

# Evolving Transnational Threats and Border Security



# Evolving Transnational Threats and Border Security: A New Research Agenda

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## *Foreword*

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While it may be an exaggeration to say that “everything changed on 9/11,” in fact, a great deal did change for both governments and citizens. For Canada, the events of 9/11 were a jarring wake-up call that we were not immune from the violent acts of extremists, of whatever kind or for whatever cause. The events of 9/11 changed the priorities and public expenditures of governments around the world. The government of which I was a part was no exception.

Therefore it was with interest that I attended the workshop on transnational threats and border security in June 2011, sponsored by a number of federal government departments and agencies. Bringing together Canadian scholars and government stakeholders who work and research in these areas seems to be an initiative long overdue.

Arguably, our government had more ground to make up than some, since transnational extremism, while discussed in international fora where we participated, was not seen as the most pressing security issue for us at home. That did change on 9/11. Whether the introduction of Canada’s first comprehensive anti-terrorism legislation, the development of a Smart Border Agenda with the United States, the creation of CATSA, budget increases and operational upgrades for CSIS, the RCMP, CSE, and ultimately, the creation of a new department, Public Safety and Emergency Preparedness and a new border agency, the CBSA, all spoke to a recognition that we, in Canada, had not been investing in our national security apparatus in the ways that we needed to. Many of these initiatives were a “hard sell” both within our government and with Canadians. Even after the events of 9/11, many Canadians continued to believe that such events happened elsewhere, to others.

It is true that we, in Government, struggled “to get the balance right.” We implemented policies, legislation and programmes that we believed were essential to the collective security of Canadians, and our allies, while at the same time striving to protect individual rights and liberties. Reasonable people of good faith can disagree as to whether we achieved the balance we sought.

Looking back, some ten years later, I wonder how, if at all, our decisions and actions would have been different if we had access to the kinds of research discussed at this workshop.

In the immediate aftermath of 9/11 I don’t think governments, anywhere, were focused on scholarly research, such as it was and what it might offer to our decision making processes. Globally, we were *reacting* to events that surprised us all, at least in their audacity. I do not mean to suggest that within our government, and those of our allies, research was not being done on subjects such as transnational organized crime and migration. But the research being done was too often “stove-piped,” within various departments and agencies. We had not developed a forward-looking, integrated, multi-departmental and agency research agenda.

In Canada, we were focused primarily on what was required to keep our borders with the United States open. To a limited degree, where time permitted, we did seek out expert advice from outside government. However, there was little time to reflect, in a systematic way, on what it would have been useful to know to better inform our *reactions*. I think that we all understood that there was much that we did not know but circumstances required that we take action – action that I believe to have been considered and balanced, albeit not universally regarded as such at the time.

Today, I hope that we all realize, both in government and outside, that there is a great deal that we don’t know about the complex web of domestic and global threats to our national security and that of our allies. These threats may be man-made or caused by nature. Our emergency response apparatus must be prepared to deal with both. The papers presented in this volume will help us identify the types of threats about which we must understand more, as well as the many questions on which policymakers need advice before taking action and committing resources, whether human or financial. Going forward, we will need the tools to be *proactive* in ensuring our national security. The research agenda proposed in the chapters that follow will help in this regard.

I am heartened to see the involvement of key government departments and agencies in this workshop. We need to develop a culture of enhanced



collaboration and trust between government and researchers. This will require government to manifest a greater willingness to share information, data and experiences. Asserting that everything to do with issues of national security is “top secret” will not help inform any research agenda. In fact, such an attitude will lead to increased cynicism and skepticism and a more confrontational stance between government and researchers.

I hope that the steps toward collaboration evinced in this initial workshop will lead to the development of a robust research agenda, supported by government, that in its results and learnings will lead to better informed, targeted and resourced public policy in the areas of transnational threats and border security. I congratulate everyone involved in what I hope is the first of other workshops of this kind.

A. Anne McLellan, P.C., O.C.

Bennett Jones LLP

(Former Minister of Justice and Attorney General of Canada and  
the first Minister of Public Safety and Emergency Preparedness)

