Effect of premigratory exposure to political violence on the social anchorage of refugees in Montreal

Aline Drapeau

Department of epidemiology and biostatistics

McGill University, Montréal

August 2001

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements of the degree of Doctor in Philosophy

Abstract

The widespread political violence and the ensuing economic hardship that prevail in countries ridden by armed conflicts affect the social fabric and the daily functioning of the exposed population in many ways. Families may be split following the death, imprisonment or disappearance of some family members or by divergent ideologies, and people may be prevented from attending their usual business because the ethnic, religious or social group to which they belong is being persecuted or because their work place or school are destroyed or no longer functional. Therefore, the elements of the social fabric that are most affected by prolonged armed conflicts are precisely those institutions (i.e., family, work, school, religious or community groups) that provide the social roles that partly shape the social identity of human beings. This breakdown of social anchors jeopardizes the psychosocial well-being of individuals because it forces them to adopt a social identity that is compatible with the surrounding state of war but that is usually in contradiction with their traditional values. Those who flee their home country in search of political asylum and basic survival needs often land in the host country in a state of confused social identity, shocked by the political violence that they have experienced and by their adaptation to it, and fearful of what may become of them in the new environment.

This thesis introduces a conceptual framework centered around the idea of social anchorage, which is viewed as a component of the psychosocial adjustment of refugees as it

enables them to recapture or redefine their social identity and, thus, to regain some control over their life. The main objective of this thesis is to estimate the effect of premigratory exposure to political violence on the social anchorage of refugees in the host country.

The sample is made up of 270 Southeast Asian and Central American refugees with school-aged children who had been living in Canada for a mean of 7 years at the time of interview. Social anchorage is measured by five types of social anchor (i.e., political, professional, religious, academic and community) and by two indices of the diversity of social anchorage. Three measures of exposure to political violence are investigated: personal acute (i.e., threat and torture), personal chronic (i.e., imprisonment, reeducation camp, forced labor), and family exposure (i.e., acute and chronic). In addition to the analyses focusing on the estimation of the effect of exposure to political violence, exploratory analyses are also carried out to identify other factors such as transferable skills and socio-demographic characteristics that may affect social anchorage once exposure to political violence and ethnicity are taken into account. Approximated risk ratios are calculated from the odds ratios obtained by binary and ordinal regression analyses.

Data analysis shows that specific forms of political violence may act differently on the social anchorage of refugees from Southeast Asia and Central America and across ethnic groups. Overall, personal acute exposure tends to foster their social anchorage whereas personal chronic exposure tends to prevent it. Personal acute exposure appears to foster the probability of a wider range of social anchors in Southeast Asian refugees but to inhibit it in Central Americans whereas personal chronic exposure tends to have the

opposite effect as it may be a driving force for Central Americans and a brake for Southeast Asians. Finally, when controlling for exposure to political violence and ethnicity, transferable skills (such as premigratory work experience compatible with an urban setting and level of schooling) and socio-demographic characteristics (in particular number of years spent in Canada, income category and age) contribute to the social anchorage of Southeast Asian and Central American refugees.

This thesis sheds a new light on the psychosocial adjustment of refugees in the host country by focusing on their social anchorage and especially on the effect of their premigratory exposure to political violence. It also emphasizes the complex web of individual factors including premigratory exposure to political violence, transferable skills and socio-demographic profile that affect multiple facets of the social anchorage of refugees in the host country. Finally, the empirical testing of the conceptual framework introduced in this thesis points to promising directions for future research.

Résumé

Le climat de violence politique et d'instabilité socio-économique qui caractérise les pays en proie à un conflit armé affecte le tissu social et la vie quotidienne de la population de plusieurs façons. Les familles sont parfois séparées par la mort, l'emprisonnement ou la disparition d'un membre de la famille ou par des divergences idéologiques ; les gens ne peuvent plus poursuivre leurs activités habituelles parce que le groupe ethnique, religieux ou social auquel ils appartiennent est persécuté ou parce que leur lieu de travail ou d'étude est détruit ou n'est plus en état de fonctionner adéquatement. Ainsi, les éléments du tissu social qui sont le plus touchés par les conflits armés sont justement ces institutions (la famille, le travail, l'école, le groupe religieux ou communautaire) qui génèrent les rôles sociaux définissant l'identité sociale des êtres humains. Cet effondrement de l'ancrage social met en péril le bien-être psychosocial des individus parce qu'il les force à adopter des identités sociales compatibles avec l'état de guerre ambiant mais souvent en contradiction avec les valeurs traditionnelles. Les personnes qui fuient leur pays à la recherche d'un asile politique et pour assurer leurs besoins essentiels arrivent dans le pays d'accueil dans un état de confusion par rapport à leur identité sociale, bouleversés par la violence politique qu'ils ont vécue et par leur adaptation à ce climat de violence, et effrayés par ce qui les attend dans le nouvel environnement.

Cette thèse présente un cadre conceptuel articulé autour de l'idée d'ancrage social considéré comme un élément de l'ajustement psychosocial des réfugiés puisqu'il leur permet de reconquérir ou redéfinir leur identité sociale et, ce faisant, de reprendre un certain contrôle sur leur vie. Le principal objectif de cette thèse est d'estimer l'effet de l'exposition prémigratoire à la violence politique sur l'ancrage social des réfugiés dans le pays d'accueil.

L'échantillon est composé 270 réfugiés de l'Asie du Sud-est et de l'Amérique centrale ayant des enfants d'âge scolaire et établis au Canada depuis, en moyenne, 7 ans. L'ancrage social est mesuré par cinq types d'ancrage (politique, professionnel, religieux, académique et communautaire) et par deux indices de la diversité de l'ancrage social. Trois mesures de l'exposition à la violence politique sont étudiées : l'exposition personnelle aiguë (menace et torture), l'exposition personnelle chronique (emprisonnement, camp de rééducation, travaux forcés), l'exposition familiale (aiguë et chronique). Outre les analyses visant à estimer l'effet de l'exposition à la violence politique, des analyses exploratoires sont aussi réalisées pour identifier les facteurs sociaux tels que les acquis transférables et les caractéristiques socio-démographiques qui peuvent affecter l'ancrage social lorsque l'on tient compte de l'exposition à la violence politique et l'ethnicité. Les données sont analysées par la régression logistique binaire et par la régression ordinale.

L'analyse des données montre que certaines formes de violence politique affectent de façon différente l'ancrage social des réfugiés de l'Asie du Sud-est et de l'Amérique

centrale et que cet effet varie aussi en fonction de l'origine ethnique des réfugiés. De façon générale, l'exposition personnelle aiguë tend à promouvoir l'ancrage social des réfugiés tandis que l'exposition personnelle chronique constitue davantage un obstacle. L'exposition personnelle aiguë semble augmenter la probabilité d'une plus grande diversité d'ancrages sociaux chez les réfugiés de l'Asie du Sud-est mais avoir l'effet contraire chez les réfugiés de l'Amérique centrale tandis que l'exposition personnelle chronique semble être un moteur pour la diversité de l'ancrage social chez les Centro-américains et un frein pour les Asiatiques du Sud-est. Finalement, lorsqu'on contrôle pour l'effet de l'exposition à la violence politique et l'ethnicité, les acquis transférables (tels que l'expérience de travail prémigratoire compatible avec un environnement urbain et le niveau de scolarité) et certaines caractéristiques socio-démographiques (en particulier, l'ancienneté de la résidence au Canada, la catégorie de revenu et l'âge) contribuent à l'ancrage social des réfugiés de l'Asie du Sud-est et de l'Amérique centrale.

Cette thèse jette un éclairage nouveau sur l'ajustement psychosocial des réfugiés dans le pays d'accueil en mettant l'emphase sur leur ancrage social et, particulièrement, sur l'effet de leur exposition prémigratoire à la violence politique. Elle souligne aussi l'éventail complexe des facteurs individuels, tels que l'exposition prémigratoire à la violence politique, les acquis transférables et le profil socio-démographique, qui affectent les multiples facettes de l'ancrage social dans le pays d'accueil. Finalement, la vérification empirique du cadre conceptuel développé dans cette thèse suggère des avenues de recherches intéressantes.

Statement of originality

To my knowledge, the effect of premigratory exposure to political violence on the social anchorage of refugees has never been studied empirically. I have developed the conceptual framework underlying my thesis after a thorough review of the literature pertaining to the resettlement and mental health of refugees, in particular those from Southeast Asia and Central America, and to social anchorage and social identity.

My thesis is based on secondary analysis of the data collected in two studies conducted by Dr Cécile Rousseau and her team. I have been a member of Dr Rousseau's research team since 1991 and I was involved in the conduct of these two studies. I participated to the construction of the questionnaires and was in charge of planning data collection and carrying out statistical analysis. I am a co-author on all publications that came out of the two studies. Dr Rousseau is a member of my thesis supervisory committee.

The main objective of the two source studies was to investigate the effect of the family premigratory exposure to political violence and postmigratory living conditions on the mental health of refugee children. My thesis focuses on the parents of the school-aged children instead of on the children themselves. In the two source studies, data editing and coding were carried out with the children focus in mind so that data had to be re-entered and re-coded for my thesis. I have personally proceeded to the data editing, coding and analysis for my thesis.

Acknowledgments

Going back to school for a PhD after working almost ten years in applied research turned out to be a very stimulating experience. Taking on this additional social role was made easier by a scholarship awarded by the National Health Research and Development Program (Canada), which allowed me to focus on my study without worrying too much about money. I am highly indebted to Dr Jean-François Boivin, Dr Cécile Rousseau and Dr Robert Platt for their enlightening supervision of my thesis. In particular, I would like to thank Dr Boivin for sharing with me his in-depth knowledge of epidemiological concepts ; Dr Rousseau for calling my attention to the subtlety of mental health process, psychosocial adjustment and the situation of refugees and for her constant support as both a co-supervisor and an employer who not only never complained about the delay incurred to our research work due to my studies but also lent me a computer so that I could write my thesis more efficiently at home ; and Dr Platt for the hours that we spent discussing the pros and cons of various statistical procedures and methodological features and for his reassurance when I felt overtaken by my thesis.

In the past four years, my social life was considerably disrupted by my studies. I would like to thank my family and friends for understanding that I often had to work on my thesis rather than spending pleasant time with them. During those years, I have especially

valued the friendship and support of Gloria Macher, who actually read my thesis and gave me some welcome advice about it.

English is not my maternal tongue and I am especially grateful to Gloria Macher and Toby Measham for revising my thesis. Finally, I would like to thank the research participants who so altruistically shared with us their life experience in their homeland and in Montreal, the interviewers who carried out the interviews with professionalism and sensitivity, and the Conseil québécois de la recherche sociale who funded the two studies that provided data for this thesis.

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Introduction

Between 1989 and 1993 alone, 90 armed conflicts involving 61 different countries took place (Wallensteen and Axell, 1994) and almost all recent armed conflicts occurred within the boundaries of individual countries (Cobey *et al*, 1993 ; Wallensteen and Axell, 1994). Internal armed conflicts usually follow a standard pattern : the government is headed by a strong political faction, part of the population is targeted for discrimination on ethnic, social or religious grounds and becomes the main victim of human rights abuses ; these groups sometimes retaliate and violence becomes widespread (Toole and Waldman, 1997). Not all armed conflicts follow this pattern, but all breed violence, death, hatred, social destabilization and refugees.

The Haut Commissariat des Nations Unies pour les réfugiés (2000) estimates that, as of December 31 1999, there were 11.7 million refugees and 1.2 million asylum seekers worldwide and that an additional 9.4 million people were either waiting repatriation in refugee camps or internally displaced within their country. The resettlement of refugees is a formidable challenge for both the refugees and the countries that welcome them.

From the point of view of refugees, fleeing their home country and resettling in a foreign land is a desperate venture to escape the political violence and socio-economic turmoil

that coexist with armed conflicts and that threaten their life and the lives of their loved ones. As other immigrants, refugees must reconstruct their life in an alien society that, more often than not, follows an unfamiliar set of rules and customs and may not recognize their assets. But, unlike other migrants, refugees often carry with them the memory of the traumatic events or situations experienced in their homeland and during their flight from a country ridden by war or armed conflict. This psycho-emotional burden adds further to the usual suddenness of their departure, which precludes planning for their future life in the host country, and to their anguish of knowing that the family they left behind may be in danger (Hein, 1993). Thus the migration and resettlement process of refugees differs markedly from that of other migrants and its favorable outcome is also more mitigated (Citizenship and Immigration Canada, 2000 ; Marr and Siklos, 1999 ; Renaud and Gingras, 1998).

From the point of view of host countries, refugees are a dilemma whose moral and political components weigh less and less against economic considerations. Refugees tend to seek asylum in neighboring, mostly underdeveloped, countries[1] even though this massive immigration often gives rise to or perpetuates violent inter-ethnic conflicts. Those who, eventually, reach an industrialized country face a growing hostility born of the pervading racism, the economic burden that they represent in an era of generalized cuts in health and social services and their apparent difficulty to adapt to the host society. Internal socio-economic pressure has led some industrialized countries to set up drastic measures to contain the increasing and costly flow of refugees on their territory. For instance, France, Germany,

[1] In 1999, 71.9% of refugees and asylum seekers were found in Africa, Asia or South America compared with 22.5% in Europe and 5.6% in North America (Haut Commissariat des Nations Unies pour les réfugiés, 2000)

Greece, Italy, the Netherlands and the United Kingdom now tend to restrict access of refugees to their territory and to welfare and to grant temporary protection rather than permanent residency (Schuster, 2000).

Thus, the resettlement process is a challenge for refugees who must adjust themselves to an alien society, in spite of their premigratory traumatic experiences, in order to enjoy their new life, and for the host countries who must foster the social adjustment of refugees so that they become healthy and valued members of the society rather than being viewed as an economic burden and a social threat. The successful adjustment of refugees to the host society cannot be understood without reference to their premigratory traumatic experience because their past exposure to political violence may have a lasting effect on the way they perceive themselves as social beings and on how they anchor themselves to society.

There is no denying that the more shocking effects of the violence arising from armed conflicts are deaths and disabilities caused in combat and by torture, bad treatments, or the very harsh living conditions that coexist with wars and political upheavals. However, the severe and devious effects of prolonged armed conflicts on the social fabric are increasingly acknowledged (Willis and Levy, 2000).

Indeed, as armed conflicts persist and gain in intensity, the whole society becomes destabilized following the disruption, or even the collapse, of traditional social anchors. This disruption has many sources. It first stems from the political violence itself, which legitimizes the discrimination of specific groups of people by the mainstream population (Nagengast, 1994) and instills a climate of terror among the members of the victims'

social network in order to destroy the foundations and structure of social cohesion (Bendfeldt-Zachrisson, 1988; Martin-Baro, 1989). It also follows from the deaths and disabilities that incapacitate the individual victims and prevent them from fulfilling their social roles. This forces a re-definition of social roles, which people may be unwilling or ill-prepared to endorse. Finally, the disruption of social anchors is enhanced by the rapid deterioration of the socio-economic conditions, which not only keeps some or most of the population from attending their usual business but also increases the risk of malnutrition and its long term effects.

Thus, most social anchors are affected by prolonged armed conflicts : families may be split by the death, imprisonment or disappearance of its members or by ideology ; work places and schools may be either closed or hardly functional, religious and community groups may become forbidden or not trustworthy. In order to survive, people living in a state of war adopt social roles and attitudes that are compatible with the war situation and with the widespread climate of suspicion and betrayal. Yet, this re-definition of social roles is precarious and breeds a confusion in social identity because it is framed outside the traditional values system.

The extent of this confusion in social identity is revealed in those who, in spite of their attachment to their country, decide or are forced to flee from their homeland because of the overwhelming threat to their lives or to the life of their loved ones due to the surrounding violence or the lack of means to support themselves and their family. They then find themselves endowed with a social identity that now serves no meaning and

deprived of the social anchors that would allow them to recover their true identity. It is in this state of confused social identity and disturbed social anchorage that refugees and asylum seekers land in the host country after days, months or even years of an uncertain and frightful migration journey.

Upon landing in the host country, refugees are often still shocked by what they went through in their homeland and fearful of what may become of them in the new environment. That fear is often shared by the native population who may view refugees as a threat to its own security and as an economic burden (Bun and Christie, 1995). Most refugees apparently overcome the trauma of exposure to political violence and past anguish of living in a society that had become disorganized and threatening in a lasting armed conflict. Some manage to replenish their former social role and status or achieve new ones in the host country in spite of their losses and, by doing so, they regain some control over their lives. Others do not fit in and this social exclusion may jeopardize their mental health. Haunted by their traumatizing premigratory experience or overwhelmed by the obstacles encountered in their new environment, they are unable or unwilling to anchor themselves to the host society and to define themselves socially. These un-anchored refugees may develop a growing social isolation that may affect their psychosocial well-being and their long term adaptation to the host country (Finnan, 1981 ; Herman, 1992).

Focusing on social anchorage as a component of the psychosocial adjustment of refugees may shed a new light on their resettlement process. The main objective of this thesis is to estimate the effect of exposure to political violence on the social anchorage of refugees. This

effect will be estimated on a sample of Southeast Asian and Central American refugees living in a North American urban setting.

The first chapter of this thesis summarizes how the plight of refugees, both before and after migration, threatens their psychosocial adjustment to the host society by repeatedly upsetting their social identity through the loss or disruption of the social anchors that define them as social beings. The second chapter presents a conceptual framework, which emphasizes the causal pathway between exposure to political violence and social anchorage though acknowledging the putative effect of other predictors of the social anchorage of refugees. The third chapter describes how the concepts developed in this framework will be operationalized in my thesis. Finally, the presentation of the results and their discussion will follow in the last two chapters.

Chapter 1

The plight of refugees

In the wake of the Second World War and the ensuing flow of stateless people, the United Nations adopted, in 1951, the Convention relating to the Status of Refugees which resolves that the status of refugee should be granted to a person who *owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable, or owing to such fear, is unwilling to avail himself of the protection of that country ; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it.* [1]

Since then, millions of people have claimed the status of refugees. As of December 31st 1999, there were 136 600 refugees and 24 700 asylum seekers in Canada, not counting those who had obtained their permanent residency abroad or since landing in Canada (Haut Commissariat des Nations Unies pour les réfugiés, 2000). The growing flow of

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[1] The Geneva Convention restricted the status of refugees to people exposed to events occurring before 1951. The 1966 Protocol extended the eligibility of the status of refugees to people exposed to events occurring after 1951.

asylum seekers in the past twenty years has emphasized the inadequacy of a refugee definition that does not account for the ruined socio-economic climate that permeates armed conflicts and that forces a number of people to flee their country in pursuit of basic survival needs.

In periods of political upheaval, life is chaotic for some or most of the population because of the endemic political violence but also because of the drastic disruption of the socio-economic environment. While refugees are persecuted by virtue of their membership in a specific race, religion, nationality, or socio-political group or overwhelmed by the poverty caused by the state of war that prevails in their country, they are cut off from some of their traditional social anchors either because they cannot resume their role within these institutions[2] or because these are destroyed, or no longer functional or trustworthy. This severed social anchorage may have adverse effects on the psychosocial well-being of refugees because social anchors serve, among other things, to define human beings as social beings. Thus, the loss or disruption of social anchors due to prolonged armed conflicts upsets the social identity of refugees as father or mother, son or daughter, worker or member of other religious, political or social group.

The plight of refugees, which starts in the home country, may continue in the refugee camps, and in the host country where they are faced with the stress of justifying their

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2 The term "institution" carries different meanings across and within disciplines. Here, it is understood as a formal group of people. According to Turney-High (1968), an institution is "a ritualized system of groups in equilibrium organized around goals considered too important to trust to informality".

claim for asylum and of resettling in an alien socio-cultural environment while mourning the loss of their family and friends, of their homeland and of their traditional way of life. One of the main challenge of refugees upon landing in the host country is to anchor themselves to the new society in order to recover their social identity or to construct a new one. Failure to do so may lead to a growing social withdrawal that can escalate into mental health problems.

This chapter summarizes how the plight of refugees threatens their psychosocial adjustment to the host society by repeatedly upsetting their social identity through the loss or disruption of the social anchors that define them as social beings. In this aspect, the specific plight of refugees sets them apart from other immigrants whose premigratory social anchorage and social identity were intact and who left their country willingly. The literature reviewed in this chapter focuses mostly on refugees from Southeast Asia (Cambodia and Vietnam) and Central America (Guatemala, Honduras, and Salvador) because the conceptual framework developed in this thesis will be tested on refugees from these geo-cultural areas.

1. In the home country

The political violence and social destabilization caused by armed conflicts may have immediate and lasting effects on the physical and mental health of individuals.

> *The health impact of political violence can be measured by deaths, injuries and disabilities. The indirect effects include the destruction of*

> *communities and their displacement (to areas which may be impoverished, lacking infrastructure, food and supplies), disruption of services and economic stresses resulting from disproportionately high military expenditure.* (Zwi and Ubalde, 1989 : 634)

The social backlash to these effects is that, on the one hand, the social roles of the victims are left unfulfilled or are taken up by individuals ill-prepared for the job, and, on the other hand, the social anchors that used to secure people to their society, to provide social cohesion and meaning and to ground social identity are destroyed or are no longer functional or trustworthy. Thus, both the political violence and the social destabilization that coexist in countries ridden by war or armed conflict threaten the acquisition and maintenance of social identity and status.

1.1 Exposure to political violence

Political violence ranges from personal threat to mass persecution, from torture and imprisonment to generalized forced labor, from execution to genocide. It is exerted by the government and its army but also by the guerrilla or other political factions, all claiming to protect the population against the *enemy* (Nagengast, 1994). Political violence is usually targeted at specific ethnic, social or religious groups but can be blindly extended to the general population. It may be short-lived but usually lasts for a number of years, although its intensity may vary over time and space. Finally, political violence can be experienced as a witness, a victim or a perpetrator, in one's own flesh and blood or in the flesh and blood of a loved one.

It is difficult for people born and raised in a peaceful country to grasp the extent and consequences of the political violence perpetuated in countries involved in armed conflict. Understandably, there are few reliable data concerning the occurrence of torture, imprisonment, execution, and other forms of violence taking place during political upheavals (Toole and Waldman, 1997). The prevalence and relative intensity of political violence in a specific country can only be glimpsed at from the number of people who have reached refugee camps in neighboring countries and from the report of refugees who have been granted political asylum in a third[3] country (Willis and Levy, 2000).

For instance, at least two million people have fled from Southeast Asia, mostly Cambodia, Vietnam and Laos, between 1976 and 1986 (Bun and Christie, 1995). It is further estimated that, by the late 1990s, approximately 2.5 million Southeast Asians had resettled in the United States including those who had migrated with the first waves of refugees and those who came later to be reunified with their family (Chung *et al*, 1998). In Cambodia alone, at least one million people[4], 14% of the population, were executed or starved to death under the rule of Pol Pot (Balencie and de La Grange, 1999). Those who fled Cambodia to reach a refugee camp in neighboring countries or found political asylum in an industrialized country bear witness to the political violence exerted by the

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3 In refugee studies, « first » country refers to the home land ; « second » country, to the country where the refugee camp is located ; and « third » country, to the country that has granted political asylum.

4 Estimations range from 300 000 to 3 millions people (Balencie & de La Grange, 1999)

Khmer Rouge under Pol Pot. Thus, in a study conducted in Utah, 73% of the 124 Cambodian subjects reported that they saw dead bodies, 57% that they witnessed the beating of others (non-family), 39% that they or a relative were beaten, and 21% that they were tortured (Blair, 2000). The frequent resort to torture by the Khmer Rouge was confirmed in a study of 993 Cambodians living in a refugee camp where 36% reported being tortured (Mollica *et al*, 1993) and in a study of 223 Cambodian refugees in New Zealand in which 23% reported experiencing torture in their homeland (Cheung, 1994).

Although the political violence documented from Cambodian refugees usually refers to the Pol Pot period (1975 - 1979), the Cambodian population lived in a state of political repression from the end of the 1960s, as the war raging in neighboring Vietnam spilled over into Cambodia, until the end of the 1980s when Vietnamese communists withdrew their troops after 10 years of occupation. The political violence did decrease after the Khmer Rouge regime, but it was still high compared to peace time prevalence. In a study on the exposure of Cambodian refugees to political violence, the percentages of subjects reporting being close to death, tortured, or imprisoned during the Pol Pot period were respectively 63%, 36% and 27% compared to 10 %, 8% and 9% after the Pol Pot period (1980 to 1990) (Mollica *et al*, 1993).

The Vietnamese have also been living in socio-political chaos for a long period starting in the mid 1960s. The first wave of Vietnamese refugees followed the fall of Saigon, in 1975, which ended the Vietnam War and this wave was mostly made up of pro-American South Vietnamese (military officers, government officials, professionals, and their

families) who were fleeing from the Communist takeover. The second wave began in 1978, when China attacked the Northern borders of Vietnam ; it comprised people of Chinese origin, mostly businessmen or merchants and their families who had been expelled by the Vietnamese government. The third wave of Vietnamese refugees, both ethnic Vietnamese and ethnic Chinese, were people sponsored by family living abroad. It was mostly made up of Amerasians banned from Vietnamese society and of former South Vietnamese soldiers released from re-education camps. The political violence experience by Vietnamese from the mid-1960s to the mid-1980s was extensive.

Among a sample of 209 newly landed Vietnamese refugees in San Francisco, 19% reported a premigratory traumatic event such as a near-death experience or witnessing the death of others, 11% were put in re-education camp, and 30% escaped by shabby boat (Hinton *et al*, 1993). In a study conducted in Montreal among Southeast Asian parents of school-aged children, 20% were boat people, and a majority reported that they or a close family member had experienced other forms of political violence such as persecution (15%), threat (26%), imprisonment (11%), execution (48%), torture (11%) or forced labor (71 %) (Rousseau *et al*, 1997).

The armed conflicts taking place in Central America are of a slightly different nature than those that have decimated the Southeast Asian population because they emerged from the socio-economic repression of peasants that gave rise to guerrilla movements fighting for a more balanced distribution of the means of agricultural production and against the American control of the economy of their countries. Although the political

ideology of the guerrilla movement was to fight for the rights of the destitute to access basic resources, the actions of this movement were mostly directed at taking control of the peasants' lives with or without their consent. Thus, in Central America, peasants and to a lesser degree scholars were the main victims of the armed conflicts either because they refused to join the guerrillas or because the army felt that they were supporting the guerrilla movement. In Guatemala, political violence reached a genocidal level in the late 1970's and the early 1980's when the Mayan Indians living in the highlands were victims of mass executions (Miller, 1996). It is estimated that over 200 000 Guatemalans, mostly Indians, were executed or « disappeared » during the 36 year long (1960 to 1996) conflict (Madelin, 1999). Similarly, between 1979 and 1992, El Salvador was engulfed in a civil war involving the army and para-military groups supported by the United States and the guerrilla troops that had joined their forces in 1980 to form the Farabundo Marti National Liberation Front. During that civil war, the guerrillas exerted their power over the rural areas with a violence as ruthless as that of the military force, and these areas were also bombed and ransacked by the army (Martin-Baro, 1989). In the early 1980s, war wounds were the fourth largest cause of morbidity and mortality in Salvador (Zwi and Ubalde, 1989). Large number of young men escaped Salvador for fear of being forcibly recruited by either or both the army and the guerrillas (Suarez-Orozco, 1990). During the 1980s, 10% of the population were displaced within Salvador, 5% escaped to neighboring countries and one million Salvadorans, roughly 20% of the population, sought asylum in the United States (Montes, 1988). The number of deaths related to political violence was estimated at 70 000 for that period (Martin-

Baro, 1989). A high percentage of Central American refugees who resettled in Montreal reported that at least one family member or themselves had been persecuted (53%), threatened (41%), imprisoned (16%), executed (34%), tortured (27%), or had disappeared (30%) in their home country (Rousseau *et al*, 1997). In a qualitative study of 67 Central American women resettled in Australia and recruited through a snowball sampling strategy, 78% reported that they had feared for their life in their homeland and that torture had been experienced by themselves (30%), a relative (61%), a husband (48%) or a son or daughter (16%) (Allotey, 1998).

Individuals caught in this web of fright find themselves in a kind of psychosocial limbo, deprived of their usual social anchors and they may suffer from social, political and psychological isolation (Nagengast, 1994). Martin-Baro (1989) uses the expression *psychosocial trauma* to denote how political violence conditions the relationships between the individual and his or her social world by imprinting itself on the institutions and groups that govern the society thus leading to an alienation of social relations. He further argues that this psychosocial trauma impregnates the foundations of a person's identity and causes a schizoid disjuncture between what one perceives and what one can disclose in a social setting so that one can no longer validate one's perceptions and becomes confused about who one is and what the social reality is.

1.2 Social destabilization

The social destabilization resulting from armed conflicts stems from the political violence that not only incapacitates part of the population and destroys some means of

production thus submitting the population to an increasing economic hardship but also instills an unremitting climate of terror and suspicion.

As the young and healthy are voluntarily or forcibly drawn to the army, the para-military groups or the guerrilla, the production of baseline necessities are more or less interrupted. The destruction of crops, fields, roads and industry by bombing or sabotage further leads to high increases in prices that few inhabitants can afford. This economic hardship generates mass migration and food shortage that, for instance, have been responsible for most deaths related to armed conflicts in Africa and Asia (Toole and Waldman, 1997). In a study of the effect of armed conflict on the national economy of 98 countries, Collier (1999) shows that the gross domestic product per capita decreases at an annual rate of 2.2% during the conflict and he attributes this decline to the reduced production of goods and the loss of capital stock. This economic hardship is worsened by the exercise of political violence that requires material and human resources that must be paid for by drawing from the budgets usually allocated to health and social services thus greatly or completely restraining the availability of such services (Zwi and Ubalde, 1989). In the early 1980s, underdeveloped countries, where most armed conflicts have taken place, spent an average of 40$ per capita for military expenditures, 27$ per capita for education and 11$ per capita for health whereas the mean budget per capita in industrialized countries was 523$ for military expenditures, 490$ for education and 454$ for health (Terris, 1987).

