sensitive to social norms and opinions, but neither are individuals atomized

and solely self-serving as a neoclassical approach would suggest.[21] Instead, he argues that

economic activity is always "socially embedded," where economic institutions are seen as

constructed through social relations, and economic activity as consequently a social activity. The

social "embeddedness" of economic activity has come to represent the core concept of economic

sociology.

Complementary to Granovetter's work is "institutional economics," which was developed within

economics. Originating with Thorstein Veblen (1919), this approach views all human activities,

including economic and labour realms as "resolutely social, shaped by a set of institutional norms

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[21] Dennis Wrong (1961) criticized sociology for having an 'over-socialized' conception of people. He
argued that sociologists conceived people as being overwhelmingly sensitive to opinions of others and
obedient to the dictates of systems of norms. He agreed that a neoclassical economics approach was
'undersocialized', but was concerned that sociologists exaggerated the extent to which a social context
influenced an actor's behaviour.

and expectations" (Barnes, 1997: 240). Veblen defines institutions as "settled habits and thoughts" (Veblen, 1919: 239, as quoted in Barnes, 1997), and also recognizes that they are geographically and historically relative. Therefore, institutional economics is in direct opposition to neoclassical's rational abstraction of the profit-maximizing individual, *homo economicus*, who operates in an idealized labour market; instead, institutionalists understand humans as influenced by habits and norms that are historically and geographically relative, requiring a place and time specific understanding (see Barnes, 1996:213-214; Amin and Thrift, 1995: 51). Institutions, then, take on the same function that social structures perform in Granovetter's work; that is, they allow contextual influences to be included into the analysis, affecting choices and actions of individuals in the workforce.

Today economic geographers commonly employ a socio-institutional approach rather than a neoclassical one. Because labour markets possess "complex socio-political structures" (Haughton and Peck, 1995: 319), and have "an *intrinsically local level of operation and regulation*" (Martin, 2000: 456), an interest in the specific spatial setting of labour markets and their variation have been of special interest to economic geographers (e.g. Peck 1989, 1996, 2001; Hanson and Pratt 1992, 1995; McDowell, 1997; Bauder, 2000). By emphasizing the operation of local labour markets, economic geographers can contribute to how

> workers seek employment and employers hire and fire workers, [how] particular forms of employment structures evolve, [how] specific employment practices, work cultures, and labour relations become established, and [how] particular institutionalised modes of labour regulation emerge or are imposed (Martin, 2000: 456).

Within the Vancouver labour market, I am interested in one particular process: how professional engineering employment is gained by immigrants. In the next three sections, I outline the theoretical literatures that assist me in understanding the various institutional forces that bear on this process.

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Regulatory and Institutional Structures and Practices

"What matters is not simply that institutions have effects, but *what* effects they have, *when*, and *where*" (Peck, 1996: 98).

The influence of state activities on the labour market is recognized in Peck's work on labour market segmentation theory (1989, 1996). For instance, he lists activities such as the structure of welfare provisions and the associated eligibility rules, the structure of taxation, and support for the training system differentiation with the education system as influencing segmentation within the market (1989: 49; 1996: 60-61). The influence of politico-economic governance and regulatory practices is also noted elsewhere (Jonas, 1996; O'Neill, 1997; Martin, 2000; *Regional Studies*, 1996). O'Neill (1997), for instance presents the state as "qualitative," playing an "indispensable role in the creation, governance and conduct of markets" (p. 290). He outlines the role of the state in a modern economy broadly to include the maintenance of property rights, establishment of legal frameworks to maximize economic co-operation, provision of basic infrastructure, creation and governance of financial markets, control of macro-economic trends, and other social wealth redistribution and citizenship rights projects (*ibid*: 295). With respect to labour markets, O'Neill (1997) notes that the state influences demographic planning and governance, social wage provision, governance of workplace conditions, supply and governance of childcare, and provision of universal education and training.

More generally, regulation theory enables the political and the social to be integrated with the economy. This kind of theoretical framework also helps understand the dynamics of a capitalist system, and it offers an understanding of how labour processes can be considered a configuration of technical and social relations of production (Jessop, 1994). Coming out of a Marxist tradition, this regulationist approach, associated with the French economists Alain Lipietz and Robert Boyer, and later the economic geographer Allen Scott, propounds that the capitalist economy can remain crisis-free because of a mode of regulation that socially regulates consumption and

investment. Although regulationists did not originally use these terms, it has been argued that during the Fordist era, the mode of regulation was the Keynesian Welfare State, and the Post-Fordist era is arguable regulated by a Schumpeterian strategy (Jessop, 1994). The important part of regulation theory for this thesis, is that it shows the link between the social and economic, and the influence of systems of state governance on economic structures.

Systems of governance, however, involve more than just state (or state-sanctioned) regulation of labour. As Peck and O'Neill (1996) have illustrated, forms of governance operate at different geographical scales, from the global to the local. For instance, Vancouver's labour market is influenced by international accords on the transferability of certain nations' professional degrees, federal immigration policy that shapes labour supply characteristics at the national level, provincial wage rates affect labour prices, and local employment programs direct labour into certain industries. When the influence of these various formal governmental and regulatory institutions combine with the local economic, political and social context, the result is a locally-specific articulation of the labour market. In this study of engineers, it is clear that professional licensing boards as a regulatory institution play a crucial role in influencing access to certain occupations within the labour market. I will also explain the influence of local immigrant service agencies on how foreign-trained engineers conduct their job searches. The consequence of regulatory and state institutions on the behaviour of foreign-trained engineers and their integration into the Vancouver labour market will be assessed in this study.

Informal Social Institutions, Social Capital and Social Networks

Let me now turn to Granovetter's discussion of social 'embeddedness.' Granovetter (1985) argues that "pure" markets comprised of atomized actors are fictional. Instead, he argues that all

economic action is embedded in structures of social relations, i.e. social institutions. These interpersonal relations create a bond between people, which influence their economic actions and behaviours.

> The embeddedness argument stresses … the role of concrete personal relations or [social] structures (or "networks") or such relations in generating trust and discouraging malfeasance (Granovetter, 1985: 490).

Trust, for example, generates collaboration and cooperation between individuals, and which facilitates improved productivity and economic exchange. "Embeddedness," however, has since become an umbrella theoretical concept for all of economic sociology, and the social nature of economic relations (Portes and Sensenbrenner, 1993: 1320). Important distinctions have since been made on the terms used to define these social relationships. Rather than discussing the entire literature on the social nature of labour, I chose to focus on "social capital" and "social networks," and which I deploy in my substantive analysis in Chapters Five - Seven.

"Social capital" as a concept has received increasing attention in recent years.[22] This widely used term has been adopted by multiple disciplines to describe the benefits of group membership. Loosely defined, having social capital means accessibility to resources available within and through networks of personal contacts for (mainly economic) gain. Given the current range of uses and interpretations, I will examine the principal authors associated with the contemporary usage of the term, and offer a range of definitions currently used to clarify the concept.

The original use of the term 'social capital' is attributed to the French sociologist Pierre Bourdieu who defined the concept as:

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[22] Portes (1998) attributes social capital's novelty and heuristic power to its ability to call attention to how non-monetary forms can be important sources of power and influence.

the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalised relationships of mutual acquaintance or recognition (1986: 248).

This definition emphasizes social capital as the benefits accrued to an individual by virtue of their participation in groups. Bourdieu (1985) suggests that individuals may deliberately construct social relations for the purpose of creating this resource. The ultimate goal with this usage, then, is to have a large quantity and high quality of people in one's social circle. This will provide a better resource, and result in better economic capital, the ultimate purpose of accruing social capital.

James Coleman (1988) is credited with popularizing the term in the English-speaking world.[23] He states:

> ...social capital constitutes a particular kind of resource available to an actor...it is... a variety of different entities, with two elements in common: they all consist of some aspect of social structures, and they facilitate actions of actors – whether persons or corporate actors – within the structure (1988: S98).

Coleman's usage of the term emphasizes the positive influence social relations have on encouraging action. For example, social structures constitute norms that act as powerful sanctions (e.g. striving for scholastic achievement) (Coleman, 1988: S102-S104). The ability for social capital to encourage indirectly educational attainment (hence developing human capital) according to Coleman is its most important role. Through the development of human capital, social capital benefits both the individual (i.e. the student), and the entire society.[24]

Robert Putnam (1993) extended the use of social capital from the individual to that of a town or region. Regions, such as Emilia-Romagna in Italy, benefit by civic involvement in social capital.

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[23] Noticeably, Coleman does not ever make reference to Bourdieu's preceding work.
[24] A note of clarification: human capital is defined as the *individual* endowment of valued workforce skills and competencies; social capital is a *collective* resource.

For Putnam (a political scientist), social capital is related to "civicness". By this he means that the level of involvement of community members through "social organizations, such as networks, norms, and trust... facilitate action and cooperation for mutual benefit" (1993: 35). In cities where the public is civically involved (e.g. voted, obeyed the law), the public is entrusted with a social bond that produces greater economic development.

When taken together, these various uses of social capital suggest benefits accrue to both the individual and the wider group. By providing access to collective resources (material and non-material) that exist because of social relations among people, individuals and groups gain.

Recent studies, however, also illustrate that social capital can have a *negative* or exclusionary effect. Waldinger (1995), for example, illustrates the "other side" of embeddedness.[25] Just as social capital provides access to group members, it can exclude others who do not have membership. This is particularly important in studies of ethnic networks because immigrants of different ethnicities who do not have access to the needed cultural bond may be excluded from the same resources. Waldinger writes:

> the same social relations that embed economic behaviour in an ethnic community and thereby enhance the ease and efficiency of economic exchanges among community members implicitly restrict outsiders (1995: 557).

Waldinger finds that "most immigrant economies are highly specialized in a few industries or business lines where ethnic firms enjoy competitive advantages" (1995: 561). The trust that is created between co-ethnics is invaluable to success in certain industries, but *it is not available to everyone*.

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[25] Waldinger (1995) uses social capital, social networks, and social embeddedness interchangeably.

When talking of exclusion, however, most authors use the term "social network" rather than "social capital." Mohan and Mohan (2002: 192) clarify:

> while both social capital and social networks may enable individuals to gain access to other resources, the former is characterized as a public good, to which all residents of an area have access, in contrast to social networks, which almost by definition rely on exclusion.

Networks of relations among ethnic groups, or "ethnic networks," are a particularly important element of social and economic organization within migrant communities (Mitchell, 2000). Networks of ethnicity are social relations based on commonalities shared by a group, consisting generally of a combination of language, culture, religion, and/or region of origin *(ibid)*. Within migrant ethnic communities, these ties are particularly valuable in providing support, assisting in the settlement process, and sharing knowledge about the social and economic organization of the new community (Castles and Miller, 1998). And because occupational skills are commonly devalued and language skills may be poor in the new country, "immigrants' economic destinies depend heavily on the [social] structures in which they become incorporated" (Portes and Sensenbrenner, 1993: 1322). Currently, co-ethnic networks of recent immigrants are believed to assist in developing major components of the informal economy, particularly in the United States as other immigrants in this sector bring in unemployed newcomers (Sassen, 1991). As immigrants who are new to a country are likely to have few contacts for employment, they are likely to rely heavily on co-ethnic contacts for assistance in finding employment.

It follows that one of the main attributes of social capital and social networks is in its ability to pass on information, particularly for employment opportunities. The next section will review some research on this area.

Social Networks: Networks of Employment Information

Returning to Granovetter and his earlier work, we find evidence of the invaluable role that social networks play in passing on employment information. In his now classic study *Getting a Job* (1974), Granovetter stresses the importance of social contacts for career advancement and job mobility. This study, which investigates the success of different job searches undertaken by "professional, technical, and managerial workers" (PTMs), emphasizes the importance of social networks in attaining information about relevant job openings. It also set the groundwork for his later theorization of "social embeddedness" (1985).

Social networks are important because as Granovetter empirically shows, of all the job searches undertaken, the most satisfying and better paying jobs are attained through "informal, word-of-mouth" methods.[26] Other methods of job search are "direct application" (where an individual contacts a firm directly without intermediary knowledge of available positions) and "formal methods" (through advertisements or employment agencies).[27] But despite the superior outcomes the informal method offers, not everyone is able to receive similar results.[28] The reason, according to Granovetter, lies in an individual's social network. He writes:

> structural factors have the largest influence on the method of uncovering ... jobs. By 'structural factors' I mean the properties of one's social situation that shape his [*sic*] contact network (1974: 18).

By this, Granovetter suggests that the type and size of an individual's social network varies greatly, which has a bearing on the quality and value of the information available. For example,

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[26] Granovetter's study group was solely men, who were over 99% white. This bias as well as the date of the study certainly tempers the empirical findings, but his theoretical assertions are nonetheless significant. PTMs were chosen because he wanted a general sample, but one where he would be able to see "intensive and sophisticated attempts at job search" (1974:7).

[27] This study was written before the internet reached prominence as a search tool. Researching job postings on the internet would fall into Granovetter's notion of 'formal' methods.

[28] Granovetter's (1974) study applied only to individuals who had successfully changed jobs in the past five years. The emphasis was therefore on job mobility, not necessarily on the search behaviour of unemployed individuals.

types of networks are either "work related" or "family-social relations." Family and friends have the largest incentive to help find work, but cannot necessarily provide information from "inside" the occupation or industry where the job seeker has career aspirations. Thus, individuals who must rely on "family-social" networks tend to receive information that eventuate in less lucrative placements. On the other hand, individuals who have access to networks based on "work relations" can gain valuable "inside" information. The difficulty is that those who pass on such information from "work relations" often have less motivation to help.

Most valuable in Granovetter's (1974) study is the insight about the origin and nature of interpersonal ties mediating the passage of job availability information. Existing social structures shape the likelihood of an individual uncovering information about certain jobs. It is worth noting, however, that Granovetter is despondent about the possibility of transgressing one's social circle. He writes, "if one lacks the appropriate contact, there is little he [sic] can do about it" (1974: 16). This belief stems from Granovetter's conviction that information is "transmitted as a by-product of other social processes," and not readily mediated by an individual's search behaviour (Granovetter, 1974: 52). As we will see, Bourdieu's notion of habitus and social capital is similarly sceptical. Clearly, if Granovetter and Bourdieu are right, this does not bode well for newcomers to Vancouver. Through interviews that I conduct with recent immigrants, it will be clear that their ability to establish well-placed social contacts is of core importance.

The Geography of Social Networks

Learning of available job openings through social networks also has a spatial component. Many immigrants on arrival settle in ethnic communities and tend to enter the local niche economy (e.g. Sassen, 1991; Hiebert, 1993). Katharyne Mitchell writes:

> As members of a particular ethnic group are most likely to garner information about the job market from co-ethnics residing near them or involved in the same church or school, their residential segregation immediately impacts the types of employment opportunities they hear about and perceive as open and available to them (Mitchell, 2000: 397).

Social links have a spatial dimension. The area in which one lives, the local nature of the social activities in which one partakes, and where one works all have an impact on the labour market information received. For instance Scott (1992) found that engineering and scientific workers in the San Fernando Valley "[tended] to search for jobs within a given restricted range of their current residence," relying on personal contacts and home-work spatial limits to gain information about job openings. Hanson and Pratt (1995) note similar spatial limits to employment opportunities based on gender daily patterns in Worster, MA. Existing social and residential segregation thereby limits the diffusion of labour market information, serving to perpetuate and reinforce occupational segregation (e.g. Mitchell, 2000; Peck, 1996; Bauder, 2001; Hanson and Pratt, 1995). Migrant communities, however, are showing increasingly transnational movements of people and information, vastly extending the spatial dimension of networks (e.g. Ong, 1999; Mitchell, 2000). The residential community in Vancouver into which immigrant engineers settle may prove to be of importance for the social network of information about potential employment opportunities that is offered.

Cultural Capital and Local Value

> The most powerful principle of the symbolic efficacy of cultural capital no doubt lies in the logic of its transmission (Bourdieu, 1986: 246).

Lastly, I wish to discuss the influence of cultural structures or institutions on local labour market participation. To do so, I will define and elaborate on Bourdieu's cultural capital, illustrating how the concept has salience in current labour market studies. I will also consider the different forms of cultural capital distinguished by Bourdieu, paying special attention to the institutional and embodied mode of cultural capital, and Aihwa Ong's usage of cultural capital for her work on transnational migrants.

Pierre Bourdieu and Jean-Claude Passeron (1990 [1977]) first developed the term cultural capital as a theoretical hypothesis to explain why French children from some social groups were steadily more successful academically and financially than from others. In the French public education system, children from lower and upper class families were getting the same knowledge or human capital. Nonetheless, the upper class children were continually moving ahead. Bourdieu and Passeron were attempting to theorize why human capital arguments made by economists, such as Gary Becker (1964), failed to explain the continual better achievements of French children from higher social class families. Bourdieu and Passeron argued that children from higher social classes were not necessarily more intelligent or competent, but that the French educational system was systematically biased towards children from higher social classes, allowing them more easily to obtain the cultural traits associated with being "educated," such as in language or accent. When combined with unequal access to high-status schools, the social bias of social capital reproduced the highly stratified French social order.[29]

Subsequently, cultural capital is defined as an individual's access to the cultural resources and skills necessary to participate in elite social interactions (Bourdieu, 1984; see also Fernandez Kelly, 1994; Mohan and Mohan, 2002). Bourdieu (1986) distinguishes three forms of cultural capital: embodied, objectified, and institutional. *Embodied* cultural capital refers to bodily markers, such as body weight, fashion of dress, and style of discourse (see also Bourdieu, 1984); *objectified* cultural capital exists in the form of material cultural goods (paintings, books, instruments, wine); *institutional* cultural capital signifies worth by institutional authority, such as an academic qualification or a university degree. These various signifiers or markers of cultural competence and knowledge combine together to create a cultural persona. Specifically, cultural capital permits acceptance into a social network of connections, facilitating admittance to a

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[29] See also Willis (1977) for further discussion on how class differentiation is legitimated through education systems, which leads to a reproduction of the established social order.

group's social and economic capital. For example, the higher the social placement of contacts to

be called upon for favours or to learn information (for example about job availabilities), the better

one is situated socially for economic gain.

Institutional Cultural Capital in the Labour Market

Institutional cultural capital implies that an association with an academic institution heightens the

perceived cultural aptitude of an individual. As Bourdieu (1986) writes:

> With the academic qualification, a certificate of cultural competence which confers on its
> holder a conventional, constant, legally guaranteed value with respect to culture ... One sees
> clearly the performative magic of the power of instituting, the power to show and secure
> belief or, in a word, to impose recognition (p. 248).

An academic degree connotes formal training, as well as symbolic ideals and the prestige of an

academic institution, which by virtue of association and recognition is related to the degree

holder. The valued cultural capital thus comes from both the *objective* occupational knowledge

that the diploma guarantees, and its *subjective* social value (Bourdieu, 1984: 182). By subjective

value I mean that a diploma constitutes an important part of a person's social identity, and holds

value in the cultural recognition it connotes about the institutions that grant them.

But not all degrees are equal, nor are they valued equally. Particularly in the job market, a

hierarchy of education labels exists according to the prestige of an institution, or a course of study

(Bourdieu and Passeron, 1977: 165). To this I would also suggest that there is a hierarchy of

value based on the country of origin of degrees. This was true in Bourdieu's stratified French

society, but is also particularly true in the increasingly global economy where internationally

recognized credentials are extremely valuable (Beaverstock, 1996). For academic credentials to

hold social or cultural value, they must be recognized as prestigious in transnational

environments. As Ong writes:

Indeed, for many middle-class Chinese in Malaysia, Singapore, Hong Kong, and the Phillipines, the ultimate symbolic capital necessary for global mobility is an American college degree, which guarantees that the holder has acquired the cultural knowledge, skills, and credentials that enable the transposition of social status from one country to another (1999: 90).

This relationship between educational capital and potential occupational attainment has already received considerable attention. It is commonly understood that to obtain "bureaucratic" or professional careers, a certain minimum level of educational attainment is required (Brown, 1995). As Reitz (2001a) has noted, however, there is already a market-crowding of degrees as increasing numbers of people enter the labour market with similar graduate qualifications. With increased competition, the emphasis on education credentials has intensified. As such, more highly reputable institutions, or higher grades are needed to distinguish oneself from other graduates (Brown, 1995: 42). Where the degree is from, and the kind of subjective cultural competence that it conveys, are also important.

I will use the cultural capital perspective to inform this study's discussion on foreign-trained engineers' formal (read institutional) credential qualifications. Potential employers and professional licensing boards, such as APEGBC, assess foreign-trained applicants according to their undergraduate engineering diploma. But as Bourdieu suggests, inherent in credentials is both *objective* and *subjective* value. Bourdieu's notion will help shed light on the different ways credentials are assessed and evaluated. I suggest that many foreign degrees may be perceived as having little subjective value because of their country of origin, and as a result, applicants are deemed "culturally incompetent" for engineering employment in BC.