November 2011



## *Acknowledgements*

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In June 2011, a group of federal departments and agencies including Public Safety Canada (PS), the Canadian Security Intelligence Service (CSIS), the Canadian Border Services Agency (CBSA), and the Department of Foreign Affairs and International Trade (DFAIT), convened a meeting of experts on the broad issues of Canadian security in collaboration with the Social Sciences and Humanities Research Council of Canada (SSHRC). The workshop, *Transnational Threats and Border Security*, had as a key objective to mobilize policy-relevant research pertinent to the mandates of these four federal stakeholder departments, inter alia by promoting dialogue between these federal stakeholders and academics conducting research related to their interests, as well as helping to identify opportunities for possible collaboration. The first half of the workshop consisted of Canadian scholars bringing to bear research on transnational trends and their impact on Canadian security. The second part consisted of contributions and analysis by the federal government stakeholder departments and agencies with the aim of identifying key issues and strategizing about means of facilitating closer collaboration between the federal stakeholder departments and university-based researchers. Academic participants were asked to prime the discussion by providing concise research notes in their area of expertise. These research notes are collected in this volume. The introduction provides some background on national security, strategic foresight, and a horizon scan of dimensions raised by the individual research notes that emerged as particularly relevant. The conclusion provides a synthesis of key overarching themes that arose in both the research notes and during the workshop discussion. It then translates these observations into prospective lines of inquiry and concomitant research questions.

The comprehensive yet succinct scope of the exercise meant that, in preparing this publication, trade-offs had to be made with respect to breadth and depth. Nonetheless, in a field that has been marked by less academic inquiry than some other policy areas, practitioners and scholars alike are likely to benefit from an easily accessible overview of many of the challenges likely to confront Canadians over the coming years. The fact that the federal stakeholder departments took this initiative is demonstrative of a willingness to reach out, engage and partner actively with Canadian researchers. This collection is meant to support civil servants in doing so, and to lay the foundation for Canadian researchers to take up the invitation.

Neither the workshop nor the publication would have been realized without the exceptional proficiency of a host of dedicated, competent and knowledgeable facilitators. In preparing both the workshop and this volume we had the distinct pleasure of working with some of the best and most dedicated civil servants from the four stakeholder departments. SSHRC's Cindy McIntyre was instrumental in putting the many organizational pieces in place; Murielle Gagnon facilitated the Memorandum of Understanding with the partner departments and agencies. Once again Maureen Bartram at the Centre for International and Defence Policy (CIDP), Queen's University, provided unparalleled administrative support both in pulling together the research notes ahead of the workshop and in expediting subsequent revisions and their compilation into this volume. We are grateful to Mark Howes and Valerie Jarus who looked after layout and assembling the final publication. Our authors are to be commended for having produced excellent research notes in line with the instructions provided in record time. We are especially grateful to the many civil servants and practitioners who took time out from very busy schedules to contribute to the workshop. Their contributions were indispensable to laying the groundwork for compiling the research questions that are found in the conclusion and the lines of inquiry into which they are synthesized. They were also integral to furthering the dialogue between the stakeholder departments and academic researchers this workshop was meant to foster.

Christian Leuprecht, Todd Hataley and Kim Richard Nossal  
Kingston, December 2011

# *Introduction*

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*Christian Leuprecht*

The objective of this collection is to foster collaboration and dialogue between the research community and policy makers on emerging transnational threats to Canada, in a spirit of open policy development that seeks to bring ideas and thinkers from outside the federal government to the policy process. Strategic foresight is the ability to identify security futures so that they do not come as a surprise. To this end, the collection seeks to raise awareness of the impact on national security and border security of key transnational trends. It is also meant to encourage greater interest in an area of policy that has received little scholarly attention relative to its public visibility. Finally, it seeks to build and bolster the capacity to gain a better understanding of the impact that transnational threats are likely to have on Canada. If Canada is to safeguard its sovereignty and political authority in security-related matters, it needs to be in a position to devise quintessentially Canadian responses to the implications of transnational threats for national security. Scholars can add significant value by identifying the metrics that underpin strategic trends, by developing rigorous frameworks for conceptualizing prospective threats to Canada's security, and by acting as "red teams" to challenge decision-making within the federal stakeholder departments. This collection seeks to stimulate more substantial work in the area by conveying a better understanding of the transnational threats that are likely to affect Canada's security environment throughout the first decades of the twenty-first century.

The research notes collected in this volume are the result of a workshop that brought together Canadian scholars with the federal stakeholder

departments to start a dialogue on the impact of transnational threats on Canada's national and border security. Their immediate purpose is to (1) synthesize succinctly Canadian research in the field, (2) make Canadian research on future threats to Canada emanating from other parts of the world more readily accessible with the goal of (3) piquing scholarly interest and bolstering Canadian research capacity on matters of national and border security, and concomitant transnational trends, (4) ascertaining the variables, trends, effects and gaps in knowledge where research is likely to yield the greatest payoffs. To these ends, the research notes in this volume (1) map the landscape of the changing global threat environment by surveying key economic, political, demographic and climate patterns, and the way they are projected to play out over the coming decade, (2) weigh the costs and benefits associated with these patterns for Canada in general and for Canadian security in particular, (3) identify how these trends are likely to affect push/pull factors of flows in people and goods across Canada's borders, (4) examine changing transaction costs across borders in a globalizing world and their impact on Canada and Canadian security, (5) understand the policy and political leeway for Canada to respond domestically and internationally, and (6) explore the impact past decisions and current institutional arrangements are likely to have on future political decisions with respect to these trends. By way of introduction, this chapter starts by providing a backdrop to security from a Canadian perspective, followed by some brief reflections on strategic foresights, before providing a synoptic overview of the research notes that make up this volume.