The social destabilization due to armed conflicts can reach a level as extreme as that observed in Cambodia. Between 1969 and 1973, the extensive bombing by the United States of the Cambodian countryside bordering Vietnam not only forced its inhabitants to flee this area and to seek shelter in the cities or outside the country[5] but it also destroyed the roads used for transportation of food and other basic necessities and rendered the field unmanageable for agriculture. In April 1975, Pol Pot overpowered the Lon Nol government and transformed Cambodia into a gigantic forced labor camp until December 1978 when the Vietnamese army invaded the country. Under the Pol Pot regime, citizens were evacuated from the cities and dispersed into farming communities where they, together with the peasants, were forced to work for endless hours under conditions similar to those of the concentration camps during World War II (Carlson and Rosser-Hogan, 1993). Members of ethnic communities and professionals were executed, hospitals were emptied and patients thrown to the streets or killed ; schools, factories and monasteries were closed ; and families were separated.

The climate of terror and suspicion that coexists with armed conflict keeps part or most of the population from attending to their usual business especially when a specific group of people is targeted for harassment and persecution, so that the violent stigmatization of specific socio-cultural groups also contributes to the destabilization of the whole society. For instance, after the fall of Saigon in Vietnam, the communist regime instituted a system based on the re-education of dissidents or assumed dissidents (i.e., members of

[5] 60% of the first wave of Cambodian refugees, estimated at 130 000 people, was an aftermath of this bombing (Kiernan, 1996).

the South Vietnamese army, professionals, and Chinese merchants) in camps or in labor farms and on the forced sharing of land and its product for the *good* of the community (Franchini, 1997). Keeping the professionals and merchants from fulfilling their role deprived the population of the services usually provided by them, and somehow reinforced the propaganda regarding the uselessness of these people as they could not perform adequately in the production of agricultural goods. Political violence thus creates *punishable categories of people ; forging and maintaining boundaries among them, and building the consensus around those categories that specifies and enforces behavioral norms and legitimates and de-legitimates specific groups* (Nagengast, 1994 : 122).

So, although political violence is experienced by individuals, its effects are felt by part or most of the population because it is embodied in series of reprehensible and brutal acts that shake the social foundations of a community and destroy its means of goods and services production. Furthermore, in order to survive, some people betray their own family or friends so that trust in loved ones can no longer be taken for granted. Finally, families and communities may be split ideologically or displaced physically so that individuals are further alienated from their traditional social anchors.

2. In the refugee camp

Refugee camps are established in order to control the massive flow of refugees that enters neighboring countries in pursuit of safety and basic survival needs. Their management is very costly even taking into account the financial contribution of a

number of humanitarian organizations (Haut Commissariat des Nations Unies pour les réfugiés, 2000). Consequently, most countries are rather hostile to the implementation of a refugee camp and to the mass migration of asylum seekers into their territory (Bun and Christie, 1995).

Refugees may find their life and well-being jeopardized in refugee camps that were initially planned as temporary asylum until repatriation to the home country or migration to a third country could be managed. In a study conducted on a random sample of 993 refugees living in a Thailand refugee camp, 82% reported living in the camp for five years or more (Mollica *et al*, 1993). These camps often lack the basic necessities required to take care of a confused population in poor health. If life in a refugee camp is relatively safer than in the home country, it is not free from considerable health hazards, including malnutrition, communicable diseases and violence. Toole and Waldman (1997) report that 7 to 9% of refugees who have successfully reached a refugee camp die within the first month of their stay as a consequence of extreme malnutrition and poor or non-existent medical care in their homeland and in the camp.

While the refugee camp rapidly becomes a microcosm reproducing the society that refugees left behind and complying with the rules and hierarchy enforced by the camp's administrators, it is nevertheless a *nowhere land* where refugees can neither retrieve their past social identity nor explore a new one (Mortland, 1987). Their only hope is to be selected for migration to a third country and, in order to be accepted, they must convince the resettlement officers that they are *real* refugees, not terrorists or torturers under

disguise, and that not only do they pose no threat to the host society but that they can actually become an asset.

Indeed, migration from a refugee camp to a third country involves a finely tuned selection and re-programming process conducted by delegates from the host country. Mortland (1987) conducted an enlightening ethnographic study of a processing center established in the Philippines to train Cambodian and Vietnamese refugees on how to become *good* USA citizens. These refugee had been thoroughly selected from refugee camps located in Thailand and Malaysia on the following basis : they had relatives already living in the USA or had been employed with Western organizations, they reported no communist affiliations, they could not be repatriated and they showed no symptoms of contagious diseases. Canadian resettlement officers also apply strict selection criteria in refugee camps ; in particular, intact families are more likely to be selected than individuals (Beiser, 1988). The American training of refugees in the processing center revolved around learning English and internalizing the American way of life through work, unwillingness to accept welfare, happiness, and not isolating themselves in ethnic enclaves (Mortland, 1987). A similar program, sharing the same objectives, called the Overseas Refugee Training Program was also implemented in refugee camps located in Thailand (Ong, 1995). Mortland (1987) argues that the propaganda disclosed during the training insists on the need for refugees to become productive and autonomous Americans and that this propaganda contrasts with the way refugees are treated in the camps as second class citizens unable to think by themselves. Ong (1995) notes that refugees soon learn that passivity is the best strategy to gain access

to the scarce resources available in the refugee camps and that they will tend to reproduce this strategy upon landing in the USA. However, when assessed in economical terms, this learned passivity may be overestimated according to Mollica *et al.* (1993) who uncovered that, among 993 Cambodians living in a refugee camp in Thailand, 64% of males and 34% of females worked within the camps to earn a living although monetary compensation was officially not permitted. Nonetheless, it is very likely that the re-programming imposed on refugees in the camps further enhances their confusion in social identity inherited from years of living with a severed social anchorage in their home country torn by armed conflicts.

3. In the host country

The plight of refugees does not cease upon landing in the host country. Those who were granted refugee status in refugee camps or through embassies benefit from a number of financial and social measures to ease their integration, whereas those who request political asylum upon landing in the host country are faced with the stress of justifying their claim that, due to socio-political reasons, their life is in serious danger in their home country ; the latter often do not have access to the services offered to the former [6]. Refugees sponsored by family members or humanitarian or religious groups enter the host country as residents but, usually, have no access to the financial incentives offered to refugees selected abroad. Whatever the category under which they land in the host

[6] In the late 1990s, the annual average of accepted refugee in Canada was 25000 and their distribution was as follow : 30% selected abroad, 10% sponsored, 45% claiming political asylum in Canada, 15% family reunification (Citizenship and Immigration Canada, 1999a)

country, most refugees suffer from what Eisenbruch (1984) has called cultural bereavement and which consists in the experience of bereavement by the uprooted person resulting from the loss of social structures and social identity. It is in this confused frame of mind that the new settlers must reestablish their lives in a host society that is often not very welcoming.

3.1 Claiming political asylum

Convincing immigration officers that a request for political asylum is well-founded is a very stressful ordeal. The majority of these claims are rejected. For instance, only 3% of the 30 000 Salvadorian refugees applying for political asylum in USA were accepted between 1980 and 1985, the same percentage was observed for Guatemalan asylum seekers (Suarez-Orozco, 1990). From 1989 to 1998, the percentage of accepted claims was, on average, 9% in Europe and 14% in USA (Silove *et al*, 2000). The acceptance percentage was comparatively high in Quebec where it reached 48% in 1998 (Berthot and Mekki-Berrada, 1999).

The process of claiming political asylum varies over time and space, and may last many months or even years. During this period, asylum seekers must provide for themselves and their family who is living with them or who was left behind. In Europe, there is a growing trend since the 1980s to restrict access of refugees to the host country and to welfare and to attribute a temporary status rather than permanent asylum (Schuster, 2000). In Canada, after notifying an immigration officer of their claim for political asylum, refugees are summoned to a hearing where they must convince an immigration

committee that their claim is justified. They can appeal their case - on judicial grounds not on the facts presented - if their claim is rejected at this first hearing. Although this process seems fair enough, it is spoilt by the lack of empathy and socio-political expertise of the commissioners in charge of the hearing process (Crépeau *et al*, 2000). Furthermore, most refugees are in a state of confusion when claiming political asylum and their past experience has taught them to be suspicious of government officials so they are ill-at-ease to disclose the traumatic information that would justify their claim. In Canada, asylum claimants have access to a lawyer to build their case but the financial support does not cover all of the juridical expenses. The result is that either the lawyer may not properly defend his or her clients or he or she may ask for additional payments, which the refugee can hardly afford especially since employment is limited as employers are less inclined to hire someone who may be deported in the near future (Berthot and Mekki-Berrada, 1999).

3.2 Integrating into the host society

Resettling in an alien society entails a number of stressful experiences such as learning new ways of doing even the most usual tasks, recreating a social network, and replenishing the social roles that define social identity. The level of stress generated by these experiences varies across migrants depending on the distance between their traditional culture and that of the host country and on whether they have suitable assets to bridge that distance if they wish to. However, even the best equipped migrants may have a hard time resettling in a society if that society is unable, because of a difficult socio-

economic context, or unwilling, because of racial prejudice, to welcome strangers[7] (Stein, 1979).

The most effective assets for resettlement appear to be fluency in the host society's dominant language, support from a community of the same ethnic origin, education, and professional skills that are easily transferable, well recognized and sought after in the host society. However, not all migrants can make the most of their assets. For instance, economic integration appears to be less successful in refugees than in other categories of immigrants as shown by their higher recourse to unemployment insurance observed in a Canadian study (Marr and Siklos, 1999). Compared to other immigrants, refugees may be disadvantaged since their hurried flight from their homeland kept them from planning their move to a country that, often, they have not selected. They may also be physically or emotionally traumatized by their exposure to political violence and the loss of family and friends, some executed or *disappeared*, others left behind in a country still ridden by armed conflict. They may be less confident about their social identity and social worth as these have been sadly shaken by their exposure to political violence and their life in a society plagued with suspicion and betrayal where the fulfillment of social roles was perverted or denied.

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7 The derogatory view of the host society regarding refugees takes different forms. For instance, upon landing in USA, Cambodian refugees were handed a booklet called Facts of Life in the United States which notes among other things that : *Americans are very sensitive to personal body odors. Because of this, it is a good idea for people to bathe or shower and put on clean clothing every day, and to wash their hair and clothes often.* (Ong, 1995)

Indeed, one of the most far-reaching effects of refugees premigratory traumatic experiences on their resettlement is the shattering of their social world in the home country, which partly conditions how they approach their relationships with others and with the institutions of the host society (Jenkins, 1991). Silove (1999) asserts that exposure to political violence may harm a number of adaptive resources such as the feeling of safety, the capacity to form and nurture interpersonal bonds, the sense of identity and role functioning, the faith in justice, and the belief that life is meaningful and coherent. In Western society, the adaptability and actual adaptation of migrants are usually measured in terms of their economic autonomy. Employment is a limited definition of adaptability although it does reflect some aspects of refugees' capacity to mobilize their resources.

From the point of view of the host society, employment or other means of economic self-sufficiency serves to alleviate the negative perception that natives often entertain toward refugees. For instance, in the USA where, according to Nagengast (1994 : 124), idleness *is seen as violence against the social body*, refugees - maybe more than other civilians - may be despised if they fail to earn their living. From the point of view of refugees, employment not only serves to provide for themselves and their family living in the host country or abroad, it also contributes to recapture the social roles and identity that may have been upset through exposure to political violence and migration (Aycan and Berry, 1996 ; Finnan, 1981; Silove, 1999), to create social bonds and to anchor themselves to the host society (Aycan and Berry, 1996 ; Valtonen, 1994). Hence the occupational anchorage of refugees to the host society serves to recover a sense of competence (Marx,

1990) or moral duty toward the family (Beiser *et al*, 1993) and to prevent social isolation (Mortland and Ledgerwood, 1987; Valtonen, 1994) and mental health problems (Mollica *et al*, 1998). Yet, a high percentage of refugees are unable or unwilling to anchor themselves to the host society through employment. In settings such as the USA where the cost of medical care is high, unemployment may be a survival strategy as it allows free access to health care (Ong, 1995).

A study of 1348 Chinese and Southeast Asian refugees living in Vancouver showed that 59% of refugees were unemployed compared to 20% of 319 Vancouverites and that in both groups unemployment was a risk factor for depression (Beiser *et al*, 1993). The lower rate of employment among refugees could result from their lower level of education ; 20% of the refugees had a high school education or higher compared with 68% of the Vancouverites under study. However, Beiser *et al.* (1993) questioned the meaning of employment for refugees. They argue that, given the traumatic events experienced by refugees and the family-based social networking, employment may not be a source of self-esteem as in North Americans or of social bonding but rather a way to fulfill their social duty toward their family. Indeed, the associations between loss of self-esteem and loss of social contacts and depressive affect in unemployed were much lower in Southeast Asian refugees ($r = .17$) than in Vancouverites ($r = .48$).

A recent Québec study conducted among 407 refugees who had been accepted within the previous three years also illustrates the low level of occupational integration of refugees as 68% were unemployed at the time of interview (Renaud and Gingras, 1998). These

refugees justified their unemployment by their lack of Canadian work experience, the non-availability of jobs on the labor market, the non-recognition of premigratory work experience or training, and the inadequate proficiency in French.

4. Effect on mental health

The effect of the plight of refugees on their mental health has largely focused on psychiatric outcomes such as post-traumatic stress disorder (PTSD), depression and anxiety and has generated conflicting results. In short, when considered separately, premigratory exposure to political violence and some postmigratory factors seem to affect the mental health of refugees across a wide array of measures whereas, when analyzed simultaneously, results are inconsistent: some studies show that both remain important predictors, others, that postmigratory factors dominate.

The theoretical model prevailing in refugee studies is that both premigratory and postmigratory factors may affect directly - positively or negatively - the mental health of refugees and that premigratory factors may also act indirectly through their effect on postmigratory factors. However, in most studies, data collection is restricted to either the pre- or the postmigration period or, when both periods are documented, the interaction between pre- and postmigration factors is not investigated. The assumption that exposure to political violence hinders the ability of refugees to resettle in the host society is thus not tested formally and conflicting results are obtained regarding the respective effect of these factors on the mental health of refugees. Furthermore, Mollica *et al.* (1987) caution that mental health problems should not be equated with impairment in social functioning.

When considered by itself, exposure to political violence is found to increase significantly the risk of PTSD among refugees of diverse ethnic origins exiled in different countries such as Vietnamese in the USA (Mollica *et al*, 1998) or in Norway (Hauff and Vaglum, 1994), Bhutanese in Nepal (Shresta *et al*, 1998), Burmese in Thailand (Allden *et al*, 1996), refugees with diverse ethnic backgrounds in Australia (Cunningham and Cunningham, 1997 ; Silove *et al*, 1997) and among young Cambodians living in the USA (Sack *et al*, 1993). Furthermore, in the absence of migration, exposure to political violence also tends to increase the risk of mental health problems among Afghan women (Rasekh *et al*, 1998), Palestinian political ex-prisoners living on the Gaza Strip (El Sarraj *et al*, 1996), Lebanese families living in Beirut (Farhood *et al*, 1993) and Turkish political activists (Basoglu *et al*, 1994). The role of exposure to political violence in the pathogenesis of depression is more controversial. For instance, Mollica *et al.* (1998) observed a positive association between the premigratory traumatic experience and psychiatric symptoms of Vietnamese refugees in the USA contrary to Hinton *et al.* (1997) who studied a group of the same ethnic origin also living in the USA.

Conversely, when exposure to political violence is not taken into account, various features of the resettlement process are associated with an increased risk of PTSD (Cunningham and Cunningham, 1997 ; Sack *et al*, 1993 ; Silove *et al*, 1997). In particular, unemployment has been implicated in the pathogenesis of a number of mental illnesses observed in refugees (Beiser *et al*, 1993 ; Chung and Kagawa-Singer, 1993 ; Lavik *et al*, 1996; Silove *et al*, 1997 ; Valtonen, 1994). This association is usually interpreted in terms of the buffering effect of employment on the detrimental health effect of exposure to political violence but also in

terms of the role of unemployment as a symptom of psychosocial distress. However, results from Chung and Bemak (1996) suggest that the high level of depression and anxiety observed in 2482 Southeast Asians refugees resettled in California was related more to public assistance than to unemployment. The authors interpret this finding by the feeling of incompetence felt by the subjects regarding their family duties. But Beiser *et al.* (1993) showed that unemployment is a risk factor for depressive symptoms in both Southeast Asian refugees and in natives. Other risk factors came up as more specific to refugees : the absence of family attachment, a non-Chinese origin (as a proxy for community support) and landing in Canada 10-12 months before interview emerged as significant predictors of depressive symptoms in Vietnamese refugees living in Vancouver (Beiser, 1988). In a qualitative study of the resettlement process of Middle East refugees in Finland, refugees attributed their psychological stress to the loss of family and social ties following migration (Valtonen, 1998). In contrast, Sundquist (1995) showed that, together with ethnicity, indicators of low economic status (low social class and low material resources) rather than social network were predictors of a decrease in general health. Westermeyer *et al.* (1989) have noted that the predictors of emotional distress reported by Hmong refugees established in Minnesota tend to change over the length of stay in the USA: after a mean of seven years, being an herbal dealer, household size and medical problems are determinant whereas, five years later, the main risk factors are marital and medical problems.

Among the few researchers who have analyzed pre- and postmigratory factors together, some have concluded that both increase the risk of mental health problems in adult refugees

(Cheung, 1994 ; Chung and Kagawa-Singer, 1993 ; Sack *et al*, 1996) and others that post-migration factors are the main predictors (Beiser *et al*, 1989; Lavik *et al*, 1996).

A small number of studies did investigate the association between pre- and post-migration factors considering the latter as the main outcome. Sack *et al.* (1996) observed a correlation of r = .49 between premigratory trauma and resettlement stresses in young Cambodian refugees. In a qualitative analysis of a clinical sample, Boehnlein *et al.* (1995) pointed out that Cambodian refugees tend to report fewer family problems than Vietnamese although the former experienced a higher number of trauma than the latter. Rousseau and Drapeau (1998) reported a negative correlation (r = -.25) between trauma sustained before the birth of a child and the level of family cohesion among Cambodian refugees and a positive correlation (r = .44) between trauma sustained after the birth of a child and the level of family conflict among Central American refugees.

Recent studies have attempted to integrate the notion that one of the main effects of exposure to political violence on mental health is to create a major breach in the sense of self and sense of coherence so that the victim becomes confused about who he or she is, who his or her friends and enemies are, what has become of the world he or she used to live in and what is his or her place in the world that has replaced it. In a study of 223 Cambodian refugees resettled in New Zealand, an adequate sense of coherence defined as the extent to which one perceives the world as being structured, predictable and explicable and estimated that personal resources are adequate to meet demands, was shown to be a protective factor against PTSD (Cheung, 1994). Sundquist *et al.* (2000),

using the same definition of the sense of coherence, confirm that a low sense of coherence increased by 65% to 182% the risk of psychological distress or somatic complaints in refugees from Iran, Chile, Turkey and Poland who had resettled in Sweden. In a study of 209 Vietnamese refugees newly arrived in the San Francisco area after spending some times in refugee camps, Hinton *et al.* (1993) concluded that past exposure to political violence should be considered not only as a predictor of psychiatric disorder but also as a predictor of psychosocial adjustment.

5. Summary

The widespread political violence and the economic hardship that prevail in armed conflicts affect the social fabric in many ways. These are likely : (1) to split families because of the death, imprisonment or disappearance of some family members or because of divergent ideologies ; (2) to prevent people from attending their usual business because specific ethnic, religious or social groups are forbidden to do so or because industries and other sources of income are destroyed or no longer functional ; and (3) to precipitate the breakdown of religious or community groups because of the ostracism of its members. Thus the elements of the social fabric that are most affected by prolonged armed conflict are the social anchors (i.e., family and work, religious or community groups) that define social identity. People living in a country ridden by armed conflict partly adapt their social roles and attitude to the war situation in order to survive but this re-definition of their social identity is precarious because it is grounded on severed social anchors. The precariousness of this social identity that is partially re-

defined due to the surrounding political violence is revealed in those who flee their country to seek political asylum abroad.

Refugees then find themselves in a psychosocial limbo where their re-constructed war time social identity becomes meaningless or inadequate and where their former social identity is fragile because the link with their traditional anchors has been broken by armed conflicts and by migration. This confused social identity may be exacerbated in refugee camps because these are nowhere lands with few opportunities to develop social competence consistent with life in a host country that refugees have not experienced yet. Although there is some evidence that exposure to political violence may result in a fragmentation of social identity in the homeland and refugee camps, its effect on the resettlement process of refugees in the host country is largely unknown.

The conceptual framework developed in this thesis rests on the empirical evidence outlined in this chapter and on the application of the social psychology model, which addresses the effect of traumatic events and situations on the psychosocial adjustment of individuals. It will be presented in the next chapter.

Chapter 2

Conceptual framework

The plight of refugees is loaded with stressful events and situations that may upset the social identity of refugees and challenge their psychosocial adjustment to the host country. Most of the epidemiologic studies on refugees have focused on specific psychiatric outcomes such as post-traumatic stress disorder (PTSD), depression and anxiety viewing specific facets of the resettlement process, mostly employment, as additional determinants of the mental health of refugees. Yet, some features of the resettlement process may also be conceptualized as components of the psychosocial adjustment of refugees rather than as risk or protective factors.

There is a growing consensus that the resettlement of refugees is affected by premigratory traumatic experiences, transferable skills and socio-demographic profile, and by the postmigration context of the host society (Boyd, 1989 ; Dorais, 1998 ; Kunz, 1981 ; Portes and Borocz, 1989 ; Stein, 1986 ; Valtonen, 1994). Expressions such as "integration" and "adaptation" have been used repeatedly as synonyms for "resettlement". Valtonen (1998 : 41) defines "integration" as *the process by which immigrants and refugees engage with and become part of their resettlement society*; she suggests that migrants integrate into the host

society through their participation in four domains of activity: labor market and education, social interaction, organized activity, and cultural encounter. Rogler (1994 : 702) also acknowledges the multidimensionality of the resettlement process which he describes as *alteration in the bonding and reconstruction of interpersonal social networks, extraction from one socioeconomic system and insertion into another, and movement from one cultural system to a different one.* Attachment and bond maintenance, and identity and role functioning are two levels of adaptation which according to Silove (1999) are most likely to be affected by exposure to political violence. Thus there seems to be an overall agreement that acculturation, social networking and social anchorage are the main components of the resettlement process - although these components carry different labels in the literature.

The expression "social anchorage" has been used in studies carried out among the mainstream population and, less often, among immigrants. In this thesis, it is defined as the way people secure themselves to the society in which they live by joining institutions, such as work or religious groups, school, family and other formal groups, that provide social roles and statuses. In the scientific literature, social anchors are not recognized as such; disparate variables related to employment, education, religion or family are investigated and their association with the main outcome is interpreted without acknowledging that their function is, in part, to anchor individuals to society.

Social anchorage is not a prerogative of immigrants or refugees; it is a common feature of the social life of all human beings. However, the social anchorage of migrants is fraught with additional difficulties. Immigrants and refugees may not meet the eligibility criteria to

specific institutions; they may have been anchored to similar institutions in their homeland, but eligibility criteria differ across societies. They may be unable to maintain their anchorage to an institution because they are not familiar with the rules that govern this institution in the host society and with the rituals that punctuate its action. Furthermore, they may have to achieve some social anchors that are ascribed to those born in the host society, for instance, citizenship. Finally, their premigratory exposure to political violence may affect their ability or willingness to join institutions endorsed by the host society. Consequently, a conceptual model of the predictors of social anchorage of refugees in the host country must encompass the effect of past exposure to political violence and of the skills that can be put to use in the new setting.

The empirical evidence gathered from the literature and reported in the first chapter supports the view that, because of the widespread political violence taking place in their home country, refugees were more or less cut off from their traditional social anchors, such as family, and work, religious and community groups, either because they were physically or psychologically unable to assume their role within these institutions or because these were destroyed or no longer functional or trustworthy. It also emphasizes how the recovery of their social identity and sense of coherence and self-worth in the host country was further jeopardized by the gap between their traditional culture and that of the host society and by the frequent loss of social status brought by their migration.

In addition, theoretical models underlying the study of refugees assume, implicitly or explicitly, that traumatic events or situations may lead to a growing confusion in social roles

and identity and to social withdrawal. In particular, the social psychology perspective links the social life of individuals to their psychosocial adjustment and mental health.

1. Social psychology perspective

The rationale underlying social psychology models is that: (1) confusion in social identity is a symptom of distress, (2) social identity is partly conditioned by social roles and status, and (3) stressful events or situations disrupt the social life of individuals thus causing a breach in their social identity that may jeopardize their psychosocial adjustment. In the social psychology perspective, exposures to political violence would be viewed as life events or situations that may affect mental health by disturbing how a person defines herself socially.

A major step in social psychology thinking was accomplished when Rahe, Holmes and their colleagues (Holmes and Rahe, 1967; Rahe *et al*, 1964) argued that it was not so much the stressful event per se that was a risk factor for mental illness but rather the change in life that ensued from that event. Since then, the life change theory has been disputed on the basis that not all changes are harmful ; some have no effect and others may be beneficial (Kessler, 1997). The validity of this argument is illustrated by a study of 303 Portuguese immigrants in Montreal which showed that, not only the association between the level of life change and illness was low ($r = .18$) for the whole sample although it was higher in women ($r = .24$) than in men ($r = .06$), but also that it was negative ($r = -.24$) in men aged 35 to 45 years old (Roskies *et al*, 1975). Nonetheless, the pioneering work of Rahe, Holmes and their colleagues has given rise to a number of

theoretical models seeking to untangle the effect of stressful life events on the psychosocial adjustment of individuals.

Burke (1991) posits that social identity is activated through four components : a reference identity comprising the set of meanings that an individual attributes to specific roles or situations ; an input which corresponds to the social situation at hand ; a process that compares the input with the reference identity ; and an output which is the behavior adopted by the individual in the specific situation under scrutiny and which is in accordance with what others, involved in that input, expect from that individual. He argues that, when individuals have no reference identity for the input they are facing, they become distressed because they cannot produce an adequate output. The activation of identity is thus interrupted. According to Burke (1991), identity interruption results from unfamiliar situations where the input is not intelligible to the individual or where the output is viewed as inadequate by others. Such unfamiliar situations are frequently encountered in the premigratory and postmigratory experiences of refugees and it may take time before refugees adjust their reference identity to the new input provided in the host society.

Pearlin (1989) argues that the stress process is embedded in three levels of social structure : social stratification (i.e., gender, age, socio-economic class, ethnicity), social institutions providing roles and statuses, and interpersonal relationships. He claims that social structures determine to what stressors specific categories of people are exposed to, how the distress is expressed and how it is dealt with. According to Pearlin (1989), the

social psychology study of the stress process should focus on role strains which include several types : role overload, which occurs when the demands associated with a role exceed the individual's capacities ; interpersonal conflicts within role sets (ex. : husband-wife) ; inter-role conflict (ex. : wife-mother-worker); role captivity when one is forced to fill an unwanted role ; and role restructuring within a role set. Pearlin (1989) insists that role strains cause, are caused by or coexist with stressful events and that the combined effect of traumatic events and role strain, although they may temporarily disorganize a person's life, will affect one's mental health or psychosocial adjustment only if the stressors are perceived as threatening to one's life or to one's values system.

Finally, Thoits (1991 : 103) has proposed a model centered around the concept of role-identities defined as *self-conceptions based on enduring, normative, reciprocal relationships with other people.* She argues that individuals who hold social roles and who perform adequately in those roles develop role-identities that contribute to their self-esteem by reinforcing their sense of who they are and how they ought to behave and that enhance their sense of meaning and purpose in life. She further notes that role-identities vary across individuals in their saliency and claims that stressful events or strain that threatens the role-identities most valued by an individual are more likely to impair his or her mental health. Thoits (1991) agrees with Pearlin (1989) that saliency is partly determined by social status so that people belonging to one or another social category may be more or less at risk of exposure to specific stressful events and more or less vulnerable to their effects, but she argues that individuals who possess many role-

identities may be less at risk than those who have few role-identities because if one identity fails, another can take over.

In the social psychology perspective, adverse effects of the traumatic events or situations are exerted through the interruption of the identity process, the overwhelming strain imposed on social role or the loss of role-identities that alienate victims from their social identity without which they cannot function properly or healthily. Hence social psychology models posit that traumatic events or situations cannot be dissociated from the social dimension of mental health because they are embedded in a specific social context and because they are upsetting social identities that rest on the relation between individuals and society. Thus these models support the assumption that exposure to political violence may create a breach in the social identity of the victims, as father or mother, as son or daughter, as worker, or as member of a religious, political, ethnic or other social group and jeopardize their psychosocial adjustment.