Embodied Cultural Capital in the Labour Market

Embodied cultural capital has also received considerable attention in labour market studies. Because of space limitations (and the number of theoretical approaches already considered), I will

only briefly discuss the relation of the body to the labour market.[30] Broadly speaking, how individuals walk, talk, dress and move act as signifiers in supporting their cultural competency to hold certain positions. Linda McDowell (1997), for example, argues that merchant bankers in London, England employ "flexible hiring practices" to hire "a certain sort of person" that by virtue of their class, credentials, and qualifications, match the elite image of the bank (p.128). A major argument in McDowell's book is that women are perceived as inferior to the rational male manager/worker. In particular women merchant bankers were all-too-conscious of the cultural image that their clothing portrayed. McDowell (1997) writes:

> Several respondents told me ...not only do women in professional positions have to blend in with their male peers but they also have to avoid the too-automatic association of a feminised appearance with secretarial work, where embodiment, appearance and the gender coding of workplace task are congruent rather than disjunctive (p. 146).

In the "new service sector occupations" where the personal performance of workers is integral to job success, the embodiment of appropriate culture capital through dress is essential.

Being able to embody characteristics of the desired worker is a concern for different immigrants of various ethnic groups as well as women. Walton-Roberts (1998) and Balder and Cameron (2002) have both shown how ethnic cultural dress and symbols affect the way in which a (potential) worker's cultural competence is perceived in the Canadian workforce. Walton-Roberts (1998) explains how the turban – an identifier of 'Sikhism' – is interpreted in different ways depending on the socio-cultural environment. In the late 1980s, the wearing of a turban by Sikh RCMP officers was met with anger and resentment by some Euro-Canadians who felt that insistence on wearing traditional Sikh headware disallowed them from conforming to the RCMP dress code tradition. Within the Indo-Canadian community the turban was a powerful symbol of ethno-religious identification, and played a key role in their inclusion within Indo-Canadian

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[30] For instance, for Judith Butler (1993) maintains that corporeal significations are brought into a "matrix of power" through discourse that has subverted female bodies (p.22)

entrepreneurial activity in Vancouver. Similarly, the sari worn by many women in the South Asian community is interpreted by many Canadian employers as suggesting that the women are inexperienced, excluding them from future employability (Bauder and Cameron, 2002). These relevant local examples illustrate how the ways in which employers evaluate *embodied* cultural capital contributes to the perception of cultural competence for a particular work environment.

Implicit in this discussion, is that cultural capital is *specific* to a physical or social environment. Each element in the repertory of symbols creating overall cultural capital holds a different value depending on the context of assessment. For example, Fernandez Kelly (1994) argues that "physical vectors, such as the characteristics of urban space," define the effects of cultural capital (p. 89). She writes:

> ...the sparkling mounds of braided hair [of young African-American women]... can severely curtail the probability of success in job interviews. What is wrought as an empowering symbol in an insular milieu becomes a signal that bars access to resources in the larger society (1994: 101).

These examples illustrate embodied cultural capital is *a locally valued criterion* used for selecting employees, but also for excluding workers who may well be technically competent, but fail to exhibit desired or stylised cultural competence.

Cultural Competence among Transnational Immigrants

Reflecting specifically on the transnational framework of Chinese immigrants in the United States, Aihwa Ong (1999) adopts Bourdieu's concepts of "symbolic capital" in *Flexible Citizenship* to appreciate the attempts made by migrants to gain social power in the new host society. Unlike Bourdieu, however, who does not recognize any structural limits to acquiring cultural capital, Ong argues that there are limits to the convertibility of cultural capital to different cultures. Ong writes:

> Chinese students and professionals entering the United States lack the appropriate racial and cultural origins that are the stereotypical markers of racial prestige in Western democracies, and the effectiveness of their accumulation strategies is conditional and limited by their racial and social origin (1999: 96).

Emerging from Ong's work is the idea that cultural capital has a geography of value. For example, for Chinese transnational migrants, the cultural capital they held in China may come to count as "symbolic deficits in the host society" (Ong, 1999: 91). Regardless of the attempts made to make social contacts and fit American culture, Ong argues that their embodied cultural capital, such as "skin colour, foreign accent, and cultural taste" renders them culturally inadequate (p.91). Ong's research illustrates how Bourdieu's concept of different forms of capital is an effective means of understanding the adaptive behaviour of migrants in response to a host society's expectations and stereotypes. It also illustrates, however, that structural limits to accumulating cultural capital signifiers exist for certain non-traditional ethnic groups.

In Conclusion

This chapter has attempted to review broadly literatures theorizing the role of social agency in labour market activity and the various types of institutions or structures affecting this process. It has been argued that there is a complex intermingling of forces that create, shape, and maintain the labour market opportunities for new immigrants in Vancouver. Three germane literatures recognizing the influence of regulatory, social and cultural structures on the occupational experience of individuals were reviewed. In particular, the roles of formal structures, such as the professional regulatory body and immigration procedures, the importance of ethnic networks and social capital on economic opportunities, and cultural capital or perceived cultural competence for inclusion or exclusion of the local labour market were discussed. These different approaches that provide an understanding of the existence of certain obstacles, the resources available to an individual, and the individual's response to the host society's expectations, will be invaluable to

understanding the experiences of foreign-trained engineers in Vancouver. Interviews conducted with this specific cohort will be analysed in terms of these theoretical literatures, and will explain the role of institutions in mediating the experiences of engineers, how immigrants understand what labour market opportunities exist, and what bearing their own actions have on their process of settlement into the Vancouver society and Canadian labour market.

Chapter 4: The 5W's of the Research Process

Why?

This research aims to offer an understanding of the social structures and institutions that have bearing on the process of finding employment for foreign-trained engineers in Vancouver. To achieve an in-depth understanding of the diversity of foreign-trained engineers' experiences in the labour market, and how they make sense of their own situation, I chose to use qualitative research methods for the richness and texture of informants' experiences that it offers. The challenges of this method, and my reasons for not using quantitative techniques, are discussed at the end of this chapter.

Who? What? When? And Where?

Twenty-five semi-structured interviews with foreign-trained engineers were conducted between October 2001 and May 2002, with the bulk being completed during the November – February period (see Appendix 2). Prior to beginning this project, I had no contact with this community of recent immigrants, so I first sought the advice of employment counsellors at local immigrant service agencies. Most were sympathetic to the research, but could not assist me with contacts because of client-counsellor confidentiality. In the end, I was permitted to place a poster for my research in five agencies, to which the response was initially slow (see Appendix 3). Just when I was becoming concerned about the feasibility of the research, I was welcomed to participate in a six-week job-training course for immigrants seeking professional occupations offered by the Open Learning Agency in Burnaby. Here I was given the opportunity to gain first-hand knowledge as a participant observer of the courses that would become a central theme in this research. I was unable to attend every day, but my irregular appearance still gave me an

invaluable chance to observe how foreign-trained professionals responded to instructor's remarks, which concepts were particularly foreign, and how immigrants interacted with one another in these courses. This experience also provided me my first five core interviewees. In the end, only six interviews were a direct result of the posters, with the remainder being an outcome of referral by past interview participants, i.e. the "snowballing method."

Each of the engineers I interviewed had been in Canada for less than five years, had worked as a professional engineer in their home country, and was actively seeking professional employment in Vancouver.[31] The similarities end here. Otherwise, they differed in their fields of engineering (civil/structural, mechanical, electrical/computer, mining), ethnicity, years of working experience, and level of education (See Appendix 2 and Figure 3). Participants came directly from or via one of the follow countries: Austria, China, Colombia, Finland, Jordan, India, Iran, Iraq, Libya, Malaysia, Mexico, Philippines, Russia, Saudi Arabia, Serbia, Ukraine, or Yugoslavia.[32] All interviewees came under the "skilled principal applicant" immigration category, with the exception of two who came as students, two as spouses of principal applicants, and one as a political refugee. 21 of the 25 were male.

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[31] Note, two respondents had recently been offered engineering jobs at the time of the interview. We were still able to discuss their job search experiences, with the added bonus of what strategies had proved successful.
[32] Eight migrated to and worked in transit countries before arriving in Canada.

Figure 3: Level of Education Among Interviewees (by kind of engineering)
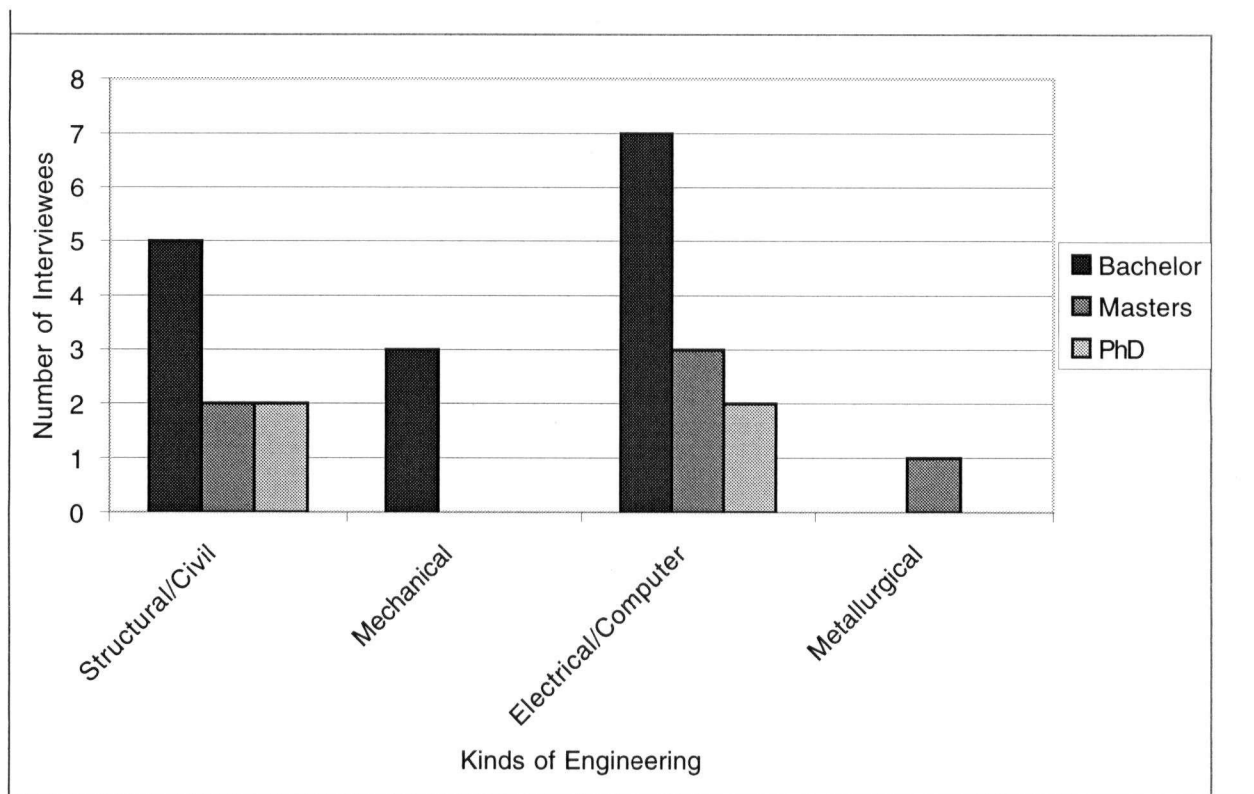
Once a potential interviewee contacted me, I emailed a letter outlining my role and the research's purpose (see Appendix 4) and which was followed-up with a phone call.[33] At this time, we arranged to meet. I usually suggested meeting in a coffee shop or public library of their choice, as I was conscious of the power dynamics constituted in certain places (Elwood and Martin, 2000), and my inability to remunerate informants with little more than a cup of coffee. Allowing them to choose the location enabled them to select an environment where they would be comfortable, and it also gave me a sense of their familiarity with the city as they attempted to describe key landmarks around Vancouver to bring me to this location. Three interviewees welcomed me into their homes.

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[33] Email was the preferred means of communication for most participants.

The interviews followed a semi-structured format (see Appendix 5 for the interview schedule). I asked about general experiences immigrating, their overseas engineering work experience, pre-migration employment expectations, specifics about their job search in Vancouver, knowledge of APEGBC, and perceived changes to their social status following migration. In particular, to investigate the role of social networks in assisting with the migration process and job search, I asked where they lived on arrival, community involvement, and the support of family and other immigrants. The questions posed were open-ended, and the format of the interview was fluid, conversational-style with no fixed order to the questions. Interviewees also raised new ideas, and the open format meant that I was able to pursue them. All interviews lasted one to one and a half hours, with the exception of one interview that was only 40 minutes. For confidentiality reasons, each respondent was given a pseudonym. Contact was continued with many of the informants after the interview who updated me on the progress of their job search via email.

In addition to interviews with foreign-trained engineers, I also conducted several interviews with individuals involved in the issue of foreign accreditation and/or the engineering profession. In the Spring of 2002 I was granted one interview with a senior registration staff member at APEGBC, two with the project director of the current MCAWS/APEGBC pilot project, and one with the director of a local international credential assessment agency. I also met informally with three employment counsellors, one senior registrar of midwifery (another self-regulating profession), and the executive member of SPEATBC, a networking association for Punjabi engineers discussed in Chapter 7. As well, I participated in a one-day forum organized by the Looking Ahead Initiative titled, "Employing New Immigrants" in October 2001, and the "Roundtable on Immigration Labour Market Research" in February 2002.

How?

There is considerable richness in the description of events and experiences gained through in-depth interviews. So as not to lose the style of speech and subtle comments made by informants, interviews with foreign-trained engineers and the administrator at APEGBC were tape-recorded and transcribed verbatim. Hand-written notes from the less formal meetings and personal observations were also typed. Together, all compiled notes became the text from which I worked.

Through reading and re-reading the texts, I determined codes for reoccurring themes or issues. I looked for relationships and patterns *within* and *between* the general interview topics (e.g. job search, social support, general immigration), and also those that related to the theoretical literature that was read before, during, and after the interviews were conducted. In other words, data collection and analysis were not discrete processes, but processes that overlapped. Therefore, codes emerged from the text in an iterative process as I worked back and forth between materials and ideas in a manner that Crang (1997: 189) calls "analytic induction."[34] As a result, the codes and subcodes that emerged were used to organize the material, as tools or "axes of interpretation," but were not an explanatory framework in themselves (ibid: 190). Instead, the codes enabled me to draw out new themes and implications in the material, and to establish and confirm my findings. To this end, while I had ideas and theories before conducting interviews, the theoretical framework and empirical verification that resulted were a direct function of the study's composition and the stories shared by the informants.

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[34] This approach to interpreting materials is commonly called 'grounded theory.'

Reflections on the Research Process: Claims to Representativeness, Researcher Positionality, and Validity

I performed in-depth interviews because I wanted to unravel how immigrants experience and make sense of their own lives. Through listening to their stories, I am able to see how they manipulate and reconstruct their resources as they come up against obstacles, and uncover the ways in which social relations and institutions mediate the process (see for e.g. Valentine, 1997). Permitting those under study to construct their own accounts of their experiences can often reveal to those of us on the outside how incomplete or inaccurate our understanding may be. Ley (1999:13), for example, performed interviews with Hong Kong entrepreneurial business immigrants in Vancouver who are commonly presented as wealthy, successful businessmen in their new society. By "[introducing] their voice into the interpretation" Ley exposes the inaccuracy of census figure representations, and the unexpectedly fragile nature of their positions. An interview offers a forum to lay out and challenge the complexities and contradictions of a situation, which are otherwise undetectable or concealed in the social construction of official statistics or other quantitative representations.

Noticeably, I do not use quantitative techniques for this research beyond setting the context in Chapter Two. Particularly in a policy-relevant study like this where impartiality and fairness are assumed, "objective" statistics might be desirable (see Porter, 1995: 8). In this sense, I recognize the lack of quantitative data may be viewed as a methodological shortcoming. I do not wish to debunk the merits of statistically-based findings, but I also want to recognize that statistics are social artefacts, and that by the very process by which they are selected and collected people are forced to fit into constructed categories. The focus of this research is on the diversity of immigrants' experiences and responses to obstacles, which I argue is only attainable through letting those under study speak for themselves. Interviews are the best method to attain this

information. At the cost of qualitative texture and depth, however, come other limitations and problems. Let me outline three: representativeness, positionality, and validity.

Firstly, this research cannot claim representativeness. I opted to sacrifice comprehensiveness for in-depth, unique, individual accounts available through interviews. Still, while not claiming representativeness, I made concerted efforts to hear from a range of perspectives among foreign-trained engineers. The variance in kinds of engineering, ethnicity, and level of education in my sample match those found with the wider composition of foreign-trained engineers in Vancouver (see Appendix 6). As comparison of Appendix 2 and Appendix 6 shows, however, there is an under-representation of engineers from Asian countries other than China, and an over-representation of engineers from Iraq. This is a result of my recruitment procedures. Because of the difficulty in securing contacts with engineers (many of whom I will argue later are fiercely independent), I needed to rely on referrals of past informants. I attempted to have a representative sample based on ethnicity, gender, level of education, and kinds of engineering differences, but my recruitment within the groups was indiscriminate (see Fernando and Prasad, 1986: 21). I defend, nonetheless, that the tendencies and experiences shared among my 25 respondents point to similar patterns among the wider community.

The issue of whose voice is heard, and whose is silenced, is by no means new in academic research. Indeed, this is hardly an issue limited to qualitative research or to geography (Hoggart *et al.*, 2002). My greatest concern regarding representation and representativeness, however, was with respect to the multiple identities of my informants. Walton (1996: 91) writes of the "social reality of ethnic affiliation, connected as it is in many ways to cultural issues such as family, religion, national origin, community, kinship networks and political mobilization." Particularly given such limited numbers from different ethnic groups, I do not wish to *essentialize* their perspectives, rendering them spokespersons for their ethnic community, nor do I wish to remain

silent where insightful patterns on ethnic differences may be noted. This is clearly a terse relation and one that needs careful negotiation. I take it as axiomatic that ethnicity is a consequence of a social process, and is not defined by essentialized attributes. It is these socially-attributed differences among groups, however, that allow me to engage in comparison when relevant.

Secondly, I wish to address my positionality as a researcher. Feminist commentators particularly have been at the vanguard of debates about the effect of social and power relations between the interviewer and respondent (e.g. Roberts, 1981; Stanley and Wise, 1993). They argue social science objectivity does not exist because both I (as the researcher) and the interviewee (as the respondent) are influenced and affected by our own socially-specific experiences, interpretations, and aims. In a discussion in the *Professional Geographer*, McDowell (1992: 214), for example, criticizes Schoenberger for failing to mention the influence of being female in conducting "corporate interviews." She says:

> I wondered about her reasons for not addressing one of the most significant factors in her own research – the fact that she is a *woman* and that, almost certainly, the majority of her respondents were men (original emphasis).

Schoenberger (1992: 218-219) says in response:

> The reason I did not talk about it was that I am not sure precisely what difference it makes, and I am not sure how I would know. ...I think that McDowell is right to remind us that we are people doing research and that questions of gender, class, race, nationality, politics, history, and experience shape our research and our interpretations of the world, however much we are supposed to deny it. The task, then, is not to do away with these things, but to know them and to learn from them.

Schoenberger and McDowell agree that knowledge acquired through interviews is contextual and interpersonal. Exactly how the social nature of interviews affects the information gained, however, is difficult to assess, and requires careful consideration on behalf of the researcher. Therefore, the responsibility lays with the researcher to remain critically self-reflexive, and open about the research process, and to be aware of the influence of contextual and interpersonal factors in the information that is shared.