## Security Matters

There are good reasons why Canadians should not be content to defer largely to research and policy experiences of other countries to inform Canadian security policy. The way that threats are *perceived* not only varies by country, but the way in which threats are *processed* will also differ. A trend that merely poses a threat to Canada may present a deep vulnerability elsewhere. While Canada may be comparatively weak in material power capabilities – and thus theoretically more vulnerable to transnational threats than stronger states – it enjoys a comparative geostrategic advantage by virtue of its proximity to the United States. That proximity also exacerbates certain threats and Canada's economic dependency on the United States imposes a particular set of decision-making constraints.

As a sparsely-settled country that shares its land border with only one country, dependent on international political stability, global markets, and open trade routes for its prosperity, Canada has always hinged its national interest not on *whether* to engage with the world, but *how* to do so. Canada has long sought to balance global, multilateral, and bilateral approaches to safeguarding its national-security interests. Owing to the moderate size of its population and economy, as well as its geostrategic location, the propensity for a state-centric realist bent to achieve Canada's security objectives is moderated by the need to harness synergies through collaboration. Moreover, the growing diversity of its population has meant that Canada has been prone to a more constructivist approach to its security policy, one that reflects not only its societal values overall but also those of the interests that particular communities bring to bear on the national-security agenda.

Finally, for want of a clear and present threat, domestic or international, Canadian security policy has tended to be informed by disproportionate optimism and certainty (relative to that of other countries of comparable population and economic size). This is reflected in a societal culture that has not paid a great deal of attention to security, and a security posture that has consistently seen Canada invest less – measured per capita and as a percentage of GDP – in security than most other countries in the world. The words of Senator Raoul Dandurand, who argued in 1924 that Canada was “a fireproof house,” far from the “inflammable materials” of global conflict, continued to reverberate in Canada for much of the twentieth century.

The attacks of 11 September 2001 sharpened the focus of governments on domestic security. Canada's overarching priority has always been to keep its border with the United States open. Yet, the stimulus provided by 9/11 to Canada to strengthen its domestic security policy should not be over-determined. Moves to strengthen bilateral security cooperation predate 9/11 began with the Canada–United States Accord on Our Shared Border in 1995. The trajectory seems to be one of greater emphasis on the instrumental returns yielded by bolstering Canada's bilateral security relationships – not just with the United States. Although domestic threats have grown in prominence, policy makers continue to remain largely outwardly focused in developing strategies to promote national security. Even issues that tend to be subsumed under the banner of “homeland security,” such as home-grown violent extremism and border integrity, are greatly influenced by international dynamics, such as Western military intervention in predominantly Muslim societies and internal displacements engendered by domestic conflict. Although cosmopolitans and some constructivists

claim that the distinction between domestic and international security has become largely redundant in the era of globalization, Canadian governments routinely distinguish between foreign and domestic issues when calibrating the policies that underpin the country's security strategy.

Enhanced capacity to anticipate the likely consequences of transnational threats for Canada in the years ahead will bolster Canadian policy makers' and security agencies' strategic planning and proactive engagement. Typically, this cognitive process is an exercise in inferring from past and present trends that generates a largely linear picture of future developments: "Driven by an inherent desire to bring order to a disorderly, chaotic universe, human beings tend to frame their thoughts about the future in terms of continuities and extrapolations from the present and occasionally the past" (United States Joint Forces Command, 2008: 6). The problem is that this method for arriving at strategic assessments has proven increasingly unreliable: the Asian financial crisis of 1997, the events of 9/11, the severe acute respiratory syndrome (SARS) crisis, the 2004 Southeast Asian tsunami, the Global Financial Crisis of 2008-2009, and the Fukushima nuclear meltdown after the Tohoku earthquake of March 2011 were all, for various reasons, unforeseen by professional strategic analysts.