2. Conceptual framework

Refugees are a subgroup of the people who were exposed to political violence in their home country so that the study of refugees is the study of the effect of political violence on a selected group of victims. This group consists of individuals who : (1) have survived the torture, bad treatment and economic hardship experienced before and during migration, (2) had the personal and social resources, and the will to escape their home country, or who were forced to do so, and (3) were either selected in refugee camps, accepted as refugees after landing in the host country or sponsored to migrate into the host country. Yet, despite

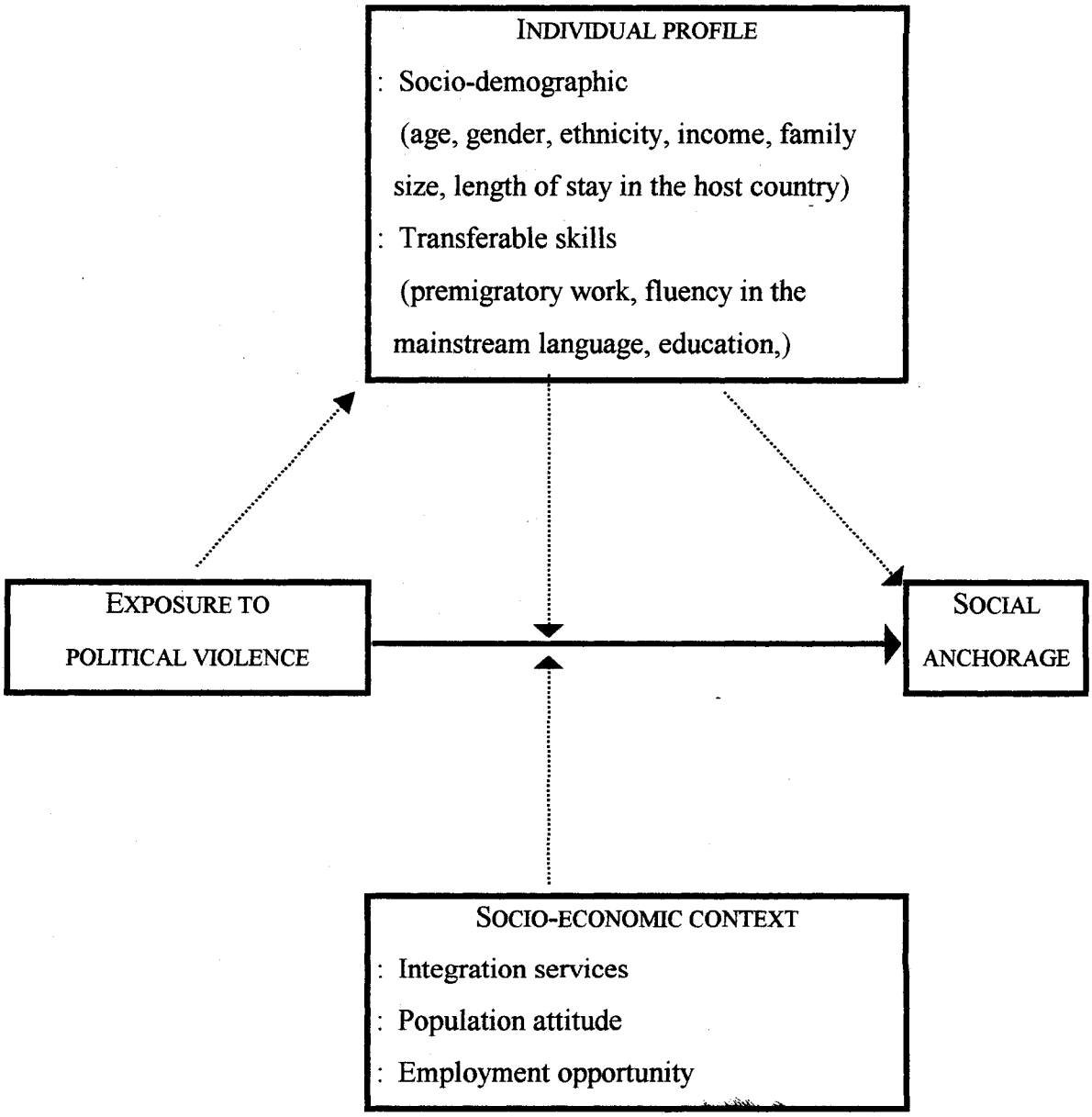
the fact that refugees have shown their considerable resiliency by overcoming a high level of adversity, a number of factors may impede their ability or willingness to anchor and adjust themselves to the host society.

First, memory from the past may contaminate the present with feelings of confusion, absurdity and fragmentation that can keep refugees from deciphering the new social environment. Second, the additional stress faced in the host country may exhaust what is left of their inner strength. Third, they may be socially ill-equipped to function adequately in a different economic environment. Finally, the host society may not be very welcoming. Thus, exposure to political violence is not the only predictor of the social anchorage of refugees. Individual characteristics, such as gender, age, ethnicity, family duty, income, transferable skills and length of stay in the host country, and macro factors such as the socio-economic context of the host country can also affect social anchorage.

In this thesis, social anchorage is the main outcome under study, the traumatic events and situations related to political violence and experienced by refugees before migration are the main exposure, and transferable skills and socio-demographic characteristics are considered as additional risk or protective factors although some may act as confounders of the effect of exposure to political violence on social anchorage or as effect modifiers (Figure 1). In the next pages, the concept of social anchorage, the measurement of exposure to political violence and the definition of transferable skills and socio-demographic profile will be discussed in order to substantiate the research questions and hypotheses that will be submitted at the end of this chapter.

Figure 2.1

Predictors of the social anchorage of refugees



2.1 Concept of social anchorage

The first mention of the expression social anchorage in the scientific literature appears to have occurred in 1954 when Kuhn and McPartland presented the Twenty Statements Test[1] (TST) derived from the symbolic interactionist theory. The TST measures the extent of an individual's anchorage to his society and social anchors are defined as the *groups and classes whose limits and conditions of membership are matters of common knowledge* (Kuhn and McPartland, 1954 : 69). The TST operationalizes the concept of self, a key notion in symbolic interactionist theory, that refers to the conceptions that people hold about themselves and that are partly constructed from their social roles and statuses in various situations (Turner, 1991). Few applications of the TST are reported in the literature; examples include the study of the social anchorage of prison inmates (Faine, 1973) and of widows (Lund *et al*, 1986) and a comparative study of people born in the USA with Koreans living in their homeland or in the USA (Rhee *et al*, 1995).

The concept of social anchorage has relatively recently resurfaced in studies conducted in Sweden by Hanson and Östergren (1987) who developed a model of the social environment that was initially tested in the Malmö Population Study[2]. In this model, social anchorage is

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1 The TST reads as follows:
"There are twenty numbered blanks on the page below. Please write twenty answers to simple question 'Who Am I?' in the blanks. Just give twenty different answers to this question. Answer as if you were giving the answers to yourself, not to somebody else. Write the answers in the order that they occur to you. Don't worry about logic or importance. Go along fairly fast, for time is limited"

2 This study was conducted in 1982-83 among 594 men born in 1914 and living in Malmö (Sweden)

defined as the *degree in a structural sense the individual belongs to and is anchored within formal and informal groups in the social network, and in a more functional sense, the degree of feeling of membership in these groups* (Hanson and Östergren, 1987 : 850). Hanson and Östergren (1987) regard social anchorage as a proxy variable for the availability of social roles and as depending on many factors such as social class, education and financial resources. In Hanson and Östergren (1987) the structural dimension of social anchorage is assessed by three questions: *Would you say that you are rooted and have a feeling of familiarity with your neighborhood? Do you belong to a group of friends which does things together? Are you a member of any organizations or clubs?* In this first published paper on the Malmö Population Study, the percentage of self-reported nervous problem was higher in elderly men with a low or moderate social anchorage than in those with a high social anchorage (Hanson and Ostergren, 1987). In a follow-up study of this male sample, no association was found between social anchorage and mortality (Hanson *et al*, 1989). In a later study, Östergren *et al.* (1991 : 259) slightly altered the initial definition of social anchorage which became *the quality of the relation between the individual and this social network and his/her identification with different domains of the network. /.../ Low social anchorage could be thought of as a form of alienation.* Its assessment was also modified from answers to the following questions: *Would you say that you are rooted and feel a strong affinity to your: residential area?, working place/school?, formal groups?, family?* It is noteworthy that, in this modified version, informal groups are no longer considered as social anchors

The minor differences between the Hanson and Östergren model and the symbolic interactionist model can easily be reconciled as the concept of social anchorage has an intuitive meaning which is well circumscribed by both approaches. This reconciliation can form the basis for a conceptualization of social anchorage for the study of immigrants and refugees. In fact, two studies on migrants relied on the symbolic interactionist approach or on the notion of social anchorage. Finnan (1981) investigated how Vietnamese have migrated to the Silicon Valley in large number because of the plentiful availability of electronic technician jobs in that area and how they have adapted their collective and self - identity to that type of work by emphasizing the requirements and prestige associated with it. In a study conducted in Germany, Shah (1988) did not clarify what he meant by *social anchorage* but he hypothesized that Turks living in that country would have a stronger social anchorage than South Americans and Pakistanis because their longer history of residence in Germany had given rise to the establishment of a larger community network which was socially and culturally well-organized and because they had their family with them and had permanent residency status.

There have been some attempts to uncover the mechanisms governing the resettlement of refugees but none has focused on social anchorage. Westermeyer *et al.* (1989) speak of the "readjustment" of refugees which include demographic, social changes, acculturation skills and cultural affiliation, avocations and social roles, material acquisition and self-reported problems. Cheung (1994) focuses on « psychosocial stresses » which refer to family problems, unemployment, type of employment, financial problems, accommodation, cultural adjustment, loneliness and boredom. Sundquist (1995) dwells on the *social network*

interaction defined by living alone or with others, contact frequency with parents, children, siblings, neighbors, coworkers, friends, social contacts at work, casual neighborhood interaction, and available help in times of need.

In this thesis, social anchorage refers to the ways people secure themselves to the society in which they live by joining the institutions that are endorsed by that society and that provide social roles and statuses. It can thus be operationalized by the type and diversity of institutions joined by people. The expression *institution* carries different meanings across and even within disciplines. Here, it is understood as a formal group of people. According to Turney-High (1968 : 346) , an institution is *a ritualized system of groups in equilibrium organized around goals considered too important to trust to informality.* As a provider of social roles and statuses (Turney-High, 1968), institutions are closely linked to the concept of social anchorage defined by Kuhn and McPartland (1954) and Hanson and Östergren (1987). According to Turney-High (1968), institutions must satisfy the following criteria to be distinguished from other forms of social organization:

- they are constituted by more than two persons
- their action is directed toward specific goals
- their membership is officialized
- the role of members is defined and somehow hierarchized
- the interactions of members are ritualized
- the existence of the institution is endorsed by the wider society.

The definition proposed by Turney-High (1968) who views institutions as formal groups of people differs from the anthropological definition which regards institutions as cultural practices aimed at preserving and regulating the norms prevailing in a society (Malinowski quoted in Turner, 1991). Turney-High's definition appears more in line with the concept of social anchorage as understood by Kuhn and McPartland (1954), Hanson and Östergren (1987) and by social psychologists because it refers to the provision of social roles and statuses.

Six types of social anchor fit Turney-High's criteria : family anchorage, professional anchorage, academic anchorage, religious anchorage, community anchorage, and political anchorage. Markers of these social anchors have repeatedly emerged in the epidemiologic literature as significant predictors of the mental health of refugees and have been emphasized in the socio-anthropological literature as socially meaningful in the resettlement process of refugees. The diversity of social anchorage is also of interest because, as suggested by Thoits (1991), individuals who possess many social anchors may be less at risk of psychosocial adjustment problems than those who have few.

2.1.1 Family anchorage

The concept of family varies across cultures and so does the definition of the roles and statuses related to the family institution (Foner, 1997). However, a basic family feature that links parents to their children, the nuclear family, is a core social unit widely acknowledged in societies from both industrialized (Burton, 1998 ; Mulford and Salisbury, 1964 ; Olsen *et al*, 1991) and Third World countries (Chung and Kagawa-

Singer, 1993 ; Lipson and Miller, 1994 ; Mortland and Ledgerwood, 1987 ; Nguyen and Williams, 1989). In addition, the nuclear family corresponds to the family definition recognized by the Canadian immigration laws for the purpose of family reunification ; as such, it takes on particular importance in the context of the social anchorage of refugees and immigrants in the host country.

On the one hand, the nuclear family is often viewed as a migration unit, and the migration itself, as a family project where, either all members migrate together, or some migrate first, by choice or by force, and scout the host country to prepare the way for the rest of the family (Boyd, 1989). When migration results in the separation of the nuclear family, the reunification with family members left behind is usually a major concern for refugees and immigrants (Rousseau *et al*, 2001). On the other hand, the nuclear family is also regarded as a resettlement unit in that the social anchorage of its members in the host country affects the psychosocial well-being of the family. For instance, the rate of unemployment is rather high among refugees (Renaud and Gingras, 1998) thus impeding the parental role of provider, but women are more likely to endorse that role in the host country than they would have been in their homeland thus gaining a new power that may destabilize their relationship with their spouses. Graham and Khosravi (1997), Jones-Correa (1998) and Westermeyer *et al.* (1989) partly attribute the high risk of divorce and separation observed in refugees studies to the increased level of family conflict ensuing from the distance between the traditional roles expected of family members and those experienced in the host society.

Finally, the age and number of children in the nuclear family partly shape the way parents anchor themselves to the host society. First, the presence of children born in the host country may curtail or delay the parental desire to return to their homeland and thus stimulate their social anchorage in the host country (Graham and Khosravi, 1997). Second, the birth of additional children may be viewed as a way to replace those who died from starvation or political violence in the homeland (Ong, 1995), as a source of income through government allowances (Ong, 1995 ; Valtonen, 1994), or as a financial burden forcing parents to work endless hours in order to provide for their enlarged family. Third, school-aged children tend to facilitate the acquaintance of women with a broader range of institutions than men because the former, as traditional caregivers, are mostly in charge of the communication with the school and health care systems (Jones-Correa, 1998). However, the relationship of women with children-related institutions serves to reinforce their role as mother rather than providing additional social anchors from which new social roles would emerge.

So, the nuclear family appears to be a meaningful social anchor for refugees and it satisfies Turney-High (1968) criteria for the determination of an institution. One of those criteria stipulates that an institution is made up of more than two peoples. The nuclear family consists of the parents and at least one son or daughter. This assertion seems quite straightforward yet it requires some refinement. For instance, the nuclear family does not necessarily coincide with the residential unit : single parents with an only child constitute a nuclear family with the missing parent even though there are only two people in the household ; older couples form a nuclear family with their children who have moved out

of the household; and multigenerational households encompass more than one nuclear family. It should also be pointed out that parents need not be related to their children by flesh and blood in order to form a nuclear family : a reconstituted family is a nuclear family and, in that case, the child belongs to two overlapping nuclear families. Finally, it is noteworthy that, according to Turney-High criteria (1968), a couple without children is not considered an institution as it encompasses only two people. It is thus the presence of at least one child, whatever his or her age, that defines the nuclear family as an institution. This is not to say that a childless couple has no social meaning but rather that its meaning cannot be framed within the concept of institution adopted in this thesis.

According to Turney-High (1968), an institution must strive towards a specific goal. Given the prerequisite of at least one son or daughter for the definition of the nuclear family as an institution, the overriding goal of the nuclear family can be viewed as caring for children and educating them within a specific social context. Of course, the nuclear family plays other social functions, such as reciprocal support among its members, but the specific social roles and statuses ensuing from membership in a nuclear family are centered around the children. Indeed, as required by Turney-High (1968) criteria, members of the nuclear family have culturally defined roles (parent, son, daughter, brother, sister) which are hierarchized (parents are the head of the family ; the eldest child often has a distinct status ; in some cultures, sons are viewed more highly than daughters) and their interactions are somewhat ritualized in conformity with the socio-cultural norms to which the family adheres. Finally, membership in the nuclear family is officialized, usually through birth certificates but sometimes by implicit consent as in the

case of reconstituted families, and the nuclear family is endorsed as an institution by the larger society.

2.1.2 Professional anchorage

Professional anchorage refers to the way people secure themselves to the labor market as employees, business owners or self-employed professionals. On the one hand, it allows one to earn a living, to gain access to valued goods and services and to provide for one's family, if any. On the other hand, it serves to establish part of one's social identity and social status in Western societies (Beiser *et al*, 1993 ; Valtonen, 1994) and in less industrialized countries (Aycan and Berry, 1996 ; Finnan, 1981 ; Graham and Khosravi, 1997), not necessarily through the magnitude of earned income but certainly through the way income is earned since in most - if not all - societies, some professional occupations are highly regarded whereas others are belittled. In the case of refugees, the social meaning of professional anchorage may be slightly altered.

First, highly educated refugees frequently undergo a decline in professional occupation because their premigratory training is not recognized, their mastery of the mainstream language is inadequate, there is no opening in their area of expertise, or because they are victims of racism on the part of putative employers. Underemployment is a frustrating experience and entails a loss of social status, yet it may have limited effect on the psychosocial well-being of people whose more salient source of social identity is not work-related. A number of studies have shown that a majority of refugees tend to view

their professional anchorage as a means to provide for their family living in the host country and/or abroad rather than as an end in itself (Beiser *et al*, 1993 ; Jacob, 1994).

Second, the employment rate is usually lower in refugee population than in natives (Beiser *et al*, 1993 ; Renaud and Gingras, 1998 ; Westermeyer *et al*, 1989) and there is some evidence that refugees are more concerned by unemployment than by underemployment. Refugees tend to view unemployed people not only as underclass citizens (Finnan, 1981 ; Valtonen, 1998) but also as failing their family duties (Beiser *et al*, 1993 ; Chung and Bemak, 1996).

Finally, professional anchorage has additional social functions for refugees working with natives from the host society since the labor market is the main source of contact with the mainstream society (Aycan and Berry, 1996 ; Jacob, 1994 ; Stein, 1979 ; Valtonen, 1998). As such, it provides refugees an opportunity to improve their mastery of the mainstream language (Stein, 1979), to learn about the habits and customs of the host society in order to better manage everyday life (Aycan and Berry, 1996 ; Jacob, 1994 ; Stein, 1979) and to take part in leisure activities with natives (Valtonen, 1998).

Professional anchorage does satisfy all of Turney-High criteria regarding the definition of an institution. Economic enterprises are constituted by more than two people, their objective is to produce goods or services, their membership is officialized, members have specific jobs that are more or less defined and hierarchized, the interaction of members are ritualized and, finally, the existence of economic enterprises are endorsed by the wider society.

2.1.3 Academic anchorage

Academic anchorage refers to the attendance of courses in public or private schools, or universities as a part-time or full time student. In the resettlement process of refugees, it plays a number of important functions such as learning the main language of the host society, training - or retraining for recognition of former accreditation - in order to gain access to employment, and getting acquainted with the way of doing things in the host country. Furthering education has repeatedly been quoted by refugees as one of their main projects upon landing in the host society (Graham and Khosravi, 1997 ; Jacob, 1994 ; Jones-Correa, 1998 ; Valtonen, 1994).

It is noteworthy that, as in the case of family anchorage where household residents were not necessarily members of the same nuclear family or in the case of professional anchorage where customers are not members of the institutional group that provides the services they are seeking, people attending specific schools do not necessarily have an academic anchor. Indeed, schools and universities constitute two types of social anchor : they are a professional anchor for the teachers and other employees, and an academic anchor for the students. This duality is emphasized by the contrasted goals pursued by each group : the teachers and employees provide a service whereas the students are pursuing their education. In consequence, the officialization of membership in an academic anchor would be through registration, and the ritualization and hierarchization processes would take place across students.

2.1.4 Religious anchorage

According to Turney-High criteria (1968) and in the context of this thesis, one can claim a religious anchorage if one belongs to a religious institution where membership is somehow acknowledged. Indeed, social anchorage has to do with joining a legitimate group of people who do things together in order to achieve specific goals. Thus, a person who adheres to some religious beliefs without joining a group that shares his or her beliefs would not be considered as having a religious anchorage even though these beliefs may bring guidance and solace to that person. Religious beliefs may have an impact on self-identity but, in order to influence the socially recognized role of a person and to serve as social anchor, they must be institutionalized. Religious faith does not necessarily imply a religious anchorage. For instance, Finnan (1981) has noted that few Vietnamese refugees belong to a religious institution although they may practice Buddhism rituals at home.

Other groups of refugees tend to develop a religious anchorage in the host country. In a follow-up study of refugees from Laos, Westermeyer *et al.* (1989) has observed an increase in religious involvement going from 4% in 1977 to 27% in 1983-1985. Religious anchors serve not only to partly shape social identity but also to ease the stress of the resettlement process of refugees and immigrants (Valtonen, 1998), to provide spiritual support and to act as a medium between the government of the host country and the refugees (Shadid, 1991). In a qualitative study, Valtonen (1998 : 53) argues that some refugees from the Middle East resettled in Finland view the mosque as *an anchor*

in social and psychological turmoil, and as a setting *for self-identification in the host society.*

2.1.5 Community anchorage

Community anchorage refers to the way people get involved in clubs or association centered around leisure (i.e., sports, culture), lobbying or other social activities. It contributes to secure refugees to the host country and to consolidate their social identity whether the club or association is oriented toward the ethnic group of origin or toward the mainstream society. Ethnically-oriented community groups tend to perpetuate the habits and customs of the homeland to the extent that the members' premigratory social status is recognized and valued thus alleviating the frustrating loss of status sometimes encountered in the host country (Jones-Correa, 1998 ; Valtonen, 1994) whereas mainstream groups facilitate contacts with the natives (Valtonen, 1998).

Membership in clubs or association is, more often than not, rather informal but one's membership is, nevertheless, acknowledged by other members and the relationships between members follow some kind of ritualized pattern depending, in part, on the specific role of members.

2.1.6 Political anchorage

Political anchorage is achieved through citizenship, which, according to Black (1998), may be the utmost symbol of immigrants' membership in the host society. To apply for Canadian citizenship, refugees must satisfy three conditions : (1) to have obtained their

permanent residency status, (2) to have spent three of the past four years in Canada since their permanent residency status was granted and (3) to pass a written test based on the *knowledge and understanding of English or French, of Canada as a nation, and of the rights and responsibilities of Canadian citizenship* (Citizenship and Immigration Canada, 1999b : 60). Canadian citizenship allows people to vote, to travel outside Canada with a Canadian passport, and to be elected to the House of Commons (Glenn, 1998).

The main advantage of citizenship for refugees is that it allows them to travel abroad under the protection of the host country, a privilege that may be especially important for those who wish to visit their homeland but who are fearful of what may happen to them there. Citizenship is thus viewed as an additional personal resource and does not require endorsement of the values system of the host society (Manuh, 1998). In some cases, citizenship also symbolizes the attachment of immigrants or refugees to the host country or even the transfer of national identity from the home country to the host country (Howard, 1998 ; Sundquist, 1993 ; Whittaker, 1988). Furthermore, in the growing number of countries that restrict certain services or government allowances to citizens, citizenship may be a way to insure one's financial security (Becker *et al*, 2000). Finally, in Canada, citizenship is granted automatically to the children of successful applicants on the condition that these children are under 18 years of age and that they are living in Canada (Citizenship and Immigration Canada, 1999b). By itself, this may be viewed as a sufficient motive for refugees with school-aged children to apply for Canadian citizenship.

2.1.7 Diversity of social anchorage

Family, professional, academic, religious, community and political anchors provide specific social roles and statuses that contribute to the social identity of people so that social anchorage is a complex phenomenon that can hardly be subsumed by a single type of anchor. Following Thoits' argument (1991), the diversity of social anchorage may be a protective factor for the psychosocial well-being of individuals since if one anchor fails, others can then take over and preserve part of the social identity. The validity of this point of view is reinforced by an American study of 2248 subjects which shows that those who combined more than one social role (married/parent ; married/employed ; married/parent/employed) reported a lower level of psychological problems whereas those who had only one social role did not differ from those who had none (Burton, 1998).

2.2 Exposure to political violence

Many researchers point to the measurement of exposure to political violence as a major difficulty in the study of refugees (Allden *et al*, 1996 ; Breslau and Davis, 1987 ; Green, 1990 ; Hinton *et al*, 1997 ; Holtz, 1998 ; Mollica *et al*, 1998 ; Montgomery and Foldspang, 1994a). This difficulty stems in part from the multidimensionality of political violence which can hardly be thoroughly investigated in a research setting that is limited by ethical and resources constraints. As a result, exposure to political violence is either summarized by a few contextual variables - such as stay in a refugee camp, veteran status, imprisonment or torture -, which are used as proxies for the whole pattern of exposure or alternatively,

traumatic experiences are summed up to provide an overall score. These strategies reflect different dimensions of the exposure to political violence but there have been few attempts to debate their respective validity. A notable exception is the pioneer work undertaken by Mollica and his colleagues who have developed and validated the Harvard Trauma Questionnaire, which uses a checklist approach to document 17 traumatic events and situations experienced by refugees in their homeland or during migration and trauma-related symptoms and which can be adapted to the situation of specific groups of refugees (Mollica and Caspi-Yavin, 1991 ; Mollica *et al*, 1992).

According to Muekce (1992), PTSD has dominated more than its share of research on refugees. In PTSD studies, the conceptualization of exposure to political violence is subsumed by the concept of trauma which requires, among other things, that the event experienced by the victim be outside the range of expected situations. A strategy to rule out the arbitrariness of defining what is an unexpected event is the construction of indexes based on the addition of events ranging from harsh living conditions to torture. This strategy is in line with the standpoint of Martin-Baro (1989) who states that living in a country ridden by war or armed conflict is, by itself, a traumatizing experience but it may not be discriminating enough to untangle the effect of exposure to political violence on the mental health of refugees. Another strategy that has been applied is to investigate a specific type of trauma - usually torture - so that the definition of an unexpected event is standardized ; the lack of association between the trauma and PTSD may then indicate that the event was not frightfully unexpected for some subjects, that the detrimental effect of that event was buffered by a protective factor and/or that the measurement strategy was not sensitive enough

to uncover its effect. Restricting exposure measurement to the domain of torture has been justified because the victim receives *the focused attention of an adversary determined to cause maximal psychological change* (Turner and Gorst-Unsworth, 1990 : 476). However, the definition of torture varies across studies and Montgomery and Foldspang (1994a) illustrate how it can also vary within a study, among refugees of the same ethnic origin.

Other attempts at conceptualizing the measurement of exposure to political violence include Rousseau *et al.*'s studies (Rousseau and Drapeau, 1998 ; Rousseau *et al*, 1997 ; Rousseau *et al*, 1998) where the number of trauma sustained by a family before the birth of a child is used as a proxy for the indirect exposure of this child whereas those sustained after his or her birth serve as a proxy for direct exposure. Finally, a strategy similar to that applied in life events measurement (Brown and Harris, 1978 ; Skinner and Lei, 1980), which consists of classifying events into meaningful categories before computing a summary score has been attempted by Dahl *et al.* (1998), Green (1990) and Cunningham and Cunningham (1997) but the conceptual basis for their classification of trauma is not clearly stated or is derived a posteriori from factorial analysis. Further insights are provided by the literature on life events that shows how indices weighted by the relative traumatic power of events usually produce results similar to those of crude indices (Grant *et al*, 1978 ; Paykel, 1983).

Epidemiology points to general principles (Armstrong *et al*, 1995) that could be applied to the measurement of exposure to political violence. First, the distinction between traumatic event and traumatic situation should be emphasized because they refer to a different duration, albeit not necessarily a different intensity, of exposure. This distinction has been

called for many times: Baum *et al.* (1990) speak of acute vs. chronic stress; Jenkins (1991) of discrete vs. broad definition of trauma, Terr (1991) of Type I vs. Type II trauma and Montgomery (1994b) of specific events vs. life conditions. Secondly, individual exposures like torture or imprisonment should be distinguished from collective exposure such as harsh living conditions because they correspond to different doses of exposure. Finally, exposure to political violence should be qualified in terms of timing and duration: at what life cycle stage was the traumatic event experienced, how long did the exposure last, how long ago did the exposure occur. However, given the wide array of traumatic experiences sustained by refugees in their home country or during migration, it is doubtful that a study can cover all of these aspects of the exposure to political violence if they are to be translated into quantitative variables.

The premigratory exposure of refugees to political violence is made up of a number of potentially traumatizing experiences such as the disruption of social life, harsh living conditions, the disappearance, execution, torture or imprisonment of loved ones, and the torture, imprisonment and harassment sustained personally. Translating the diversity of this exposure into valid measures is a major task. In epidemiological terminology, exposure can be characterized by its distribution over time, its dose and its nature (Armstrong *et al*, 1995). These three dimensions are usually, but not always, positively associated: the dose received during an acute exposure may be more harmful than that sustained during a longer period if it is of a more direct nature. The timing, dose and nature of exposure can often be combined to provide a cumulative index. For instance, the number of cigarettes, cigars and pipes smoked during a given period may be multiplied by the nicotine content of each source of

exposure to reflect the direct exposure to nicotine; the indirect exposure through passive smoking can also be estimated to construct a cumulative index. The construction of cumulative index must be adapted in the case of premigratory exposure to political violence because the diverse traumatic events or situations experienced by refugees cannot be converted into a common denominator such as nicotine in the case of smoking.

Multiple aspects of the timing of a specific source of exposure to political violence can theoretically be investigated: age of the victim at the time of exposure, duration of exposure, and time between exposure and the onset of disease. However, most refugees have been exposed to more than one type of traumatic event or situation so that the number of variables needed to describe the timing of exposure rapidly becomes unmanageable for any statistical analysis other than descriptive. A solution would be to limit the study to one type of trauma; the effect of its timing could then be investigated by sampling only those refugees who were victims of that specific trauma. Another solution would be to conduct a series of analyses, each one focusing on a specific type of trauma. Both solutions assume that the timing of exposure is a valid proxy for its dose, an assumption that cannot be endorsed.