I raise these concerns because the interviews I conducted with engineers were not meetings of equals. In fact, I was cognizant of being different from my informants in nearly every possible way. Whereas they were mainly middle-aged, engineering professionals, recent immigrants, non-native English speakers, and nearly 85% male, I am in my early 20s, a graduate student in geography, native-born Canadian, native-English speaker, and female. And while these were not "corporate interviews," I encountered many of the issues discussed by McDowell and Schoenberger and other academics who "interview up" or interview elites. My respondents were all senior to me in age, and many indicated scepticism of what a student in geography (conducting a 'non-scientific' or non-statistical study) could do about their very real predicament. I found this a strange dynamic to encounter because many respondents phoned me with interest in being interviewed. I sensed many felt their predicament *merits* research, and frankly were disappointed when they saw someone as young as me as the researcher. As a result, I needed to illustrate my authority as a researcher, my ability to understand engineering projects and the accreditation process, and unfortunately, on a few occasions, I needed to deal with unsolicited flirting.[35] On the other hand, I sometimes felt I had the dominant position because I was affiliated with the university, and nearly all interviewees had experienced significant recent declines in their financial and social status, and were currently unemployed. As such, power relations were contested and transformed throughout the interview. To deal with this, I consciously conducted the encounter as what Kvale (1996) calls an "Inter View" – a conversation and sharing of ideas between two people about themes of mutual interest. This is not to imply that social power relations were (or can be) neutralized or pushed aside, but this method helped me demonstrate my genuine interest and growing knowledge of professional accreditation and barriers to their

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[35] I chose to discard one interview because I questioned the validity of the respondent's remarks. His comments were inconsistent throughout the interview and I believe he was more concerned about sounding 'impressive' than being open about his experiences.

involvement. By early in the interview, most expressed genuine pleasure with the concern of an outsider in their plight.

As an additional note, I believe that as a young female I was perceived as non-threatening, which permitted me to conduct a conversation on the sensitive issue of unemployment – a topic that may have been more difficult to address by a male colleague.

My researcher position as an outsider leads directly into the third issue of validity. Generally, a researcher sharing a similar identity with her respondents is believed to create empathy and mutual respect. Some, like hooks (1991) goes so far as to imply that only researchers who share common traits with the researched can offer 'legitimate' insight about the actions of a social group. I disagree. I argue that researcher reflexivity from the position of sympathetic outsider provides *as* great a capacity to inform, and often *adds* a valuable perspective to inquiry. I therefore agree with McCracken (1988: 12) who writes, "intimate acquaintance with one's own culture can create as much blindness as insight," and I believe having a different background and perspective from my interviewees resulted in new insights. Still, I remain anxious of the dangers of speaking on behalf of others, and have thus chosen to use quotes, lengthy at times, to allow sentiments of the respondents to be expressed clearly as their own. I have also chosen to write myself in to this thesis, acknowledging my voice as the researcher as well as a moderator.

Regarding validity, there remains the issue of the content of informants' statements. Because of the interpersonal nature of interviews, there is a possibility that interviewees represent themselves in socially desirable ways. Depending on the issue at hand, informants may slightly alter the image of themselves so that they appear to place themselves in the best possible light. In the case of unemployed foreign-trained engineers, they may overemphasize the influence of external forces on their predicament (thus reducing blame on themselves), or they may inflate their

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credentials or experiences in trying to enhance their self-image. Unfortunately, the ability for interviewees to misrepresent themselves, to omit or forget information, and/or to self-rationalize the information they share with the interviewer are unavoidable pitfalls of doing interview-based research. Often, however, the *way* that interviewees self-rationalize or choose to represent themselves can be particularly telling of deeper feelings or thoughts on the issue being discussed. Ultimately, the responsibility falls on me as the investigator to ensure that I do not ask leading questions (prompting certain responses), to be alert to inconsistencies and abnormalities in respondents' comments that I can challenge or question during an interview, and to be continually reflexive as to how knowledge is produced through social relations. Such issues drive at the heart of trustworthiness and confidence in academic research, because if questions of misrepresentation are not taken seriously, our work can no longer be seen to have social legitimacy.

Chapter 5: Pre-Migration Motivations and Expectations

In the next three chapters I consider the results of interviews conducted with foreign-trained engineers looking for employment in Vancouver, as well as interviews conducted at APEGBC and with employment assistance counsellors in the Lower Mainland.

The main purpose of this chapter is to explore both the decision to migrate, and employment expectations, of the foreign-trained engineers who came to Vancouver. In anticipation of the discussion about the social embeddedness of the job search process that comes in Chapter Seven, I ask my interviewees if social networks and previous contact with people in Vancouver were influential in their ultimate choice to settle here. Whereas general immigration research widely acknowledges the importance of social networks throughout the migration process, research done on highly skilled or professional immigrants tends to adopt an economistic approach; one that neglects social and cultural factors in migration in favour of exclusively economic motivations to migrate. I argue that social networks played a significant role in mediating the migration processes for the engineers in this study. The aim of this chapter, then, is to map the backdrop of social relations that foreign-trained engineers had, or have since established, in Vancouver, and to set the context of their pre-migration employment expectations.

This chapter comprises four sections. The first briefly presents factors commonly believed to instigate the international migration of professional workers. The second discusses the reasons given by my interviewees in this study for choosing to immigrate. The third considers why Canada, and more precisely Vancouver, was chosen as their destination. The fourth explores the economic and employment opportunities anticipated in Vancouver.

Theories on the International Migration of Professional Workers

Prior contact between new immigrants and earlier arrived immigrants, particularly those with similar ethnicity, greatly facilitates the migration and settlement process. Contact networks act as a social and cultural bridge, providing resources and/or social capital, such as information and access to jobs in the recipient country, finance, emotional support, as well as administrative assistance (e.g., Castles and Miller, 1998). The importance of social capital based on ethnic lines in the immigrant community and the assistance this offers new immigrants to enter the local niche economy, has received much attention (Waldinger, 1995, 1996; Portes and Sensenbrenner, 1993; Sassen, 1991).

Curiously, previous work on migrants with *high levels of skill* or *professional training* has not emphasised social capital or social networks (Meyer, 2001). According to Meyer (2001), this is because a "human capital paradigm" is so entrenched in research around the "brain drain" that workers are seen only as economic agents responding to, or "pulled" by, global market signals. Research instead focuses on the movement of professionals or "knowledge" workers who actively seek international employment and remuneration appropriate to their formal education and training. The only studies looking at "networks" consider how foreign "knowledge" workers are channelled through multinational companies' internal labour markets, and international recruitment agencies (e.g. Beaverstock, 1996; Findlay *et al.* 1996; Xiang, 2001). An alternative approach to this human-capital inspired one, however, is to highlight the role that the political climate, the lack of economic opportunities, and the poor working and intellectual environments in source countries play in encouraging or "pushing" skilled labour from developing countries to move to industrialized countries (Iredale, 2001). Given when these push factors are recognized, though, it is often assured that the immigrant enjoys a smooth transition into the host labour

market. With the exception of a study based on expatriate contacts (Meyer, 2001), to my knowledge, no studies have considered the influence of kin or friend-based contacts in affecting the migration of professional workers. This, however, is my aim.

The interviewees in this study pointed to a variety of factors that mediated their choice to immigrate.[36] As I will illustrate, political and economic stability, as well as new professional challenges are the main reasons for wanting to immigrate. But, interviews also reveal the importance of social networks in mediating the settlement process. Clearly there is a wide range of "push factors" that motivate individuals to leave their home countries, but their reasons to settle in Canada, and Vancouver more specifically, are strongly influenced by social agents and intermediaries.

In Search of Better Things: Reasons for Immigrating

The 25 interviewees in my sample come from a large range of countries (see Chapter 4). A common motivation for many was to improve their economic and social opportunities. Eight of the 25 engineers interviewed mentioned better paying jobs or improved career opportunities as their major motivation. Margarita says:

> I was satisfied with my position in [Yugoslavia], but I wanted to improve my professional knowledge, and I wanted a change, some challenge. Basically, [my husband and I] couldn't find ourselves in our country, economically and professionally. I mean that we both had work, but somehow after a couple of years, we stopped improving our knowledge and started thinking that maybe here we could become better professionals.

Even for those who regarded themselves as having good professional jobs in their country, there was a sense of better professional and economic prospects existing outside. Particularly those

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[36] Alejandro Portes (1997) would certainly have agreed, for he titled a section of an article, "There is No Encompassing Theory of Immigration."

from Eastern Europe said that their professional jobs were low paying. In addition, they desired

more lucrative placements, and the opportunity to use state-of-the-art technology. Many others

also mentioned equipment and technology limitations of working in developing or poorer

countries.

For just as many respondents, the desire to leave was fuelled by concerns of political instability.[37]

The political unrest and economic volatility in nations such as Colombia, Iran, Iraq and Saudi

Arabia acted as "push factors." Salem explains:

> I think you know that the situation in Iraq is politically and economically unstable. And so
> people, young people like me cannot plan for their future in that situation, right? So I decided
> to leave and come to Canada to have a better life, to plan for a better future.

The dissatisfaction with the general political and economic climate in their respective homelands

made moving to a safe and stable nation where a future could be planned a particularly

compelling force for Middle Eastern and South American respondents.

Another common explanation among respondents was that they "wanted a change" or simply

desired a "challenge." To my surprise, over half of the interviewees answered my question of

why they chose to leave their country by saying they were "bored" or wanted a "new experience."

For example, Mark decided to leave his family in India for 6 months to try and establish himself

professionally in Canada. He says:

> I guess I thought it was kind of a long shot. A crazy idea. Basically, coming out of your
> country, and seeing other things, doing something different. Actually, I was bored, back in
> my country. ((laughs)) I wanted to live in a country where people are different from you are.

John's reasoning for leaving China is based on similar grounds.

> KG: When did you start thinking about coming here?
>
> John: Well, one problem is that I am tired of working in one country your whole life. To say
> that I want to change my life, a new career, a new life. Another problem is that the Chinese

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[37] Eight respondents clearly stated "war" or the bad political environment. One interviewee was a political
refugee.

coal industry is going down at that time... Of course I knew that here it is also not so good, but I was confident, I *was* very confident ((laugh)) to immigrate to Canada, to change my whole life and that's what I think, and also I like challenge...

The responses given by John and Mark are illustrative of the sense of unrest and longing for a better life elsewhere. This willingness to immigrate for a "challenge" was strong among those not leaving for political reasons, and seemed to stem from a professional and personal confidence.

Confidence, in fact, was a common trait among many of the engineers. These engineers were generally successful in their home countries. Many engineers spoke of considerable professional achievements at home, and showed little hesitancy in describing the technical abilities or their capacity to solve engineering problems. This professional confidence also showed in personality traits, examples of which will be given throughout the chapter.

It is also interesting to note that 10 of my 25 interviewees had children at the time of migration. Despite these familial ties and responsibilities, only three participants (of various ethnicities) highlight their children's interest as being a factor in the decision to immigrate. Evidently, the key motives in the choice to immigrate as presented to me were political, economic and personal. Social relations or contacts were not described as having *any influence* on the decision, as the literature on the international migration of professional workers had also suggested.

Reasons for Choosing Canada and Vancouver

But why did these foreign-trained engineers end up in Canada and not in other immigrant receiving countries? Can the decision of *where* and *why* to immigrate be separated? Did any "channels" or mechanisms such as international labour markets of MNCs, international

recruitment agencies, or expatriate professional networks that Findlay *et al.* (1996) and Iredale (2001) believe play a role in moving skilled workers bring the engineers in this study to Canada? Consideration of these questions leads to the ideals and expectation of the engineers, and also illustrates the crucial role that personal contacts and informal social institutions played in bringing these engineers to Vancouver. It also shows the diversity of experiences of the study group.

For roughly one quarter of respondents, the choice to immigrate and the destination of Canada were one and the same. Life in Canada had long captured the imagination of seven respondents who spoke of having always had intentions to move to Canada. For example, Lewis explains part of the school curriculum for all Chinese children was to read a story about a Dr. Bethune, a Canadian doctor. Because the doctor is portrayed as kind and caring, Lewis grew up with the image of Canadians as warm and gentle people, and from an early age thought of migrating to Canada. Fedor, on the other hand, based his boyhood dream of moving to Canada on the stories he heard from his uncle living in Montreal. In both cases the desire to go to Canada was seeded early, but mid-life dissatisfaction with their professional lives caused them to pursue it.

For the four other respondents who said that Canada was their only choice destination, it was the encouragement of family and friends already settled in Canada that influenced their immigration. Such "social intermediaries" painted a rosy image of the country, inspiring them to come. For example, Vasin explains how his uncle encouraged him to apply with stories of engineering opportunities. Three others said they were considering other countries, but eventually opted for Canada because they had friends here, and wanted an existing support network in their new society. Margarita says, "We are the last of our friends who came to Canada... We heard their opinion and their stories and that was just a reason more to come here." Similarly, Horardo said, "My sister was here in Canada, and she has many friends. She said I should have no trouble

getting help here." Clearly, the assistance and benefits brought by connections with other migrants were important. Contacts help diminish the risks of migration, providing resources for information about procedures, financial and emotional support, and job prospects (Hammer et al., 1997). These expressions of the existence of support in Canada illustrate that pre-existing social networks played an influential role for some to migrate to here.

For the 13 remaining respondents, the choice to come to Canada was not as clear. Seven people indicated their preference was strongly in favour of the United States, and they considered Canada as only a second choice. But in comparison to the more stringent immigration policy of the US, where fewer immigrants are accepted each year through a lottery system, Canada was thought to have "good policy," making it the obvious next-best destination, or a "better" or "cheaper" choice. The expectation was that life in Canada would be the same as in the US. The differences between the two were then only realized on arrival. As Fred explains:

> Because, first of all I think America, United States of America…When my wife think that we should move to North America, that time I think Canada is maybe the same as the United States. But when I come here, I see that they are different.

For others, Canada is an intermediary destination on way to the US, or as Tomas says, "the nearest way to go the US." Two of the interviewees said that their plan included moving to Canada, getting valuable North American experience and Canadian citizenship, and then applying to move to the US.[38] Three others considered countries such as Australia or New Zealand because they thought they would have a "good chance to get into them" by immigration lawyers.

Noticeably, none of the engineers had been enticed or recruited by companies in Canada. (Although one felt that he had been enticed by the Canadian government: "Well, it was your

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[38] These two respondents already had family in Canada who had also come with the hopes of moving to the United States.

advertising, your marketing and your media..." says Tomas.) Not one interviewee mentioned any kind of company enticement or recruitment firm that had eased their integration or brought them expressly over to the Canadian labour market. While this does not rule out Canadian firms targeting overseas engineers, none in my study group were contacted. I imagine that a small proportion of the increasing number of foreign-trained engineers arriving under the skilled worker category are ushered into the Vancouver workforce through multinational companies' internal labour markets. But they are likely not experiencing the same labour force barriers that my case study group have found.

The reasons given for choosing to come to Canada, then, are diverse; they range from wanting higher incomes, greater personal and professional challenges, political stability, better technology, to moving closer to the desired United States. After being given these reasons, I pushed all respondents to explain *why Vancouver* in particular was chosen within Canada. It is here that social contacts become important. Even for *professional* workers, the migration process is socially embedded.

In discussing social embeddedness, Granovetter (1974) uses the "strength of ties" metaphor to describe the relationship between social actors. The stronger the tie, the closer the relation between actors, and often the greater the motivation to offer assistance. Strength of motivation, however, is not the same as quality of assistance. In Granovetter's case, the metaphor is used to illustrate how social relations affect economic opportunities through the diffusion of employment opportunities. It is also useful here to understand the "strength of ties" that brought engineers to Vancouver, for the social capital these ties provide may also prove important in future employment assistance.

19 of the 25 foreign-trained engineers interviewed explained that they are in Vancouver because of a contact they had here. 10 engineers identified the contact as a family member, often an extended uncle or cousin, or what Granovetter would call a "strong" tie. Barbara says, "My mother's brother has been here for 3 years. When I decided to come to Canada, of course I come to Vancouver. I knew I can live with him and his family to get started." Unlike Barbara, who was upfront with this contact, on a few occasions, I felt I had to tease out the existence of familial support. The reason for it not being readily revealed, it seemed to me, was because engineers took pride in having been selected for their own merit under the "skilled applicant" immigration category. Emphasizing their family members, they thought, ought lead me to assume they were family class immigrants who were unqualified as engineers. Tomas, for example, said this:

> when we did this application for Canada, we didn't let [our relatives] know that we are coming here. We didn't use them as a reference on the application form, because there is a point also there, if you have relatives in Canada. We didn't use that. We wanted to do this on our own. So...I mean, one month before we are trying from overseas for [accommodations], we had troubles, so they phoned us and said, try B.C. So that's why we are here.

Upon arriving in Vancouver, Tomas original moved in with his family. So did every person who mentioned that their decision to move to Vancouver was related to having family members here. Often, the engineers' families were also in tow. Once their family members were 'revealed', all respondents spoke with gratitude of the initial assistance that was provided, particularly with housing, in making the transition less daunting, and in learning the basics of Canadian life. Four participants (who had all been in Vancouver for less than two months at the time of the interview) were still living with their family, while the others had subsequently found their own apartment but in the same neighbourhood.

For three other participants, the contact that they had in Vancouver was not a family member but a friend, albeit a "family friend." For example, Rogelio explains:

> Why did I choose Vancouver? Well, to tell you the truth... we knew somebody here. Well I didn't know, but my wife knew her family and my wife's family and her family were not very close but acquaintances... and we thought if we have somebody there, they might tell us what to do, where to go, where it's cheap, where it's expensive, and that's why we decided to come here.

While the social relations between the engineer and the other immigrants were not strictly family-based, these situations extended to ties with respective families who were still living and knew each other in their homelands. As such, they constituted "strong ties" and the expectation of assistance was high, and the advice was assumed trustworthy.

For four others, the contact that had bearing on the selection to come to Vancouver was random, or a "weak" tie. Malak who was originally from Iraq, told a story of chance and happenstance when he met an old schoolmate from Iraq in Malaysia where he worked for a few years before immigrating to Canada. It was merely the suggestion of this other person who had contacts in Vancouver that induced Malak to choose this city. Laughingly he explains how he filled out his application form:

> Then he told me that he had some friends or relatives in Vancouver, so at that time, I don't know about the climate, or how the weather looks in all the cities of Canada, so I'm not in the position to select, I just wrote Vancouver!

The three other random contacts were relations established over the Internet. Fedor in Yugoslavia, Ivan in Russia and Roman in the Philippines all were making Vancouver contacts via computer terminals, partaking in transnational immigration assistance. In each case, the contact was of the same nationality. In Fedor's case, the contact went as far as to find an apartment for him, pay the deposit and pick him up at the airport. This contact even affected where in the city he eventually settled since he says, "It wasn't our choice... He thought it was a good idea maybe to be in this Metrotown area." In Roman's case, the contact was a former employer of the same large phone company where he worked in the Philippines. As he explains:

> ...somebody has a friend who has been there for four months who was in the telephone company.... So I started talking to the guy, [and I told him] that I had decided to go to

Canada, and if I was choose a place, where would be the right place? And he said Vancouver. So, I said okay, Vancouver it is.

This same individual also set up an apartment for Roman and picked him and his family up at the airport. When I asked Roman to speculate as to why this distant person would be so willing to extend such a long arm to help him, he said:

> ...he came here without knowing anybody, just him and his wife and maybe a son, and when they came here they didn't know anybody...it was really hard for him.... He doesn't want others to have the same experience, to go through the same hardships ...

Roman expressed having total confidence in the advice of this new friend.

The person who assisted Roman and his family, as with Fedor and Ivan, is what I called a 'random contact.' These were recently established relationships. But according to Granovetter, they would be 'strong' ties because there is considerable motivation to help. As Roman's quote suggests, this bond is based on a common experience, and a common ethnicity. And Roman, Ivan and Fedor all took the offered advice and assistance into their settlement decisions, illustrating again that actors do not make decisions in a social vacuum, but instead are embedded within various social institutions.

For the other respondents who did not have a personal contact in Vancouver, responses to my "Why Vancouver?" were related to the anticipated lifestyle in Vancouver. Five respondents spoke of having done "research" and envisioned this to be a city that offered the cultural and social environment that they desired. For instance Lewis said, "It's good to research everything, it's good to look at why are you there, why is that place for me. That's why I thought Vancouver." Alexei describes his process of deciding:

> ...we started to research a little bit more about Canada, and somehow Vancouver was then ranked first in the world as quality of life and we started to hear from different sources the same thing, so because I believed that well for me it wouldn't be a problem [to find work], so why should we start in Toronto when Vancouver is the best city, so we can enjoy it.

Contained within the above quote from Alexei is another factor noted by some of the respondents, including some of those whose families also influenced their choice: Vancouver was chosen because it offered a more attractive lifestyle. In comparison, Toronto (and less frequently Calgary and Edmonton) was commonly hailed as the city with a flourishing job market for engineers. Those who chose Vancouver illustrate both the confidence they have in their professional skills and their prioritization of quality of life over pure economic gain. In addition, some expected that because Vancouver was a large city, it would offer a robust labour market, and other physical environment and cultural amenities. Alexei, a computer and electrical engineer from the Ukraine says:

> At first I wanted to come to Toronto because I knew that it would be easier for me to find work … It was two or three months before coming to this country, I changed my mind. I choose Vancouver because of clean environment and it's very beautiful, very beautiful city, I don't know exactly. Some of this reason. It's also a big city, approximately 2 million, it's a good labour market so I don't think that it's worse than Toronto.