### Strategic Foresight

Consider Andrew O'Neil's observation about the performance of international-relations scholars in accurately forecasting change in the international system (2011). The arrival of the nuclear revolution in the 1940s led to the widely-held view that wars could never be fought in the shadow of nuclear weapons, given the risk that they would inevitable escalate to nuclear conflict. Similarly widespread predictions of terminal US decline in the post-Vietnam era proved wide of the mark. Perhaps most damaging was the failure to foresee the end of the Cold War, the demise of bipolarity and, subsequently, the peace dividend that failed to materialize.

Why, then, have history and the data it yields been the mainstay of *ex post facto* explanations? Stanley Hoffmann (1977: 57) has observed that part of the problem is coming to grips with interpreting the very nature of change:

Because we have an inadequate basis for comparison, we are tempted to exaggerate either continuity with the past that we know badly, or the radical originality of the present, depending on whether we are struck by the features we deem permanent, or with those we do not believe existed before.



And yet a more rigorous examination of the past might reveal that what we sense as new really is not, and that some of the “traditional” features are far more complex than we think.

A recurring feature that plagues scholarship is a proclivity for hyperbole in the long-term impact of allegedly “transformative” changes that are supposedly indicative of an impending break from established patterns of behaviour. As Kal Holsti put it, “One detects in these claims a large component of wishful thought that seems to be replacing serious, empirically-based, and authoritative analysis” (1998: 16). In the aftermath of the Second World War, many thought that states would henceforth be willing to sacrifice narrow national interests to make international institutions work for the greater benefit of the international community. A large body of scholarship hailed the end of the Cold War as signaling the onset of a new liberal order. Liberalism, born of enlightenment ideals, was thought to be sweeping across the international system; globalization was rendering states less relevant. These predictions failed to materialize, and since the end of the Cold War it has largely been business as usual: great-power rivalry, ethno-religious conflict, human-rights abuses, genocide, and an international financial system riled or saved by... states. States remain the dominant units of interaction, systemic anarchy prevails, and the majority of states are still primarily concerned with global and regional balance-of-power issues, not threats emanating from non-state actors.

Frameworks for conceptualizing prospective threats to Canada’s security must necessarily make certain assumptions about the world. Yet, theories promoting normative change – such as liberalism or critical theory – have proven notoriously incompatible with balanced, detached judgments about what the future might hold. Bereft of capacity and method, there is a gaping blind spot with respect to academic literature on threats to Canada’s future security. Not unlike the satirical *Saber-Tooth Curriculum* (Peddiwell, 1939), a fictitious series of lectures on paleolithic education (featuring the teaching of such crucial skills such as fish-grabbing-with-bare-hands and sabre-tooth-tiger-scaring-with-fire), the study of Canada’s security policy tends to be backward-looking, shying away from engaging with potential future developments.

This is partly a result of an aversion on the part of Canadian academics to engage in methodical, evidence-based discussion about the future. Some of the problem, of course, is that the way the scientific method is commonly applied in the social sciences does not lend itself to conducting work on subjects that are not replete with a large body of antecedent

literature from which hypotheses can be derived and subjected to empirical testing. Scholars are, by inclination, skeptical about attempts to chart future developments. Since the future cannot transcend itself (post-modern claims to the contrary notwithstanding), the scope for speculation is endless. Ergo, futures studies are not positivist in nature. As it turns out, the scientific method is not suitable to predicting singular events anyway. It can, however, help discern trends, their probability, and their impact. As the Development, Concept and Doctrine Centre of the United Kingdom's Ministry of Defence (DCDC, 2007: v) observes:

The future will happen as a result of long wave themes and developments that unite the past, the present and the future. However, one constant in history – the power of contingency and surprise – will continue to dominate our future, which will be influenced and punctuated by unexpected events, startling surprises, major discontinuities and the pervasive operation of chance.

One way to think about the future developments is to distinguish trends-based markers and discontinuity-based markers of change. Trends are linear processes; discontinuities, by contrast, refer to major breaks along hitherto linear trajectories.

In an age when risk management has largely become integral to the modern welfare state (Beck 2009), however, one also has to come to terms not just with threats per se, but with the way competing threat perceptions are likely to frame the range of available choices and influence the eventual decision. Threat perception is the decisive intervening variable between action and reaction (Jervis 1976; Rouhana and Fiske 1995). When threat is not perceived, even in the face of objective evidence, security resources are difficult to mobilize. Conversely, security resources risk end up being allocated sub-optimally to counter threat perceptions that the metrics do not actually support (Mueller 2005). It is in the nature of human beings to hold certain predispositions and expectations with respect to human behaviour on which they draw to separate signals from noise. Social constructivism and social identity theory have shown a shared sense of identity to reduce perceptions of intergroup threat and increase cooperation (Rousseau 2006; Rousseau and Garcia-Retamero 2007). Ergo, we can expect the psychological process behind threat perception to be particularly acute when appraising security issues, since (in)security often involves discordant identities. In assimilating data, observers have to decide on the criteria that guide the selection, interpretation, and evaluation of evidence. Attributes that influence threat perception include (Cohen 1978: 95): (1) The articulation of decision-makers – their expressions of judgment and of personal