Although the dose of exposure to political violence cannot be measured on a ratio or interval scale, an ordinal scaling can be proposed where, for instance, threat and torture would correspond to an increasing level of exposure. The problem here is that the political violence exerted against loved ones may be as traumatizing for a person as the violence used against oneself; indeed, that strategy is routinely used by perpetrators of political violence who torture the wife in front of the husband, or the children in front of their parents. Yet, the

ordering of exposure for a specific refugee can hardly encompass the trauma experienced by his or her loved ones. A solution to that problem would be to distinguish the trauma endured by the victim himself or herself from that sustained by his or loved ones and to scale the traumatic events and situations in the order of the dose of violence exerted. This strategy entails some form of trauma and victim selection or classification as, otherwise - and again -, the number of variables increases rapidly. This highly subjective process has been attempted with torture but results are not conclusive (Cunningham and Cunningham, 1997; Montgomery and Foldspang, 1994a).

Finally, given the level of abstraction allowed by the data available in a research context, the nature of exposure is closely linked to its dose. It can be defined by two dimensions: the identity of the victim, and the type of traumatic events experienced. But, again, grouping of victims and of traumatic events is required to avoid an unmanageable number of variables. In terms of the victim's identity, two categories could be investigated: the subject himself or herself, and the subject's family. In terms of the type of trauma, two axis could be analyzed: direct (harassment, imprisonment or reeducation camps, torture) vs. indirect trauma (harsh living conditions); and acute vs. chronic exposure. However, distinguishing the two poles of the acute/chronic dimension is problematic. How long must an event last before it becomes a situation (Baum *et al*, 1990)? Execution of a family member is definitely an event and political harassment, a situation. But what about torture? A one time torture session is an event but when a victim is repeatedly tortured while imprisoned, does torture become a situation? Focusing on the nature of trauma somehow preserves the dose of exposure albeit with a considerable loss of precision. It thus seems that each strategy has its drawbacks and

that not all types of exposure to political violence can be measured in the same way so that different strategies may have to be applied to different types of traumatic events.

2.3 Other predictors

Three types of putative predictors of the social anchorage of refugees have come up in the literature : transferable skills, individual socio-demographic profile, and socio-economic context of the host society. Some of these predictors may have multiple roles in the causal pathway leading to the psychosocial adjustment of refugees ; they may act as independent predictors, confounders of the effect of exposure to political violence on social anchorage, or effect modifiers.

2.3.1 Transferable skills

Education, premigratory occupation and fluency in the dominant language of the host country are the main transferable skills reported in the literature on the resettlement of refugees. However, the location of these skills in the causal pathway between exposure to political violence and the social anchorage of refugees is unclear. On the one hand, education and professional status can be viewed as predictors of exposure since they have often served to target specific groups of people for harassment or other forms of political violence (Portes and Borocz, 1989); on the other hand, these transferable skills have also been associated with employment in the host country either as a risk (Stein, 1979) or as a protective factor (Marr and Siklos, 1999). Education and professional status may then act as independent predictor, confounders and effect modifiers.

The effect of language fluency is also controversial. It may be viewed as a predictor of social anchorage but it can also result from that anchorage. Furthermore, as a predictor, fluency in the mainstream language may facilitate the social anchorage of refugees who secure themselves to institutions oriented toward the dominant culture of the host society but have little or no impact if the anchorage is oriented toward the ethnic group of origin. Dorais (1991) and Kuo and Tsai (1986) argue that the ethnic orientation of the social anchorage is not a major determinant of refugees well-being : what matters is to be anchored. This point of view is not shared by Stein (1979) who views the lack of contact with the host society as a risk factor nor by Halpern (1993) who insists that sticking with one's own ethnic group offers a protection against racial prejudice and preserves self-esteem. Sundquist (1995) agrees that maintaining relationships with one's own ethnic group is beneficial but only as long as these relationships reinforce cultural and professional identities.

2.3.2 Individual socio-demographic profile

Age, gender, ethnicity, length of stay in the host country, and size of family can also affect the social anchorage of refugees. It is widely acknowledged that, the older the adult refugee is at his or her arrival in the host country, the more difficult his or her social adjustment will be. However, the effect of age is not so straightforward and may be better expressed by a threshold rather than by a gradient. The specific pattern of this threshold is a matter of considerable controversy especially since the effect of age may by mediated by the family situation. The presence of children in the family may entice parents to seek work but it may also have the opposite effect as suggested by Valtonen (1994) who argues that

unemployment may be a valid survival strategy if the cost of rearing children is better taken charge of by government assistance to the unemployed than by the poor wages often paid to refugees on the labor market.

Conflicting results have also been observed regarding the effect of gender. According to Jones-Correa (1998), men tend to anchor themselves to institutions controlled by their own ethnic group because, in these institutions, emphasis is put on the former roles and statuses of members in their homeland rather than on those achieved in the host society. Women are more inclined to join institutions steered toward the host society because these usually offer a welcome enlargement of their traditional role. Rogler (1994) rather feels that male refugees are more involved in the institutions of the host society whatever their ethnic orientation. Beiser *et al.* (1993) show that, in the early years of resettlement, males tend to experience greater stress than females whereas, after awhile in the host country, males and females are at a similar risk of depression. They argue that the burden of finding a job, providing for the family and interacting with the host society first falls most heavily on males but that, eventually, the resettlement experience overwhelms the usual gender differences in the reporting or experiencing of depressive symptoms.

It is a matter of continuing debate whether some ethnic groups fail to adapt themselves to a host society because their cultural background precludes their adaptation due to the wide gap between their home culture and the culture of the host society or because the skills that they have acquired are incompatible with the economy of the host society. In a comparative study of the economic adaptation of ethnic Vietnamese and Sino-

Vietnamese resettled in Illinois and California, Desbarats (1986) observed that although the lesser professional training and the poorer economic context at the time of arrival in the USA did affect the lower rate of employment of the Sino-Vietnamese, cultural background defined by ethnicity was also an independent predictor of unemployment. Similarly, a study conducted by Hinton *et al.* (1997) among 114 Vietnamese confirmed that ethnicity (ethnic Vietnamese vs. Sino-Vietnamese) but also age and fluency in English were independent predictors of their depression level one to two years after they resettled in the San Francisco area.

Finally, the length of stay in the host country has repeatedly been associated with the resettlement of refugees, and the patterns of association that have been unveiled have given rise to diverse theoretical and empirical models describing the different phases of the resettlement process (Allotey, 1998 ; Beiser, 1988 ; Stein, 1986).

2.3.3 Socio-economic context of the host society

Many researchers, such as Dorais (1998), Kunz (1981), Portes and Borocz (1989) and Rogler (1994) have stressed how the socio-political context prevailing in the host country may affect the resettlement of refugees. The socio-economic context upon landing in the host country can and has been approximated by the year of landing but, unfortunately, this variable shows a perfect correlation with the length of stay in the host country so that researchers must select one or the other, hopefully keeping in mind the ambiguous meaning of these variables. Furthermore, as the flow of refugees usually follows a wave pattern (Kunz, 1981) corresponding to peaks of extreme political violence in specific countries

engulfed in armed conflict, the effect of year of landing in the host country is partly confounded by ethnicity. Finally, the effect of the attitude of the host society toward refugees is also confounded by ethnicity because visible minorities tend to be the more likely victims of racism and because the services offered to facilitate integration are determined by the pattern of asylum seeking which varies across ethnic groups. As a result, although the socio-economic context of the host society can affect the social anchorage of refugees, the investigation of this effect is mostly restricted to comparative studies across countries.

3. Objective of the thesis

The main objective of this thesis is to estimate the effect of premigratory exposure to political violence on the social anchorage of refugees in the host country and it is this objective that will guide the primary data analyses. However, the conceptual framework presented in this chapter clearly indicates that other factors, such as transferable skills and socio-demographic characteristics, can affect the social anchorage of refugees. To verify the effect of these variables after controlling for exposure to political violence, exploratory analyses will also be carried out. More precisely, this thesis addresses the following research questions :

With what types of social anchors do refugees secure themselves in the host country ?

What is the effect of premigratory exposure to political violence on the social anchorage of refugees ?

Which other social factors affect the social anchorage of refugees when exposure to political violence is taken into account ?

The main argument of this thesis is that the exposure to the political violence and ensuing social destabilization taking place in armed conflicts causes the loss or disturbance of the social anchors that define human beings as social beings, so that refugees land in the host country in a state of confused social identity which may jeopardize their ability or willingness to anchor themselves to the host society and put them at risk of poor psychosocial adjustment especially if they do not posses skills that can be used in the host society. The social anchorage of refugees to the host society is viewed as a component of their psychosocial adjustment as it allows them to recover, maintain or solidify a social identity that will contribute to their psychosocial well-being. It can then be hypothesized that :

(1) The pattern of social anchorage will differ across gender, age and ethnic groups ;

(2) Exposure to political violence experienced in the homeland will prevent the social anchorage of refugees in the host country ;

(3) Refugees with a high level of exposure to premigratory political violence and few transferable skills will show a lower level of social anchorage.

The effect of premigratory exposure to political violence on the social anchorage of refugees in the host country will be estimated on a sample of refugees from Southeast Asia and Central America resettled in Montreal.

Chapter 3

Method

The conceptual framework outlined in the preceding chapter constitutes a novel approach in the study of refugees since it focuses on social anchorage as a component of their psychosocial adjustment to the host country. Social anchorage is viewed as a provider of the social roles and identity that allow refugees to secure themselves to the host society. It is determined by premigratory exposure to political violence but can also be affected by transferable skills, socio-demographic characteristics and the socio-economic context of the host country. Judging from the scarce evidence gathered in the medical (i.e., psychiatry, psychology, epidemiology) and social (i.e., anthropology, sociology, history) literature and from the social psychology perspective, this conceptual framework appears like a theoretically valid proposition. Yet, its empirical validity remains to be tested.

The empirical validity of this conceptual framework will be assessed through secondary analysis of data collected in two studies conducted by Dr Cécile Rousseau and her team (Rousseau *et al*, 1993 ; 1997). I have been a member of Dr Rousseau's research team since 1991 and I was closely involved in the conduct of these two studies. More precisely, I participated in the construction of the questionnaires and was in charge of

planning data collection and carrying out statistical analysis. I also supervised data collection in the first study and I am a co-author on all publications that came out of the two studies.

The main objective of both studies was to investigate the effect of the family pre-migratory exposure to political violence and post-migratory living conditions on the mental health of refugee children living in Montreal. The innovative feature of my thesis compared to the initial data analysis is that it focuses on the parents of the school-aged children instead of on the children themselves.

1. Sample

The target population is made up of refugees from South-East Asia and Central America who had at least one child attending a primary or high school located in the Montreal area. The sampling strategy adopted by Dr Rousseau and her colleagues (1993, 1997) in the two source studies is described as it was carried out, i.e., with the focus on children. Information is then provided on how the sample of parents was constituted from the source studies.

1.1 From the first study

In the first study, children were selected in the fall 1991 by non-random cluster sampling of the primary schools located in the Montreal area that had the highest number of students from South-East Asia and Central America. Parents of all students registered in

the participating schools and satisfying the selection criteria were solicited first by mail and, then, by phone. The selection criteria for the children included :

- being native of South-East Asia (Cambodia and Vietnam) or Central America (Guatemala, Honduras, Salvador). These ethnic groups were targeted for three reasons : first, at the time of the study, they constituted the most important group of refugee children in the primary schools located in the Montreal area ; second, the armed conflicts that took place in those countries were extensive and enduring ; finally, these five countries could be regrouped in two relatively homogeneous geo-cultural units whose cultural profile was quite different ;

- being born outside of Canada so that the children had gone through the migration process ;

- being registered in the 3rd, 4th, 5th or 6th grade in a participating primary school ;

- not suffering from a major physical or intellectual handicap.

A total of 255 children satisfying these selection criteria were identified in the seven schools enrolled in the study. The parents of 218 of these children were reached and 159 children took part in the study. The response rate was similar in Southeast Asians (76%) and Central Americans (69%). Three interviews were rejected because of missing information so that the final sample was made up of 100 Southeast Asian and 56 Central American refugee children.

The number of parents interviewed in this study does not coincide with the number of participating children because eligible children from the same family were kept in the sample as it was felt that their exposure to political violence and their psychosocial profile may differ. But, exposure to political violence, socio-demographic profile and social anchorage is similar for the parents of each pair of siblings (n = 28 pairs). The number of independent parental observations from the first study that are available for the study population in this thesis is 82 Southeast Asian and 46 Central American parents of school-aged children.

1.2 From the second study

In the second study, children were selected in the fall of 1993 by non-random cluster sampling of the high schools located in the Montreal area that had the highest number of students from Cambodia and Central America. Parents of all students registered in the participating schools and satisfying the selection criteria were solicited by mail and agreement to participate in the study was confirmed with both the parents and the adolescents by phone. The selection criteria for the children included :

- being native of Cambodia or Central America (Guatemala, Honduras, Salvador). These ethnic groups were targeted for the same reasons as in the first study but refugees from Vietnam were not solicited because of the low number of Vietnamese students in public high schools at the time of the study;

- being born outside of Canada ;

- being registered in the 1st or 2nd grade of a participating high schools ;

- not suffering from a major physical or intellectual handicap.

A total of 213 youths satisfying the selection criteria were identified in the six high schools enrolled in the study. Among the 195 families who could be reached, 158 agreed to participate in the study. The response rate was similar in Cambodian (81%) and Central American (75%) families. As no siblings were recruited in the second study, the sample available for this thesis is made up of 76 Southeast Asian 82 Central American parents of school-aged children.

1.3 Combined sample

The combined sample for this thesis totaled 270 subjects (Figure 3.1) rather than 286 (128 from the first study ; 158 from the second study) because the similar sampling strategy applied in the two source studies and the short time interval (2 years) between these studies entail that some parents were interviewed in both studies. Observations gathered from these repeated parental interviews are not independent and, consequently, one of the duplicate interviews had to be excluded. Duplicate parental interviews occurred in two situations :

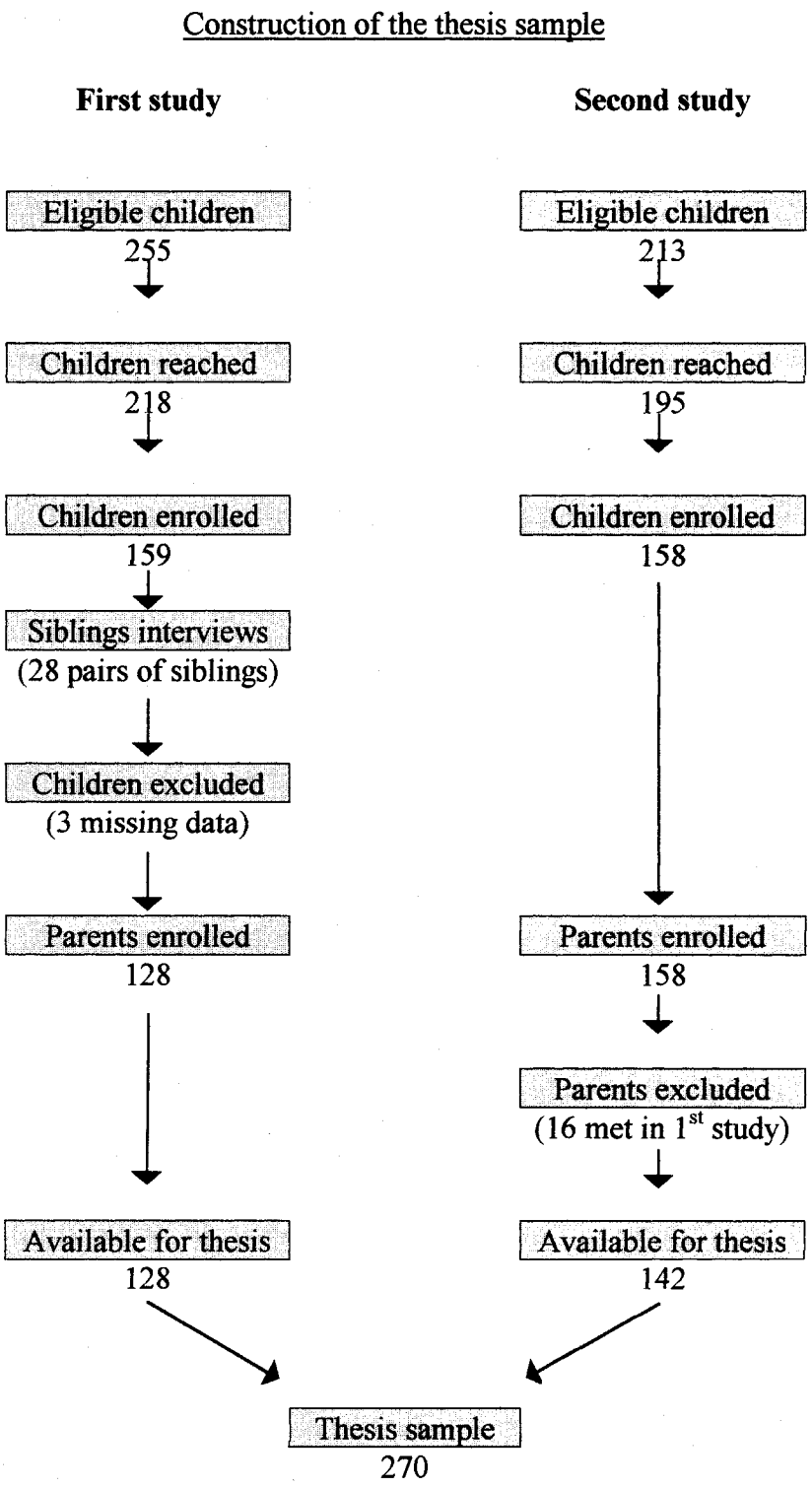
(1) students who were in the last grades of primary school in the first study had graduated to high school by the time the sample was selected for the second study and were thus eligible for selection in that latter study if they were registered in a participating high school ;

(2) some brothers or sisters of children interviewed in the first study were met in the second study.

Although the questionnaires used in the two studies were quite similar, the information disclosed by parents who participated in both studies sometimes differs because the situation of respondents and of their family had evolved over the two year period separating the studies, or because their perception of their actual situation or of their premigratory exposure had changed, or because the father was interviewed in the first study whereas the mother was met in the second study or vice-versa.

Whenever a family participated in both studies (n = 16), the first parental interview was kept. Exclusion of the second interview resulted in a final thesis sample of 270 parents of school-aged children (Figure 3.1). The decision to retain the first interview, rather than the second one, was based on the following rationale. First, the first few years spent in the host country are often determinant for the social anchorage of refugees, mostly in terms of employment (Marr and Siklos, 1999 ; Stein, 1986 ; Westermeyer *et al*, 1989). Second, as refugees get used to the mainstream culture of the host society, they may redefine their perception of their past history and of their actual situation (Berry *et al*, 1986). Finally, going through the first interview may have had a carry over effect where refugees reflect on their past and re-interpret it or get accustomed to the research interview process and modify their attitude towards it (Allen and Yen, 1979 ; Brannen, 1988). Given the time interval (2 years) between the first and the second studies, the acculturation process and the carry over effect may have had limited effect on the data

Figure 3.1


Construction of the thesis sample
First study
Second study
Eligible children
255
Children reached
218
Children enrolled
159
Siblings interviews
(28 pairs of siblings)
Children excluded
(3 missing data)
Parents enrolled
128
Available for thesis
128
Eligible children
213
Children reached
195
Children enrolled
158
Parents enrolled
158
Parents excluded
(16 met in 1st study)
Available for thesis
142
Thesis sample
270

provided in the second interview but, as there were no plausible argument in favor of keeping the second interview, the first interview was retained.

The fact that 10% (i.e., 16/158) of parents interviewed in the second study had been met in the first study suggests that the samples overlap and that they belong to the same target population. To further verify whether these samples could be pooled, age, gender and ethnicity distributions were compared (Table 3.1). Socio-demographic characteristics likely to fluctuate over time in an unpredictable direction were not investigated because observed inter-studies differences could then result from the evolution of parental profile over a two year period rather than from the heterogeneity of the source populations.

The lower percentage of fathers interviewed in the second study (37.3%) compared to the first study (50.8%) could reflect the higher percentage of single parents in the second study (31.7% vs. 17.2% in the first study). This explanation is plausible for two reasons. First, in two-parents households, a similar percent of fathers were interviewed in the first (55.7%) and second (51.5%) studies. Second, the increasing risk of divorce or separation even over a short time period is also apparent in the 16 parents interviewed twice where the number of single parents rose from 3 at the first interview to 5 two years later.

Given that the data collection procedure focused on the same residential area across the two studies and that the overall profile of the source samples appears homogeneous, pooling of the two samples seems justified. Nevertheless, a dichotomous variable distinguishing subjects from the first and the second study will be tested in multivariate analysis to verify the effect of the source study on the results.

Table 3.1

Comparability of samples from the first and second studies

	First study	Second study
Number of subjects	128	142
Male (%)	50.8	37.3
Mean age	38.6	41.0
Ethnicity		
Southeast Asian (%)	64.1	45.1
Central American (%)	35.9	54.9

2. Data collection

In both studies, data were collected by face-to-face interviews conducted in the family home and interviewers were from the same ethnic origin as the subjects. The interviewers' training was similar across studies. It was devoted to the migration context of Southeast Asian and Central American refugees, the objective of the research, the conduct of a research interview and to a first examination of the questionnaires. Interviewers performed two pretest interviews with people not participating in the

research but with the same overall profile and these interviews were then thoroughly discussed with all interviewers present. The largest part of the questionnaires pertains to the children' profile and is not relevant for this thesis. Questions providing data for this thesis are reproduced in Appendix II.

In the first study, the same interviewer met first with the parent then with the child whereas, in the second study, one interviewer met with the parent while another interviewer met with the child. The decision of who, of the father or mother, would be interviewed was left to the parents. Interviews with the parents were conducted in their maternal tongue (Cambodian, Vietnamese, or Spanish). Part of the interviewers training was to make sure that everyone had the same understanding of what was being asked so that interviewers could translate the question in the subjects' language. Before starting the interview, parents signed a consent form that gave a brief summary of the objectives of the research, described the limit of their participation and ensured confidentiality.

3. Description of variables

One of the main difficulties in psychosocial epidemiology is the quantification of complex concepts since it results in a simplification of these concepts (Kelsey *et al*, 1996). This difficulty is further exacerbated when there are no widely accepted definitions of the concepts and of their measurement. The description of each variable under study here will proceed by, first, recalling the conceptual basis for that variable, then defining how this concept was measured and, finally, underlining the limits of that measurement.

3.1 Social anchorage

Refugees anchor themselves to the unfamiliar social environment of the host country by joining institutions that are endorsed by society. These institutions provide roles and statuses through which refugees can replenish their former social identity or access a new one. The social roles provided by an institution are usually hierarchized and the saliency of a specific social anchor may vary across individuals and across cultures. This thesis focuses on the occurrence of social anchorage as a component of psychosocial adjustment rather than on the hierarchy of social roles or on the saliency of social anchors.

Five means of social anchorage are investigated : professional, academic, religious, community, and political. The number of social anchors activated by Southeast Asian and Central American refugees is also studied as a measure of the diversity of their anchorage. Family anchorage cannot be investigated since the sample under study is made up of refugees with school-aged children who, as parents, had already established a family anchorage in Canada at the time of interview.

3.1.1 Professional anchorage

People with a professional anchorage are viewed as *productive* members of society and enjoy a valued social status. There is no denying that, in every society, some professional occupations are highly regarded whereas others are belittled. However, what matters

here is not the professional status achieved by refugees but rather the resort to professional anchorage as a means to adjust themselves to the host society.

Professional anchorage is documented from answers to a question that was phrased similarly in the two source studies and that read as follow : *Quelle était votre principale occupation ou profession durant la dernière année ?* It is defined by a dichotomous variable indicating whether or not the subject reported that his or her main occupation in the past year was work.

The question providing data for professional anchorage was expressed in the singular form and most subjects reported a single main occupation. However, five subjects indicated that they had two main occupations, work and study : these subjects were recorded as having both a professional and an academic anchor. Thus, professional anchorage does not necessarily imply full-time employment for the whole year preceding the interview since what is of interest here is whether or not refugees can claim a work-related social role in the host society in the past year.

3.1.2 Academic anchorage

Academic anchorage provides a transient social role, that of student, which is valued because it serves to acquire some training - or to retrain for recognition of former accreditation - in order to improve employment opportunity. Of course, academic anchorage is not necessarily employment-related since it is also a means to satisfy one's intellectual curiosity. Whatever the motive that initiates it or the type or level of studies

pursued, academic anchorage provides a social role and contributes to secure refugees to the host country.

Data regarding academic anchorage are derived from the same question as professional anchorage so that these anchors are, as a rule, mutually exclusive ; the only exceptions being the five subjects who reported that work and study were their main occupations in the year preceding the interview. Academic anchorage is measured by a dichotomous variable recording whether or not the subject was a student in the past year and, as for professional anchorage, it was not necessarily a full-time occupation

3.1.3 Religious anchorage

Religious anchorage is a way to assert the spiritual component of one's social identity. Its assessment is not as straightforward as the assessment of other means of social anchorage because religious anchorage must be distinguished from religious faith and membership in a religious institution is often quite informal. Methodologically, data regarding religious anchorage are derived from questions that were phrased differently in the two studies (Table 3.2). In addition, in the first study, social network from fellow countrymen or countrywomen and from native Canadians was documented whereas, in the second study, networks from other ethnic groups were also investigated. To respect the comparable accuracy principle, networks from other ethnic groups are not integrated in the computation of religious anchorage. Based on data from the second study, misclassification of religious anchorage due to the exclusion of networks from other

Table 3.2

Questions providing data for religions and community anchors

In the first study	In the second study
Avez-vous des amis /du pays d'origine/ à Montréal ? Si oui, de qui s'agit-il ?	Combien de /personnes du pays d'origine/ connaissez-vous à Montréal ?
Participez-vous à des fêtes, des réunions ou des activités avec la communauté /du pays d'origine/ à Montréal ? Si oui, lesquelles ?	Quelle est la nature de votre relation avec eux ?
Avez-vous des amis canadiens ou québécois à Montréal ? Si oui, de qui s'agit-il ?	Combien de Canadiens ou Québécois connaissez-vous à Montréal ?
Participez-vous à des fêtes, des réunions ou des activités avec des Canadiens ou des Québécois à Montréal ? Si oui, lesquelles ?	Quelle est la nature de votre relation avec eux ?
	Allez-vous à la messe /ou à la pagode/ ?

ethnic groups is estimated at 2.1% (i.e., 3 subjects classified as having no religious anchorage would have been classified as anchored if networks from other ethnic groups had been included in the computation of religious anchorage).

For the first study, subjects who reported that they were meeting their friends in religious activities or that they often took part in religious activities were coded as having a religious anchorage. For the second study, subjects who reported that they were meeting their acquaintances in religious activities or that they often went to the church or the

pagoda were coded as having a religious anchorage. Thus, the documentation of religious anchorage is more precise in the second study since it is based : (1) on the less restrictive notion of acquaintance compared to friendship and (2) on a specific question regarding church or pagoda attendance. Religious anchorage is 31.5% higher in the second study than the first study. This inter-study difference can be attributed to the higher precision observed in the second study but it may also reflect a tendency for refugees to increase their religious involvement over the years. For instance, Westermeyer *et al.* (1989) noted an increase of 23% in religious involvement over a 5 year period in Lao refugees. Nevertheless, special care will be taken to verify whether this inter-study difference affect the estimation of the effect of exposure to political violence on religious anchorage.

3.1.4 Community anchorage

Community anchorage contributes to secure refugees to the host country by reinforcing their identity as members of a sporting, cultural or lobbying group. It is measured by a dichotomous variable that indicates whether or not the subject is involved in clubs, association or other types of leisure or community group - other than religious. Because community anchorage is derived from the same questions as religious anchorage, it suffers from the same risk of misclassification. Based on data from the second study, the percentage of misclassification is estimated at 0.7% (i.e., had networks from other ethnic groups been integrated in the computation of community anchorage, 1 subject classified as not anchored would have been classified as anchored).

3.1.5 Political anchorage

Political anchorage denotes the desire and the ability to be recognized as a citizen of the host country. In particular, Canadian citizenship allows people to vote, to travel outside Canada with a Canadian passport, and to be elected to the House of Commons. It is thus defined by a dichotomous variable recording whether or not the subject has obtained the Canadian citizenship. Subjects who have held their permanent residency for less than three years or who have not obtained this immigration status at the time of the interview are not assessed regarding their political anchorage because holding residency status for a minimum of three years is a necessary condition to apply for Canadian citizenship. Citizenship denotes the official membership in a political institution. Whether this anchorage was activated through voting, being elected or traveling abroad was not ascertained.

3.1.6 Diversity of anchorage

Two indices of the diversity of anchorage are computed. The first index is the sum of the four social anchors (i.e., professional, academic, religious, community) that can be secured by the whole sample. The second index is the sum of the five anchors (i.e., professional, academic, religious, community, political) that can be activated by refugees who are eligible for Canadian citizenship. However, since it is not so much the quantity of social anchors that is of interest here but rather the diversity of anchorage, these indices are stratified : the first level includes subjects who have no other social anchor

than family anchorage ; the second level, those who have one social anchor apart from family anchorage ; the third level, those who have two or more social anchors.

The validity of these indices depend on the validity of the individual social anchors that are used to compute these indices. However, it is likely that the misclassification of the level of diversity of anchorage due to the under-estimation of religious and community anchors would affect subjects who have one or no anchor since those who have two or more anchors would have been classified in the highest category of the indices anyway.

3.2 Exposure to political violence

Exposure to political violence was documented similarly in the two studies with a checklist of the traumatic events and situations encountered by Southeast Asians and Central Americans before and during migration. This checklist was developed by Rousseau *et al.* (1993) based on Breslau and Davis's approach (1987) to wartime stressors and after consultation with key informants from Southeast Asia or Central America. This thesis focuses on the following premigratory trauma : threat, execution, torture, imprisonment, forced labor, reeducation camp, temporary and permanent disappearances.