In fact, only three respondents emphasized anticipated economic benefits as a factor shaping their choice of Vancouver. Two said that they wanted to avoid Toronto which they feared would be flooded with immigrant engineers, and so tactically they looked ahead to better employment odds and less competition in Vancouver. Another Eastern European resident believed that there would be a large number of wealthy Chinese immigrants, which would in some way allow him to gain social capital through interaction with them. He believes, "This means if I will contact with rich people, I will be sooner or later rich. If I will contact with poor people, I will sooner or later be poor."

As a researcher, I wonder about the prioritziation of factors influencing the decision to migrate to Vancouver. I take it as axiomatic that multiple factors were considered in the decision, and they are not mutually exclusive. Yet, the referral to existing contacts, or recently established contacts by nearly 80% of the sample indicates to me that this was a significant factor in bringing these

engineers to Vancouver. Because the contact was of the same nationality as the migrant in every example, it is clear that an entrance into existing co-ethnic networks occurred for over half of the respondents. As Castles and Miller (1998) suggest, the experience of the earlier cohort greatly influences the ongoing immigrant experience of newcomers to the society. How fruitful these contacts with other co-ethnics are for entrance into the Vancouver labour market, and what kind of social capital is attained from these social contacts will be explored in Chapter Seven.

Residential Neighbourhoods in Vancouver

I would like to make a few comments about the neighbourhoods into which interviewees settled. As Mitchell (2000) points out, *where* a migrant settles often significantly affects the social network and related information network of job opportunities. Because the engineers I interviewed settled all over the city (although with a heavy East Vancouver and Burnaby emphasis), and from multiple ethnic groups, it was beyond the scope of this thesis to examine in any depth how community-based social contact played out to any great extent.

I raise these inconclusive findings for a reason, however. When I asked interviewees to describe where and why they lived in their respective neighbourhoods, I was frequently given a response that I had not expected. Of those who settled in neighbourhoods where there was a large co-ethnic community, seven deliberately stressed that they would just as readily not live near other co-ethnics, and they make efforts to "network" with people around the city. For example, John, a mining engineer from China criticizes the cultural homogeneity within Chinatown in Vancouver. He says:

> If you need a job, just go to the Chinese restaurant, if you want to buy some food, just go to the Chinese supermarket and you can talk with them in Chinese. I think that's the main reason that lots of immigrants stay in Vancouver. But for me, I am not going to stay.

Nehru correspondingly described how he moved in from Surrey to Vancouver to avoid relying too heavily on Indian contacts, and Yousef explained being content *not* living in North Vancouver where many Iranians live. These sentiments indicate several of the engineers want autonomy, in effect indicating how they are different from other immigrants, or from their countrymen and women.

Related to this, Markov explains that wanting independence from his cultural ties is the reason he does not live in Toronto:

> I know that in Toronto there was even like small area of the city that's called North York – it's settled mostly with people from the Soviet Union. You see, I decided not to have many contact with my previous countrymen… I just decided that I have to assimilate with this culture, and you see, all your previous contacts, they will disturb you. I mean, that you won't be given much opportunity to improve your language or professional culture if you have all the time contacts with your previous culture. That's why…

This undercurrent of wanting to assert independence from their respective ethnic group arose in other contexts. When asked about receiving job assistance from other immigrants, Mark, an electrical engineer from India declares:

> I met people from other parts, I mean I'm not that type, you know, who is hanging around with *my* people. Well I make friends with people from all parts of the world. I have Filipino friends, I have Fijian friends, I have Chinese friends, I have Canadian friends, I have friends from England… So, we don't, I don't, you know, only mix with my own people just to have a sense of belonging. Well, *I'm* not like that…

In total, approximately one-third of respondents expressed a general desire to associate with people of all ethnicities, and not to be limited to their own ethnic group. Because I did not have questions in my interview schedule that raised the issue of cultural independence, I found these comments insightful. There seemed a desire by the interviewees to extend beyond their ethnic community and to integrate fully into the wider Vancouver community and Canadian society. I speculate that these unprompted remarks may indicate common concerns among foreign-trained engineers – the concern that their ethnic identity is concealing their professional identity. I

wonder if many of the respondents believe that a multi-ethnic and spatially wide-reaching network of contacts throughout the city is needed to establish professional engineer employment connections, as Granovetter's theories on the value of "social structures" for passing job information would suggest. Because social contacts were relied heavily upon in deciding to settle in Vancouver, it will be interesting to observe if these familial or friend-based ties are severed in the search of professional engineering employment. The issues and the particular job search strategies used will be taken up in Chapter Seven.

Employment Expectations

This chapter has discussed thus far pre-migration motivation, and initial Vancouver settlement. Before moving on to the experience of looking for work, let me discuss the beliefs held by engineers about their labour market prospects. The majority of respondents (18 out of 23) thought that despite some initial difficulty, they would quickly find employment.[39] Some even offered time-lines, ranging from a few weeks to six months. Alexei says, "What I thought? I [thought] it would be pretty, pretty easy. I think it would take 4 or 3, 4 months...". A large number said that they were aware of engineering licensing requirements, but did not expect finding professional employment to be so difficult. Hector wistfully recalls knowing "only the requirements, but nothing about the difficulties to get a job." Others admit that they did not think they would have any trouble. Still others, like Ivan expected there to be an initial transition period while he made contacts and got his degree and experience evaluated, but once this was done, he expected to breeze into a job.

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[39] Because two interviewees immigrated as students and did not intend to join the workforce at the time of migration, we did not discuss pre-migration employment expectations in the interviews.

Only four thought that they might start in a lower position than "engineer," albeit related to the occupation, such as technician or draftsperson. The optimism and confidence in their skill comes through because they felt that once given a chance, they could work hard to impress the employers and they would quickly move up to an "engineering" position. It is unmistakable that many of the engineers were not expecting such difficulties, even if they knew about the licensing requirements. Vasin said:

> I had no idea the situation was going to be like that... once I was here and I met some people and they told me that the situation was like that... I would definitely have given a second thought to my decision if I had known that all this kind of stuff was going to happen.

Just how accurate their understandings of the licensing requirements are will be evaluated in the following chapter.

Merely four of the respondents describe having previous information about the difficulties of being hired as engineers in Canada. In each case, it was relatives or friends in Canada who forewarned them. They explained that despite being warned, they did not wish to heed these cautionary words. Nehru confesses:

> I knew there are problems for people who came from all places, particularly for civil engineers. I had some idea, my relatives had warned me. But I thought why not give it a try? Maybe if not at a high level I can start at an intermediate level. Maybe I could try, but I would eventually get it.

More generally, information about labour market opportunities varied widely. Barbara, a Chinese woman sent me a website link after our interview to show me where she read prior to migrating about the difficulties and strategies suggested by other Chinese in Vancouver (see www.vansky.net). For those that had engineering friends who had emigrated prior to them, difficulties had been portrayed through phone conversations as well. But of my 23 respondents, the overwhelming attitude was that because of their perseverance and good working experience, such difficulties would not apply to them.

Only one respondent, Margarita, one of the two respondent in my group to have been hired thus far as an engineer, admitted that she was pessimistic and fearful of finding work in Vancouver prior to arriving. She had much more faith in her husband, who at the time of the interview, was still searching.

In Conclusion

In conclusion, this chapter offered a summary of recollections made by participants on why they chose to come to Canada and Vancouver, and their expectation of finding work. This chapter demonstrates that the traditional reliance on economistic reasoning used to understand the migration behaviour of highly skilled workers is not sufficient. While, lucrative and stable professional employment opportunities were noted as motivating "push" factors to immigrate among the group, economic enticement does not alone explain the full migration process. The chapter argued that while social networks are rarely examined in understanding the movement of professional workers, they are a major influence in settlement choices. The choice to come to Vancouver or the neighbourhood of residence is mediated by the advice or desire to be near family, friends, and other co-ethnic contacts for many of my interviewees. Yet, while social contacts seem influential in choosing Vancouver, once here, many engineers said they wanted independence, and even disassociation from their ethnic group. Social networks were valued in the context of coming to this country, but it is yet to be seen they are helpful in attaining a job. In the final chapter I look at the role of social intermediaries (or lack of) in affecting professional employment of immigrant engineers in Vancouver. Next, however, I examine the first formal employment-related institution that the engineers encounter upon arrival: the professional licensing body, APEGBC.

Chapter 6: APEGBC – The Authority of the Provincial Regulatory Body

"The Sun Never Sets on Innovation" (APEGBC's website welcome page)

The inability of highly skilled or professional immigrants to have their academic credentials and work experience recognized is one of – if not *the* – central obstacle facing labour market integration as noted in Canadian policy literature (e.g. Spigelman, 1999; Brouwer, 1999; AMSSA, 2000; Bloom and Grant, 2001) and by immigrants themselves (Basran and Zong, 1998). Pursuing the "socio-institutional" framework laid out in Chapter Three in this chapter. I turn my gaze on *formal* regulatory institutions. Jamie Peck (1989, 1996, 2001), in particular, emphasizes the influence of regulatory institutions to comprehend various state policies and programs in combination with local social and economic factors in shaping local labour markets. In this chapter, I wish specifically to address the main institutions involved in the licensing and evaluation procedures for foreign-trained professionals, namely state-sanctioned occupational regulatory boards. In particular, the influence of engineering regulatory bodies, the Canadian Council of Professional Engineers (CCPE) and the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC), will be examined for their role in providing access (or barriers) to engineering jobs in Vancouver. The aim is to illustrate how these institutions are an example of the kind of regulatory control emphasized by Peck, and which makes attaining a professional job a *social and regulated process,* and not an atomized and uninterrupted process as the neoclassical model suggests.

This chapter consists of four sections. The first reviews APEGBC's legal jurisdiction over professional engineering licenses in the province, as well as APEGBC's procedures with respect to foreign applicants. In the second, information from the interviews about how recent

immigrants understand (and misunderstand) the licensing and registration procedures, as well as the channels along which information is attained, are presented. Third, I consider the strategies adopted by some immigrants in response to APEGBC's policies. At this time, I look to Bourdieu's notion of "institutional cultural capital," to understand why a large number of foreign-trained engineers wish to obtain Canadian credentials simply for local institutional recognition. In the final section, the goals and anticipated outcomes of the current joint MCAWS-APEGBC pilot project introduced in Chapter One are discussed as an example of how the state is attempting to review and change the current procedures of a state-sanctioned regulatory body.

"P.Eng. The license to engineer"

Peck's call to understand the influence of regulatory institutions is particularly timely with regards to occupational regulatory bodies in Canada for several reasons. At recent roundtable discussions and conferences across the country, the seemingly discriminatory and opaque licensing procedures of regulatory bodies have been increasingly criticized (McDade, 1988; Looking Ahead, 2001, 2002a, 2002b). And as suggested in Chapter One, Prior Learning Assessments, a more holistic and informal approach to evaluating professional knowledge and skills, as well as other "competency-based" assessments are the current focus of discussions among the policy community because formal or "degree based" assessments are viewed as biased and unfair (Laurier, 2001; Bloom and Grant, 2001). An important addendum to these critiques and policy discussions is the 1999 BC Human Rights Tribunal decision against the College of Physicians and Surgeons. The court ruled in favour of five foreign-trained doctors, ruling that the College discriminated against these applicants on the basis of place of origin (Patch, 1999). This watershed ruling illustrates the court's ability to challenge the practices of regulatory bodies (Sims, 2000), and the move towards an increasingly open-minded view of qualification

evaluation. Exactly the same issue is germane for engineers in Vancouver. As noted in Chapter

Two, Vancouver is currently receiving large numbers of immigrants who wish to find work as

"engineers" (approximately 2000 each year), but APEGBC only licenses annually approximately

150-200 foreign applicants to work as a professional engineer.

But why does APEGBC have authority to determine who can or cannot work as an engineer in

the province? As I noted in Chapter three, O'Neill (1997) notes that the state plays an

"indispensable role in the creation, governance and conduct of markets" (p. 290). One of the

state's roles is to govern professional occupations, which then directs workers into certain

occupations. In Canada, work conditions fall under provincial jurisdiction, and provincial

governments delegate the regulation of professions such as medicine, law, and engineering, to

self-governing groups, commonly referred to as professional associations (McDade, 1988: 9).

One form of professional self-regulation, as is the case with engineering, is to establish a

licensing body that controls the use of reserved professional titles, and the right to offer a licensed

service. These powers are granted to ensure that the public is protected from incompetent service

(*ibid*, p. 9).

Professional engineering licenses, therefore, are only awarded by the 12 provincial/territorial

associations/ordre.[40] In the province of BC, the regulator is APEGBC. It has legal jurisdiction to

confer or take away the right to perform engineering services. It also determines who can use the

professional engineer title (P.Eng), and whether someone can call themselves an "engineer" in the

province.[41] In short, it is illegal for anyone, including individuals licensed as professional

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[40] One agency, the Association of Professional Engineers, Geologists, and Geophysicists of the Northwest
Territories (APEGGNT) govern the Northwest Territories and Nunavut. "Ordre" is used in Quebec.
[41] APEGBC is responsible for both professional engineering and geoscientist titles in the province. There
are several grades of membership, but this study will only be concerned with criteria to be a Registered
Engineer Member (P.Eng.) or Engineer-in-Training (EIT).

engineers in other countries to call themselves "engineer," sign their names with "P.Eng," or to perform engineering work in BC without first being registered with APEGBC. APEGBC's institutional function is to maintain professional engineering standards by ensuring that all members in the province meet a minimum level of competence.

There is also a national umbrella organization, CCPE, constituted by the 12 provincial associations. CCPE accredits undergraduate engineering programs, and sets national professional qualification and ethical conduct standards. The registration of members, however, remains under provincial authority, and procedures for registration differ slightly by province. As such, the domain of each license is geographically specific to a province, meaning an engineer licensed, for example, with APEGBC can only practice in BC. Although there is a national mobility agreement between the provinces, registration and procedural barriers exist.

Recently, the CCPE voiced concern over the provision of engineering services and the use of "engineer" by non-registered members. On behalf of its provincial constituent members, CCPE placed a full-length advertisement in *Report on Business Magazine* captioned, "You're **Not** hiring a P.Eng? Sure you could cut the grass with scissors. But why would you? *Are you using the best resources available?*" (April 2002). This message, while slightly obscure, shows that CCPE is intent on expanding employer recognition about the value and symbolism of hiring a professional engineer (P.Eng). As the magazine advertisement says in smaller text, "Hiring a P.Eng means you're selecting a professional with demonstrated technical skills and ability. It's your guarantee of hiring someone with the right education, the right experience and the right attitude... Only a Professional Engineer is licensed to practise engineering in Canada." Included is a website link established to justify and explain the legal jurisdiction and quality assurance of hiring a P.Eng in Canada (www.peng.ca).

CCPE's motivation to advertise itself comes from a growing concern over both the use of "engineer" within the computer science community, as well as increasing numbers of non-registered foreign-trained engineers calling themselves "engineers."[42] In the first instance, software development has become an integral component of computer engineering systems, and many computer experts call themselves "software engineers" who have not met the extensive academic qualifications required to be licensed as engineers in Canada.[43] Further complicating the issue, Microsoft offers a software certification program titled Microsoft Certified System Engineer (MCSE), which directly contravenes CCPE's sovereignty over the title "engineer."[44] Many graduates of this course had unknowingly been breaking the provincial Engineering Act when they called themselves "system engineers" because the term "engineer" is to be used solely by registered professional engineers, and not granted after taking a software course. CCPE's position is that it has "an essential role to play in regulating the practice of software engineering... that [can] directly affect public safety and welfare," and to that end successfully challenged Microsoft's use of "engineer" in Canada in May 2001.[45] In the second instance, many recent immigrants do not seem aware that their use of the title "engineer" is prohibited without possessing a provincial license. Because "engineer" continues to be casually used within the IT industry, and the number of foreign-trained engineers trying to find employment as unlicensed "engineers" continues to grow, it seems that CCPE's need to assert control over engineering titles will not soon go away.

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[42] "Engineer" is deemed the equivalent of "Professional Engineer" or "P.Eng." Usage of any of these titles in BC without licensure with APEGBC is illegal for it contravenes the Engineering Act.

[43] There are on-going discussions between CCPE and the Association of Universities and Colleges of Canada regarding the use of "software engineer" within computer science programs in Canada.

[44] I first encountered frequent use of "engineer" within the IT industry when I interviewed a recent immigrant from Iran with a MSc in Electrical Engineering at her job search club. The club was comprised of people looking for employment within the IT field. When I explained that my research was in part looking at people who want to become "licensed" in Canada, one member of the job club derisively said, "What does it mean to be an 'engineer' anyway? We're all 'engineers. I've taken the MSCE program.'

[45] Source: www.ccpe.ca/ccpe.cfm?page=softwareEngineering

These issues are raised to provide some background information about the non-regulatory culture that exists within computer-software-electrical engineering. As will be apparent in the section reviewing interviewees' perceptions about APEGBC and engineering licenses in Canada, different attitudes among software and electrical engineers are clear, particularly among those who did not need to be licensed in their home countries. Be that as it may, nearly all respondents wished to be registered with APEGBC, that is, to have local recognition of their engineering credentials, and be associated with a prestigious professional body.

APEGBC: Registration of Foreign Applicants

Registration as a P.Eng at APEGBC is contingent upon three factors: academic training that meets Canadian standards; four years of relevant engineering experience under the supervision of a licensed engineer (of which *one year must be in Canada or the United States*); and the testing of professional and character standards (through, for example, professional conduct, and ethical standards).[46] APEGBC insists on performing all evaluations, including the evaluation of academic credentials.[47] For graduates of Canadian accredited engineering programs, academic requirements are automatically met since CCPE has a standing committee called the Canadian Engineering Accreditation Board (CEAB) ensuring Canadian undergraduate engineer programs "meet or exceed educational standards acceptable for professional engineer registration in Canada" (CEAB, 2001). For applicants educated outside Canada, methods of evaluation vary depending upon the country where the degree was attained. Currently, CCPE and CEAB have an international mobility agreement with the respective engineering accreditation boards in

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[46] Provincial licensing procedures for foreign applicants differ between provinces by method of evaluation for technical and academic knowledge and the number of required years of experience.
[47] Other evaluation services do now exist, such as the provincial International Credential Evaluation Services (ICES), which is operated by the Open Learning Agency and was established by the then MMI in 1995.

Australia, Ireland, New Zealand, United Kingdom, United States, South Africa, and most recently Hong Kong.[48] This agreement, now commonly called the "Washington Accord," establishes that member countries recognize each other's engineering academic programs as comparable. CCPE has also signed the NAFTA mutual recognition agreement, and recently concluded an agreement with La Commission des Titres d'Ingénieur (CTI) in France, which is a bilateral agreement between all Canadian provincial/territorial associations/ordre (with the exception of Ontario) and French "ingénieur diplomés" (CEAB, 2001: 32-34). According to CCPE, fundamental to these agreements is each country's belief that "the accreditation of engineering programs is a key foundation for the practice of engineering."[49] No engineers in this study benefited from the Washington Accord.

CCPE's international mobility agreements mean that APEGBC accepts the academic qualifications from applicants trained in the above-mentioned countries. But as the list of top 10 source countries for immigrants intending to work as "engineers" in BC showed in Chapter 4 (see Appendix 6), the Washington Accord only holds in one of the top ten source countries (Hong Kong). The vast majority of engineers coming to BC were trained in countries that do not have international mobility agreements with CCPE. They thereby face more difficult licensing and credential evaluation procedures with APEGBC because their academic credentials are not considered comparable. Instead, to evaluate the academic credentials of engineers from these other countries, each institution is checked against a "list" of baccalaureate programs in engineering from foreign universities.[50] If an applicant's institution is on the "Foreign List," a

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[48] The first agreement was signed in 1980 between the CEAB of the CCPE and the Engineering Accreditation Commission of the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET) of the United States. Six countries signed the second agreement between in 1989, with South Africa joining in 1993 and Hong Kong in 1995.

[49] Source: www.ccpe.ca/ccpe.cfm?page=Mobility_Int.

[50] The Canadian Engineering Qualifications Board's (CEQB), a standing committee of the CCPE, maintains this list.

minimum of three "confirmatory exams," each costing $247 may be assigned to verify technical knowledge. If an applicant's institution is not on CEQB's "Foreign List," the minimum number of confirmatory exams increases to six, with the maximum number of exams being 20 (APEGBC Application Guide, 2002).[51] Other costs for registration include a $360 application fee, $110 for the Professional Practice exam (now used to evaluate professional standards), plus the cost of manuals and books for exam preparation.