Two dimensions of the exposure to political violence are investigated. First, trauma experienced by the subject himself or herself are considered separately from those experienced by his or her nuclear family both ascending (i.e., his or her mother, father, brother and sister) and descending (i.e., his or her spouse and children). Second,

traumatic events are distinguished from traumatic situations to approximate acute and chronic exposure. These dimensions are combined to form two indices of personal exposure and one index of family exposure (Table 3.3).

3.2.1 Personal exposure to political violence

The first personal index is a three-level ordinal variable reflecting the degree of acute exposure (PAE) to political violence. Two types of traumatic event (i.e., acute exposure) are considered : threat and torture. Subjects who did not report being threatened or tortured are coded 0 ; those who indicated that they were threatened but not tortured are coded 1 ; those who reported being tortured are coded 3. This three-level variable is treated as a continuous variable in statistical analysis to preserve the ordering in the growing intensity of personal acute exposure to political violence.

The debate on whether to input ordinal variables in the model as a set of k-1 dummy variables or as a single variable is still going on. On the one hand, it is argued that dummies should be used because the coding applied to ordinal strata is arbitrary and mimics a non-existent metric (Neter *et al*, 1985). For instance, the coding used for PAE implies that being tortured (coded 3) is three times worst than being threatened (coded 1). On the other hand, using dummies leads to an important loss of information because the ordering is ignored. Besides, Moses *et al.* (1984) have shown that the Mann-Whitney test for ordinal variables produces results similar to the T-test even when the coding is modified thus suggesting that treating ordinal variables as continuous variables does not

Table 3.3

Measurement of exposure to political violence

Label	Scale	Coding
PERSONAL EXPOSURE		
Acute	Ordinal	None (0) [a]
		Threat (1)
		Torture (3)
Chronic	Dichotomous	No (0)
		Yes (1)
FAMILY EXPOSURE	Continuous	n/a [b]

a Numbers in parenthesis indicate the values of the code applied to that category
b Not applicable

invalidate the results. Given that PAE seeks to measure the increasing level of personal acute exposure to political violence rather than the qualitative difference in exposure between torture and threat, which would be assessed by the use of dummies, PAE will be input as a single variable.

The second measure of personal exposure is a dichotomous variable indicating whether or not the subject was chronically exposed to political violence. Three types of traumatic situations (chronic exposure) are considered : imprisonment, forced labor and reeducation camp. The length of direct and chronic exposure was not documented in the two source studies so that a more refined measure cannot be created.

3.2.2 Family exposure to political violence

Family exposure to political violence is assessed by an index summing up the number of traumatic events or situations experienced by the nuclear family of the subject. Three types of traumatic events (i.e., threat, execution and torture) and five types of traumatic situations (i.e., imprisonment, forced labor, reeducation camps, temporary or permanent disappearance) are taken into account.

3.3 Other predictors

Two categories of covariates are investigated : transferable skills and socio-demographic profile (Table 3.4). These variables were selected because they were shown to affect the social anchorage of refugees or because they were expected to do so on theoretical grounds.

3.3.1 Transferable skills

Three types of transferable skills are documented : premigratory work experience, level of schooling, and fluency in French and/or English. Premigratory work experience is documented from the question : *Quelle était votre principale occupation ou profession*

au /pays d'origine/ ? It is measured by a dichotomous variable indicating whether or not the subject was working in a domain compatible with the economic climate of the Montreal urban setting. Subjects reporting that they had no work experience before migrating, or that they were fishermen or agricultural workers are considered as having no transferable work skills whereas those who were involved in commerce or other types of industry or who were professionals are viewed as having some transferable work skill.

Level of schooling is documented from a question regarding the highest diploma obtained. It is measured by a dichotomous variable denoting whether the subject had no diploma (never went to school or only went to primary school) or whether he or she had at least a high school diploma. This cut-point was selected because most jobs require at least a high school diploma. The level of schooling reported at the time of interview may have been achieved in the homeland or since landing in Canada.

Fluency in French and/or English is also assessed by a dichotomous variable that records the level of speech in either language estimated by the subject. Language fluency was self-reported and it was not tested in any way. Subjects who reported having no or little knowledge of either spoken French or English were coded 0 and those who reported being quite fluent in either language were coded 1.

3.3.2 Socio-demographic profile

Seven socio-demographic characteristics are investigated (Table 3.4). Some are self-explanatory : gender, age, number of children in Canada, type of household (two parents

Table 3.4

Measurement of other predictors

Label	Scale	Coding
TRANSFERABLE SKILLS		
Premigratory work experience	Dichotomous	Not transferable (0) [a]
		Transferable (1)
Level of schooling	Dichotomous	None or primary (0)
		≥ High school (1)
Fluency in French/English	Dichotomous	None or little (0)
		Good (1)
SOCIO-DEMOGRAPHIC PROFILE		
Ethnicity	Dichotomous	Central American (0)
		Southeast Asian (1)
Gender	Dichotomous	Female (0)
		Male (1)
Age	Continuous	n/a [b]
Length of stay in Canada	Continuous	n/a
Number of children in household	Continuous	n/a
Type of household	Dichotomous	Single parent (0)
		Two parents (1)
Income category	Dichotomous	Low (0)
		Average (1)

a Numbers in parenthesis indicate the value of the code applied to that category b Not applicable

vs. single parent), length of stay in Canada (in years). Other require additional information. Income category was investigated by the question :

Au Canada, les revenus de votre famille au cours de la dernière année vous situent selon vous dans une situation économique de ...

Haut niveau

Classe moyenne avec bons revenus

Classe moyenne avec revenus moyens

Secteur de bas revenus

No subjects reported belonging to the high level category and few mentioned that they were from the middle class with good income. Thus, the income category is described by a dichotomous variable that indicates whether the subject feels that his or her household income is low or average.

Ethnicity is viewed as a proxy for the un-measured, and mostly un-measurable, cultural background that characteristizes how an individual interprets his or her environment and how he or she reacts to it. It is measured by a dichotomous variable indicating whether the subject is from Southeast Asia or Central America. This apparently simplistic view of ethnicity was adopted for two main reasons. First, Cambodians and Vietnamese on the one hand, and Guatemalans, Hondurans and Salvadorans on the other hand, belong to two rather homogeneous geo-cultural areas (i.e., Southeast Asia vs. Central America) who have shared a similar and intertwined climate of political violence. There is no denying that there are cultural and political differences both between and within the five individual countries but these differences are small compared to the differences between

the two geo-cultural areas. Second, the small samples from some countries preclude the calculation of country specific effect estimates since these would be most unstable.

4. Statistical analysis

The main objective of the statistical analysis is to estimate the effect of exposure to political violence on social anchorage. Given that the hypotheses under study involved no interaction terms and that the sample size is relatively small, the major concern in data analysis is to control for confounding. In addition, preliminary analyses are carried out to describe the distribution of exposure and social anchorage across ethnic, gender and age group. Finally, exploratory analyses are performed to identify significant transferable skills and socio-demographic characteristics that affect the social anchorage of refugees when controlling for exposure and confounders ; these analyses are carried out for the total sample, and when the statistical power is sufficient, for each geo-cultural group. Data editing and analysis are performed with SPSS Version 10.

4.1 Data editing

Data were re-edited and re-coded specifically for this thesis because the initial data editing and coding in the two source studies were carried out with the children as the focus. Data re-editing and re-coding were validated by : (1) checking for unexpected, deviant or extreme values, (2) examining the distribution of variables and (3) verifying the accuracy of the new variables or indices created from the raw data.

4.2 Data analysis

Logistic regression analyses are carried out to calculate the effect of exposure to political violence and of other predictors on the social anchorage of refugees. Binary logistic regression is used for dichotomous outcomes (i.e., specific types of social anchorage) whereas ordinal logistic regression is applied for the two indices of the diversity of anchorage. Since binary logistic regression is a basic statistical tool in epidemiology, it will not be reviewed in detail. Ordinal logistic regression analysis is less well known and will be described. But first, specific aspects that apply to both binary and ordinal regression must be discussed because they take on special importance in this thesis. These include : the verification of assumptions, the approximation of risk ratio from odds ratio, the detection of confounders, the model building strategy, the verification of the goodness-of-fit of the model, and statistical power considerations.

4.2.1 Verification of assumptions

In addition to the correct specification of the model (i.e., no important variables are omitted, no incongruous variables are included, no multicollinearity among independent variables), logistic regression also requires that the logits are a linear function of the covariates (Hamilton, 1992).

The satisfaction of the linearity assumption is verified by plotting the effect estimates across the levels of the independent variables ; this plot should approximate a straight line that increases or decreases more or less steadily (Greenland, 1998a). This method

entails some arbitrariness because continuous variables must first be categorized before computing stratum specific effect estimates and different categorization methods may produce different results. The adequacy of the linearity assumption between social anchorage and family exposure to political violence, age, length of stay in Canada, and number of children is assessed through various categorization methods so that the robustness of the linear approximation can be ascertained.

Multicollinearity leads to unreliable regression coefficients with large standard errors (Hamilton, 1992). It can be suspected, during analysis, whenever a regression coefficient changes markedly with the addition of a new variable, when the regression coefficient associated with an important predictor is non-significant or shows a wide confidence interval, or when the direction of the regression coefficient is opposite to what was expected on theoretical grounds (Neter *et al.*, 1985). Multicollinearity can also be detected before proceeding to the analysis by computing a number of regression equations where each independent variable is, in turn, regressed on all other independent variables (Hamilton, 1992). A high percentage of variance explained (R^2) - or, equivalently a low tolerance ($1 - R^2$) - in any of these equations is viewed as a symptom of multicollinearity involving the variable used as temporary outcome. The extent of the multicollinearity is expressed by the variance inflation factor ($VIF = 1 / (1 - R^2)$). Although the VIF method was devised for use with predictor variables measured on a continuous scale, Hsieh *et al.* (1998) have shown that it performs adequately with dichotomous variables. Multicollinearity problems will be checked for all multiple regression analyses.

4.2.2 Approximation of risk ratios from odds ratios

A number of measures have been developed to estimate the effect of risk and protective factors on a health-related phenomenon but all turn around the notion of risk. Greenland (1987) has showed that risk differences and risk ratios are the optimal measures of effect because their interpretation is consistent with the notion of average risk. In case-control studies, odds ratios are a valid estimation of incidence risk ratios because, expectantly, the distribution of exposure among controls is similar to that of the source population from which the cases were selected (Rothman and Greenland, 1998). In cross-sectional and cohort studies, odds ratios are a valid estimation of the risk ratios only when the outcome under study is rare [1]. Otherwise, they have no readily interpretable meaning and they bias the effect estimates away from the null value (Lee, 1994).

Zhang and Yu's method (1998) can be used to approximate risk ratios and their confidence intervals when the outcome under study is not uncommon and when logistic regression is used to compute odds ratio . Zhang and Yu (1998) recommend correcting the odds ratio when the probability of outcome is higher than 10% and the observed odds ratios are smaller than OR = .5 or larger than OR = 2.5.

Zhang and Yu's method (1998) rests on a simple formula that takes into account the observed odds ratio and the percent of subjects with a positive outcome in the reference category of the covariate (i.e., the unexposed in the case of the exposure variable) :

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[1] The rare disease assumption is not required in case-control studies except in cumulative case-control studies where the maximum induction period is over before the selection of subjects, for instance in the case of food poisoning after a social gathering (Rothman and Greenland, 1998)

$$RR = \frac{OR}{(1 - P_0) + (P_0 \times OR)}$$

where OR = odds ratio fitted by logistic regression

P_0 = probability of outcome in the non-exposed category

Thus this formula requires that a different weight (P_0) be calculated for each covariate and each outcome under study. According to McNutt *et al.* (1999), the simplicity of this method is achieved at the cost of a slight overestimation of the precision of the approximated risk ratios (i.e., the confidence intervals tend to be somewhat narrower than they should be) due to the fact that the variance of P_0 is not taken into account and to the sometimes high correlation between that P_0 and the uncorrected odds ratio. They also caution, in agreement with Zhang and Yu (1998), that the computation of approximated risk ratios is not valid for interaction terms.

Since social anchorage is not a rare event according to epidemiological criteria, all odds ratios and confidence intervals estimated in this thesis are corrected by the Zhang and Yu (1998) method to better approximate risk ratios. The only exceptions are the odds ratio for continuous variables with no meaningful zero category (i.e., age, length of stay in Canada, and number of children) or for interaction terms because Zhang and Yu's method cannot be applied in those situations.

4.2.3 Detection of confounders

Confounding is a bias that can mask, inflate, attenuate or even reverse the effect estimate for exposure. Given that the main objective of this thesis is to estimate the effect of exposure to political violence on social anchorage, control of confounding is a major concern in this thesis. Confounding of the risk ratio for exposure occurs when the covariate is independently associated with both the exposure and the outcome so that the crude risk ratio is outside the range of the risk ratios observed in the individual levels of the covariate (Boivin and Wacholder, 1985). Control for the confounding variable brings the adjusted risk ratio back within the range of strata specific risk ratios. Thus, confounding of a covariate can be detected by comparing the crude and adjusted risk ratios. Greenland (1989) asserts that covariates that change the effect estimate for exposure by at least 10% can be viewed as confounders and should be controlled for.

In this thesis, the detection of confounders is based on the risk ratio approximated by Zhang and Yu's method (1998) and proceeds in two steps. First, the change-in-estimate method is applied by entering separately each covariate into a regression model that already contains the three exposure variables ; the change in the approximated risk ratio for exposure following the introduction of the covariate is then computed. Second, if this change-in-estimate is higher than 10%, interaction terms between exposure variables and the putative confounder are tested for significance to make sure that the change-in-estimate is due to confounding since Miettinen and Cook (1981) have shown that it can also reflect effect modification.

4.2.4 Model building strategy for exploratory analyses

Overall, three exposure variables and ten covariates are considered as putative predictors of specific types of social anchor and of indices of the diversity of social anchorage. The main argument for the validity of a statistical model is the scientific plausibility of the independent variables ; this condition is satisfied here since the exposure variables and covariates were selected because they were shown to affect the social anchorage of immigrants or refugees in a number of studies or were expected to do so on theoretical grounds. Yet, the covariates may not be relevant for the sample under study here and the available sample size is not sufficient to include all of them in the regression model. In consequence, a model building strategy must be devised to select the covariates that significantly affect the social anchorage of refugees after controlling for exposure to political violence and for the confounders of the effect of exposure,

A number of strategies have been proposed to deal with the search for a parsimonious yet valid model in multiple regression analysis and all these strategies have their strengths and weaknesses. The strategies selected here for exploratory analyses are the automated backward and forward selections of independent variables based on the maximum likelihood criteria. According to Lovell (1983), using these strategies is valid as long as it is not a fishing expedition without conceptual basis. The automated selection of independent variables has two main drawbacks. First, variables entered in the model by forward selection or excluded by backward selection are tributaries of the variables already included in the model so that the forward and backward methods do not

necessarily produce similar results. Second, the computer-based selection of independent variables fails to retain covariates which are confounders of the effect of exposure but which are not significant independent predictors of the outcome. This second weakness is not an issue here since confounders of the effect of exposure to political violence will have been identified previously by the change-in-estimate method.

Model building for exploratory analyses will proceed by hierarchical regression. The three exposure variables and their confounders, if any, will be forced in the model in a first bloc. The covariates will be included in a second block that will be submitted to both the forward and the backward methods of automated selection. In cases where these selection methods do not produce the same model, the validity of each model will be discussed. Note that income category and fluency in French and/or English will not be included in the professional anchorage model because these variables may represent a consequence rather than a predictor of the outcome.

4.2.5 Test of goodness-of-fit of the model

Three summary measures are widely used to test the overall goodness-of-fit of logistic models. The deviance compares the maximum log-likelihood function of the current model (i.e., based on fitted probabilities) to that of the reference model (i.e., based on observed probabilities). Though the deviance approximates the χ^2 distribution with n - p degrees of freedom, this approximation is not valid when the model includes a continuous variable because then almost no cell contains enough subjects per cell (Bender and Ulrich, 1997 ; Collett, 1999 ; Hosmer *et al*, 1991). The Pearson χ^2 statistic

is also based on the χ^2 distribution and, as such, cannot be used as a measure of overall goodness-of-fit for the models with continuous variables. Since family exposure to political violence is a continuous variable and appears in all regression analyses, the deviance and Pearson χ^2 statistic cannot be used to judge the goodness-of-fit of the fitted models.

Therefore, the overall goodness-of-fit of the binary regression models computed in this thesis will be estimated by the third summary statistic, that derived from the Hosmer and Lemeshow decile-based test, which splits the sample in 10 categories containing an equal number of fitted probabilities and then computes a χ^2 statistics with 8 degrees of freedom based on the difference between expected and observed frequencies (Lemeshow and Hosmer, 1982). The pooling of observations ensures that the χ^2 approximation is valid because then every cell has more than 5 observations (Bender and Ulrich, 1997) if the sample comprises more that 50 subjects. The null hypothesis tested by the Hosmer and Lemeshow decile-based statistic is that the observed and predicted values are equal. Thus failure to reject the null hypothesis at a level $\alpha \leq .05$ implies that the fit of the model is good.

In logistic regression, there is no widely accepted measure of the efficacy of the model to predict the outcome, such as the percentage of the outcome variance (R^2) explained by the model in linear regression. However, Nagelkerke (1991) has proposed a refinement of an R^2 equivalent defined by Cox and Snell (1989, quoted in Nagelkerke, 1991). The Cox and Snell R^2 is given by :

$$R^2_{CS} = 1 - \exp\left[-\frac{2}{n}\left\{\log L_c - \log L_f\right\}\right]$$

Nagelkerke (1991) cautions that the maximum achieved by the Cox and Snell R^2 depends on the probability distribution of the outcome :

$$\text{maximum } R^2_{CS} = 1 - \left[pr(y = 1)pr(y = 0)\right]$$

For instance, when pr (y = 1) = pr (y = 0) = .5, the maximum reached by the Cox and Snell R^2 is .75. Therefore, he proposes to adjust the Cox and Snell R^2 by taking into account the maximum achievable given the observed probability of outcome, so that :

$$R^2_{CS/N} = R^2_{CS} / \max R^2$$

Neither the Cox and Snell R^2 nor Nagelkerke's modification seems to have been endorsed or condemned in the literature so Nagelkerke R^2 will be used with all reserve as an approximation of the predicting ability of the model.

Although the overall goodness-of-fit for the model may be satisfactory, individual observations may still be poorly fit or have an undue influence on the results. In linear regression, residual analysis is commonly used to detect outliers or influential observations. This method has been adjusted for logistic regression by defining residual as the difference between the observed and the fitted probabilities of outcome given the values of independent variables, adjusted for the standard error of the fitted probability.

When the Pearson standardized residuals are calculated for each subject, they provide a measure of the influence of each subject on the goodness-of-fit of the model. Collett (1999) cautions that an influential observation is not necessarily an outlier as its influence may have shifted the model toward itself. In linear regression, the leverage measures *how extreme a subject's values of the independent variables were, relative to the rest of the subjects in the study* (Hosmer *et al*, 1991). It has been adapted to logistic regression by using the matrix of weights used to fit the model (Collett, 1999). Individual delta square statistic and leverage will be plotted against the index number of the subjects to respectively detect influential observations and outliers (Collett, 1999). In the event that marginal observations (i.e., influential or outlier) are detected by residual analysis, these observations will be temporarily deleted from the model to judge the importance of their effects.

4.2.6 Statistical power

Since the empirical validation of the conceptual framework developed for this thesis is based on a secondary analysis of data collected in two previous studies, concern about statistical power is approached more from the perspective of the precision of the effect estimates than that of sample size requirement. The precision of the approximated risk ratios is revealed by the width of the confidence intervals, which will be calculated at the traditional .95 level.

Nonetheless, special attention will be put on the multiple regression models that transgress the rule-of-thumb that stipulates that there should be at least 10 subjects for each independent variable included in the equation (Greenland, 1998b; Kleinbaum *et al*, 1988). However,

when applied to logistic regression, it is not so much the number of subjects in the sample that matters but rather the number of subjects in the smallest category of outcome. In most epidemiologic studies, it is the positive outcome category that is the smallest but in the case of common outcomes such as most social anchors, the smallest category is that of the negative outcome.

4.2.7 Ordinal logistic regression

Polytomous logistic regression was developed to prevent the dichotomisation, and ensuing loss of information and statistical power, of categorical outcomes with more than two levels (Taylor and Becker, 1998). It entails the computation of equations with different intercepts and regression coefficients for each outcome strata minus 1 :

$$\text{logit Pr (y = i)} = \alpha_j + \beta_{j1} x_1 + \ldots + \beta_{jk} x_{ki}$$

Ordinal logistic regression is a special case of polytomous logistic regression where the strata ordering underlying the ordinal outcome is taken into account. This ordering can be analyzed by comparing the outcome stratum j to either the adjacent stratum to estimate pr (y < j) or the cumulative strata to estimate pr (pr ≤ j). Both the adjacent and cumulative methods require the computation of equations with different intercepts and regression coefficients for each outcome stratum minus 1 unless the proportional odds model is used.

Indices of the diversity of social anchorage will be modeled with the proportional odds model for cumulative-category ordinal logistic regression (McCullagh, 1980). This model is given by :

$$\text{logit Pr}(y \leq i) = \alpha_j + \beta_1 x_1 + \ldots + \beta_k x_{ki}$$

This model differs from other ordinal logistic regression models in that, though the number of intercepts is still equal to the number of outcome categories, *j*, minus 1, a unique regression coefficient is computed for each independent variable. Thus, the proportional odds model assumes that the regression slopes are parallel across outcome strata and differ only by the value of the intercept, α. This apparently stringent assumption is, however, especially valid for ordinal outcomes reflecting an underlying continuous variable (Bender and Ulrich, 1997 ; Taylor and Becker, 1998).

Proportional odds models must satisfy the assumptions of dichotomous logistic regression outlined previously. The additional proportional odds assumption can be tested by the score test for which the null hypothesis stipulates that the regression coefficients estimated from separate set equations are equal to those estimated from the proportional odds model so that failure to reject the null hypothesis at $\alpha \leq .05$ indicates that the proportional odds assumption is satisfied (Taylor and Becker, 1998). If the proportional odds assumption is not satisfied, one can dichotomize the outcome variable and proceed to k-1 separate equations (Taylor and Becker, 1998), try a link function producing a non-symmetric response curve, add interaction terms, or calculate separate regression coefficients as in non-ordinal polytomous logistic regression (Agresti, 1999).

There are no global measures of the goodness-of-fit for polytomous and ordinal logistic regressions so they must be tested by computing separate equation for each pair of adjacent or cumulative outcome strata and then performing residual analysis as described for binary logistic regression (Bender and Ulrich, 1997).

5. Ethical considerations

This thesis received the ethical approbation of the Institutional Review Board of McGill University. In addition, Southeast Asian and Central American refugees who took part in the two studies that provided data for this thesis signed a consent form written in their maternal tongue that gave a brief summary of the objectives of the research, described the limit of their participation and ensured confidentiality. Finally, the two source studies were also approved by the Ethical Review Board of Douglas Hospital where Dr Rousseau and her team were located at the time of data collection. These ethical approbation and the French version of the consent forms are reproduced in Appendix I.

Chapter 4

Results

This chapter is broadly divided in two parts. The first part outlines the sample under study and the pattern of social anchorage and exposure to political violence across ethnic, gender and age groups. It brings to light the special role of ethnicity as a marker of exposure to political violence, social anchorage and transferable skills. The second part focuses on the estimation of the effect of exposure to political violence on the social anchorage of refugees by logistic regression analysis. Whenever the sample size provides sufficient statistical power, separate analyses are carried out for Southeast Asians and Central Americans in an attempt to better capture the ethnic specific effects of political violence and other covariates on the social anchorage of refugees. Given the considerable amount of data presented in this second part, results are summarized at the end of the chapter.

1. Socio-demographic profile

The sample was made up of 146 Southeast Asian and 124 Central American parents of school-aged children for a total of 270 subjects (Table 4.1). At the time of interview,

these refugees had been living in Canada for a mean of 7.2 years and all Southeast Asians and 91% of Central Americans had obtained the permanent residency status or the Canadian citizenship.

An approximately equal number of Southeast Asian females and males took part in the study whereas more Central American females than males were interviewed. The age distribution ranged from 24 to 72 for an overall mean of 40 years old and 90% of the sample was between 30 and 52 years old.

Southeast Asian subjects tended to have fewer transferable skills than Central Americans (Table 4.1). For instance, 55% of Southeast Asians had a primary school education or none compared to 43% of Central Americans, 43% of Southeast Asians had no premigratory work experience compatible with an urban setting economy compared to 33% of Central Americans, and 92% of Southeast Asians had no or little knowledge of spoken French or English compared to 72% of Central Americans. However, the percent of subjects with no transferable skills whatsoever was similar in the two ethnic groups (7%)

The majority of subjects were living with a spouse but the percent of subjects with a spouse was slightly higher in the Southeast Asian sample (81%) than in the Central American sample (69%). Given that the sample is constituted of parents of school-aged children, this implies that a minority of subjects were heading a single-parent household and that the percent of single parenthood was lower in the Southeast Asian (19%) than in

Table 4.1

Socio-demographic profile

	Central American	Southeast Asian	Total
Number of subjects	124	146	270
Gender			
Female	82 (66 %)	70 (48 %)	152 (56 %)
Male	42 (34 %)	76 (52 %)	118 (44 %)
Mean age	39.4 (sd 6.6) [b]	40.2 (sd 7.2)	39.8 (sd 6.9)
Education			
Primary school or none	53 (43 %)	81 (55 %)	134 (50 %)
Secondary or more	71 (57 %)	65 (45 %)	135 (50 %)
Premigratory work			
Not transferable	41 (33 %)	63 (43 %)	104 (39 %)
Transferable	83 (67 %)	83 (57 %)	166 (61 %)
Fluency French/English			
None or little	89 (72 %)	135 (92 %)	224 (83 %)
Good	35 (28 %)	11 (8%)	46 (17 %)
Marital status			
Without spouse	39 (31 %)	28 (19 %)	67 (25 %)
With spouse	85 (69 %)	118 (81 %)	203 (75 %)
Income category [a]			
Low	86 (69 %)	89 (61 %)	175 (65 %)
Middle	38 (31 %)	57 (39 %)	95 (35 %)
Mean number of children	2.9 (sd 1.1)	3.2 (sd 1.3)	3.1 (sd 1.2)
Mean years in Canada	6.9 (sd 2.8)	7.5 (sd 3.7)	7.2 (sd 3.3)

a Self-reported subjective estimation of income category ;

b sd : standard deviation.

the Central American (31%) sample. As usual, single parents were mostly women (87%). Finally, the percent of subjects who felt that they belong to the lowest income category was similar in the two ethnic groups and the probability of reporting a low income was 40% higher in single parents than in those living with a spouse (RR = 1.4 ; CI 1.2 to 1.6).

2. Social anchorage

Political (71%), professional (48%) and religious (33%) anchors were the most frequent types of social anchorage among this sample of Southeast Asian and Central American refugees whereas academic (10%) and community (8%) anchors were less common (Table 4.2). The pattern of social anchorage tended to vary across ethnic, gender and age groups and the percent of subjects with no social anchorage to the Canadian society other than their family was 12% in Southeast Asians and 6 % in Central Americans, 13% in younger refugees and 6% in older ones, 15% in females and 8% in males.

2.1 Political anchorage

Among the 210 subjects eligible for Canadian citizenship because they had been holding their permanent residency status for three years or more, Southeast Asians were 60% more likely than Central Americans to anchor themselves politically to the host society (Table 4.2). Political anchorage also varied across gender as males were 30% more likely than females to have obtained their Canadian citizenship (Table 4.3). The excess

Table 4.2

Distribution of specific social anchors for total sample and by ethnic group

	Types of social anchor				
	Political	Professional	Religious	Academic	Community
n	210	270	270	270	270
TOTAL SAMPLE					
Anchored	149 (71%)	129 (48 %)	89 (33 %)	28 (10 %)	21 (8 %)
Not anchored	61 (29 %)	141 (52 %)	181 (67 %)	242 (90 %)	249 (92 %)
BY ETHNIC GROUP					
Central American					
Anchored	47 (52 %)	74 (60 %)	56 (45 %)	26 (21 %)	17 (14 %)
Not anchored	43 (48 %)	50 (40 %)	68 (55 %)	98 (79 %)	107 (86 %)
Southeast Asian					
Anchored	102 (85 %)	55 (38 %)	33 (23 %)	2 (1 %)	4 (3 %)
Not anchored	18 (15 %)	91 (62 %)	113 (77 %)	144 (99 %)	142 (97 %)
Risk ratio [a]	1.6	0.6	0.5	0.1	0.2
Confidence interval [b]	1.3 to 2.0	0.5 to 0.8	0.4 to 0.7	0.02 to 0.3	0.1 to 0.6

a Risk ratio of anchorage in Southeast Asians vs. Central Americans

b Confidence interval for the risk ratio at the .95 level

Table 4.3

Distribution of specific social anchors by gender and age group

	Types of social anchor				
	Political	Professional	Religious	Academic	Community
BY GENDER					
Female					
Anchored	77 (63 %)	63 (41 %)	57 (38 %)	21 (14 %)	8 (5 %)
Not anchored	45 (37 %)	89 (59 %)	95 (62 %)	131 (86 %)	144 (95 %)
Male					
Anchored	72 (82 %)	66 (56 %)	32 (27 %)	7 (6 %)	13 (11 %)
Not anchored	16 (18 %)	52 (44 %)	86 (73 %)	111 (94 %)	105 (89 %)
Risk ratio [a]	1.3	1.3	0.7	0.4	2.1
Confidence interval [b]	1.1 to 1.5	1.1 to 1.7	0.5 to 1.04	0.2 to 0.98	0.9 to 4.9
BY AGE GROUP					
24 to 44 yo					
Anchored	118 (71 %)	106 (49 %)	65 (30 %)	23 (11 %)	16 (7 %)
Not anchored	49 (29 %)	112 (51 %)	153 (70 %)	195 (89 %)	202 (93 %)
45 yo and more					
Anchored	31 (72 %)	23 (44 %)	24 (46 %)	5 (10 %)	5 (10 %)
Not anchored	12 (28 %)	29 (56 %)	28 (54 %)	47 (90 %)	47 (90 %)
Risk ratio [c]	1.0	0.9	1.5	0.9	1.3
Confidence interval [b]	0.8 to 1.3	0.7 to 1.3	1.1 to 2.2	0.4 to 2.3	0.5 to 3.4

a Risk ratio of anchorage in males vs. females

b Confidence interval for the risk ratio at the .95 level

c Risk ratio of anchorage in older vs. younger subjects

of male respondents in the Southeast Asian sample (n = 76) compared to the Central American sample (n = 42) does not account for the higher probability of political anchorage in the former compared to the latter as when adjusting for gender, the risk ratio for ethnicity only goes from 1.63 to 1.57. Finally, older subjects were as likely to be anchored politically as were younger subjects (Table 4.3).

2.2 Professional anchorage

Southeast Asian subjects were 40% less likely than Central Americans to have been working in the year preceding the interview (Table 4.2). The probability of professional anchorage was 30% higher in males than in females and similar in older and younger subjects (Table 4.3).

2.3 Religious anchorage

Religious anchorage refers to regular attendance at public religious activities or to having a social network made up of members of a religious institution. According to this definition, Southeast Asian subjects were 50% less likely than Central Americans to have a religious anchorage in Montreal (Table 4.2). Religious anchorage was 30% less likely in males than in women and older Southeast Asian and Central American refugees were 50% more likely than younger ones to be anchored to a religious institution (Table 4.3).

2.4 Academic anchorage

Academic anchorage was especially uncommon in the Southeast Asian sample as only 2 subjects of that ethnic group were attending school compared to 26 Central Americans (Table 4.2). Males from these two ethnic groups were 60% less likely than females to have an academic anchorage in the host country whereas this type of social anchorage did not appear to vary by age group (Table 4.3).

2.5 Community anchorage

Only 21 subjects in the total sample reported belonging to a community organization or taking part in leisure activities with a more or less structured group. Among those involved in community institutions, there were more Central Americans (n = 17) than Southeast Asians (n = 2), slightly more males (n = 13) than females (n = 8), and more younger subjects (n = 16) than older ones (n = 5) (Tables 4.2 and 4.3).

2.6 Diversity of social anchorage

Two indexes of the diversity of social anchorage were computed. The first index reflects the diversity of anchorage for the whole sample not taking political anchorage into account as subjects who have held the permanent residency status for less than three years are not eligible for Canadian citizenship. The second index is based on the five types of social anchor but excluded subjects not eligible for Canadian citizenship.

According to the first index, 31% of the total sample had no social anchor other than family, 43% had one social anchor in addition to family anchorage and 26% had between 2 and 4 anchors plus family anchorage (Table 4.4). The diversity of social anchorage tended to vary across ethnic and age groups but was rather similar in males and females. The probability of having one anchor or more compared to none was 40% lower in Southeast Asians than in Central Americans whereas the probability of having two anchors or more compared to one or none was 80% lower in the former than in the latter (Table 4.4). The probability of having one anchor or more compared to none was 30% higher among older compared to younger subjects (Table 4.6).

When including political anchorage in the second index thus restricting its computation to the 210 subjects eligible to Canadian citizenship, 9% of this sub-sample had no social anchor other than family, 35% had one social anchor in addition to family anchorage and 56% were highly anchored (Table 4.4). The pattern of the diversity of anchorage slightly differs in this second index compared to the first one.

The probability of two or more social anchors compared to one or none was 20% lower in Southeast Asian refugees than in Central Americans (Table 4.4). Males were 10% more likely than females to have one or more anchor compared to none whereas the probability of having two or more social anchors compared to one or none was 30% higher in the former than in the latter (Table 4.5). Finally, older refugees were 30% more likely than younger ones to have 2 or more anchors (Table 4.6).

Table 4.4

Distribution of the diversity of social anchorage for total sample and by ethnic group

	Total sample (n = 270)	Eligible sample (n = 210)
TOTAL SAMPLE		
No anchor [a]	83 (31 %)	19 (9 %)
1 anchor [b]	117 (43 %)	74 (35 %)
≥ 2 anchor [c]	70 (26 %)	117 (56 %)
BY ETHNIC GROUP		
Central American		
No anchor [a]	15 (12 %)	5 (6 %)
1 anchor [b]	54 (44 %)	27 (30 %)
≥ 2 anchor [c]	55 (44 %)	58 (64 %)
Southeast Asian		
No anchor [a]	68 (47 %)	14 (12 %)
1 anchor [b]	63 (43 %)	47 (39 %)
≥ 2 anchor [c]	15 (10 %)	59 (49 %)
Risk ratio and CI [d]		
≥ 1 anchor vs. none	0.6 (0.5 to 0.7)	0.94 (0.9 to 1.02)
≥ 2 anchors vs. 1 or none	0.2 (0.1 to 0.4)	0.8 (0.6 to 0.97)

a No anchor apart from family anchorage

b One anchor plus family anchorage

c Two and more anchors plus family anchorage

d Risk of anchorage in Southeast Asians vs. Central Americans and confidence interval at the .95 level

Table 4.5

Distribution of the diversity of social anchorage by gender

	Total sample (n = 270)	Eligible sample (n = 210)
Females		
No anchor [a]	53 (35 %)	15 (12 %)
1 anchor [b]	56 (37 %)	47 (39 %)
≥ 2 anchor [c]	43 (28 %)	60 (49 %)
Males		
No anchor [a]	30 (25 %)	4 (5 %)
1 anchor [b]	61 (52 %)	27 (31 %)
≥ 2 anchor [c]	27 (23 %)	57 (65 %)
Risk ratio and CI [d]		
≥ 1 anchor vs. none	1.1 (0.98 to 1.3)	1.1 (1.0 to 1.2)
≥ 2 anchors vs. 1 or none	0.8 (0.5 to 1.2)	1.3 (1.0 to 1.7)

a No anchor apart from family anchorage

b One anchor plus family anchorage

c Two and more anchors plus family anchorage

d Risk of anchorage in males vs. females and confidence interval at the .95 level

Table 4.6

Distribution of the diversity of social anchorage by age group

	Total sample (n = 270)	Eligible sample (n = 210)
24 to 44 years old		
No anchor [a]	74 (34 %)	16 (10 %)
1 anchor [b]	88 (40 %)	63 (38 %)
≥ 2 anchor [c]	56 (26 %)	88 (53 %)
45 years old and older		
No anchor [a]	9 (17 %)	3 (7 %)
1 anchor [b]	29 (56 %)	11 (26 %)
≥ 2 anchor [c]	14 (27 %)	29 (67 %)
Risk ratio and CI [d]		
≥ 1 anchor vs. none	1.3 (1.1 to 1.5)	1.1 (0.9 to 1.1)
≥ 2 anchors vs. 1 or none	1.1 (0.6 to 1.7)	1.3 (0.99 to 1.6)

a No anchor apart from family anchorage

b One anchor plus family anchorage

c Two and more anchors plus family anchorage

d Risk of anchorage in older vs. younger age group and confidence interval at the .95 level

3. Exposure to political violence

Almost all subjects (81%) reported some forms of premigratory exposure to political violence in their homeland, 64% were direct victims through personal acute or chronic exposure whereas 72% were indirect victims through the exposure of their family. The

pattern of exposure to political violence tended to vary across ethnic groups, gender and age groups.

3.1 Personal acute exposure

A minority of subjects reported being threatened (24%) and tortured (4%) in the midst of the armed conflict that raged over their homeland (Table 4.7). Southeast Asian refugees were 50% less likely than Central Americans to have been personally threatened and males were 5.2 times more likely than females to report a personal experience of torture. But given the small number of subjects reporting such extreme exposure to political violence, this risk estimate is very imprecise (CI 1.1 to 23.8) ; in the Southeast Asian and Central American refugee population, the number of victims of torture may be up to 24 times higher in males than in females (Table 4.7). The probability of reporting torture was 2.8 times higher in older compared to younger subjects but, again, this risk ratio is rather imprecise (CI 0.8 to 9.5).

3.2 Personal chronic exposure

More than half the subjects (56%) reported exposure to some forms of chronic political violence such as imprisonment, reeducation camps or forced labor (Table 4.8). Chronic exposure was 2.3 times more frequent in Southeast Asian than in Central American refugees. The interethnic variation was to be expected given that almost all Cambodians subjects (87%) were coerced into forced labor under Pol Pot rules. Males refugees from Southeast Asia and Central America were 30% more likely than females from these two

Table 4.7

Distribution of personal acute exposure to political violence for total sample and by ethnic, gender and age group

	Not exposed	Threatened	Tortured
TOTAL SAMPLE	196 (73 %)	64 (24 %)	10 (4 %)
BY ETHNIC GROUP			
Central American	78 (63 %)	40 (32 %)	6 (5 %)
Southeast Asian	118 (81 %)	24 (16 %)	4 (3 %)
Risk ratio [a]	1.3	0.5	0.6
Confidence interval [d]	1.1 to 1.5	0.3 to 0.8	0.2 to 2.0
BY GENDER			
Females	115 (76 %)	35 (23 %)	2 (1 %)
Males	81 (69 %)	29 (24 %)	8 (7 %)
Risk ratio [b]	0.9	1.1	5.2
Confidence interval [d]	0.8 to 1.1	0.7 to 1.6	1.1 to 23.8
BY AGE GROUP			
24 to 44 years old	164 (75 %)	48 (22 %)	6 (3 %)
45 and older	32 (61 %)	16 (31 %)	4 (8 %)
Risk ratio [c]	0.8	1.4	2.8
Confidence interval [d]	0.7 to 1.02	0.9 to 2.3	0.8 to 9.5

a Risk of no exposure, threat or torture in Southeast Asians vs. Central Americans

b Risk of no exposure, threat or torture in males vs. females

c Risk of no exposure, threat or torture in older vs. younger subjects

d Confidence interval for the risk ratio at the 0.95 level

Table 4.8

Distribution of personal chronic exposure to political violence for total sample and by ethnic, gender and age group

	Not exposed	Exposed
TOTAL SAMPLE	119 (44 %)	151 (56 %)
BY ETHNIC GROUP		
Central American	83 (67 %)	41 (33 %)
Southeast Asian	36 (25 %)	110 (75 %)
Risk ratio [a]	0.4	2.3
Confidence interval [d]	0.3 to 0.5	1.7 to 3.0
BY GENDER		
Females	76 (50 %)	76 (50 %)
Males	43 (36 %)	75 (64 %)
Risk ratio [b]	0.7	1.3
Confidence interval [d]	0.5 to 0.97	1.0 to 1.6
BY AGE GROUP		
24 to 44 years old	105 (48 %)	113 (52 %)
45 and older	14 (27 %)	38 (73 %)
Risk ratio [c]	0.6	1.4
Confidence interval [d]	0.3 to 0.9	1.1 to 1.7

a Risk of no exposure or exposure in Southeast Asians vs. Central Americans

b Risk of no exposure or exposure in males vs. females

c Risk of no exposure or exposure in older vs. younger subjects

d Confidence interval for the risk ratio at the 0.95 level

geographic areas to have experienced chronic political violence. Reporting of chronic exposure to political violence was also more frequent in older compared to younger subjects and suggest that such exposure was 40% more likely in older Southeast Asian and Central American refugees.

3.3 Family exposure

Family exposure is defined by a continuous variable ranging from 0 to 5, which serves as a proxy for the intensity of the exposure of the nuclear family to political violence. It takes into account acute exposure such as threat, execution and torture experienced by one or more members of the nuclear family as well as chronic exposure such as imprisonment, stay in a reeducation camp, forced labor and temporary or permanent disappearance. The mean level of reported family exposure for the total sample was 1.3 (Table 4.9). It was higher in females ($\mu = 1.5$) than in males ($\mu = 1.1$) but did not appear to vary across ethnic or age groups.

The remainder of this chapter is devoted to the estimation of the effect of political violence, first, on specific social anchors of refugees and, then, on the diversity of their anchorage. Exploratory models are also presented for each measure of social anchorage to identify covariates that significantly affect social anchorage once exposure to political violence and ethnicity have been taken into account, and ethnic specific analyses are carried out whenever the available sample size is sufficient to do so.

Table 4.9

Distribution of family exposure to political violence for total sample and by ethnic group, gender and age group

	n	Mean	Standard deviation	Regression coefficients
TOTAL SAMPLE	270	1.3	1.1	n/a
BY ETHNIC GROUP				
Central American	124	1.2	1.3	0.1
Southeast Asian	146	1.4	1.0	(-0.1 to 0.4) [a]
BY GENDER				
Females	152	1.5	1.2	-0.4
Males	118	1.1	1.1	(-0.6 to -0.1) [a]
BY AGE GROUP				
24 to 44 years old	224	1.3	1.1	0.1
45 and older	46	1.4	1.1	(-0.3 to 0.5) [a]

a Confidence interval for the linear regression coefficient at the 0.95 level

4. Effect of exposure to political violence on specific social anchors

Crude risk ratios suggest that the effect of exposure to political violence on the social anchorage of refugees varies across types of exposure and anchorage (Table 4.10). Overall, personal acute exposure tends to foster professional, academic and community anchors, personal chronic exposure appears to hinder all forms of social anchorage

Table 4.10

Risk ratios of exposure to political violence for specific social anchors

	Types of social anchor				
	Political	Professional	Religious	Academic	Community
Crude risk ratios					
Personal acute	.99	1.13	1.05	1.33	1.27
	(.85 to 1.10) [a]	(.93 to 1.33)	(.81 to 1.33)	(.85 to 2.05)	(.75 to 2.13)
Personal chronic	1.29	.69	.74	.44	.72
	(1.09 to 1.44)	(.50 to .89)	(.50 to 1.03)	(.20 to .91)	(.31 to 1.60)
Family exposure	1.02	.95	1.10	1.14	.77
	(.94 to 1.10)	(.85 to 1.05)	(.95 to 1.27)	(.86 to 1.50)	(.51 to 1.13)
Adjusted risk ratios [b]					
Personal acute	.95	1.20	1.11	1.62	1.36
	(.80 to 1.07)	(1.00 to 1.40)	(.84 to 1.40)	(.99 to 2.58)	(.79 to 2.31)
Personal chronic	1.31	.65	.64	.31	.74
	(1.10 to 1.46)	(.45 to .87)	(.41 to .94)	(.13 to .71)	(.29 to 1.79)
Family exposure	.99	.99	1.15	1.25	.80
	(.90 to 1.07)	(.88 to 1.09)	(.99 to 1.33)	(.94 to 1.63)	(.52 to 1.18)

a In parenthesis, confidence interval of risk ratio at the .95 level ;

b Risk ratios adjusted for all measures of exposure to political violence

except political anchorage, and family exposure tends to prevent professional and community anchorage but to increase the probability of religious and academic anchorage. However, crude risk ratio for specific exposure must be interpreted with caution because they may be confounded by other forms of exposure to political violence.

Indeed, in a period of political upheaval, it is not unusual for any individual to experience a variety of exposures to political violence so that the effects of these exposures may be intertwined. Though these mixed effects are not sufficient to create a problem of multicollinearity in statistical analysis[1], they yield slight differences between crude and adjusted risk ratios for the sample under study here (Table 4.10).

When considering the three exposure measures simultaneously, adjusted risk ratios reveal that the probability of professional anchorage among Southeast Asian and Central American refugees increases by 20% for every additional level of personal acute exposure to political violence whereas that the probability of academic anchorage among these refugees increases by 62% for every additional level of such exposure. They also show that, compared to refugees not exposed to chronic forms of political violence, those who were exposed are 31% more likely to be anchored politically, 35% less likely to be

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1 In the sample under study, 4% of the variance of the probability of personal acute exposure is explained by personal chronic and family exposures ; 12% of the variance of personal chronic exposure is explained by the other two types of exposure ; and 8% of the variance of family exposure is explained by personal exposure.

anchored professionally, 36% less likely to be anchored to a religious institution and 69% less likely to be anchored to an academic institution. Finally, adjusted risk ratios suggest that every additional level of family exposure increases by 15% the probability of religious anchorage and by 25 % the probability of academic anchorage.

The validity of these estimates of the effect of exposure to political violence on the social anchorage of Southeast Asian and Central American can further be improved by controlling for putative confounders such as ethnicity, transferable skills, and other socio-demographic characteristics. To do so, multiple logistic regression analyses were performed for each type of social anchorage.

4.1 Political anchorage

In addition to the three basic exposure measures, the regression model for political violence includes an interaction term between personal chronic exposure and family exposure that was significant before the insertion of ethnicity, which was the only confounder identified by the change-in-estimate method.

Overall, when controlling for ethnicity, exposure to political violence appears to have no major effect on the probability of political anchorage (Table 4.11). A notable exception concerns refugees who reported both a personal chronic exposure and a family exposure. Indeed, although those who experienced imprisonment, reeducation camp or forced labor are 28% less likely to have obtained the Canadian citizenship, this effect is canceled out

Table 4.11

Adjusted risk ratios[a] estimated from logistic regression for political anchorage

	Model with confounder	Exploratory model
Hosmer & Lemeshow Test [b]	$\chi^2 = 5.6$ p = .59	$\chi^2 = 4.3$ p = .83
Nagelkerke R Square	.19	.47
Exposure to political violence		
Personal acute [c]	1.04 (.89 to 1.16) [j]	1.02 (.83 to 1.17)
Personal chronic [d]	.72 (.33 to 1.17)	.58 (.19 to 1.14)
Family [e]	.94 (.81 to 1.05)	.92 (.76 to 1.05)
Personal chronic * family [f]	1.65 (.90 to 3.03)	2.28 (1.10 to 4.74)
Transferable skills		
Level of schooling [g]	n/a [k]	1.30 (1.11 to 1.41)
Socio-demographic profile		
Ethnicity [h]	1.61 (1.35 to 1.77)	1.69 (1.40 to 1.83)
Years in Canada	n/a	1.61 (1.35 to 1.91)
Income category [i]	n/a	1.23 (1.00 to 1.37)

a Risk ratios are adjusted for the other variables in the model. All risk ratios are approximated by Zhang and Yu's method (1998) except those for the interaction between personal chronic and family exposures and for number of years in Canada ;

b Chi-square statistic and p value obtained from H & L decile-based test of goodness-of-fit ;

c Ordinal variable (0 = none ; 1 = threat ; 3 = torture) ;

d 1 = exposed, 0 = not exposed ;

e Continuous variable ;

f Interaction between personal chronic and family exposure ;

g 1 = high school or higher, 0 = primary school or none ;

h 1 = Southeast Asian, 0 = Central American ;

i 1 = middle, 0 = low ;

j Confidence interval for risk ratio at the 0.95 level ;

k Not applicable (i.e., variable not included in model).

in refugees whose family was exposed and is eventually reversed when the family was highly exposed. For instance, refugees who reported both a personal chronic exposure and a high family exposure are approximately 6 times more likely to be anchored politically than those who reported neither exposures[2].

This model fits the data well according to the Hosmer and Lemeshow decile-based test and may explain 19% of the variance of the probability of political anchorage of Southeast Asian and Central American refugees in Montreal. No outliers are detected by residuals analysis but one subject emerges as a putative influential observation. This subject is a Southeast Asian refugee who does not hold Canadian citizenship and who reported no personal or family exposure to political violence. But removing him from analysis does not alter the effect estimates for exposure variables.

The second model is exploratory and aims to identify covariates that are significant predictors of political anchorage once exposure to political violence and ethnicity are accounted for. It is built by hierarchical regression where exposure variables and ethnicity are forced in a first block and where covariates [3] make up a second block from

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2 This effect estimate (OR = 6.17) is based on the observed odds ratios rather than on the risk ratios approximated by Zhang and Yu's method (1998) since that method is not applicable to interaction terms. It is calculated in the following way : $e^{-.680 + .500 * 5} = 6.17$, where -.680 is the regression coefficient observed for personal chronic exposure, .500 is the regression coefficient observed for the interaction term between personal chronic exposure and family exposure, and 5 is the maximum observed level of family exposure.

3 These covariates include transferable skills (premigratory work experience, level of schooling, fluency in French and/or English) and socio-demographic profile (gender, age, marital status, number of children, income category, years in Canada).

which significant covariates are selected by the forward method [4]. This exploratory model increases the percent of variance explained from 19%, observed in the first model, to 47% (Table 4.11). Furthermore, the inclusion of level of schooling, number of years spent in Canada and income category considerably alters the risk ratio for personal chronic exposure, which goes from RR = .72, in the first model, to RR = .58. This suggests that the small individual confounding effects of these three covariates combine so that, when taken together, these variables clearly confound the effect of chronic exposure on political anchorage.

According to this exploratory model, when controlling for exposure to political violence and ethnicity, the probability of political anchorage increases by 30% in Southeast Asian and Central American refugees who have at least a high school education, by 61% for every additional year spent in Canada and by up to 23% in those who feel that they belong to the middle income category. However, adding these three variables to the model stretches the limits of the statistical power provided by the sample size, which can accommodate up to six independent variables according to the rule-of-thumb of 10 cases per independent variable. This model produces two influential observations, one of which is also an outlier. These observations are both related to unanchored subjects, with a high school or higher education who claimed membership in the lower income

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[4] The forward and backward methods converged to the same model.

category. Removing these subjects from analysis increases the percent of variance from 47 to 55% but does not alter the effect estimates for exposure.

Ethnic specific analysis cannot not be carried out for the Southeast Asian sample due to the small number of subjects in one outcome category (n = 18 un-anchored subjects). The model obtained for the Central American sample by hierarchical logistic regression explains 33% of the variance of the probability of political anchorage and appears to fit the data well (Hosmer and Lemeshow test = 8.2 p value = .41). This model confirms the minor effect of exposure to political violence on political anchorage except in the case of Central American refugees who reported both personal chronic and family exposures. It also shows the fostering effect of the length of stay in Canada and of the level of schooling on social anchorage but does not retain income category as a significant predictor. The risk ratios and confidence intervals observed for this ethnic specific model are as follows :

Personal acute exposure	RR = .84	CI = .56 to 1.08
Personal chronic exposure	RR = .97	CI = .32 to 1.48
Family exposure	RR = .97	CI = .81 to 1.10
Personal chronic * family exposures	OR = 1.60	CI = .67 to 3.79
Level of schooling	RR = 1.33	CI = 1.11 to 1.44
Years in Canada	OR = 1.45	CI = 1.16 to 1.80

4.2 Professional anchorage

When controlling for ethnicity, the risk ratios for personal acute and chronic exposures are relatively large. These risk ratios indicate that, in Southeast Asian and Central American refugees, the probability of professional anchorage increases by 14% for every additional level of acute exposure and that those exposed to chronic political violence are 23% less likely than non exposed refugees to be professionally anchored (Table 4.12). Family exposure does not appear to affect professional anchorage.

This model fits the data well judging by the Hosmer and Lemeshow statistic but it explains only 8% of the variance of the probability of professional anchorage. Residuals analysis reveals two putative influential observations but no outliers. These marginal subjects are both unanchored Central Americans who had been tortured and personally exposed to chronic political violence but who reported no family exposure. Removing these two subjects from analysis has no impact on the results.

Three covariates [5] are found to be significant predictors of professional anchorage after controlling for exposure to political violence and ethnicity. Adding these variables in the model lowers the risk ratio for personal acute exposure from RR = 1.14 to RR = 1.06 (Table 4.12). The exploratory model suggests that Southeast Asian and Central

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5 The covariates submitted for professional anchorage include transferable skills (premigratory work experience, level of schooling) and socio-demographic profile (gender, age, marital status, number of children, years in Canada).

Table 4.12

Adjusted risk ratios[a] estimated from logistic regression for professional anchorage

	Model with confounder	Exploratory model
Hosmer & Lemeshow Test [b]	$\chi^2 = 6.5$ p = .59	$\chi^2 = 11.3$ p = .19
Nagelkerke R Square	.08	.25
POLITICAL VIOLENCE		
Personal acute [c]	1.14 (.93 to 1.35) [i]	1.06 (.84 to 1.29)
Personal chronic [d]	.77 (.53 to 1.02)	.75 (.50 to 1.03)
Family [e]	.98 (.87 to 1.09)	1.04 (.92 to 1.15)
TRANSFERABLE SKILLS		
Premigratory work [f]	n/a [j]	2.14 (1.63 to 2.60)
SOCIO-DEMOGRAPHIC PROFILE		
Ethnicity [g]	.74 (.52 to .98)	.70 (.47 to .95)
Marital status [h]	n/a	1.81 (1.34 to 2.21)
Number of children	n/a	.79 (.62 to .99)

a Risk ratios are adjusted for the other variables in the model. All risk ratios are approximated by Zhang and Yu's method (1998) except that for number of children ;

b Chi-square statistic and p value obtained from H & L decile-based test of goodness-of-fit ;

c Ordinal variable (0 = none ; 1 = threat ; 3 = torture) ;

d 1 = exposed, 0 = not exposed ;

e Continuous variable ;

f 1 = some transferable premigratory work experience, 0 = no transferable premigratory work experience

g 1 = Southeast Asian, 0 = Central American ;

h 1 = with spouse or concubine, 0 = without spouse nor concubine ;

i Confidence interval for risk ratio at the 0.95 level ;

j Not applicable (i.e., variable not included in model)

American refugees with school-aged children are 2.14 times more likely to be anchored professionally if they have premigratory work experience compatible with an urban economy and 1.81 times more likely to be anchored if they are heading a two-parent household, and that the probability of their professional anchorage decreases by 21% for every additional child in the household (Table 4.12). Together with exposure and ethnicity, these covariates explain 25% of the variance of professional anchorage and the model fits the data well. The two influential observations observed in the model without covariates remain marginal and share a similar profile : they both belong to subjects with transferable work experience who head a two-parent household and have three children. Removing these subjects from analysis does not alter the effect estimates.

To finalize the study of professional anchorage, regression analyses are conducted separately for the Central American and Southeast Asian samples as the distribution of professional anchorage within each ethnic group provides sufficient statistical power to include up to five independent variables in each model. These two additional models are carried out by hierarchical regression analysis where exposure variables are forced in the model in a first block and covariates are included in a second block and submitted to forward and then backward selections. These two methods do not produce quite the same results so the models selected by each method are discussed

For both the Central American and Southeast Asian samples, the effect of exposure to political violence on professional anchorage is similar to that observed for the total

sample (Tables 4.13 and 4.14). In addition, the important effect of transferable work experience on the professional anchorage of refugees is confirmed for both ethnic groups.

The model selected by the forward method suggests that, when controlling for exposure to political violence, Central American refugees who have acquired transferable work experience in their homeland are 92% more likely to be anchored professionally than those who have no such experience (Table 4.13). The model selected by the backward method suggests that, in addition to transferable work experience, age, years in Canada, marital status and number of children also affect the professional anchorage of Central American refugees with school-aged children and that, taken together, these variables act as confounders of the effect of premigratory work experience. On the one hand, the probability of anchorage for these refugees decreases by 6% for every year of age and by 46% for every additional child in the household, and Central American refugees with at least a high school education are 71% less likely to be anchored professionally. On the other hand, it increases by 19% for every year spent in Canada and refugees in a two-parents household are 93% more likely to be anchored than single parents. Although the nine variables selected by the backward method are a lot given the statistical power afforded by the available sample size, the width of the confidence intervals suggest that these risk ratio are not unduly imprecise.

For the Southeast Asian sample, the model selected by the forward method suggests that, when controlling for exposure to political violence, refugees with transferable work

Table 4.13

Adjusted risk ratios[a] estimated from logistic regression for professional anchorage

Central American sample

	Automated variable selection method	
	Forward	Backward
Hosmer & Lemeshow Test [b]	$\chi^2 = 1.5$ p = .99	$\chi^2 = 10.0$ p = .26
Nagelkerke R Square	.08	.29
POLITICAL VIOLENCE		
Personal acute [c]	.96 (.67 to 1.26) [i]	.98 (.66 to 1.32)
Personal chronic [d]	.82 (.47 to 1.19)	.95 (.54 to 1.32)
Family [e]	1.00 (.86 to 1.13)	1.06 (.91 to 1.21)
TRANSFERABLE SKILLS		
Premigratory work [f]	1.92 (1.21 to 2.60)	2.40 (1.51 to 3.05)
Level of schooling [g]	n/a [j]	.29 (.11 to .71)
SOCIO-DEMOGRAPHIC PROFILE		
Age	n/a	.94 (.88 to .99)
Years in Canada	n/a	1.19 (1.02 to 1.39)
Marital status [h]	n/a	1.93 (1.27 to 2.42)
Number of children	n/a	.54 (.35 to .85)

a Risk ratios are adjusted for the other variables in the model. All risk ratios are approximated by Zhang and Yu's method (1998) except those for age, years in Canada and number of children ;

b Chi-square statistic and p value obtained from H & L decile-based test of goodness-of-fit ;

c Ordinal variable (0 = none ; 1 = threat ; 3 = torture) ;

d 1 = exposed, 0 = not exposed ;

e Continuous variable ;

f 1 = some transferable premigratory work experience, 0 = no transferable work experience ;

g 1 = high school or more, 0 = primary school or none ;

h 1 = with spouse or concubine, 0 = without spouse nor concubine ;

i Confidence interval for risk ratio at the 0.95 level ;

j Not applicable (i.e., variable not in model)

Table 4.14

Adjusted risk ratios[a] estimated from logistic regression for professional anchorage

Southeast Asian sample

	Automated variable selection method	
	Forward	Backward
Hosmer & Lemeshow Test [b]	$\chi^2 = 5.9$ p = .66	$\chi^2 = 5.7$ p = .57
Nagelkerke R Square	.33	.36
POLITICAL VIOLENCE		
Personal acute [c]	1.21 (.86 to 1.55) [i]	1.18 (.81 to 1.53)
Personal chronic [d]	.73 (.35 to 1.16)	.71 (.34 to 1.16)
Family [e]	1.09 (.86 to 1.30)	1.11 (.88 to 1.32)
TRANSFERABLE SKILLS		
Premigratory work [f]	1.80 (1.05 to 2.55)	1.88 (1.10 to 2.63)
Level of schooling [g]	2.14 (1.61 to 2.49)	2.10 (1.43 to 2.43)
SOCIO-DEMOGRAPHIC PROFILE		
Gender [h]	n/a [j]	1.47 (.98 to 1.89)

a Risk ratios are adjusted for the other variables in the model. All risk ratios are approximated by Zhang and Yu's method (1998) ;

b Chi-square statistic and p value obtained from H & L decile-based test of goodness-of-fit ;

c Ordinal variable (0 = none ; 1 = threat ; 3 = torture) ;

d 1 = exposed, 0 = not exposed ;

e Continuous variable ;

f 1 = some transferable premigratory work experience, 0 = no transferable premigratory work experience

g 1 = high school or more, 0 = primary school or none ;

h 1 = male, 0 = female

i Confidence interval for risk ratio at the 0.95 level ;

j Not applicable (i.e., variable not included in model)

experience are 80% more likely to be anchored professionally whereas this probability is 210% in those with a high school level or more (Table 4.14). In addition to these two covariates, the model selected by the backward method also includes gender and indicates that Southeast Asian males are 47% more likely than females to be anchored professionally when controlling for exposure to political violence, premigratory work experience and level of schooling.