APEGBC has also recently introduced an interview program for more educated or more experienced foreign applicants. Rather than writing confirmatory exams, applicants with 10 years or more work experience have their engineering knowledge assessed in an interview with senior APEGBC members. (Recognized Masters or PhD degrees can also count towards the required 10 years.) About this process, an APEGBC registrar says,

> The system we have works, it's not perfect. As I say we have enhanced it with our interview program where we say okay, you have "x" number of years from experience; you're far too far away from university to be writing exams, unless we find that you really don't know engineering at the level at which we think you should. The interview has structure. It's a technical interview, it's a professional interview. They want to find out what kind of professional norms they have, and see what they would do in certain situations. And they can have, well 70% of them have the exams waived, or will have an exam assignment reduced or they'll zero in and say, for example, this person appears to have very little knowledge of the BC Building Code, and they'll be working in that field – we recommend that before they get registered, they take course in the building codes. We think it's a fairer process than just hitting everybody with a bunch of exams.

This interview upon which all professional and technical qualifications are evaluated lasts a mere hour. Candidates have 5-10 minutes to present the work experience outlined on their resume, followed by roughly 40 minutes of questioning by their peers. This seems a surprisingly little amount of time to evaluate a foreign applicant's knowledge of engineering principles and theories *and* his or her work experience, particularly given that this applicant's professional recognition is on-the-line. This also leaves little room for communication difficulties or cultural differences to

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[51] Graduates of Philippine universities are singled out as simply not welcome to apply. No explanation is given for this on CCPE or APEGBC's website.

be worked out. When asked why only an hour is allotted, a registrar said, "[the interviewers] can usually find out all they have to know. You know, they get the idea if the person is qualified or not."

For all applicants, once APEGBC recognizes suitable academic training, the next step is to gain a minimum of four years engineering experience meeting the association's suitability criteria.[52] Herein lies the often-insurmountable obstacle for foreign-trained engineers: *one year of the experience must be gained in Canada and/or the United States.* To meet APEGBC's licensing requirements, foreign-trained engineers must find local employment. However, without any local professional recognition or recognizable academic credentials, foreign-trained engineers face the difficult task of needing to convince employers of the validity of their engineering degrees and work experience on their own. In a profession that relies on institutional recognition and professional licensure to ensure technical competency, these foreign-trained engineers are at a severe disadvantage, caught in what many felt was a "catch-22 situation." Experience is needed to get a P.Eng license, but few employers want to give foreign-trained engineers work opportunities before they are assured of their competence (with a P.Eng license). The identification of this obstacle and the assortment of responses will be discussed in the next section.

APEGBC is an institutional body that unequivocally influences who can work as an engineer in the province. As a state-sanctioned self-regulating professional body, it has direct and complete control over who can use the professional title of "engineer," thereby governing who can work as an engineer in the province. It is entrusted with the important task of ensuring competent

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[52] Supervised work is required of recent graduates of Canadian schools, as well as foreign applicants. Relevant experience includes first-hand involvement with projects and application of various engineering theories, including analysis, design and synthesis, testing and implementation (APEGBC Reference Guide, 2002). An applicant with less than four years experience must apply for the Engineer-in-Training (EIT) program, as would any graduate from a Canadian engineering program.

engineering work for the safety and security of Canadian society. However, this is a clear example of the regulatory control to which Peck refers, making access to engineering employment a *social and regulated process*, and illustrating that the labour market for professional engineers is not free to respond to supply and demand fluctuations for labour. In fact, if APEGBC's control over the supply of engineering labour is great enough to construct the supply of professional engineers (the number who are licensed to perform engineering work), the greater the economic benefits for the current members. Certainly, APEGBC would never acknowledge financial motivations rather than safety standard concerns, but the final results are the same. Foreign-trained engineers are not free to enter the labour market in their desired profession. Instead, they must manoeuvre themselves through multiple institutions, of which APEGBC is key.

Understanding (and Misunderstanding) APEGBC's Registration Procedures

The diversity of ways that immigrant engineers interpret and respond to APEGBC's licensing requirements will be examined in this section. Evaluating the ways in which foreign-applicants understand APEGBC's requirements is important because simply not understanding APEGBC's requirements dissuades or prevents many otherwise qualified applicants from applying. Failure to comprehend is a barrier in itself. Additionally, their particular interpretations of the requirements affect their subsequent strategies to find employment.

To begin, CCPE has established an Initial Assessment program run in conjunction with CIC. This program attempts to bring two autonomous institutions together to prevent unqualified engineers from immigrating to Canada, and to increase the level of understanding about professional licensing requirements in Canada among overseas immigration applicants. The Initial Assessment

therefore consists of CCPE evaluating the *academic engineering credentials* of potential

immigrants wishing to come to Canada under the independent skilled worker category to work as

"engineers."[53] A positive Initial Assessment indicates that CCPE expects their credentials will be

favourably viewed by the provincial licensing boards (like APEGBC), and which indicates

greater likelihood of employability to a CIC Immigration Officer. The Assessment also enables

CCPE to disseminate licensing requirements to potential applicants through the required forms.

I raise the Initial Assessment program for two reasons: first, it illustrates an attempt made by two

regulatory institutions with different jurisdictions of authority, namely CIC (immigration) and

CCPE (engineering), to reduce informational barriers among engineers overseas, and to rectify

the perceived problem of unqualified engineers immigrating to Canada; second, it has had an

unfortunate and unintended outcome of cultivating misconceptions and expectations among

engineers who do immigrate. This is because many immigrants interpret a positive Initial

Assessment as an indication that engineering licensing procedures will be straightforward and

smooth in Canada. For example, Lewis illustrates his confusion: "the CCPE *invite* my engineer,

said that I was an engineer qualified to immigrate." Vasin expresses a similar frustration:

> I took my application to the Canadian High Commission in New Delhi. I was told that I am
> engineer, that's why they approved my application. If they thought I am not engineer, they
> should have straight away rejected my application. That's what I feel, instead of letting
> people like me come over here and then wander around doing nothing.

This problem arises because a third institution, the provincial regulatory association like

APEGBC, retains the right to confer engineering titles in Canada. In other words, a positive

assessment has *no bearing* on an immigrant's eligibility for registration with provincial

associations like APEGBC. Immigrants can only apply for engineering registration with

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[53] Having an Initial Assessment was originally "required," but is now "strongly recommended" as the points system used to evaluate skilled worker immigrant applicants is re-evaluated.

provincial associations once they have landed in Canada.[54] Therefore, while the program *does* succeed in disseminating information about the requirement of having education and work qualifications evaluated in Canada, it also succeeds in establishing unrealistic expectations of how easily this will be achieved. As a result, many immigrants fall between the cracks of the different regulatory structures of CCPE, APEGBC, and CIC and resign in frustration by giving up on the hope of practicing engineering in Canada.

When I asked interviewees to tell me how they had attained the information about licensing procedures, I received varying responses. For example, only 13 of the 25 had even contacted APEGBC for an application package, and eight of these 13 explained that they did this because it was suggested on the Initial Assessment forms. The five others who requested packages from APEGBC did so after it was recommended to them by local immigrant agencies, by employers, or from brochures received at the airport. Seven others explained that they learned of APEGBC's procedures through other immigrants or by word-of-mouth, and felt that their understanding based on this source was sufficient. Two others used APEGBC's website, and two went to information sessions geared towards immigrants at APEGBC's office in Burnaby.[55]

Conversely, I was told by a registrar at APEGBC that they believe most information about licensing procedures is attained through their website, www.apeg.bc.ca. In its current state, the website offers a wealth of information in highly formal language. There are myriad charts and tables employed to clarify the licensing procedures, many of which are confusing to foreign applicants. One aspect of the provincial Pilot Project, to be discussed below, is to focus on the ability of the APEGBC's website to communicate complex and detailed procedures.

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[54] Ontario has recently become an exception to this and now allows overseas applicants, although applicants are still required to obtain Canadian experience.
[55] In the interview, three did not specify where they received the information, whereas others mentioned multiple sources.

When I asked interviewees to explain how APEGBC's procedures related to them, again, there was an assortment of responses. At the time of interviews, only six had sent completed applications to APEGBC, three of whom were in the process of writing their confirmatory examinations, and one had recently passed all his assigned exams and would soon receive a "P.Eng" designation. The remaining 19 others had not applied for various reasons: three said they needed more information about what was required and what would be gained from registration; two were currently working in engineering-related jobs and thought they would apply soon; five said they would not apply because costs were too prohibitive; four electrical/computer engineers were waiting for employers to confirm that it would be needed; and seven believed that they needed to get local work experience, or Canadian credentials by either taking English or engineering-related university/college courses before applying.

How well interviewees understood APEGBC's licensing requirements corresponded to the means of attaining the information. Those who had already applied, had gone to information sessions, or were currently working in engineer-related jobs, possessed a clear comprehension of APEGBC's procedures.[56] Among the other half, knowledge was much more spotty, particularly stemming from word-of-mouth communication. Misinterpretations included beliefs that there is one single-chance exam, that Canadian education was *required*, and/or that 3 or 4 years of *only Canadian* work experience would be acceptable. Fred's comment exemplifies nearly all these misconceptions:

> Because many, many, you know, many, many Chinese immigrants are engineer, used to be an engineer, they want to have engineer job here, and they want to have engineer certificate, but all my friends, all my network, they all failed. It's very difficult and very hard to pass that. First you need engineering education here, this will spend at least 2 years to get a diploma, some BCIT diploma, or you need to spend 4 years in UBC or Simon Fraser to get you

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[56] 12 of the 25 respondents illustrated a strong understanding of APEGBC's procedures.

engineering bachelor, and then you need to work 2 or 3 years working experience, and then you can apply. Oh, long way…

Inaccurate information about licensing procedures was frequently passed along a social network, and misconceptions were most common among the more recent arrivals. Licensing requirements and procedures for engineering employment thus comes to immigrants from multiple sources, helping both to disseminate information but also creating misconceptions.

Of all the licensing requirements, the one most clearly and widely known to foreign-trained engineers is their need to obtain one year of Canadian (or American) work experience for P.Eng licensure with APEGBC. APEGBC maintains that this one year requirement is essential because,

> We feel, if you're going to be licensed to practice in British Columbia, you need to have practiced here for at least a year to learn standards, like technical standards, professional standards – things that are particular to B.C., like climate, soil conditions, whatever. And that you can't just be parachuted in with a full professional designation when you haven't become acclimatised to how the profession operates in this country. And your professional obligations –as you know, in different cultures there are things that are perfectly acceptable in some, and totally frowned upon in others – and vice versa. (APEGBC Senior Registrar).

There was confusion over whether applicants could apply to APEGBC before this one year was completed (they can), but nearly all participants cited the need to find engineering work as their current goal.[57] Trying to find work in a regulated profession without having engineering credentials recognizable by an employer, or other local experience, makes it difficult for an immigrant to convince an employer of their competence. In addition, non-licensed immigrants are limited to applying to junior positions were a P.Eng license is not required (i.e. they would work under the supervision of a licensed engineer). The find-work-without-a-license, need-a-license-to-find-work cycle is where most recent immigrants are trapped. During the interviews, the "chicken and egg," and "catch-22 situation" expressions were frequently and exasperatedly employed to describe the difficulties imposed by this requirement. Nehru's description is emblematic:

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[57] Four stated that did not want to pay the registration fee until they knew that they could get the relevant work experience. One said this was because a P.Eng from APEGBC would not have value in Ontario, which is not accurate with the previously mentioned national (interprovincial) mobility agreement.

I went to APEGBC and they said you need one year's experience in Canada, North America to be enrolled in our association. I tried a number of companies to get some experience. Everybody said that you are in a "catch-22" position. You can't get experience unless somebody gives you a chance, and nobody will give you a chance! It's like that, because you have no experience. So, I was going like that for about 16/17 months.

Similarly, Malak expresses how the required one year is his only real obstacle:

... but only one problem, this one year experience, I told even during my presentation last time to [my immigrant employment assistance program], I told them, it's become like the egg and the chicken. Which one is first? Because the APEG asks for one year's experience, when you go to the private sector, I'm not sure about the government, they ask about the P.Eng. So how to get this? Which one first, the egg or the chicken?

And in trying to find an English expression for barrier, Jasmine eloquently conveys her

frustration with the requirement:

And the one year Canadian experience, it is very, it is... like, I don't know in English...we say that, like, they put a rock in the road, but I don't know in English... in your way, they put something just to make it difficult.

In the next section, I begin to explore strategies employed to overcome this obstacle.

Strategies Adopted: Accumulating Institutional Cultural Capital

Immigrants wanting a career as a professional engineer in Canada are only too aware of the value of a P.Eng license. The P.Eng title is legally needed because engineering is a regulated profession. But the P.Eng also holds immense value as a locally recognized title, guaranteeing competence and confidence in technical engineering abilities and academic training. It is a symbol of professional status and institutional prestige among other professionals (and compared to non-licensed immigrants). Even among immigrants who might be able to find engineering-related work (although not legally as an "engineer"), a P.Eng license is sought because it will

impart on the holder the same respect and authority in Canada that they held prior to migration.

As Lewis says:

> My personal reason? I like the profession, I like engineering, and I have the professional skill and I didn't like to reject or give up this thing. Also I am confident for my skill and organization to do the technical problem. I can do very well, as other engineers. I get a very good feeling when I succeed, so I think maybe this is the best job for me. I am engineer...now I am very proud. I like to be engineer. If I can not get the qualification in Canada, I think I will [return to China]... but I think I will get it. I will get it.

In kinds of engineering such as industrial, mining, civil, mechanical, or structural as in Lewis's case, the need for a P.Eng is paramount. Legal recognition and safety standards are of utmost importance. Work without a P.Eng may be attainable, but it would be junior or supervised work. It would also be neither of comparable responsibility or such an intellectual challenge as many immigrants experience prior to migration. Positions involving design and construction are not attainable without a P.Eng. In short, professionally challenging work in traditional engineering fields is not possible without this title.

Among cutting edge software-computer-electrical engineers, as noted earlier, there is less of a regulatory culture because many practitioners do not feel safety standards are compromised. Many electrical-computer engineers interviewed believe a P.Eng is not necessary to find work. For example, Yousef, a recent graduate from UBC's Electrical Engineer program explains that in a rapidly evolving field like his, recent knowledge is more important for employers than satisfying regulatory rules.

> Someone with fresh knowledge is more attractive to [employers] than an engineer, for example, who trained 20 years ago and has the P.Eng to prove it. If someone shows that he is keeping up with prime technology then that's what's important (Yousef).

Still, *all but two* of the electrical-computer engineers in this study said that they would like to be licensed.[58] Given his earlier comments, I asked Yousef if he intended to apply for a P.Eng once he found work. He says:

> Yousef: I think, yeah, I will, but as I told you it's not necessary to get a job to have it. Maybe it will help if the economy shows some sort of... it will help but it's not a requirement I don't think.
>
> KG: But then why would you do it then?
>
> Yousef: Because just it helps. (.) And it's a title.

Fedor, an electrical engineer from Yugoslavia similarly says, "... of course it is in my interest to become a member of such a prestigious professional body." These comments illustrate that even among engineers who may be able to find challenging professional work without a P.Eng, the title is believed to hold considerable value to foreign-trained engineers. It shows Canadian recognition and competence in a highly competitive and regulated labour market. And according to Bourdieu, because it is institutional cultural capital, it holds value by providing recognized professional status that enables access into elite social circles, for further career advancement.

In order to obtain the P.Eng title, however, there remains the difficult obstacle of getting local work without having local professional recognition. Newcomers need to convince employers of their engineering competence with no more than their foreign academic credentials. It is here that Bourdieu's notion of institutional cultural capital is again helpful. According to Bourdieu (1986) the value of an academic degree is in its institutional authority. By virtue of association, the prestige and intellectual standards of an institution are related to the title or degree holder. The value of the credential, therefore, has two components. First, a credential holds value for the individual in the *objective* technical or occupational knowledge that the degree imparts (Bourdieu, 1984: 182). Second, a degree holds value in its *subjective* social value based on the

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[58] The two who showed indifference about wanting a P.Eng license were both electrical engineers from Iran. They both explained that many of their Iranian friends had found well-paying work in Canada without first being licensed.

cultural recognition of the quality of the institution (Bourdieu, 1984: 183). The subjective value of a credential to the holder is based on the cultural recognition that is connoted by the institution that grants it.

Recognizing that employers are likely unacquainted with their degree-granting institutions, many newcomers use credential evaluation services to have their academic degrees compared to Canadian standards. This translated document indicates to a potential employer the *objective* value of a foreign-degree, comparing the technical knowledge he or she learned to what is taught in Canadian engineering programs.[59] Regardless of what the evaluated certificate says, however, an employer still *subjectively* evaluates the degree. Most immigrants feared that the academic institution they attended had low social or symbolic value for Canadian employers. For example, Alexei shows frustration over the lack of value of his Ukrainian credentials in Canada:

> And I think I need some education from Canada, Canadian education system, because many people see Dnepropetrovsk State University, it's difficult to pronounce even! University, what university? Maybe it doesn't exist at all!

Very few interviewees actually showed insecurity or any doubt in their technical abilities. As would be expected, when asked where their degrees were attained, answers were typically vague and boastful. For example, Fedor said, "It is one of the most prestigious universities in that part of Europe." Mark says, "It was the major engineering college in the province." Ivan says, "I graduated by very good teachers. Not only Russian known, but world-wide known university." But despite the claims made of the value of their degrees, a common strategy among the engineers was to pursue some kind of Canadian education. The goal is not to gain knowledge, but simply to obtain Canadian credentials, hoping this would convince local employers of their cultural competence to obtain a preliminary job and work experience. For this reason, 16 of the

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[59] Note, immigrants only use these evaluation services for employers because APEGBC insists on performing its own evaluations.

25 people interviewed were either enrolled in a Canadian institution, or thought that they would

enrol soon. For example, one recent immigrant who has a PhD in Civil Engineering from a

university in Iran said:

> If I can't get a job very soon, I will maybe apply to UBC to complete my second Ph.D from
> Canada. This I think will be a good chance for me to find a job in Canada. I think that,
> because if you want to work in Canada, you must have Canadian experience, and this I think
> is very impossible to get. Nobody will accepted to you because you didn't have Canadian
> experience, and I don't know how you can get this experience if you didn't work with a
> company in Canada (Marwan).

Nehru also indicated that he pursued courses in Canada simply for the sake of his resume. He

explains:

> I took some courses at BCIT just for the heck of it so that I had some credentials from
> Canada. I took three courses in BCIT, and I think my marks were in the range of 90-97%.
> That's fairly good and not too much effort was required to get those... I just took because I
> wanted to have something of Canada to put on my resume.

The recognition by foreign-trained engineers that they need to be recognized as culturally

competent, as more than technically adept, is particularly astute on their parts. This indicates that

they are aware that entrance into labour markets is very much a social process, and being able to

illustrate technical competence does not guarantee employment. Particularly because of

intensified competition in the workforce, applicants are evaluated for cultural competence,

language and communication skills, as well as a good rapport with clients. After conducting a

focus group with employers, a registrar at APEGBC said,

> [Employers are] looking for people who can talk to their clients. They're not looking for a
> designer who can go in the backroom and make drawings all day, they want somebody who is
> a Jack or Jill of all engineering trades, who can operate at the design level, and can talk to
> clients. They're looking for sophistication and professionalism. Especially in this economy
> you need to have a lot of things roll up into one.

The subjective value of credentials may indeed be playing a large role, and is beyond the

influence of APEGBC. But for many recent immigrants, the inability to get a P.Eng and the need

for evidence of Canadian credentials go hand-in-hand.

This section attempted to establish and explore the ways that immigrant engineers perceive and respond to APEGBC's procedures. It was found that there are a diversity of interpretations about licensing requirements, and multiple ways in which the information is attained by newcomers. The means of obtaining information are both formal and informal, resulting in accurate and sometimes inaccurate information. Part of the reason APEGBC accredits so few foreign-trained engineers is because such a small proportion apply. A major reason few apply, however, and this is the most frustrating obstacles for recent immigrants, is the need for one year's experience in Canada or the United States. The requirement leads to what many immigrants perceive as an insurmountable obstacle or a "catch-22 situation." Bourdieu's concept of institutional cultural capital is helpful here to understand the subsequent strategy undertaken by many immigrants to get Canadian credentials on their c.v. The value of this education is less for technical knowledge, but more in its recognition by local employers. The next section elaborates on how a provincial ministry perceives APEGBC's role, and on what the Pilot Project has chosen to focus.

Pilot Project: "A Framework for Action" and Anticipated Results

Concurrent with this research has been a "Pilot Project for Foreign-Trained Professional Engineers in BC." Initiated in March 2001 under BC's former NDP government by the former Ministry of Multiculturalism and Immigration (MMI), the project is in partnership with APEGBC, CCPE, and the Government of Canada. It is intended to resolve issues around the professional qualifications for foreign-trained engineers in the province, and has since become regarded as one of the "successful" features of the provincial strategy regarding access to professional employment for immigrants in BC (Looking Ahead, 2002b).

Here, I briefly outline the objectives of this project now directed through the Ministry of Community, Aboriginal and Women's Services (MCAWS) under the new Liberal government,

and address concerns raised by the project about licensing foreign-trained engineers. The success and proposed deliverables of the program will also be reviewed, as an example of what O'Neill (1997) would call "qualitative state intervention."

The objectives of the project (explained as the "framework to action") are multiple, and are designed to address the individual and structural barriers that may be preventing foreign-trained engineers from gaining relevant employment in the province. The first of the project's three major initiatives is to run a professional work experience program for a sample group of underemployed foreign-trained engineers in the province. The objective is to help 20 individuals find work experience necessary for an APEGBC license, and from which a "working service model" can be created to help other immigrants gain professional recognition. The second initiative is to analyse and review existing information services made available by APEGBC about registration procedures. The objective is to develop more easily comprehensible, comprehensive and timely information targeted to foreign-trained engineers, employers, and immigrant service providers. The third initiative reviews the current licensing policy and procedures at the different levels of government, including CCPE's Initial Assessment program, the EIT/P.Eng licensing procedures, and considers discussions about Prior Learning Assessment (PLA), with the objective to make procedures more consistent and streamlined. In addition to these initiatives, there are "three supporting activities" of on-going research, communication, and evaluation (see *Framework for Action: Pilot Project for Foreign-Trained Professional Engineers in BC*, available at www.lookingahead.bc.ca).

This pilot project is an interesting example of the relationship between two formal political/regulatory institutions attempting to address a social problem. MCAWS and the Province of BC initiated and are funding the project. APEGBC is playing an advisory role, although also putting forth substantial time and resources into the project. In other words, there is one formal

state-sanctioned institution (APEGBC) that has regulatory control over the profession and thinks that the process is working well. The second institution (a provincial ministry) is pushing for change in the way in which the profession is regulated because it perceives significant obstacles and barriers hindering newcomers. Clearly, then, this is a politically sensitive issue because the province has given authority to APEGBC, but seemingly now wishes to influence its policies. APEGBC deserves considerable credit for being involved in a government-led initiative, openly reassessing its registration procedures specific to foreign applicants. Through the project, APEGBC is re-evaluating its communication materials, and attempting to be more culturally sensitive to the misunderstanding that occurs with many foreign applicants. In addition, APEGBC helped recruit participants and potential employers for the work experience project. But APEGBC insists, however, on the authority of its procedures, and on the need of one year of experience in Canada or the United States for their foreign applicants.

In one of the interviews that I had with an individual involved from the ministry-side of the project, emphasis was placed on a need for streamlined, culturally sensitive, less formal communication and discussion, rather than continuing with exams, interviews, and a strict reliance on CCPE's "Foreign List." The tone certainly promoted many of the aims of Prior Learning Assessment approach, where knowledge is based within a competency framework, rather than on formal evaluation. How successful the project will be in changing APEGBC's current formal and standardized procedures remains to be seen.

Additionally, all parties involved in the project have expressed dissatisfaction with the time taken to begin certain elements. For instance, 20 foreign-trained engineers were selected for the project by September 2001, with the intention of beginning the work experience program in October 2001. In a recent discussion with the pilot project's coordinator in May 2002, I learned that the work experience and training project did not start up again until May, with the training to begin in

June 2002. The delays have been due to the Ministry needing to hire people to develop a curriculum for the training, turning it into what the coordinator called "an administrative nightmare." In the meantime, a few of the participants have found work on their own. And while this is a useful process, 20 selected engineers is a mere drop in the bucket of the 2000 or so new immigrants who are in the same boat.

Overall, the project is another example of how the multiple "socio-institutions" affect immigrants' entrance into professional occupations. As O'Neill (1997: 290) spoke of the state's "indispensable role in the creation, governance and conduct of markets," this project shows that the way in which it does so is in constant flux. The policies of the state, or "state intervention" change in response to the altering social and economic context in which it operates. Peck (1988) noted, "institutional structures evolve around (and subsequently change as well as being changed by)... these locally specific conditions" (p. 53). In Vancouver where there has been an increasing number of underemployed foreign-trained engineers, the provincial government is trying to exert influence on the licensing procedures that create a labour market barrier for so many, while also trying to respect APEGBC's occupational autonomy. Clearly, then, the operation of the local labour market for engineers is shaped by regulatory institutions, and the market into which immigrant engineers arrive wishing to use their skills is not free, uninterrupted, or rational.

In Conclusion

Examining the influence and control of one institution on the ability of foreign-trained engineers to enter the Vancouver labour market shows that finding employment as a professional engineer is not a smooth or uninterrupted process. This chapter has outlined APEGBC's legal jurisdiction over engineering titles in the province, and has illustrated how its licensing requirements affect

the behaviour of many recent immigrants. The clearest example is the need for immigrants to find local engineering-relevant work experience. Bourdieu's notion of "institutional cultural capital" is used to understand the different valuations of a P.Eng title among immigrants, noting the differences between foreign-trained software-computer engineers compared with more traditional kinds of engineers. Bourdieu's concept also elucidates an understanding of a common strategy employed by foreign engineers: to obtain Canadian credentials simply for local institutional recognition. The next chapter will investigate specifically the job searches undertaken, and other attempts made by foreign engineers to attain engineering work in Vancouver.

Chapter 7: Foreign-Trained Engineers' Employment and Settlement Strategies

For recent immigrants, finding employment in a host society is not a linear or straightforward process. As I have argued throughout this thesis, the labour market is a site of social and institutional practices, and cannot be understood by neoclassical theory. Instead, to understand how immigrants look for professional employment, we need to examine how they encounter a variety of existing institutions and structures (regulatory, social, and cultural), which shape their experience, expectations, and opportunities in the host society. In the previous two chapters, while I made use of the theoretical framework outlined in Chapter Three, it was sometimes implicit, and I typically only drew upon one of two of the three institutions forms I earlier identified; regulation, social embeddedness and networks, and cultural capital. In this, the final chapter of Part III, I incorporate all three institutions to examine the job search process, for it is here that the widest variety of influences comes together. The aim of this chapter is to uncover common elements in foreign-trained engineers' job search strategies with the hope that this insight will further our understanding of what is causing or perpetuating the problem of immigrant non-accreditation, specifically among engineers.

This chapter examines four substantive themes. First, many recent immigrants visit government-sponsored immigrant assistance agencies in the Lower Mainland. The ways in which foreign-trained engineers perceive and respond to the recommendations made in job search programs at these centres will be addressed using Peck's notion of regulatory institutions. Second, an extensive look at the sources and methods used by foreign-trained engineers to apply for specific jobs or to contact employers is given using Granovetter's classification of information networks. Third, the notions of co-ethnic networks and "social capital" are employed to provide a broader

view of the influence of families, ethnic communities, and other immigrants on mediating

available job information and for channelling immigrants into certain professions, drawing upon

Bourdieu and Mitchell's work. Fourth, the ways in which foreign-trained engineers believe

employers perceive their skills and cultural competence is discussed using again Bourdieu's

"cultural capital."

Immigrant Service Agencies and the "Job-Search Skills"

Beginning a job search in Vancouver is associated with an initial shock for many foreign-trained

engineers. After facing APEGBC's licensing procedures that require local work experience,

immigrants find a business community that does not warmly welcome their skills. They realize

finding employment may be a lengthy process, different from what they expected. The

conventions in applying for work, such as resume length, and use of a cover letter, vary quite

differently in different societies. For those with international work experience, there was some

preparedness for difference, but for those who were confined to a single national context, this

realization was humbling and mystifying. Older engineers from countries where education was

fully government-funded explain that their first jobs were assigned after university graduation,

and so they are totally inexperienced in the task of looking for work.

Consequently, many recent immigrants turn to government-sponsored immigrant service agencies

around the Lower Mainland for help. Immigrants learn of the centres by referral of other

immigrants, and some learn of them upon landing in Canada, but the centres are widely used and

known throughout the immigrant community.[60] In the Greater Vancouver Regional District, there

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[60] Despite contacting several immigrant centres on multiple occasions, I am frustrated by the inability to
know how many people are using these centres. It would be enormously helpful to see trends by ethnicity

are at least a dozen large centres offering services ranging from settlement assistance, translation services, English courses, and employment programs, such as job-training, career planning, entrepreneurialism and job-search programs.[61] Job-search programs, in particular, vary from one-day resume writing workshops, to six-week intensive job search training programs tailored to immigrants with professional skills. 22 of the 25 engineers interviewed had taken job search courses in Vancouver.[62] Three of the people interviewed began courses the day after they arrived in Canada.

Employment programs are funded in Canada by the federal government. Education, job training, and settlement services are provincially funded (Walker, 2001: 6). The employment assistance programs offered through immigrant service agencies are often largely state-financed, and are intended to smooth the employment transition process for immigrants to make use more quickly of the skills and knowledge brought with them to Canada, and to ease overall social integration.[63] As Peck (1996) notes, local state forms, structures, practices, and institutions considerably impact and mediate the experience of entering the labour market. These Canadian government-sponsored programs are no exception for they unequivocally play a major role in shaping labour market expectations and directing job-search behaviour of recent immigrants.

Evidence of the impression left by job-training programs was clear when discussing job-searches with the engineers. Terminology such as "information interview," "hidden market," "survival

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and occupational training, but only one smaller centre replied to my request, stating that over a 12 month period, they serviced 300 immigrants in employment programs, of which 41 were engineers. The remaining centres contacted were never able to provide such figures due to reasons such as "out-dated databases."
[61] AMSSA, the Affiliation of Multicultural Societies and Service Agencies (AMSSA) lists 81 member agencies in BC. Not all offer employment related assistance (AMSSA Annual Report, 2001).
[62] A bias in this research comes from recruiting immigrants through such centres with posters. 10 respondents contacted me after seeing these posters, but 15 others contacted me through referral or other means. This derivative recruitment source should help neutralize the bias in the study sample.
[63] Immigrant centres are generally not-for-profit and receive funding from the federal, provincial, and municipal governments, as well as individual donors and volunteers.

jobs," and "telephone techniques," loosely and frequently rolled off the tongues of engineers who

otherwise found difficulty expressing themselves. Such expressions, commonly used by engineers

who attended *different* programs offered by different agencies throughout Vancouver, illustrate

the shared aims and strategies of state-sponsored programs. One example is the common message

to search beyond formally advertised jobs, to reach the "hidden market." As Malak says:

> I don't know whether this is for B.C. or Canada, but 15% is advertised job, 85% is the hidden
> market. They call it the hidden market.

After taking a course geared to professional immigrants, Malak now focuses his job search on

contacting firms where he can use his skills, regardless of whether they have posted job openings.

His strategy is to reach what he has been told is the sizeable number of unadvertised jobs. Nine

other interviewees also mention needing to reach the "hidden market." Another six people

describe "networking" (having social contacts who know your skills and availability) as the key

to finding out about unadvertised jobs.

Along similar lines, Ivan explains that his job search is now focused on attaining "information

interviews," which is the opportunity to meet with an employer to ask for advice, meet people in

his field, and learn about both work and employers' expectations. Ivan says:

> I totally follow what [my instructors] say, but mainly I am focussing on "information
> interview." I try to create "networking." ... I already sent 26 "information letters" and I only
> have, only have 4 interviews. And next week I will have one interview more. I think it is not
> perfect because, it is one interview, one resume. It means that my resume or maybe my
> information letter is not perfect.

Eight other engineers also refer to this technique. When Markov explains that he has sent "maybe

500 resumes" for this purpose, I wonder how many such letters are received by engineering firms

around the city.

In total, eighteen interviewees described utilizing techniques learned through immigrant

assistance agencies. Based on information from interviewers, these job search courses stress

networking, contacting appropriate companies regardless of postings, writing professional cover

letters and resumes, and maintaining a systematic search approach. Clearly, strategies for looking for work are developed and transformed as a result of the courses taken and advice received, and many engineers performed more effective searches.

On the other hand, four engineers who attended job training programs did not heed the advice. For example, Tomas, having recently completed a six-week course tailored to professionals, described spending 75% of his time searching posted jobs on internet search engines, or taking resumes to stores where "help wanted" signs were posted. Correspondingly, Alexei finds the suggestions of job training programs helpful, but is not comfortable making use of them. He says:

> [My instructors] helped me learn how to make phone calls and showed me different methods to look for work. The problem is that networking like they suggest is not feasible. I cannot employ them to their full extent. It is difficult for me to speak with a person…

Alexei's concern arose from being overly self-conscious of his language abilities. Particularly when speaking with professionals or potential employers, he felt inadequate and nervous about saying the wrong thing or making the wrong impression. Many others similarly expressed uneasiness in making such contacts saying they did not feel comfortable in English. Much of the techniques require assertive behaviour, such as networking and phoning companies who have not placed postings. Among the engineers who were more introverted or uncomfortable with their language abilities, they resorted to other recommended activities that do not require communication. For example, Alexei also spoke of spending enormous amounts of time "researching" companies so that *when* he eventually contacted them, he would be prepared.

With seven of the interviewees, I noted what seemed to be unwavering reliance on the advice of employment counsellors. Omar, for example, repeatedly stressed that he wanted the advice of his counsellor before he would apply for "his ideal job." Fedor illustrates confidence in his instructors' advice who helped him realize his "inadequate approach" prior to taking his course. He says:

> I was so focused on networking, internet, but also job placement agencies, that I didn't do really what I could have done, and this is to find myself names, and talk to the technical people. Now I know what I need to do.

The approaches adopted by many engineers, therefore, tended to be somewhat formulaic. This creates the danger of being too rigid in approach, or overly dependent on the advice of their counsellor. Fedor, for example, attributed his faults to engaging in job-searches before he took the course and did not know the "correct" procedures. If counsellors are adequately trained, and sensitive to both cultural and individual particularities, their advice is extremely helpful. If they are not, immigrants may be directed into inappropriate jobs. For example, Horado came to Canada with intentions of finding employment, but on the advice of his counsellor he settled with a "survival job:" These "survival jobs" are what is commonly referred to in the immigrant community as a job taken simply to have income, usually requiring few skills, and paying little.

> Horado: [The instructors] told us all the time that we should find a survival job, any kind of job. After that we can try to find a job in our profession, and I think this is a mistake...
>
> KG: Why did you think it was a mistake?
>
> Horado: I feel my self-esteem came, er went down. Yeah, when I came, I started looking, I sent my resume, I went to visit some people. That was before that program. I didn't know too much about the workplace, but I was looking for [a] job in engineering. I thought it would be easy. It wasn't. And then I found that program, and they say that we should be looking for any kind of job, survival job. (...) But I found a survival job, but I didn't feel good.

Although Horado's case was atypical from all other foreign-trained engineers with whom I spoke, I raise it because of the overwhelming influence that counsellors seem to have on directing new immigrants into certain jobs. In Australian society, Fincher *et al.* (1993: 12) believe that job search agencies (state or non) expose new immigrants to the staff's stereotyped view about what immigrants "should" do, or are best suited to work at. I do not think that this is a danger in the centres that I encounter in Vancouver, but I think the employment counsellors have considerable impact on shaping labour market behaviour, and negative or inappropriate advice will have adverse consequences on newcomers.

A few final comments on the role of immigrant service agencies: While in general most engineers expressed gratitude for the assistance they received, many also simultaneously criticized elements of the programs. Most complaints came from engineers who took courses that were designed for broad audiences with a multiplicity of individual needs.[64] Instead, those who took courses geared specifically for professional immigrants found the information to be appropriate and helpful. On a related note, nine engineers actually spoke of having visited several different immigrant service agencies. This shopping around is noted because it suggests referral between agencies, sending engineers to centres where professionally oriented courses are offered. This is important because few programs in Vancouver are specifically targeted to professionals. Taking courses geared to gaining general employment wastes the time of the professional, and may direct other highly skilled immigrants into low-skill labour before they attempt to find work using their skills.[65]

Overall, state-funded immigrant service agencies emphasize the need to network and meet the right people to gain access to professional jobs. As if aware of Granovetter's notions of a social embeddedness, counsellors encourage engineers to broaden their contact base (increase their social network), particularly with other professional engineers (those with better social capital). In the next section I use Granovetter's theories to examine more extensively the sources foreign-trained engineers use to find employment.

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[64] For example, Fedor, who later took a course for professionals, described his exasperation with an instructor in a resume workshop who "spent something like 15-20 minutes on the science of making resumes" and then only looked at the resume to say it was too long. Fedor says, "I got the impression that what counts is only to have your name, your SIN number so they can prove to the government you attended."

[65] Immigrants are restricted to enrolling in one job search program every six months. Still, many visit several centres.

Sources of Engineering Employment Information

In assessing how my study group searches for jobs I will use Granovetter's vocabulary. He recognizes: "informal methods" (through word-of-mouth), "formal methods" (through advertisements or postings on the internet and in newspapers, or using employment agencies), and "direct application" (contacting a potential employer without knowledge of an available position). Based on his empirical findings, Granovetter concludes that "informal methods" net the most successful professional jobs – reaching the highest paying and most satisfying jobs. He finds that the informal social transmission of job information enables those who have the right professional contacts (well-placed social contacts on the "inside" of the profession) to be most accomplished in their career advancement.

If Granovetter and employment counsellors are correct, informal word-of-mouth contacts with engineers in Vancouver should be the most promising method to learn of professional engineering jobs. While all interviewees mention multiple sources, however, it is not networking, but the *internet* that is the most heavily relied upon to obtain jobs. 23 of the 25 foreign-trained engineers say that the spend the greatest time and place the greatest importance on the internet. It is employed in different ways. 22 explain using the internet to search job postings at sites such as www.monster.ca, www.careerclick.com, www.bctechnology.ca, or www.workopolis.ca, (using it for "formal methods"). On the other hand, the internet is also used to search and gain information about companies who will later be contacted regardless of available postings ("direct application") – a technique often encouraged in job search courses, again to reach that "hidden market". 17 people specify using the internet for this purpose.[66] Farideh, for example, uses the internet to her advantage to attain unadvertised jobs:

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[66] A large number of respondents explain using the internet for both "formal methods" and to gain information for "direct application."

It all depends how you use the internet – if you can find a company to do what you want, then it's good – then you can call and ask for an information interview, and learn of unadvertised positions. Waiting for job postings is the worst way to do it because it is the most competitive.

But how successful a tool is the internet? In this study group the success rates with the internet were low. None of the interviewees had received a response after applying to posted positions, and only five had been granted the requested information interview after targeting specific firms. Nonetheless, it is heavily relied upon and enormous amounts of time are spent searching the internet because, as Hector says, "It's easy… and you never know." Nehru guessed he spent around 75% of his day surfing the internet, and Jasmine said around 90% of her time is spent using this tool.

There are many factors that make the internet an attractive search tool. It is inexpensive, simple, available at all times of the day, seems to offer a wealth of information, and is non-threatening. It also gives job seekers a sense that they are actively looking for work, even if the end results are nominal. And while all of these factors indicate why the internet is used so heavily by all job seekers, the feelings of comfort and ease with using a computer are perhaps common traits more among engineers who have greater confidence in their technical and computer abilities than in their other communication skills. In addition, using the internet is familiar to them. Five mentioned having searched on the internet for jobs in Canada prior to migration.

Looking at other "formal methods", the second most frequently cited source of job availability information was newspapers and/or employment papers, and named by six applicants. The bi-weekly classified section in local papers, such as the *Vancouver Sun,* lists both professional salaried and minimum-wage work. Horado complains, however, that these paper sources only offer extremes of the labour market – "survival" or management-level jobs – neither of which he desires. He says:

> I have found that the jobs the companies post in the paper or online are... what do you call it? Career opportunities for higher levels. I have never seen an advertisement for an entry-level [engineering] job. Never. Where do the people, where *I* can find jobs, entry-level positions? I have never seen them.

Similar in method to searching newspaper classifieds is to use the job postings placed on walls or binders at immigrant service agencies, and at the Vancouver Public Library where an entire floor is devoted to job search information and assistance. Four and three people mention using these sources respectively. Some immigrant centres also offer computer databases or cds of local companies and advertised positions for their clients, although only two people refer to these sources.

Another method of "direct application" used by only three interviewees is to go door-to-door with resumes in hand. Margarita was successful in securing her engineering job with this technique, but the other two were struggling to find survival jobs using the same approach.