4.3 Religious anchorage

According to the model with ethnicity, it appears that personal exposure to political violence has almost no effect on the religious anchorage of Southeast Asian and Central American refugees whereas the probability of anchorage increases by 13% for every additional level of family exposure (Table 4.15).

Adding ethnicity is not sufficient to substantially increase the percent of variance explained but the model seems to fit the data well judging by the Hosmer and Lemeshow statistic. Three influential observations are detected by residuals analysis and they all related to anchored subjects who had been tortured and who were exposed to chronic political violence. Removing these three observations only increases the percent of variance explained from 9 to 10% but it considerably lowers the risk ratio for personal acute exposure from RR = .97 to RR = .79 (CI .51 to 1.11).

Table 4.15

Adjusted risk ratios[a] estimated from logistic regression for religious anchorage

	Model with confounder	Exploratory model
Hosmer & Lemeshow Test [b]	$\chi^2 = 7.1$ p = .52	$\chi^2 = 8.9$ p = .35
Nagelkerke R Square	.09	.19
POLITICAL VIOLENCE		
Personal acute [c]	.97 (.71 to 1.27) [h]	.95 (.68 to 1.26)
Personal chronic [d]	.92 (.58 to 1.32)	.84 (.51 to 1.25)
Family [e]	1.13 (.97 to 1.31)	1.16 (.98 to 1.34)
TRANSFERABLE SKILLS		
Level of schooling [f]	n/a [i]	.67 (.43 to .98)
SOCIO-DEMOGRAPHIC PROFILE		
Ethnicity [g]	.51 (.31 to .78)	.42 (.23 to .69)
Age	n/a	1.07 (1.02 to 1.11)
Years in Canada	n/a	1.10 (1.00 to 1.20)

a Risk ratios are adjusted for the other variables in the model. All risk ratios are approximated by Zhang and Yu's method (1998) except those for age and years in Canada;

b Chi-square statistic and p value obtained from H & L decile-based test of goodness-of-fit ;

c Ordinal variable (0 = none ; 1 = threat ; 3 = torture) ;

d 1 = exposed, 0 = not exposed ;

e Continuous variable ;

f 1 = high school or more ; 0 = primary school or none ;

g 1 = Southeast Asian, 0 = Central American ;

h Confidence interval for risk ratio at the 0.95 level ;

i Not applicable (i.e., variable not included in model)

The exploratory model [6], built by hierarchical regression analysis, suggests that, when controlling for exposure to political violence and ethnicity, Central American and Southeast Asian refugees with a high school education or more are 33% less likely then those with a lower level of schooling to be anchored to a religious institution and that the probability of religious anchorage increases by 7% for every additional year of age and by 10% for every additional year spent in Canada. This model yields one outlier, different from those uncovered for the model without covariates.

Ethnic specific analyses are carried out cautiously because, according to the rule-of-thumb of 10 cases per independent variable, the sample size can only afford six variables for the Central American sample and three variables for the Southeast Asian sample. For each ethnic group, the forward and backward selection methods have converged to the same model, which confirms the effect of age on religious anchorage (Table 4.16).

Ethnic specific analyses apparently point to a considerable difference between the risk ratios for personal chronic exposure in Central American (RR = 1.01) compared to Southeast Asian subjects (RR = .43). In view of the small statistical power available for the study of the religious anchorage in Southeast Asians and of the number of variables included in that model (i.e., 7), the observed risk ratio for chronic exposure (RR = .43) may be a statistical artifact since the crude ethnic specific risk ratios for chronic exposure

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6 The covariates submitted for religious anchorage include transferable skills (premigratory work experience, level of schooling, fluency in French and/or English) and socio-demographic profile (gender, age, marital status, number of children, income category, years in Canada).

Table 4.16

Adjusted risk ratios[a] estimated from logistic regression for religious anchorage by ethnic group

	Ethnic group	
	Central American	Southeast Asian
Hosmer & Lemeshow Test [b]	$\chi^2 = 3.9$ p = .87	$\chi^2 = 5.5$ p = .71
Nagelkerke R Square	.07	.35
POLITICAL VIOLENCE		
Personal acute [c]	.75 (.47 to 1.14) [g]	1.18 (.73 to 1.70)
Personal chronic [d]	1.01 (.55 to 1.56)	.43 (.14 to 1.08)
Family [e]	1.05 (.86 to 1.26)	1.55 (1.14 to 1.98)
TRANSFERABLE SKILLS		
Premigratory work [f]	n/a [h]	.40 (.17 to .87)
SOCIO-DEMOGRAPHIC PROFILE		
Age	1.07 (1.01 to 1.14)	1.08 (1.02 to 1.15)
Years in Canada	n/a	1.20 (1.04 to 1.37)
Number of children	n/a	.63 (.42 to .96)

a Risk ratios are adjusted for the other variables in the model. All risk ratios are approximated by Zhang and Yu's method (1998) except those for age, years in Canada and number of children;

b Chi-square statistic and p value obtained from H & L decile-based test of goodness-of-fit ;

c Ordinal variable (0 = none ; 1 = threat ; 3 = torture) ;

d 1 = exposed, 0 = not exposed ;

e Continuous variable ;

f 1 = some transferable premigratory work experience, 0 = no transferable premigratory work experience

g Confidence interval for risk ratio at the 0.95 level ;

h Not applicable (i.e., variable not included in model)

show no sign of interaction (Central Americans RR = .96 CI .63 to 1.46 ; Southeast Asians RR = 1.02 CI .51 to 2.06). To further investigate this matter, two logistic regression analyses are carried out by breaking up the variables included in the Southeast Asian model into two groups so that each sub-model has enough statistical power. In these sub-analyses, the risk ratio for chronic exposure adjusted for personal acute exposure and family exposure is found to be RR = .65 (CI .27 to 1.27) whereas that risk ratio adjusted for covariates other than exposure (i.e., premigratory work, age, years in Canada, number of children) is RR = .81 (CI .34 to 1.50). These risk ratios suggest that both groups of variables are confounders of the effect of personal chronic exposure on the religious anchorage of Southeast Asian refugees ; the combination of their respective confounding effect may partly explain the risk ratio of .43 observed for personal chronic exposure.

In the Central American model, age is the only variable to come up as a significant predictor of religious anchorage. When controlling for exposure to political violence, the the probability of religious anchorage in Central American refugees increases by 7% for every additional year of age (Table 4.16). This model shows a good fit to the data according to the Hosmer and Lemeshow statistic although it explains only 7% of the variance of the probability of religious anchorage in that ethnic group.

In the Southeast Asian model, transferable premigratory work experience, age, length of stay in Canada and number of children are retained as significant predictors of religious

anchorage when controlling for exposure to political violence (Table 4.16). This model indicates that the probability of anchorage is 60% lower in Southeast Asian refugees with transferable work experience and decreases by 37% for every additional child in the household. It also reveals that, for that ethnic group, the probability of anchorage increases by 8% for every year of age and by 20% for every year spent in Canada. This model appears to fit the data well and accounts for 35% of the variance of the probability of religious anchorage among Southeast Asian subjects. Although the number of variables included in the model is considerable given the available sample size, the risk ratios are rather precise except for personal chronic exposure.

4.4 Academic anchorage

Statistical analysis of academic anchorage with the total sample under study is problematic because 26 of the 28 anchored subjects are Central Americans. Consequently, ethnicity is an almost perfect proxy for academic anchorage and, as the mean intensity of personal acute exposure to political violence is higher in Central American ($\mu = 0.5$) than in Southeast Asians ($\mu = 0.2$) whereas the risk of personal chronic exposure is 2.3 times higher in Southeast Asians than in Central Americans, ethnicity is also associated with exposure to political violence and is possibly a major confounder. Furthermore, because there are only 28 subjects with a positive outcome, the available statistical power is small and would only safely allow for three covariates in the regression model.

When ethnicity is not controlled for, either as a confounder or by stratified analysis, risk ratios indicate that the probability of academic anchorage in Central American and Southeast Asian refugees increases by 62% for every additional level of personal acute exposure and by 25% for every additional level of family exposure whereas this probability is 69% lower in those exposed a chronic form of political violence (Table 4.17). However, when ethnicity is controlled for, these probabilities drop to 14% for acute exposure and 17% for family exposure, and the observed risk ratio for chronic exposure goes from RR = .31 to RR = .84 for chronic exposure. These values are quite close to those observed in the Central American sample because Southeast Asians bring almost no information regarding the effect of exposure to political violence on academic anchorage.

4.5 Community anchorage

The statistical power available for the study of community anchorage is also very small as only 21 of the 270 subjects are anchored and, since 17 of the 21 anchored subjects are Central Americans, the distribution of outcome across ethnic groups is, as for academic anchorage, highly unbalanced.

As noted for academic anchorage, the risk ratios for the effect of exposure to political violence on the community anchorage of Central American refugees are close to those observed for the total sample when ethnicity is controlled for (Table 4.18). Although the risk ratios for chronic exposure are relatively high in the Central American (RR = 1.49)

Table 4.17

Adjusted risk ratios[a] estimated from logistic regression for academic anchorage

	Total Sample		Central American sample
	Without ethnicity	With ethnicity	
Hosmer & Lemeshow Test [b]	$\chi^2 = 10.1$ p =.18	$\chi^2 = 7.9$ p = .34	$\chi^2 = 5.8$ p = .56
Nagelkerke R Square	.08	.24	.03
POLITICAL VIOLENCE			
Personal acute [c]	1.62	1.14	1.06
	(.99 to 2.58) [g]	(.64 to 1.99)	(.57 to 1.92)
Personal chronic [d]	.31	.84	.96
	(.13 to .71)	(.34 to 1.88)	(.38 to 2.14)
Family [e]	1.25	1.17	1.22
	(.94 to 1.63)	(.89 to 1.52)	(.93 to 1.58)
ETHNICITY [f]	n/a [h]	.07	n/a
		(.02 to .32)	

a Risk ratios are adjusted for the other variables in the model. All risk ratios are approximated by Zhang and Yu's method (1998) ;

b Chi-square statistic and p value obtained from H & L decile-based test of goodness-of-fit ;

c Ordinal variable (0 = none ; 1 = threat ; 3 = torture) ;

d 1 = exposed, 0 = not exposed ;

e Continuous variable ;

f 1 = Southeast Asian, 0 = Central American ;

g Confidence interval for risk ratio at the 0.95 level ;

h Not applicable (i.e., variable not included in model).

Table 4.18

Adjusted risk ratios[a] estimated from logistic regression for community anchorage

	Total sample		Central American sub-sample
	Without ethnicity	With ethnicity	
Hosmer & Lemeshow Test [b]	$\chi^2 = 8.9$ p =.26	$\chi^2 = 8.8$ p = .27	$\chi^2 = 5.4$ p = .61
Nagelkerke R Square	.03	.12	.02
POLITICAL VIOLENCE			
Personal acute [c]	1.36	1.02	1.01
	(.79 to 2.31) [g]	(.54 to 1.86)	(.51 to 1.96)
Personal chronic [d]	.74	1.47	1.49
	(.29 to 1.79)	(.55 to 3.41)	(.51 to 3.70)
Family [e]	.80	.80	.87
	(.52 to 1.18)	(.55 to 1.15)	(.60 to 1.25)
ETHNICITY [f]	n/a [h]	.18	n/a
		(.05 to .57)	

a Risk ratios are adjusted for the other variables in the model. All risk ratios are approximated by Zhang and Yu's method (1998) ;

b Chi-square statistic and p value obtained from H & L decile-based test of goodness-of-fit ;

c Ordinal variable (0 = none ; 1 = threat ; 3 = torture) ;

d 1 = exposed, 0 = not exposed ;

e Continuous variable ;

f 1 = Southeast Asian, 0 = Central American ;

g Confidence interval for risk ratio at the 0.95 level ;

h Not applicable (i.e., variable not included in model).

and total samples (RR = 1.47), these estimates may be imprecise judging from the width of their confidence intervals, which are rather large compared to those observed previously for similar risk ratios.

5. Effect of exposure to political violence on the diversity of social anchorage

The first index of the diversity of social anchorage totals the number of positive outcomes among professional, religious, academic and community anchors and is computed for the total sample. Crude risk ratios based on that definition suggest that the probability of a wider range of social anchors in Southeast Asian and Central American refugees increases by 10% for every additional level of personal exposure to acute political violence and that it is 21% lower in those who were exposed to some form of chronic political violence in their homeland (Table 4.19). Family exposure does not appear to affect the diversity of social anchorage in the sample under study. These effect estimates are slightly increased when risk ratios are estimated simultaneously for all three exposure measures so that the risk ratio of each measure is adjusted for the other two.

The second index takes political anchorage into account but is only computed for subjects who are eligible for Canadian citizenship. Risk ratios derived for that second definition of the diversity of anchorage tend to be somewhat lower than those computed for the total sample (Table 4.19). They indicate that the probability of a wider range of social anchors in Southeast Asian and Central American refugees increases by 2% for

Table 4.19

Risk ratios of exposure to political violence for the diversity of social anchorage

	Total sample (n = 270)	Eligible sample
Crude risk ratios		
Personal acute	1.10 (.99 to 1.19) [a]	1.02 (.98 to 1.05)
Personal chronic	.79 (.65 to .91)	.90 (.79 to .99)
Family exposure	.99 (.95 to 1.03)	1.00 (.99 to 1.00)
Adjusted risk ratios [b]		
Personal acute	1.15 (1.05 to 1.24)	1.03 (.99 to 1.06)
Personal chronic	.72 (.57 to .86)	.89 (.76 to .98)
Family exposure	1.02 (.97 to 1.05)	.96 (.99 to 1.00)

a In parenthesis, confidence interval of risk ratio at the .95 level

b Risk ratios adjusted for all measures of exposure to political violence

every additional level of acute exposure to political violence and is 10% lower in those exposed to some form of chronic political violence. Adjusted risk ratios for exposure are similar to crude risk ratios within the second decimal for that second index.

Ordinal logistic regressions are carried out for each index of the diversity of anchorage to improve the validity of the effect estimates for exposure to political violence by taking into account putative confounders. As for specific social anchors, ethnicity is found to be the only confounder for the first index of the diversity of social anchorage whereas no confounders are detected by the change-in-estimate method for the second index.

5.1 Total sample

The crude effect of personal chronic exposure to political violence on the first index of the diversity of social anchorage is considerably confounded by ethnicity. When controlling for that confounder, the risk ratio for personal chronic exposure goes from RR = .72 to RR = .92 (Table 4.20).

This model explains 23% of the probability of a diverse social anchorage and the parallel line assumption is satisfied. However, although residuals analysis detects only two influential observations, the observations with the highest residuals are clearly split into two groups : high positive residuals belong to the 15 Central Americans with no social anchorage except family anchorage whereas high negative residuals belong to the 15 Southeast Asians with two or more anchors. It is also noteworthy that the two influential observations identified through residuals analysis are both victims of torture.

Table 4.20

Adjusted risk ratios[a] estimated from ordinal regression

for the diversity of social anchorage - Total sample

	Model with confounder	Exploratory model
Test of parallel lines [b]	$\chi^2 = 2.1$ p = .71	$\chi^2 = 5.2$ p = .64
Nagelkerke R Square	.23	.32
POLITICAL VIOLENCE		
Personal acute [c]	1.06 (.93 to 1.17) [i]	1.01 (.87 to 1.13)
Personal chronic [d]	.92 (.78 to 1.03)	.94 (.79 to 1.05)
Family [e]	1.01 (.97 to 1.05)	1.02 (.98 to 1.06)
TRANSFERABLE SKILLS		
Premigratory work [f]	n/a [j]	1.24 (1.06 to 1.39)
SOCIO-DEMOGRAPHIC PROFILE		
Ethnicity [g]	.64 (.48 to .79)	.57 (.40 to .73)
Age	n/a	1.05 (1.01 to 1.08)
Income category [h]	n/a	1.26 (1.12 to 1.36)

a Risk ratios are adjusted for the other variables in the model. All risk ratios are approximated by Zhang and Yu's method (1998) except that for age;

b Chi-square statistic and p value obtained for the test of parallel lines ;

c Ordinal variable (0 = none ; 1 = threat ; 3 = torture) ;

d 1 = exposed, 0 = not exposed ;

e Continuous variable ;

f 1 = transferable ; 0 = not transferable ;

g 1 = Southeast Asian, 0 = Central American ;

h 1 = middle, 0 = low ;

i Confidence interval for risk ratio at the 0.95 level ;

j Not applicable (i.e., variable not included in model).

The exploratory model[7] built by hierarchical regression analysis suggests that premigratory work experience, age and income category are significant predictors of the diversity of social anchorage once exposure to political violence and ethnicity are controlled for (Table 4.20). This model reveals that the probability of a wider range of social anchors is 24% higher in Southeast Asian and Central American refugees who have premigratory work experience compatible with an urban setting, 26% higher in those who feel that they belong to the middle income category, and that it increases by 5% for every additional year of age.

This model does not modify the effect estimates for exposure to political violence and satisfies the parallel lines assumption. The two tortured subjects who were detected as influential observations in the model containing only exposure to political violence and ethnicity remain marginal. However, the exploratory model succeeds in predicting correctly the outcome for 10 of the 15 Central American and 8 of the 15 Southeast Asian subjects who showed extreme residuals in the initial model.

Although the interaction between ethnicity and personal exposure to political violence is not significant, the pattern of ethnic specific risk ratios suggests that personal acute and

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7 The covariates submitted for the indices of the diversity of social anchorage include transferable skills (premigratory work experience, level of schooling, fluency in French and/or English) and socio-demographic profile (gender, age, marital status, number of children, income category, years in Canada).

chronic exposure may have opposite effect on the diversity of social anchorage in at least part of the Southeast Asian and Central American refugee population (Table 4.21). Indeed, these risk ratios show that the probability of a wider range of social anchorage decreases by 12% for every additional level of acute exposure in Southeast Asians whereas it increases by 13% in Central Americans ; similarly, Southeast Asians are 4% more likely to have a more diverse range of social anchorage if they were exposed to chronic forms of political violence whereas exposed Central Americans 17% less likely to have a diverse social anchorage. Ethnic specific analyses both satisfy the parallel lines assumption and the risk ratios for personal exposure are not altered when the marginal observations detected by residuals analysis in the Central American (n = 2) and Southeast Asian (n = 6) samples are omitted from analysis.

When controlling for exposure to political violence, the importance of income category as a predictor of the diversity of social anchorage is confirmed in both ethnic groups. In addition, the Central American model indicates that the probability of a wider range of social anchors increases by 35% in refugees who have transferable work experience whereas the Southeast Asian model reveals that this probability increases by 31% in refugees who have a high school education or more and by 6% for every additional year of age.

Table 4.21

Adjusted risk ratios[a] estimated from ordinal regression for the diversity of social anchorage - Total Sample by ethnic group

	Ethnic group	
	Central American	Southeast Asian
Test of parallel lines [b]	$\chi^2 = 0.7$ p = .98	$\chi^2 = 8.7$ p = .19
Nagelkerke R Square	.11	.22
POLITICAL VIOLENCE		
Personal acute [c]	.88 (.68 to 1.06) [i]	1.13 (.95 to 1.27)
Personal chronic [d]	1.04 (.86 to 1.14)	.83 (.57 to 1.02)
Family [e]	1.01 (.96 to 1.06)	1.05 (.98 to 1.11)
TRANSFERABLE SKILLS		
Premigratory work [f]	1.35 (1.08 to 1.52)	n/a
Level of schooling [g]	n/a [j]	1.31 (1.08 to 1.46)
SOCIO-DEMOGRAPHIC PROFILE		
Age	n/a	1.06 (1.01 to 1.11)
Income category [h]	1.28 (1.06 to 1.42)	1.26 (1.06 to 1.39)

a Risk ratios are adjusted for the other variables in the model. All risk ratios are approximated by Zhang and Yu's method (1998) except that for age;

b Chi-square statistic and p value obtained for the test of parallel lines ;

c Ordinal variable (0 = none ; 1 = threat ; 3 = torture) ;

d 1 = exposed, 0 = not exposed ;

e Continuous variable ;

f 1 = some transferable premigratory work experience, 0 = no transferable work experience ;

g 1 = high school or more, 0 = primary school or none ;

h 1 = middle, 0 = low ;

i Confidence interval for risk ratio at the 0.95 level ;

j Not applicable (i.e., variable not included in model)

5.2 Eligible sample

No confounders were detected by the change-in-estimate method so that the basic model described in Table 4.19 and containing only the three measures of exposure to political violence is the baseline model. The exploratory model without ethnicity (Table 4.22) suggests that the probability of a wider range of social anchors among Southeast Asian and Central American refugees is higher in those exposed to personal acute exposure to political violence (RR = 1.14) and lower in those exposed to personal chronic exposure (RR = .69). It also indicates that a high school education or more (RR = 1.49), age (RR = 1.05), years in Canada (RR = 1.18) and middle income category (RR = 1.45) foster the probability of a diverse social anchorage whereas the number of children (RR = .76) prevents it.

This model satisfies the parallel line assumption and explains approximately 25% of the variance of the probability of an increasing diversity of social anchorage. It yields four outliers, one of which also appears to be an influential observation. These four marginal subjects share nothing in common except that they have secured no other social anchor than family anchorage.

The absence of ethnicity, either as a confounder or as a significant predictor, is so unexpected that it requires further investigation. Thus an additional ordinal regression analysis was carried out by forcing ethnicity in a model that already includes exposure to political violence and significant covariates. At first glance, this model confirms that

Table 4.22

Adjusted risk ratios[a] estimated from ordinal regression for the diversity of social anchorage - Eligible sample

	Model without ethnicity	Model with ethnicity
Test of parallel lines [b]	$\chi^2 = 8.9$ p = .35	$\chi^2 = 8.9$ p = .47
Nagelkerke R Square	.25	.26
POLITICAL VIOLENCE		
Personal acute [c]	1.14 (.88 to 1.31) [i]	1.06 (.84 to 1.28
Personal chronic [d]	.69 (.45 to .94)	.81 (.52 to 1.09)
Family [e]	1.03 (.94 to 1.11)	1.03 (.94 to 1.11)
TRANSFERABLE SKILLS		
Level of schooling [f]	1.49 (1.14 to 1.78)	1.45 (1.10 to 1.76)
SOCIO-DEMOGRAPHIC PROFILE		
Ethnicity [g]	n/a [j]	.77 (.50 to 1.04)
Age	1.05 (1.01 to 1.10)	1.05 (1.01 to 1.10)
Years in Canada	1.18 (1.07 to 1.31)	1.20 (1.08 to 1.33)
Number of children	.76 (.59 to .98)	.77 (.60 to .99)
Income category [h]	1.45 (1.15 to 1.68)	1.50 (1.19 to 1.72)

a Risk ratios are adjusted for the other variables in the model. All risk ratios are approximated by Zhang and Yu's method (1998) except those for age, years in Canada and number of children;

b Chi-square statistic and p value obtained for the test of parallel lines ;

c Ordinal variable (0 = none ; 1 = threat ; 3 = torture) ;

d 1 = exposed, 0 = not exposed ;

e Continuous variable ;

f 1 = high school or more ; 0 = primary school or none ;

g 1 = Southeast Asian, 0 = Central American ;

h 1 = middle, 0 = low ;

i Confidence interval for risk ratio at the 0.95 level ;

j Not applicable (i.e., variable not included in model)

ethnicity has no significant effect on the diversity of social anchorage among Southeast Asian and Central American refugees eligible for Canadian citizenship (Table 4.22). However, the inclusion of ethnicity modifies the risk ratio for personal chronic exposure which goes from RR = .69, in the model without ethnicity, to RR = .81 and slightly alters the risk ratio for acute exposure (Table 4.22). To pursue the investigation regarding the effect of ethnicity, two interaction terms are added to the model : one between ethnicity and chronic exposure and the other between ethnicity and acute exposure. Both interaction terms are found to be significant predictors of the diversity of social anchorage so that the effect of personal exposure to political violence must be revisited.

The model with interaction terms suggests that personal acute exposure increases the odds of a wider range of social anchors by 98% in Southeast Asians and decreases it by 44% in Central Americans whereas personal chronic exposure decreases the odds of a diverse social anchorage by 68% in Southeast Asians and increases it by 59% in Central Americans[8]. These effect estimates coincide with those observed for the first index of social anchorage and they are also consistent with those found in ethnic specific analyses.

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[8] These effect estimates are the odds ratios rather than the risk ratios since Zhang and Yu's method (1998) cannot be used to approximate risk ratios from odds ratios observed for interaction terms. The regression coefficients for personal exposure in the model with interaction terms are as follows (Southeast Asians are coded 1 and Central Americans are coded 0) :

Acute exposure	-.583	(CI : -1.273 to .107)
Acute exposure * ethnicity	1.265	(CI : .263 to 2.267)
Chronic exposure	.466	(CI : -.700 to 1.632)
Chronic exposure * ethnicity	-1.591	(CI : -3.182 to -.001)

Indeed, ethnic specific ordinal regression shows that, in Central Americans eligible to Canadian citizenship, personal acute exposure tends to prevent the probability of a wider range of social anchorage and personal chronic exposure tends to foster it whereas, in the Southeast Asian sub-sample, the reverse relationships are observed (Table 4.23).

When controlling for exposure to political violence, the probability of a wider range of social anchorage in Central American refugees decreases by 46% for every additional child in the household (Table 4.23). This model satisfies the parallel lines assumption but explained only approximately 11% of the variance of the probability of the diversity of social anchorage. Residuals analysis revealed five putative influential observations who corresponds to the five Central American subjects with no other social anchor than family anchorage. To clarify this matter, logistic regression were performed with the diversity index dichotomized into 0 or 1 anchor vs. 2 or more. This strategy did not alter the effect estimates for the exposure or the covariates but only two of the initial marginal observations remained ; these share nothing in common except that they both belong to subjects exposed to chronic political violence.

In addition to the considerable effect of personal exposure to political violence, the probability of a diverse social anchorage in Southeast Asian refugees is also affected by the number of years in Canada, income category and by gender (Table 2.23). The probability of a wider range of social anchors in that ethnic group increases by 31% for

Table 4.23

Adjusted risk ratios[a] estimated from ordinal regression for the diversity of social anchorage - Eligible sample by ethnic group

	Ethnic group	
	Central American	Southeast Asian
Test of parallel lines [b]	$\chi^2 = 3.9$ p = .42	$\chi^2 = 5.5$ p = .49
Nagelkerke R Square	.11	.34
POLITICAL VIOLENCE		
Personal acute [c]	.81 (.52 to 1.13) [h]	1.38 (1.03 to 1.63)
Personal chronic [d]	1.14 (.75 to 1.38)	.44 (.16 to .90)
Family [e]	1.00 (.88 to 1.10)	1.10 (.96 to 1.21)
SOCIO-DEMOGRAPHIC PROFILE		
Years in Canada	n/a [i]	1.31 (1.14 to 1.50)
Number of children	.54 (.34 to .86)	n/a
Income category [f]	n/a	1.63 (1.26 to 1.85)
Gender [g]	n/a	1.52 (1.17 to 1.76)

a Risk ratios are adjusted for the other variables in the model. All risk ratios are approximated by Zhang and Yu's method (1998) except those for years in Canada and number of children;

b Chi-square statistic and p value obtained for the test of parallel lines ;

c Ordinal variable (0 = none ; 1 = threat ; 3 = torture) ;

d 1 = exposed, 0 = not exposed ;

e Continuous variable ;

f 1 = middle, 0 = low ;

g 1 = males, 0 = females ;

h Confidence interval for risk ratio at the 0.95 level ;

i Not applicable (i.e., variable not included in model)

every year spent in Canada, and it is 63% higher in those who feel that they belong to the middle income category and 52% higher in males compared to females.