Despite frequently employing formal and direct methods, the engineering job seekers in this study are more than aware of the importance in having the right contacts – 19 said an obstacle to finding professional employment is not knowing the right people. For example, while Farideh earlier praised the internet as a search tool, she also later said, "What is called the hidden job market is basically cold calling. What is important is who you know – networking." Awareness of having the right contacts stems from both the message taught in immigrant centres, as well as knowledge of labour markets at home. In fact, nine people mentioned "networking" as having had an influential role in helping them get to professional positions in their home countries. Omar recalls friends helping him to find jobs in the three other countries in which he has lived, and says, "But the main problem here is that we miss the network. I miss the network." Foreign-trained engineers believe finding professional employment is contingent upon knowing local professionals. That is, and in line with my earlier arguments, it is a socially embedded process.

When speaking about their social network in Vancouver it is clear that many foreign-trained engineers were frustrated with their underdeveloped networks. The term "network" was used quite loosely, however. Some referred to simply having many friends who could be of assistance, while others used the term to refer to professional engineers who would have "inside" knowledge of companies and who might be hiring.[67] As a researcher, I was acutely aware that many people saw the interview for this research as an opportunity to "network" with a non-immigrant. For example, Lewis said:

> I'm very not satisfied for my network in Canada. I want to know network persons, like you, but I'm not quite sure how you people can accept us and me.

Most, however, were clear that they were desperate for contact with professional engineers. Only six could even name immigrants who had succeeded in finding engineering jobs, and only four others had contact with engineers beyond the information interviews.[68]

Rationales offered to explain their undeveloped networks included language barriers (although only six expressed concerns over English abilities in the interview), their short time in Vancouver, limited contact outside their ethnic community, and being too busy between their survival job and formal job search. For instance, Markov said:

> Because especially for me it's difficult to find [contacts] in my [engineering] field... so... I ... you see, because I do not see any way of coming in touch with people, like people in business, so where can we meet each other? I wouldn't think there is such probability. So because I do not have much time for recreation or an occasion where there are these sorts of people, so I cannot afford it for myself... I cannot just have acquaintances or any people I meet and just say can I just make friends with you ((laughs)). It must be natural.

Clearly, then, networking is not easy for them, for all the above reasons, and for fear of embarrassing themselves. So, those working in survival jobs who wanted to make contacts in the engineering field, tended to use their limited non-working time to check advertised postings and to research companies on the internet, but in so doing they make no contacts.

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[67] According to Granovetter (1974), successful "inside contacts" come most frequently from work contacts.
[68] Two of the people in this study who knew successful engineers had been students at UBC, and two others were involved in an organization that will be discussed shortly.

As if aware of Granovetter's theory that networks importantly pass a great deal of job information, many engineers blamed their lack of success on not having assistance or contacts from within engineering. In other words, they view their existing social capital as weak. The social capital or networks that most immigrants possess are tied to their ethnic community, where few professional success stories are found, and knowledge of underemployed engineers abound. The lack of professional attainments within these communities may be a vicious circle whereby the previous lack of contacts for immigrants perpetuates among each success wave of newcomers to gain assistance and guidance, i.e. a negative cycle of cumulative causation. In the next section, the co-ethnic social involvement in the labour market will be explored.

Sentiments of Independence and Reliance on Co-ethnic Networks

"Social capital," as discussed in Chapter 3, refers to the accessibility to resources available within and through social networks for economic gain (e.g. Bourdieu, 1986: 248-252). Such social networks create a reliable bond or trust that discourages malfeasance between social actors (Granovetter, 1985), establish a sense of obligation (Coleman, 1988), and provide valuable access to information that is otherwise costly or unattainable (Granovetter, 1974; Coleman, 1988). It is the ability of social networks to diffuse information that is the focus of this section.

As Granovetter writes, labour market information is "transmitted as a by-product of other social processes" (1974: 16). That is, one's social circle impacts one's information network. In the case of newcomers, they tend to learn of available job opportunities in the pre-existing local ethnic niche economy (Sassen, 1991; Hiebert, 1993; Portes and Sensenbrenner, 1993; Waldinger, 1995; Mitchell, 2000; see also Chapter Three). Foreign-trained engineers' reliance or resistance to involvement in their co-ethnic or broader immigrant community is examined in this section to

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determine how their ethnic network affects their social capital, and to determine if co-ethnic contacts are helpful in attaining engineering employment.

Every engineer interviewed mentioned having co-ethnic contacts in Vancouver. The number of contacts and level of involvement with co-ethnics varies enormously, however. For instance, as mentioned in Chapter 5, several engineers received settlement and housing assistance from family members or other co-ethnics contacted prior to migration. Once in Vancouver, many of the South Asian and East Asian engineers spoke of having contact with innumerable other co-ethnics. Barbara, for example, said, "I don't see local people. Only Chinese, only Chinese." There is also a relatively large Iranian community on the North Shore (North Vancouver). On the other hand, the various South American and Eastern European ethnic groups described small communities in Vancouver, yet all still had at least some contact with co-ethnics. In Granovetter's terminology, family and friends who comprise co-ethnic structures constitute "strong ties" for new immigrants because the cultural bond in a new host society heightens trust and indebtedness to assist between co-ethnics.

While not necessarily using the terminology "social capital," other studies also show the social bond or "strong ties" between co-ethnics has indeed provided employment assistance (e.g. Walton-Roberts and Hiebert, 1997; Waldinger, 1996; Sassen, 1991). The assistance offered to the engineers interviewed, however, was heavily limited to helping find "survival jobs." Because few interviewees had professionally well-established co-ethnic contacts (or valued social capital), employment offers to immigrant engineers were only for low-skill labour. For the most part, co-ethnics in Vancouver were unable to help with professional engineering jobs. (Notable exceptions will be discussed shortly.)

Attitudes towards these "survival jobs" were nearly split among respondents. 11 were strictly

opposed to the notion of "lowering themselves to menial tasks," as put by Fred, and who would

rather return home, move to another province, or find work in the United States, before accepting

such employment. The engineers with this opinion strongly identified themselves with their

professional occupation. Nehru says:

> I spent ten precious years of my life. It isn't that easy to get admission into engineering
> colleges in India…it's a very intensive competition and needs intensive study. Having come
> this far, I don't want to go and start a smoke shop or anything like that.

On the other hand, 14 people interviewed were either currently working in a survival job or had

worked in at least one. Many had already performed several different survival jobs. These jobs

included working as "back staff" in restaurants, in convenience stores, in a factory/assembly line,

as a cleaner/caretaker, in construction, and two had worked in engineering-related jobs (albeit

considerably lower-status and lower-pay) as technician assistants.[69] "Survival jobs" were readily

available for those interested, and over two-thirds of interviewees obtained these low-skill jobs

through co-ethnics.[70] Barbara describes getting her factory job:

> My friends introduced me. I think many people from China they get their first job through the
> friends introducing. If they try to find a job alone it's hard, it's difficult. Right now the boss I
> am working for is Chinese.

Rogelio also said:

> Almost all Mexicans have a job under the table. Almost all of them. And it's like a chain.
> 'Okay, I'm looking for a job, do you know something?' 'Well I have something in cleaning
> offices,' so basically the jobs under the table for Mexican people at least can clean offices,
> construction, that's basically it. Connections, friends, 'Well, I'm leaving my job because I'm
> going back to Mexico, do you want to take it?' 'Okay, do you know somebody who is willing
> to take it?' And after that, any job after that, 'hey do you know a friend, we need a
> dishwasher, for cheap, $7 an hour because it's under the table. Do you know somebody?
> Okay.' To one of those jobs, 2 or 3 friends. One of those guys is back in Mexico and the other
> one I don't know. That's the way you get the jobs here.

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[69] Discussions about "survival jobs" were often short and simple. Respondents often lowered the eyes
and/or voices when describing the jobs that they had performed, seeming embarrassed and uneasy about
admitting this work. Nehru feared that engineering employers would look down on him doing "survival
jobs", but after 8 months, he needed income.
[70] The remaining one-third got their jobs through applying to newspaper advertisements.

As Rogelio's description suggests, many survival jobs are reserved for other needy or trustworthy co-ethnics. Some who worked in factories or restaurants described working with only other co-ethnics, entering ethnic niche industries in Vancouver. Hiebert (1999) has also found patterns of occupational segmentation along ethnic lines (and gender) lines in Vancouver.

Associated with this divided stance regarding survival jobs was another split around sentiments of independence and reliance on co-ethnic communities. By this I mean that those *un*willing to perform "survival jobs" also wanted to distance themselves from their ethnic community. Lewis says:

> Lewis: Yeah, a lot of the immigrants tell me about local jobs. But I refuse lackey-person jobs, I only want a professional job. One woman or one or two others are professionals.
>
> KG: One or two of your friends are also professionals?
>
> Lewis: Yeah, and they started working in a supermarket and in a factory. I don't like if I can't find a professional job, I will go back to China. In my native city, I have a lot of network, so some of them like to give me a contract to design a large building.

Many foreign-trained engineers do not want to become like their co-ethnics who are working in jobs that do not employ their professional skills. For these engineers, their ability to find professional employment was juxtaposed against their ethnic community and the easily available survival jobs. For example, John said:

> If you want to find just a survival job, it's not difficult. But if you want to find the professional job, it's very difficult. You know, many Chinese people they work hard, some people do 2 or 3 jobs per day. Yeah, and just [go] to bed for 5 hours. Okay, so you can get a lot of money, but they do a survival job. I want professional job and I find little help for this.

In comparison to the two Chinese examples given, Ivan suggests that it is the professionally successful Russians who refuse contact with unemployed Russian immigrants. Ivan says:

> In Russian community, immigrants over here, there are two different paths. The first path is those who are newcomers, the second path it is who already get a job. Who get a job don't like contact with newcomers. It is alright, it is Russian traditional habits.

Relations differ between co-ethnics of dissimilar ethnic groups. These examples are raised to show that there is a tendency among engineers to assert independence in different ways with the

intention of disassociating themselves with unsuccessful co-ethnics. As a result, many have small social networks and little social capital.

The immigrants who were willing to begin survival jobs believed that co-ethnic contacts were of great assistance. This involvement is not necessarily a deliberate decision, though. The ease, comfort, and acceptance by co-ethnic communities makes it an easy and natural starting point. They use their limited social capital as an initial entry into the Vancouver labour market, albeit in non-professional occupations. As such, they demonstrate a longer-term commitment to staying in Canada because they did not speak of returning home if they failed to attain professional employment. Those willing to work in survival jobs seem to view the trajectory to engineering employment as difficult and lengthy, but surmountable with perseverance and improved networking.

The lack of assistance from co-ethnics further fuelled the desire among many engineers to make social contacts with professionals, or to improve their social capital. For example, when I asked Horado to explain why he took a course in Vancouver that repeated knowledge he learned in Colombia, he said:

> Well it was cheap. I wasn't doing anything in my field in electronics – I was [working] in a Chinese fast food restaurant, so I said, well, I might get connected with people, but I found that they were immigrants too, that they are trying to find a better job because they are working in construction, or whatever. I didn't make *good* contacts, well basically that. I was feeling like a little bit useless so I needed to get close to my field. Basically that...

An interesting exception to the seeming lack of professional co-ethnic assistance was found among the South Asian community. Two of the engineers who emigrated from India were members of an association called the Society for Punjabi Engineers and Technologists of British Columbia (SPEATBC). This organization, founded in 1995, is expressly intended to promote the Punjabi culture within engineering, and engineering within the Punjabi community. It was

introduced to Vasin and Nehru like a godsend when they were desperate for employment assistance. Currently with over 300 members (membership is free), it is an association comprised of immigrants from India who have been professionally successful in Vancouver, new immigrants, and second-generation Indian immigrants.[71] The society organizes monthly executive meetings, an annual picnic, an annual barbeque, a bowling night, and professional development programs throughout the year. Through these social events, it offers Indian-trained engineers exactly the opportunity that so many foreign-trained engineers are seeking: the chance to socialize casually with successful professionals, who as potential employers and co-ethnics can recognize the validity of their overseas engineering training. It was through SPEATBC contacts that both Nehru and Vasin gained their current engineering-related jobs. And while both are still *under*employed, they are working in their field, progressing through APEGBC's licensing examinations, and feeling positive about future professional engineering employment.

SPEATBC is the ideal opportunity for new Indian immigrants to develop social capital comparable to that which they had before migration. Because of a common cultural bond and the trust and recognition of academic institutions (recognized cultural capital), recently-arrived foreign-trained engineers are provided with a forum to make social contacts with professionals who are both aware of engineering employment opportunities, but who are willing also to assist. Intriguingly, this, the only example of promising and helpful social interaction with co-ethnic professionals was arranged through a *formal* social institution, or what Vasin calls a "networking organization." This "casual" social interaction occurs at *organized* events, not *randomly*, as Granovetter's notion of information dispersal implies.

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[71] Membership is not limited to Punjabis. Currently the association also has members from throughout India, Pakistan, and Bangladesh.

Two other interviewees also received considerable informal assistance from co-ethnic friends. Amin, a soon-to-be PhD graduate in Electrical Engineering at UBC, says he has many Iranian friends in Vancouver who attended the same engineering college in Iran. All successfully found employment, and he has been in contact with many of them about employment.[72] Likewise, Fedor noted that calling on his few co-ethnic acquaintances in Vancouver had all successfully resulted in leads to interviews.

In summary, co-ethnic contacts are mixed in assisting foreign-trained engineers to find professional employment. The social capital that newcomers can access usually provides only settlement assistance and knowledge of low-skill, "survival jobs." An interesting exception, however, is found with SPEATBC, an ethnic-based social organization created by successful engineers to assist recently arrived co-ethnics. The next section will address more specifically the importance that perceived cultural competence plays in the workforce.

Additional Obstacles, Perceiving Cultural Capital, and Subsequent Strategies

> Because you are immigrant! I think, I think that! …How come you think that they just accept you? (Jasmine).

The final section looks at discriminatory, racial, and culturally stereotypical sentiments that engineers believe are directed towards them. I follow Ong (1999) who uses Bourdieu's notion of "symbolic capital," that is, a person's various economic, cultural, and social "capitals" available for individual power and wealth, in studying the Chinese diaspora in the United States. Ong's usage (which is a modification of Bourdieu's original concept), shows that cultural capital from

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[72] Amin case differs somewhat from many of the others because he will soon have Canadian credentials, and his field is electrical engineering where fresh knowledge, rather than established trust, seems to be more valued.

the home society (e.g. reputable universities, high class accents) is not always convertible into social capital in the host society, or more broadly in transnational movements.[73] Ong argues, "there is a perceived mismatch between the distinction of [immigrants'] symbolic capital and their racial identity, which may be associated with low social value in the host group" (1999: 91). This mismatch, based on what Ong calls "misrecognition" of cultural symbols, is recognized by Chinese diasporan subjects who then "active[ly] manipulat[e] cultural symbols" to render themselves social acceptable and culturally competent in US society (1999: 88). Ong's insight also applies to foreign-trained engineers in Vancouver.

As discussed in Chapter Three, other studies of recent immigrants entering the Vancouver labour market have shown the importance of *embodying* a culturally competent worker. For example, the wearing of a turban or sari may signify to an employer that a worker is culturally unsuitable or *in*competent for the Vancouver workforce (Walton-Roberts, 1998; Bauder and Cameron, 2002).[74] These examples show the importance of cultural capital, in its embodied form, for affecting employers' choice in hiring. In all interviews with me, foreign-trained engineers wore western-style clothing and did not wear a single recognizable ethnic symbol that could identify them as culturally different.[75] Sensitive to the perception of their cultural competency, however, many immigrants were embarrassed or dissatisfied with their English and/or communication abilities. More specifically, only four admitted frustration with their inability to communicate well in English, but seven were frustrated with their *accent* or for sounding as though English was not

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[73] Bourdieu's original usage was in a static "field", looking at the ideological system of taste and prestige as markers of symbolic capital and social order in 1970s France.

[74] Cultural capital signifies value through a shared set of cultural codes that interpret which styles, tastes, behaviour and symbols are valuable and which one are not. A cultural symbol "has meaning and interest only for someone who possesses the cultural competence, that is, the code, into which it is encoded" (Bourdieu 1984: 2).

[75] Job search courses at immigrant service centres discuss appropriate clothing to wear in the Canadian labour market.

their mother tongue. John, for instance, describes his concern about how employers perceive his

English abilities, rather than his ability to communicate ideas:

> For example, if two guys have the same level, and same skills, of course they hire the local guy. Why not? … so, that's why I decided to go back to university, to get a local license I mean, not only to study the mining in my field 'cause I already know a lot about this field, but also, *the most important part for me is just to improve my English*…ah, it is not much difficult for me to get my degree I think. But I expect more to improve my pronunciation and communication.… *If the employer [sees a UBC degree], it is not necessary to doubt your language ability after they pick up your resume, right?* While before that, they, sure they would doubt your ability. But okay, a Master of Engineering Mining at UBC, ah, 2 years, probably he got no big problem for his language. (italics added)

For John, a motivating factor to do his Masters in Canada was simply to convince employers of

his communication competence. Salem, on the other hand, believes that casual language will help

him broaden his social circle to include non-immigrants. He says:

> [My English] is a real barrier in front of me to get more friends. I know I can speak English, but it's not an everyday English. Not like the slang English. When friends talk to each other, they don't talk like this, I mean they use other terms, other ways of talking. So I need more time, more practice to get more friends to build my network, to make it bigger, because I'm interested in networking not only to get friends…Someday maybe I want to change my job, if I have bigger network, it will be easier for me to find a good job.

Salem is concerned that his accent marks him as foreign, and which excludes him from local

(non-co-ethnic) social capital. Many feel that simply sounding like a foreigner reduces their

chances of genuine, casual social contact with non-immigrants, and this limits their network and

hence knowledge of professional job opportunities. Thus, Salem fears embodying the wrong

cultural capital will prevent access to social capital, and hence economic capital (and thus future

employment).

Along similar lines, seven interviewees showed concern that others may negatively stereotype

them, or view them as unwelcome in the Canadian workforce because of their particular ethnicity.

Referring to her degree from the University of Belgrade, Margarita says:

> If they see Belgrade, who knows whether or what it is…Right now I think if they see Yugoslavia, I think they expect to see a murderer or something like that because of the last 10 years…

Marwan similar showed concern over how his Iraqi ethnicity is perceived in Canada. As if testing

my reaction, he said:

> Marwan: I think there is another problem that we have – we are from Iraq. Because when I
> talked to you about the research and I told you I was from Iraq, I think you are shocked…
> Most people don't have a good idea about people from Iraq. Iraqi people.
>
> KG: I know very few people from Iraq, I admit.
>
> Marwan: Yeah, a lot of people fear that Iraqi people are like the leader of Iraq.

Foreign-trained engineers believe that their country of origin is having an impact on how others,

particularly employers and desired social contacts, perceive them, and this makes being hired

more difficult.

In addition, many of the engineers self-identified a general devaluation in their social and cultural

standing. When describing how they viewed themselves before moving to Canada, many

emphasized their material and financial wealth. But just as many described themselves as

relatively poorly paid, but highly respected. Markov aligned himself with the "intellgensia" of his

country, and Margarita said:

> We both were working in good companies, he with telecommunication systems, I in the
> professional oil industry. According to our salaries, we were very, very low. But according to
> our cultural, intellectual skills, I think we the top of our society.

In comparison, all had experienced a downward shift in both their cultural and social standing, an

impact that requires a readjustment of self-perception and expectations. Horado explains:

> I am recognized as an engineer, as a professional engineer in Colombia. I don't know now,
> but when I was living there, I had good status, good social status, good cultural and
> professional education. My reputation was of high status. I had or have I think respect from
> people, from friends. (…) Here, I don't feel good.

Tomas's frustration is more than evident when we says "We are leftovers", and asks, "What is

wrong with us?"

The frustration arises from the realization that symbolic capital (ranging from the intuitional and

embodied cultural capital, and social capital) has a place-specific value, and its value is low in

Vancouver. Coming to terms with this devaluation is difficult, as could be heard in many of the engineers' voices. As a response to these changed self-perceptions, many engineers tried to reduce their expectations and the manner in which the presented their professional qualifications. Ivan, for example, who holds a PhD and MBA, lists only an MSc on his resume for wanting "not to be over-qualified." Omar explains that he now only asks for a fraction of the advertised salary. Seven engineers emphasize that they are looking to volunteer, simply to get the experience that they desire so greatly for the APEGBC license. What these foreign-trained engineers do not realize, however, is that by offering their services for free or at low cost, they present themselves as lacking institutional cultural capital to employers. According to the P.Eng code that is part of APEGBC's legislation, an engineer must not undervalue him or herself, nor work for less than a professional engineer's worth. By offering to volunteer, they present themselves as lacking the professional integrity and institutional affiliation that is associated with the P.Eng license, and reinforce their status as culturally incompetent.

In Conclusion

Various formal and informal institutions influence foreign-trained engineers seeking professional employment. This chapter has shown that the ways in which these institutions affect each immigrant differs, and that the process of finding work is far from the asocial, automatic, price-based, uninterrupted model put forward by neoclassical economics. Instead, job searches of foreign-trained engineers in Vancouver are affected by the institutional advice of state-funded immigrant service agencies, the opinions of individual counsellors, the experience of co-ethnics and other immigrants, the informal information gained through social contacts, and employers' stereotyped views of cultural competence or ethnicity. To understand these multiple influences, I brought together theoretical frameworks that consider state regulation policies (à la Jamie Peck),

social capital and networks (à la Mark Granovetter), and cultural capital (à la Aihwa Ong and Pierre Bourdieu). Only by combining multiple theoretical perspectives is it possible to understand complex and continually intermingling forces that mediate the job search process. The result is insight into the ways in which newcomers encounter the Vancouver labour market, respond to experiences, change expectations, and deal with new opportunities.

Chapter 8: Conclusion

This thesis began with concern over the underutilization of skilled and professional immigrants in Canada. Empirical studies were reviewed to assess the integration of immigrants into the Canadian labour market. Immigrants, in comparison to native-born, earn less money on average given their education level, experience lower rates of employment, and are segregated into low-pay, low-skill occupations, a situation which has been worsening for foreign-born over the 1990s. There is a range of causal factors at work varying from human capital characteristics to systemic discrimination by employers and professional regulatory bodies based on country of origin, country of education, race, and gender. In short, there are multiple and overlapping barriers that create and perpetuate immigrants' disadvantaged labour market position in Canada, but few studies are able to bring these factors together.

In response, this thesis aimed to construct, then put to work, a theoretical approach that provided an integrated explanation of the difficulty that foreign-trained engineers in Vancouver have in finding professional employment. This theoretical approach – "socio-institutionalism" – offers an alternative to what Peck (1996: 262) calls "the enduring hegemony of neoclassical economics." In particular, it recognizes that labour markets are not self-equilibrating, free, and uninterrupted, and describable by supply and demand functions. Instead, drawing from established bodies of work, such as institutional economics and economic sociology, I argue that the labour market is a complex, socially and institutionally embedded construct. As such, not all individuals have equal access to all occupational positions within the market as opportunities and resources are both socially controlled and regulated. This socio-institutionalist approach has gained increasing prominence in economic geography and sociology, and has great purchase for research on immigrant labour market behaviour because as Portes and Sensenbrenner (1993: 1322) say,

"foreign-born communities represent one of the clearest examples of the bearing contextual factors can have on individual economic gain."

After establishing the merits, and potential insight gained from anaylzing labour markets using a socio-institutionalist theoretical framework, I turned to consider the bearing of institutions on foreign-trained engineers. This led me to three bodies of literature. First, I looked to Jamie Peck and his work on *regulatory* and state institutions. Second, I examined Mark Granovetter's notion of the social embeddedness of economic activity and the role that *social* institutions play. Third, I considered Pierre Bourdieu's concept of cultural capital, bound up with the ability to gain entrance into elite social interactions or professional circles, i.e. recognition by *cultural* institutions. These various conceptions of institutional influences (regulatory, social, cultural) provide distinct, often competing, but also overlapping views of how institutions affect the functioning of local labour markets (see also Martin, 2000). Together, they formed the theoretical framework of the thesis.

Taking this approach to the interviews conducted with 25 foreign-trained engineers, I found evidence of multiple institutions controlling, shaping, and governing access to professional employment. Beginning with regulatory and state institutions, the greatest (and most evident) institutional impact occurs when foreign-trained engineers encounter APEGBC. Because engineering is a regulated profession in Canada, and a "P.Eng" title is legally required to work in the profession, entrance into the labour market for engineers is certainly not free and uninterrupted as assumed by the idealized neoclassical model. Instead, foreign applicants must meet the licensing requirements, including the difficult condition of gaining one year of relevant engineering experience in Canada or the US. This local work experience is the most significant obstacle noted by foreign-trained engineers in the study. As a result, the job searches undertaken by them often consist of trying to convince a local employer to hire them *without* a P.Eng license.

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Similarly, immigrant service agencies around the city that are partially state-funded also influence an immigrant's job-seeking behaviour. A large number of foreign-trained engineers take job search programs through these agencies, and are taught specific job search techniques. Generally, these programs promote systematic, extensive job searches that look beyond formally advertised positions. Employment counsellors promote "networking," meeting other professional engineers, sometimes by requesting information interviews, but also by actively phoning engineering companies. Many of my sample group of engineers expressed discomfort in employing these techniques, but most were certain that this advice would provide the key or secret to attaining their desired job. Clearly, then, these state-financed institutions shape the experience and expectations of immigrant engineers in entering the Vancouver labour market.

The techniques promoted by the employment counsellors are, in fact, similar to Granovetter's theories of successful job searches turning on the importance of having a large number of social contacts. The ability of foreign-trained engineers to use social contacts to their advantage, as well as the broader influence of social institutions upon immigrants will next be discussed. To begin, the choice to immigrate to Vancouver is itself a socially embedded decision for many of the engineers. The advice of, or desire to be near, family, friends, and other co-ethnics mediated the decision for many of my interviewees. This finding is particularly important because it undermines faith in the economistic reasoning conventionally used to understand migration of highly skilled workers. Yet, despite the apparent influence of social contacts in choosing to settle in Vancouver, many engineers during their interviews with me expressed a desire for independence, and even disassociation from their ethnic group. While social contacts are valued in coming to Vancouver, after they arrived many want only limited contact. The reason, it seems, is because ethnic social contacts were generally found only to be of assistance in finding non-professional, low-skill employment, or what many immigrants call "survival jobs." Significant

numbers of interviewees knew co-ethnics who resorted to accepting low-skill labour jobs in Canada when professional occupations were unattainable. Having the "right" professional social contacts, then, required extending social relations beyond their ethnic community. Few interviewees knew of successful immigrant engineers who could provide them with assistance or guidance in gaining professional employment, and were left hoping simply to be "the right person at the right time." It seems, then, that exclusion from professional social circles is perpetuated in a vicious cycle: foreign-trained engineers cannot access "inside" information about available engineering job openings, and so remain in survival jobs, but as a result they then cannot provide later rounds of immigrant engineers with social contacts either, and they in turn are forced into survival jobs.

On the other hand, roughly half of the respondents were highly involved in their community, and were grateful for the assistance it had provided (social capital). Most of these engineers were currently working in "survival jobs" and viewed this avenue as the route to integration and settlement in their immediate community, hoping it would eventually lead to engineering employment.

An interesting exception was found with respect to ethnic social networks. Among the South Asian community, an ethnic-based formal networking association was established to assist newcomers gain entrance into the profession. By creating social opportunities for newcomers to speak with successful Indian engineers, recent Indian immigrants are given the opportunity to speak with professionals who respect and recognize their foreign credentials, have an interest in helping them to find employment, and to share information about "hidden" or unadvertised engineering positions from "inside" firms.

It seems, then, that social networks are heavily relied upon for diffusing information about professional job availabilities. The difficulty for most immigrants, however, is that they are excluded from the social networks where the knowledge of professional jobs exists. The social assistance that is offered then rarely leads to professional employment.

Finally, Bourdieu's concepts of institutional and embodied cultural capital help explain why the problem of getting employment is not simply a case of lacking information about jobs. Cultural institutions determine whether certain workers are qualified for certain workplaces. Through the notion of institutional cultural capital, I suggested that lack of recognition of the subjective value of certain institutions or credentials based on place of origin leads some immigrant professional labour to be viewed as incompetent by employers and regulators. The foreign worker may possess the necessary technical knowledge, but an employer still does not desire them. Embodied cultural capital helps us understand why many engineers perceive their accent or skin colour disadvantages them in comparison to Canadian-born and trained workers. Because of these foreign markers, numerous engineers fear that they are excluded from necessary social networks, and viewed negatively by employers.

In conclusion, the operation of the local labour market for engineers is clearly not a free, uninterrupted, or rational market into which foreign-trained engineers can easily enter. There are a variety of intersecting institutions that affect immigrants at various stages throughout the job search process in Vancouver, such as APEGBC's lengthy licensing requirements, the lack of access to information about unadvertised positions through social networks, and the disadvantage of being undesirable because of cultural signifiers. Not one causal factor explains the difficult experience facing engineers. As a result, the thesis attempted a multilogical theoretical model incorporating regulatory, social, and cultural institutions to explain the complexities of immigrant professionals attaining employment in Canada, and hopefully it also brings insight into the kinds

of positive changes necessary to ameliorate their plight. It is to these potential policy ramifications that I turn next.

Policy Ramifications and Future Research

Recent policy responses to the problem of immigrant skill underutilization has been to establish academic credential evaluation services in many provinces (Mata, 1999). These include the International Qualification Assessment Service (IQAS) in Alberta, the Manitoba Credentials Evaluation Program, the International Credential Evaluation Service (ICES) in BC, the Service des Equivalences (SDE) under the Ministère des Relations avec les Citoyens et de l'Immigration of Quebec, and the most recently established World Educational Services (WES) in Ontario.[76] This is an important first step for creating information banks to evaluate the innumerable different degree programs immigrants bring to Canada. After using this service, immigrants can take an objective evaluation of their formal academic degrees as they would be valued in the Canadian education system to potential employers. This reduces "statistical discrimination," where employers or licensing bodies negatively evaluate degree programs or institutions about which they have limited information, and resulting in even qualified applicants being viewed unfavourably (Mata, 1999). Increased sharing of experiences and knowledge among evaluation agencies enables more accurate assessments, which serves everyone's best interests. In Canada, however, these services remain provincial, if they exist at all. To maximize sharing of information, a national credential evaluation body would be most effective, as well as continued and increased Canadian involvement in international professional recognition agreements.

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[76] ICES received assistance from the provincial Ministry of Multiculturalism and Immigration for setting up in 1995, but now operates independently on a cost-recovery basis. The SDE is the most widely used agency and was established in 1981. WES was created in 2000.

However, recognizing formal degrees alone is insufficient in two regards for professional immigrants. First, most professional regulatory boards, such as APEGBC, insist on performing their own evaluations, and hence do not accept evaluations done by provincial centres. Second, most professional occupations require a residency period before granting the license. Gaining employment to fulfill a residency requirement necessitates much more than having recognized academic credentials. As this study has shown, gaining local professional employment is perhaps the greatest obstacle of all in obtaining a full-time, long-term engineering position. Again, entering the labour market is very much a social process. Employment opportunities are shared through social networks. Many recent immigrants have little-to- no social contact with professionals, and are out of the information loop. They also have few social contacts who can speak on their behalf when internal hiring decisions are made. More social interaction and assistance with practitioners and employers would enable newcomers to learn workplace norms, hiring procedures, and most importantly, to gain information about available jobs. A mentorship program that brings new immigrants in contact with established professionals in their field would provide preliminary information about licensing requirements, and possible employment avenues. Skills for Change in Ontario has initiated such a program (Silkowska-Masior and Swajkowski, 1998). The difficulty, however, as Granovetter suggests, is that job availability information is only passed when there is a propensity to assist the job seeker. This is an unavoidable aspect of the social nature of labour. Still, being a mentor on an occasional basis to recent immigrants could become a requirement of having a professional license, and would at least open dialogue. Another consideration would be to extend the MCAWS-APEGBC pilot work assistance program to a larger government assistance program that assists experienced foreign professionals to gain local Canadian experience through voluntary internships, helping newcomers make invaluable contacts.

In addition, whether employers are discriminatory or not, they are also faced with a lack of information about foreign applicants. If a foreign-trained engineer applies for a job without a P.Eng, an employer does not know the reason they are unlicensed; the applicant may meet all requirements with the exception of one-year local experience, or the applicant may be completely unqualified. Why is it not possible for APEGBC to design a new category for foreign-trained engineers that indicates that they have met all other academic and professional requirements, but now require local employment experience? Such a program would considerably assist employers trying to determining the aptitude of foreign-trained applicants.

More broadly, APEGBC has been an excellent regulatory board in its willingness to be involved with discussion on licensing foreign-trained professionals, and for attempting to make procedures more transparent and in accommodating applicants' characteristics (e.g. introducing the interview process for more experienced engineers). Indeed, many regulatory boards have made recent attempts such as creating fact sheets that outline licensing requirements; however, there are several (particularly in the health sciences) which remain opaque and cloak their procedures with secrecy. Behind these closed doors may be outdated or discriminatory selection criteria. Regulatory boards need to be pressured to review their licensing procedures to ensure that they are fair, easily understandable, and as equally open to foreign-trained professionals as home-educated ones.

Additionally, the most effective way to bring about relevant changes to the system that is currently disadvantaging immigrant professionals is for the individual immigrants who are frustrated by the barriers to collectively work on changing the system themselves. Lobby groups developed along shared professional and/or ethnic lines, such as SPEATBC, CAPE, and FNA (see Chapters One and Seven) are the ones most successful in breaking down systemic barriers (Chakkalakal and Janzen, 2001). With shared interests and experiences, members of these groups

support one another with social networks, share accurate information about licensing requirements, and present a unified front to challenge and confront barriers within regulatory institutions. Importantly, they can raise public awareness of the obstacles their members face, and they can become involved in constructing alternatives. But most engineers in this study showed tendencies toward independence, rather than community assistance. There is thus a long way to go in empowering immigrants to bring about the changes they desire.

Finally, more research is needed to decipher many of the ethnic and gender trends uncovered in this thesis. First, the level of social support and professional linkages in the different residential communities in which immigrants settle is unclear. Ethnographic research on various ethnic communities around Vancouver and the spatiality of communication networks would shed further light on this issue. Second, a gendered analysis of the strategies employed by professionally-trained women immigrants, particularly in a masculinist field such as engineering, would be interesting to see how gender positions play out differently in the socially constructed labour market. Third, a comparative study with engineers in another Canadian city or province would heighten our understanding of the place-specific nature of the institutions under analysis. Further investigation into these issues would lead, I believe, to a deeper understanding of an issue central to the lives of immigrants, Canadian immigration policy, and economic geography, that is, the nature of place-contingent socially regulated labour markets.

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Appendix 1: NOC Classifications used for LIDS Data

To determine the inflow of immigrants declaring "engineering" as their desired profession, these are the types of engineers that I included, based on the National Occupational Codes.

NOC Engineering Codes

2131	Civil Engineer
2132	Mechanical
2133	Electrical and Electronics Engineer
2134	Chemical Engineer
2141	Industrial and Manufacturing Engineer
2142	Metallurgical and Materials Engineer
2143	Mining Engineer
2144	Geological Engineer
2145	Petroleum Engineer
2146	Aerospace Engineer
2147	Computer Engineers
2148	Other Professional Engineers, n.e.c.
0211	Engineering Managers

Appendix 2: List of Interviewees

Pseudonym	Sex	Ethnicity[1]	Kind of Engineer[1]	Date of I/V	Time in Vancouver[2]	Eng. Work Experience[1]
Malak	M	Iraqi	Structural	21.10.01	16 months	18 years
Lewis	M	Chinese	Civil	22.10.01	6 months	17 years
Jasmine	F	Iraqi	Structural	01.11.01	3 months	14 years
Fedor	M	Serbian	Electrical	06.11.01	9 months	5 years
Tomas	M	Filipino	Electrical/Telecomm'n	08.11.01	4 months	15 years
Fred	M	Chinese	Mechanical/Refrigeration	13.11.01	3 years	6 years
Mark	M	Indian	Electrical and Electronics	14.11.01	5 years	10 years
John	M	Chinese	Metallurgy and Mining	15.11.01	2 years	14 years
Ivan	M	Russian	Electrical	16.11.01	3 months	19 years
Marwan	M	Iraqi	Civil/Water Resources	24.11.01	1 month	5 years[3]
Omar	M	Iraqi	Civil/Environmental	24.11.01	2 months	5 years[3]
Margarita	F	Yugoslavian	Mechanical	24.11.01	10 months	8 years
Salem	M	Libyan	Mechanical/HVAC	03.12.01	15 months	4 years
Roman	M	Filipino	Electrical	05.12.01	7 months	15 years
Amin	M	Iranian	Electrical	07.12.01	5 years	3 months[4]
Alexei	M	Ukrainian	Computer	07.12.01	4 months	5 years
Yousef	M	Iranian	Electrical/Computer	16.01.02	2 years	1 year[4]
Horado	M	Colombian	Civil	11.02.02	3 1/4 years	6 years
Farideh	F	Iranian	Electrical/Computer	18.02.02	4 months	3 years
Markov	M	Ukrainian	Electrical/Computer	19.02.02	1 year	10 years
Vasin	M	Indian	Civil	23.02.02	2 1/2 years	5 years
Nehru	M	Indian	Civil/Highway	04.03.02	2 1/2 years	20 years
Rogelio	M	Mexican	Electrical	01.04.02	2 years	3 1/2 years
Hector	M	Colombian	Electrical	08.04.02	11 months	2 years
Barbara.	F	Chinese	Civil/Architectural	12.05.02	1 month	11 years

[1] As defined by the interviewee
[2] At time of interview
[3] Both had additional work experience as instructors in engineering colleges. This time was not included in years of engineering work experience.
[4] Both came to Canada on student visas.

Appendix 5: Interview Schedule

General Immigration Background:
1. Where are you from? (country previous to Canada)
2. How long have you been in Canada?
3. Where do you live now (roughly)? How and why did you choose that location?
4. Why did you decide to come to Canada?
5. Did you consider any other countries? Why Vancouver?
6. How do you feel about life in Canada/Vancouver?

Engineering Background:
7. Were you a licensed and practicing engineering in your home country?
8. How long were you working as an engineer?
9. What specialization? What kind of projects?
10. Where did you receive your degree?
11. Can you tell me about the training process.
12. Was there an apprenticeship/experience period required for the profession?
13. Was there a professional organization that governed your occupation? Explain differences with Canada.

Employment-related decision:
14. Did you look into the requirements for working as an engineer before coming in Canada? How?
15. How difficult did you expect it to be to secure a job in Canada?
16. What kind of job did you expect you would begin with?

Job search:
17. How long have you been looking for work?
18. Tell me about your job search...
19. Where have you been getting your information about jobs available? Who has been helping you?
20. Have you received much advice from other immigrants? Was this helpful?
21. Have you gone to immigrant service agencies or employment centres? How many? Were they helpful and what did they tell you?
22. Are your friends and family involved in your job search?
23. Have you had your credentials assessed by ICES?
24. Do you find that the process of getting a job is different in Canada?

Being Accredited by APEG:
25. What have you done so far to become certified as an P.Eng in B.C.? (applied for application yet, taking language courses?)
26. What do you think you need to do next to become certified in British Columbia?
27. Where did you learn about the procedures to become accredited? Were the requirements clear to you?
28. What obstacles do you see yourself facing? Why do you think these obstacles exist?

Culture of Engineering:

29. Why did you originally choose to become an engineer?
30. How did you get your first job?
31. Do you see similarities in the culture of the profession here as opposed to what you were accustomed to?
32. Why do you want to work as an Engineer in Canada?

Appendix 6: Top Twenty Source Countries of Engineers Coming to Vancouver 1991-2000

Country of Birth	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991
China	1465	1085	371	500	336	133	70	24	4	8
Taiwan	88	129	313	140	266	127	22	12	4	4
Iran	97	132	180	145	102	46	27	9	4	7
Romania	54	51	92	38	52	83	59	84	24	6
Hong Kong	7	9	80	14	103	92	64	34	21	7
India	95	78	73	58	53	27	22	12	9	1
Korea, Rep.	105	84	35	88	24	24	24	4	0	0
Yugoslavia	17	28	24	13	28	75	76	64	17	0
Russia	33	39	54	34	24	13	1	5	0	0
Pakistan	52	27	34	31	12	10	5	3	3	2
South Africa	21	17	24	12	19	25	40	15	2	1
Ukraine	47	33	32	27	18	7	6	1	0	0
England	14	30	13	28	21	15	12	16	11	3
Bosnia-Herzegovina	2	3	5	2	7	28	55	22	4	0
USSR	2	27	29	22	17	12	7	6	1	0
Egypt	3	7	17	6	21	17	14	9	2	2
Bangladesh	19	14	35	11	6	5	5	0	0	0
Philippines	13	11	14	10	16	5	3	7	2	3
Mexico	12	18	12	22	7	6	2	1	0	1
Colombia	32	20	4	17	3	1	1	0	0	1

Source: Author's Calculations, LIDS 2000

See Appendix 1 for kinds of engineer included in category.