The Southeast Asian model satisfies the parallel lines assumption and fits the data well except for six influential observations, one of which is also an outlier. Removing these six subjects from analysis increases the percent of variance explained to .43 and also magnifies the effect of exposure to political violence. In the model without marginal observations, the risk ratios jumps from RR = 1.38 to RR = 1.75 (CI 1.41 to 1.88) for acute exposure, from RR = 1.10 to RR = 1.16 (CI .96 to 1.21) for family exposure and goes from RR = .44 to RR = .20 (CI .05 to .63) for chronic exposure. The only common feature to all six marginal observations is that these subjects felt that they belong to the low income category.

6. Summary

Although most risk ratios for exposure to political violence are rather small, some are larger and a number of striking trends surface from the analysis. First, specific forms of exposure to political violence seem to act differently on the social anchorage of refugees. Overall, personal acute exposure tends to foster their social anchorage whereas personal chronic exposure tends to prevent it. The effect of family exposure seems to be much more heterogeneous. But the effects of personal chronic exposure and family exposure can interact and reverse the individual effect of each type of exposure.

Second, specific forms of exposure to political violence seem to affect the diversity of anchorage differently across ethnic groups. Personal acute exposure appears to foster the probability of a wider range of social anchors in Southeast Asian refugees but to inhibit the diversity of social anchorage in Central Americans whereas personal chronic exposure tends to have the opposite effect as it may be a driving force for Central Americans and a brake for Southeast Asians. Family exposure is more likely to increase the diversity of social anchorage in both ethnic groups.

Finally, when controlling for exposure to political violence and ethnicity, transferable skills such as premigratory work experience compatible with an urban setting and level of schooling have a positive effect on the social anchorage of refugees with school-aged children and on its diversity. In addition, some of the socio-demographic characteristics of these refugees, such as the number of years spent in Canada, membership in the middle income category and age, also significantly contribute to the social anchorage of Southeast Asian and Central American refugees.

Chapter 5

Discussion

This thesis introduces a conceptual framework centered around the idea of social anchorage. The rationale underlying this conceptual framework is that social anchorage is a major source of the social roles and statuses that substantiate social identity ; that the social identity derived from this social anchorage contributes to the psychosocial well-being of individuals ; that the political violence and ensuing social destabilization taking place in armed conflicts cause the loss or disturbance of traditional social anchors ; and that refugees who were exposed to such political violence land in the host country in a state of confused social identity which may jeopardize their ability or willingness to anchor themselves to the host society and impede their psychosocial adjustment especially if they do not posses skills that can be used in the host society.

Thus the social anchorage of refugees to the host society is a component of their psychosocial adjustment as it enables them to recover, maintain or solidify their social identity. It was hypothesized that the pattern of social anchorage would differ across gender, age and ethnic groups because of inter-group variation in exposure to political violence and in social profile, that exposure to the political violence exerted in the

homeland would prevent the social anchorage of refugees in the host country, and that refugees with a high level of exposure to premigratory political violence and few transferable skills would show a lower level of social anchorage.

As expected, the social anchorage of refugees differs across ethnic groups and gender. The probability of political anchorage is higher in Southeast Asians than in Central Americans but all other social anchors are more common in Central Americans. More males than females are anchored politically and professionally whereas more females than males have joined a religious or an academic institution. However, age does not seem to affect the social anchorage of refugees except for religious anchorage, which is proportionally more frequent in those aged 45 years and older.

The effect of premigratory exposure to political violence on the social anchorage of refugees in the host country is more complex than what was hypothesized. First, specific forms of exposure to political violence seem to act differently on social anchorage. Overall, personal acute exposure tends to foster the social anchorage of refugees whereas personal chronic exposure appears to prevent it. The effect of family exposure is more heterogeneous. Second, exposure to political violence seems to affect the diversity of social anchorage differently across ethnic groups. Personal acute exposure appears to foster the probability of a wider range of social anchors in Southeast Asian refugees but to inhibit it in Central Americans whereas personal chronic exposure tends to have the opposite effect as it may be a driving force for Central Americans and a brake for Southeast Asians. Family exposure is more likely to increase the diversity of social

anchorage in both ethnic groups. Finally, in the case of political anchorage, the negative effect of personal chronic exposure is buffered by the intensity of family exposure. Refugees who were imprisoned, sent to a reeducation camp, or subjected to forced labor in their home country are less likely to be anchored politically if their family was spared any direct exposure to political violence. But the negative effect of personal chronic exposure is progressively diluted by increasing level of family exposure to the point where refugees who were personally exposed to chronic violence and whose families were highly exposed are more likely to be politically anchored.

The third hypothesis is supported by the data since, when controlling for premigratory exposure to political violence and ethnicity, a number of transferable skills and demographic characteristics come up as major predictors of the social anchorage of Southeast Asian and Central American refugees with school-aged children. Some factors may be universal to the refugee situation since they are significant predictors of the social anchorage in two ethnic groups with different pattern of exposure to political violence and social anchorage and contrasting cultural backgrounds: transferable work experience fosters professional anchorage, increasing age is associated with a higher probability of religious anchorage, and refugees in the middle income category are more likely to have a wider range of social anchorage. Other factors may be specific to some ethnic groups. For instance, contrary to Southeast Asians, the professional anchorage of Central Americans is affected by their length of stay in Canada, their marital status, their age and their number of children whereas gender is a predictor of professional and religious anchorage in Southeast Asians but not in Central Americans. In addition, the level of

schooling fosters professional anchorage in Southeast Asians but tends to inhibit it in Central Americans.

It is unlikely that the observed variation of social anchorage across ethnic groups and gender and the estimated effect of exposure to political violence, transferable skills and socio-demographic profile on the social anchorage of refugees result from methodological artifacts. Indeed, a number of steps, described in the methodology chapter, were taken towards the prevention of information bias arising from data collection and editing. Though the questions used to document religious and community anchors were worded differently in the two studies that provided data for this thesis, this discrepancy had no major impact on the estimation of the effect of exposure to political violence on social anchorage since a variable discriminating the source of data (first vs second study) did not emerge as a significant predictor of social anchorage after adjusting for exposure to political violence. Special care was also taken to verify that the assumptions underlying binary and ordinal regression analyses were satisfied and that marginal observations did not unduly affect the results.

Two procedures were used to further refine the calculation of unbiased effect estimates. First, the detection of putative confounders of the effect of exposure to political violence on social anchorage was meticulously conducted with the change-in-estimate method and, following Greenland's advice (1989), covariates that change the effect estimates for exposure by at least 10% were retained as confounders. Ethnicity was the only confounder detected by the change-in-estimate method and it was controlled for in all

analyses carried out with the total sample. Second, when applicable, Zhang and Yu's method (1998) was used to approximate risk ratios from the odds ratios obtained by logistic regression since the latter produce effect estimates biased away from the null value when the outcome under study is not rare.

The magnitude of these odds ratios may be especially misleading when the probability of outcome is more than 10% and the odds ratios are either smaller than OR = .5 or larger than OR = 2.5 (Zhang and Yu, 1998). In this thesis, the probability of outcome was higher than 10% for all social anchors, except community anchorage, but only 14% of the approximated risk ratios reported in the preceding chapter were estimated from odds ratios smaller than OR = .5 or larger than OR = 2.5. In consequence, differences between odds ratios and approximated risk ratios were often negligible. In odds ratios smaller than 1, the difference between the observed odds ratios and the approximated risk ratios was within the second decimal for 49% of the effect estimates and for 20% this difference ranged from .20 to .27 (for example, an observed OR = .25 would go up to OR = .45 after correction). In odds ratios larger than 1, the difference between the observed odds ratios and the approximated risk ratios was smaller than 1 for 75% of the effect estimates and for 13% this difference was larger than 2 (for example, an observed OR = 3.25 would go down to OR = 1.25 after correction). The simplicity of Zhang and Yu's method (1998) is achieved at the cost of a slight overestimation of the precision of the risk ratios (i.e., the confidence intervals tend to be narrower). However, preliminary results from an ongoing validation study suggest that the overestimation of the precision of the approximated risk ratios is problematic when the true risk ratios are higher than 2

whereas in those nearing the null value, the precision may actually be underestimated (McNutt *et al*, 2001).

Despite all these precautions, there are some evidence that the relatively low risk ratios observed for exposure to political violence may be partly explained by some methodological features such as misclassification of outcome and measurement of exposure.

The putative under-estimation of social anchorage, particularly of religious and community anchors, due to its partial documentation in the source studies implies that some subjects classified as not-anchored may have been anchored. However, there is no reason to believe that the under-estimation of social anchorage is correlated with the exposure. When misclassification of outcome and exposure are not correlated, the misclassification is said to be non-differential and leads to an attenuation of the effect estimates towards the null value except in rare circumstances (Rothman and Greenland, 1998). Wacholder (1995) has shown that social desirability is especially liable to the unpredictable effect of non-differential misclassification in ordinal variables when a systematic over-reporting in those un-exposed coexists with a systematic under-report in those exposed, such as when in a nutritional study *those who eat smaller amounts of a nutrient may tend to overreport, whereas those who eat larger amounts may underreport consumption* (Wacholder, 1995 : 157) It is doubtful that the social consensus regarding social anchorage is strong enough among refugees to create such a phenomenon especially since the studies that provided data for this thesis did not focus on the social

anchorage of parents but rather on the children's well-being. Subjects would most likely not feel threatened by questions on social anchorage because they were concerned by information regarding their children.

Contrary to traditional epidemiological studies where non-exposed subjects have a non-exposed status for all facets of exposure under study, in this thesis, exposure to political violence is fragmented in three overlapping measures so that, for instance, subjects not exposed to an acute form of political violence may have been exposed to a chronic form of exposure or may have reported family exposure. The general idea was to dissect the political violence experienced by refugees in order to pinpoint forms of exposure that may be especially harmful for their social anchorage. This strategy was fruitful since data analysis shows that specific forms of exposure act differently on the social anchorage of refugees. The main drawback of this fragmentation of the exposure to political violence is to dilute the effect of exposure since, on the one hand, the overall effect of exposure is split in three parts so that the independent effect of each form of exposure is rather small and, on the other hand, the exposed group in each measure of exposure is compared to a non-exposed group that may have been exposed to other forms of political violence. This latter concern is not a peculiarity of this thesis as the lack of a non-exposed group in studies of the exposure to political violence is well acknowledged (Petersen, 1989). Thus the small effect of exposure to political violence observed in this thesis and in other studies is partly attributable to the fact that there can actually be no non-exposed group since all refugees were affected to various degrees by the political violence stemming from armed conflicts.

A majority of victims do not survive torture or are in a physical and psychological state that precludes fleeing the country (Farias, 1991) so that torture victims are under-represented in refugee samples. But, the rate of torture observed here appears suspiciously low especially for the Cambodian sub-sample where only 2% reported experiencing torture. In two studies conducted in Cambodian refugees sampled from the general population, the proportion of torture victims was in the vicinity of 23% or 22% (Cheung, 1994 ; Sack *et al*, 1993). The rate of torture recorded here in the Central American sample (5%) may have been less under-reported since it is partly corroborated by a study conducted by Rousseau *et al.* (1997) where 8% of Central American and Peruvian refugees reported experiencing some forms of torture in their homeland. This does not necessarily imply that torture was less common in Central America ; it could rather mean that victims were less likely to survive following torture or to be physically fit to escape their country. Nevertheless, there is some evidence that the assessment of acute exposure, most probably torture, was inadequate. On the one hand, the rate of torture is rather low compared to that observed in other studies and, on the other hand, the influential observations detected by residuals analysis for professional anchorage, religious anchorage and the diversity of anchorage all pertain to subjects who had been tortured.

There are two main reasons why torture may have been under-reported : its assessment and selective recall. Montgomery and Foldspang (1994a) have shown that, although there is an overall consensus about what is and what is not torture, there is still some variation in the definition of torture within and across ethnic groups. They report cases

where torture was over-reported by refugees who experienced ill-treatment in prison though they were not tortured, or under-reported by those who were tortured but felt that their experience was less traumatizing than that of others. The likely under-reporting of torture in the sample under study here may be partly explained by the lack of a checklist of the multiple forms of torture that would have standardized the definition of torture in subjects.

The under-reporting of torture could also result from selective recall mostly due to denial. Denial is a normal phase in the healing process following a traumatic experience (Carlson, 1997). It may persist after refugees have landed in the host country either because their priority, at first, is to settle in so that coming to terms with past traumatic experience is delayed (Allotey, 1998), because the memory of the trauma is simply unbearable (Beiser, 1988), or because some forms of exposure to political violence, especially rape, bring dishonor to the self and to the family and are better left hidden (Ong, 1995). Selective recall may lead refugees to under-report torture if they are still in a phase of denial regarding what they went through in their home country, especially if these trauma are viewed as shameful. Ethnic matching of interviewer and interviewee, which was used to facilitate communication and instill a climate of trust, may not have been sufficient to overcome the resistance regarding the disclosure of the most extreme forms of exposure to political violence such as torture and rape (Westermeyer and Janca, 1997).

Some of the findings reported here are intriguing but not entirely implausible. For instance, the lower proportion of political anchoring in Central American refugees (52%) than in Cambodians (85%) seems, at first glance, counterintuitive given that the former fare better than the latter on transferable skills that would facilitate passing the Canadian citizenship exam. This inter-ethnic difference may indicate, not so much that Central Americans are less successful at passing the citizenship exam, but rather that they are less inclined to apply for citizenship. The migration process of Southeast Asian and Central American refugees differs substantially. Southeast Asians were recruited by Canadian immigration officers in refugee camps or were sponsored by their family or a religious group ; in both cases, they landed in Canada with resident status. Central Americans asked for political asylum at the Canadian frontiers and went though the ordeal of proving the legitimacy of their claim although a minority were sponsored. Restricting the computation of political anchorage to the refugees who were eligible for Canadian citizenship controlled for the delay incurred by the processing of the Central American claims for political asylum. Nevertheless, the lower percent of Canadian citizens among Central American refugees may reflect a higher level of mistrust towards governmental institutions following the trauma of defending their claim for political asylum. But it may also indicate a different attitude towards their home country and towards the symbolic meaning of applying for Canadian citizenship. In a qualitative study carried out in Montreal, Jacob (1994) asserts that some Salvadorian refugees reject the Canadian society and do not attempt to settle in because they are still mourning their homeland and hope for a prompt return.

The observed level of community anchorage is especially low (8%) but this low level is plausible judging from a recent study reported by Renaud *et al.* (2001). This follow-up study was carried out with a sample of immigrants (including 10% of refugees) resettled in Québec for ten years. Renaud *et al.* (2001) note that, during that 10 year period, 18.4% of these immigrants were in touch at least once with an association mostly made up of native Québécois or Canadians, 17,8% with an association that provides services or cultural activities to their compatriots ; 16,3% with a sports or leisure association, 10,1% with a multi-ethnic association that provides services or cultural activities, and 5% with a community organization serving immigrants. Given that these data refer to *making contact* with a community-based institution rather than being involved in it, that they pertain to the cumulative incidence of contact over a ten year period rather than to the prevalence at the time of interview, that a number of immigrants would be counted in the numerator of more than one of the observed percents, and that these data do not discriminate between associations offering short-term services, mostly information, from those centered around socio-cultural activities, one can conjecture that the community anchorage of refugees is quite low and even more so in parents of school-aged children who have a low income.

Unexpectedly, although a high school education or more fosters employment in the Southeast Asian sample, it tends to inhibit it in the Central American sample. This finding is counterintuitive. There is some evidence that, among refugees, a high level of education is associated with underemployment (Allotey, 1998 ; Aycan and Berry, 1996) and that some highly educated refugees are reluctant to accept manual jobs (Graham and Khosravi, 1997). But the Central American sample under study here is not a highly

educated group since only three subjects have a university degree So other factors, remaining to be uncovered, must affect the negative association observed in this group between the level of schooling and professional anchorage.

Finally, ethnicity is omnipresent in this thesis and deserves some comments. Ethnicity is, first, a selection criterion ; then, a matching variable between interviewer and interviewee because it was felt that people sharing the same cultural background would more easily establish a trusting relationship thus facilitating the disclosure of information ; and, finally, a confounder since the distribution of exposure to political violence and of social anchorage tends to vary across the two ethnic groups. In addition, ethnic specific analyses were carried out to identify predictors of social anchorage that are specific to each ethnic group by opposition to those « universally » related to the situation of refugees.

Southeast Asian and Central American refugees were initially selected not only for feasibility reasons, because they were among the most numerous refugee groups at the time of data collection, but also to control for the effect of culture on the psycho-emotional well-being of refugee children because they belong to two geo-cultural area with different cultural backgrounds. In a research setting, ethnicity subsumes all those unmeasured and/or un-measurable features of identity, attitude and behaviors that are determined by having been raised in a specific culture and a specific environment at a specific time period. However, it is more and more recognized that ethnicity is only a proxy for the *cultural* unknown.

A problem with the use of ethnicity as a proxy for the core socio-cultural values that characterize each society is that it is based on a rather static view of culture (Cooper and Denner, 1998). This view may be especially unrealistic in the case of refugees whose traditional socio-cultural values have been transformed, to different degrees, by the war situation and by their resettlement in an alien country. Most immigrants and refugees preserve at least part of their traditional way of life but the ethnicity membership that is imposed on them in a research setting corresponds to a stereotyped view of ethno-cultural groups that often does not fit with how these immigrants and refugees perceive themselves. Indeed, a number of immigrants classify themselves as bi-ethnic (Frable, 1997) or endorse the « nationality » of the mainstream host society (Howard, 1998 ; Sundquist, 1993). The complex relationship of refugees with their past traumatic experiences in their homeland and with their present life in their host country is such that their socio-cultural references lie somewhere on a continuum going from complete adherence to the traditional values of the homeland to an increasing acculturation towards the values of the host society . The use of ethnicity as a proxy for cultural background also negates the fact that ethnicity may not be the most salient social identity for all individuals and that ethno-cultural groups are not homogeneous ; people may be more inclined to define themselves as members of a socio-economic group rather than as members of an ethnic group. However, attempts to replace ethnicity with a multiplicity of variables that would account for inter-ethnic differences affecting the phenomenon under study have shown that there still remains *something* that is left unmeasured and that is covered by ethnicity (Desbarats, 1986). So, although ethnicity is an imperfect

proxy, no better alternatives have been uncovered yet to account for the effect of ethno-cultural background on health and psychosocial outcomes.

Despite the few weaknesses discussed previously, the results observed in this thesis are consistent with the findings reported in the scarce literature concerning the resettlement process of refugees. The relationship between personal chronic exposure and professional anchorage, which is the most studied anchor, illustrates how exposure to political violence can affect the social anchorage of refugees in the host country.

Confinement in prison or reeducation camp or to forced labor in the context of political upheaval does not *just* deprive the victims of their freedom to attend their family, economic and social businesses, it also strips them of their basic human rights while they are at the mercy of guards who can, and often do, threaten, torture and kill them. Under those circumstances, one soon learns that, in order to survive, it is best to distance oneself from the present and to cling to the past to draw some hope for the future (Herman, 1992). Survival thus requires that one becomes an anonymous being, often oblivious to the suffering of others. Those who are eventually released go back, weakened or impaired physically and psycho-emotionally, to an environment that has become alien to them : their family may have fled abroad to escape threats of violence, been disseminated by the violence exerted against them by one or the other political faction, or reorganized itself during their absence leaving them with no role to play ; their friends may also have escaped the country or the area, been killed, or be fearful to be seen in their company ; their source of income may be no longer available. The Southeast Asian and Central

American subjects who were personally exposed to chronic political violence experienced such an ordeal to various degrees. In fact, it is that ordeal that, to some extent, led them - or forced them - to flee their home country.

According to Chung and Bemak (1996), such premigratory exposure to political violence may cause an emotional and mental fatigue that can inhibit efforts to gain and maintain employment especially since the survival strategies adopted by the refugees in the home country may not be appropriate to the work environment in the host country. Beiser *et al.* (1989) rather claim that refugees are a selective group of particularly resilient victims because, among all those who experienced similar threats to their life, they were the ones able to escape and to reach a safer country. These apparently diverging points of view actually illustrate the dynamics underlying the effect of exposure to political violence : a negative pole (i.e., psycho-emotional impairment) and a positive pole (i.e., resilience) act in opposite directions on the social anchorage of refugees and a number of circumstantial factors can shift the balance in favor of one or the other.

For instance, a positive factor, which may be particularly determining in the sample under study here, is the need to care for one's family. Providing for one's family in the host country and abroad is a priority for refugees and may contribute to their resilience and dampen their traumatic memories. A number of studies have shown that the driving force behind the positive outlook that refugees with children entertain towards their migration and their resettlement in an alien country is the hope for a better future for their children (Beiser *et al*, 1993 ; Finnan, 1981 ; Mortland and Ledgerwood, 1987 ; Ong,

1995). But this positive stimulus can be annihilated by the lack of transferable skills and by the unfavorable socio-economic context of the host country. Thus there is a complex interplay of positive and negative circumstantial factors that foster or prevent the effect of psycho-emotional impairment and resilience on the social anchorage of refugees.

There are, of course, some limitations to the interpretation of the findings reported in this thesis. First, a larger sample size would have increased the precision of the approximated risk ratios especially in ethnic specific analyses where some confidence intervals were rather wide. Second, the sample was made up of parents of school-aged children and refugees with a different family situation may show a different pattern of social anchorage.

In addition, the overall climate of terror that permeates the population living in a state of armed conflicts is not measured in this thesis. Though it could be argued that ethnicity is a marker of this unmeasured exposure to political violence, this would be only partly true since not all areas of the home country were as intensely affected by the armed conflict and because this exposure also depends on the time spent in a specific region where the political violence was rampant. A possible approach for future research would be to asked respondents how long they felt their life was disrupted by the political violence going on. This solution was applied by Michultka *et al.* (1998) but this variable was found to have no significant effect on the emotional distress in Central American refugees maybe because of its susceptibility to recall bias. .

Finally, all factors investigated in this thesis are internal to refugees as if their social anchorage was independent of the society to which they are attempting to secure themselves. Factors reflecting the context of the resettlement in the host society such as the economic situation, the discriminating attitude of some members of the mainstream society and the availability of a community from the same ethnic origin should be investigated and would plausibly contribute to better understand the social anchorage of refugees in the host country.

Notwithstanding its weaknesses and limitations, this thesis sheds a new light on the psychosocial adjustment of refugees in the host country by focusing on their social anchorage and especially on the effect of premigratory exposure to political violence. It also emphasizes the complex web of individual factors, such as premigratory exposure to political violence, transferable skills and socio-demographic characteristics, that can affect the social anchorage of refugees. Finally, the empirical testing of the conceptual framework introduces in this thesis points to directions for future research that will be outlined in the conclusion.

Conclusion

The enduring armed conflicts that have plagued the World in the past forty years or so have created an endemic situation where millions of refugees are either awaiting repatriation or resettlement in refugee camps, claiming political asylum upon landing in a host country, or attempting to reconstruct their lives in a foreign land (Haut Commissariat des Nations Unies pour les réfugiés, 2000). In recent years, this situation seems to have reached a dead end since a growing number of countries are increasingly reluctant to offer permanent shelter to refugees. The apparent difficulty of refugees to adapt to the host society, their large number and the economic burden that they represent in an era of generalized cuts in health and social services have stirred up the latent antagonism of part of the mainstream population giving rise to public and violent demonstrations of ostracism towards the newcomers and threatening the often fragile social harmony (Schuster, 2000 ; Silove *et al.*, 2000). In fact, the resettlement of refugees is becoming a major psycho-social health issue for the refugees themselves and a socio-economic concern for the host countries.

One way to promote the successful resettlement of refugees is to foster their social anchorage to the host society. From the point of view of refugees, social anchorage serves not only to recapture or redefine their social identity but also to develop a feeling of belonging and well-being towards the host country and the host society. From the point of view of the host

society, supporting the social anchorage of refugees is a means to ease their psycho-social adjustment and to defuse the growing prejudice and hostility expressed against them. Thus a better social anchorage would contribute to enhance how refugees view themselves and how they are viewed by others, as valued members of the society.

To foster the social anchorage of refugees, its predictors and process must be better understood. Studies carried out by Desbarats (1986) in the United States, Renaud and Gingras (1998) in Québec, and Valtonen (1994) in Finland have paved the way in that direction. This thesis provides new evidence regarding the complexity of the effect of premigratory exposure to political violence, transferable skills and socio-demographic profile on a wide range of social anchors. It also points to directions for future research on the psychosocial adjustment of refugees in the host country.

Future research must focus not only on the individual factors pertaining to the refugees themselves but also on the social factors that partly determined the resettlement of refugees in the host country and that could not be investigated in this thesis. Regarding personal features, there is a need to better capture the specific saliency and functions of each type of social anchorage (i.e., family, political, professional, religious, academic and community). This could be achieved by in-depth interviews based on life history methods and conducted with refugees belonging to different ethnic, gender and age groups who face various family situations. A number of scales have already been designed to more systematically document torture (Mollica *et al.*, 1998 ; Shresta *et al.*, 1998) and other forms of political violence (Mollical *et al.*, 1992). But these could be further refined by recording the length of

confinement in prison and in reeducation, forced labor and refugee camps, and by probing refugees about the length of time during which their life was disrupted by the widespread political violence and social destabilization that took place in their homeland. Given the importance of ethno-cultural background on the social anchorage of refugees, there is also a need to carry out studies among multi-ethnic samples with a sufficient number of subjects belonging to each ethnic group so that the ethnic-specific predictors of social anchorage can be distinguished from those that are universally related to the refugee situation.

Regarding macro social factors, multi-site international studies focusing on the resettlement programs available to refugees, on employment opportunities in the area of resettlement and on the attitude of the mainstream population towards minority groups and refugees, are required to investigate the effects of the socio-economic context of the host country on the social anchorage of refugees. In addition, studies on the negative perception of the mainstream population towards refugees would also be welcome.

Finally, the social anchorage of refugees is not static, it fluctuates over time. This fluctuation is illustrated in a study carried out by Renaud and Gingras (1998) regarding the evolution of the housing situation, training, employment and access to services of a sample of refugees followed for three years after landing in Québec. Such longitudinal studies could be undertaken to document the evolution of the social anchorage of refugees over time in order to identify period at higher risk and the changing effect of individual and macro social factors on social anchorage.

This research agenda will take decades, the participation of thousands of refugees, the involvement of many researchers from a variety of disciplines and countries, and a lot of money before being filled. However, given that a lot of wars and armed conflicts are still going on, that there are already more than 20 million refugees and asylum seekers in the world, and that the social prejudice against them is growing, concern for the resettlement process and the psycho-social adjustment of refugees to the host country is rapidly becoming a health and social priority.

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Appendix I

Documents related to ethical considerations

Appendix II

Questionnaire

Questions that provided data for my thesis are reproduced in French, as they appeared in the questionnaire. Whenever the question was worded differently in the first and second studies, both versions are reproduced.

1. Questions regarding the social anchorage of refugees

1.1 Political anchorage

Study # 1

Quel statut avez-vous maintenant au Canada ? Citoyen ? Résident ? Réfugié accepté ?

Study # 2

Avez-vous obtenu le statut de résident ? Avez-vous maintenant le statut de citoyen ?

1.2 Professional and academic anchors

Quelle a été votre principale occupation ou profession durant la dernière année ?

1.3 Religious and community anchors

Study # 1

Avez-vous des amis /du pays d'origine/ à Montréal ? Si oui, de qui s'agit-il ?

Participez-vous à des fêtes, des réunions ou des activités avec la communauté /du pays d'origine/ à Montréal ? Si oui, lesquelles ?

Avez-vous des amis canadiens ou québécois à Montréal ? Si oui, de qui s'agit-il ?

Participez-vous à des fêtes, des réunions ou des activités avec des Canadiens ou des Québécois à Montréal ? Si oui, lesquelles ?

Study # 2

Combien de /personnes du pays d'origine/ connaissez-vous à Montréal ?

Quelle est la nature de votre relation avec eux ?

Combien de Canadiens ou Québécois connaissez-vous à Montréal ?

Quelle est la nature de votre relation avec eux ?

Allez-vous à la messe /ou à la pagode/ ?

2. Questions regarding premigratory exposure to political violence

Quels événements vous ont on amené personnellement à quitter le /pays d'origine/ ?

Est-ce qu'au /pays d'origine/ vous ou quelqu'un dans votre famille a ... *(l'interviewer lisait les traumatismes mentionnés et, à une réponse positive du sujet, demandait qui avait subi ce traumatisme particulier et dans quelles circomstances)* :

Souffert de persécution ou de harcèlement ?

Subi des menaces ?

Été emprisonné ?

Été exécuté ou assassiné ?

Été torturé ?

Été dans des camps de rééducation du régime ?

A disparu temporairement ?

A disparu définitivement ?

Été soumis aux travaux forcés ?

Est-ce que votre famille a vécu d'autres événements difficiles en relation avec la situation au /pays d'origine/ ?

3. Questions regarding transferable skills

Quelle était votre principale occupation ou profession au /pays d'origine/ ?

Quel type de diplôme avez-vous obtenu dans vos études ? Aucun ? Primaire ? Secondaire ? Technique ? Universitaire ?

Quelle est votre maîtrise de l'anglais et du français ? *(l'anglais et le français parlé, écrit et lu ont été documentés mais seul la maîtrise orale a été retenue)*

Français : Non ? Un peu ? Couramment ?

Anglais : Non ? Un peu ? Couramment ?

4. Questions regarding socio-demographic profile

Sexe du répondant : Homme ? Femme ?

Date de naissance du répondant ? (jour, mois et année)

Lieu de naissance (pays) du répondant ?

État civil actuel ? Célibataire ? Marié ou union libre ? Veuf ? Séparé ou divorcé ?

Au Canada, les revenus de votre famille au cours de la dernière année vous situent dans une situation économique de ... Haut niveau ? Classe moyenne avec bons revenus ? Classe moyenne avec revenus moyens ? Secteur de bas revenus ?

Quand êtes vous arrivé au Canada ? (mois et année)