reaction to the threatening cue; (2) descriptions of contemporary spectators of the state of mind of decision-makers; (3) explorations by decision-makers of alternative responses to the threat; and (4) “coping processes” put into effect by decision-makers in response to the threat. Any single one of these indicators may be present without the perception of a threat; their convergence, however, in the form of an appraisal indicates that “threat perception” is at work.

On the one hand, this collection deals with trend-based threats to Canada’s security. These threats are based on current observable trends that are likely to continue to shape transnational dynamics. On the other hand, a range of discontinuity-based threats that may emerge over the coming years are also discussed. These are threats that have the potential to affect Canada’s security situation in a “game-changing” way – that is, developments on the scale of a shock. It is in the interest of Canada, Canadians, and Canadian academics to give serious thought to transnational threats and external shocks that may affect the country’s security situation in the years ahead.

## **Environmental Scan**

The collection of research notes in this volume seeks to draw attention to transnational threats that will be confronting Canada over the coming years. Threats pose an imminent danger; challenges are merely a demanding situation. Most countries perceive threats as those that might result in territorial sovereignty being compromised. From this perspective, the dominant threats to much of the world’s security remain state-based in origin, such as major power realignments, major-power confrontation and conflict, and the proliferation and use of weapons of mass destruction, the rise of illiberal democracy and competitive authoritarianism, and the rise of neo-isolationism in the United States.

Canada’s situation is different. Canada’s territorial integrity may be challenged but not threatened. Many threats that Canada faces are not primarily state-based, at least not directly or explicitly: transnational crime, violent extremism, undocumented migrants, the illicit trade of people and goods entering and leaving the country, climate change, natural disasters and epidemics. Nonetheless, some of these threats are marked by influential state-based enablers, including states that are known to sponsor international terrorism, such as Iran, and states that are known to have engaged in hacking, cyberspying, and cyberespionage, such as China.

Brian D. Finlay opens the collection with a discussion of the challenges of trying to “manage across borders.” He focuses on the range of transnational and other threats faced by the contemporary global community, arguing that security policy is deeply influenced by the emergence of private actors as central cogs in the new global order, by the expansion of emerging markets in the Global South, and by the emphasis that will be placed on “whole of society” solutions to security challenges.

The economy, Jeremy Leonard argues, is an oft-overlooked challenge to national security. Examining the state of the global economy, and Canada’s place in it, Leonard suggests that we need to keep our attention firmly fixed on key issues, such as the implications of the shift to emerging economies, industrial espionage, and the position of the United States in the global economy, since the economic fate of the US in the decades ahead will have profound effects on Canada’s security situation.

Ron Deibert expands on Leonard’s concern about industrial espionage to look at the broader issue of cyber security and the emerging area of cyber security studies. His research suggests that Canada is lagging far behind in this area, with the government in Ottawa deeply exposed to cyber attacks of the sort that caused the Treasury Board Secretariat website to be taken off-line for months.

A third source of insecurity comes from demographic change. Christian Leuprecht argues that the rapid demographic changes that we are seeing in contemporary global politics – aging and population stagnation in the Global North and rapid growth with a “youth bulge” in the Global South – have considerable implications for security futures, particularly for Canada. Canada, he suggests, will experience push-pull factors in migration trends, as Canada is seen as an increasingly attractive destination for individuals, families and groups caught in conflict in different parts of the world, posing on-going challenges for the Canadian government to manage not only migration flows but also the socialization of immigrants.

The likely increases in flows of migrants as a result of demographic changes will place increasing pressures on Canada’s borders. The securitization of borders is examined by François Crépeau. He suggests that because irregular flows of people across borders is a permanent feature of contemporary global politics, measures to control the flows of people across borders cannot be treated as mere temporary measures; the government should aim to ensure that securitization measures are both constitutional and legitimate. Governments, he suggests, should also seek to alter the

discourse around migration, so that security issues “can take their real (not imagined) place” in policy-making.

The movement of people from the Global South to Canada highlights another challenge: movement from one type of urbanization to another. In the Global South, the informality of the urban political economy is the norm. However, while informality may be less visible in Canada, there is no lack of informal activities, ranging from squatting to the drug trade. Julie-Anne Boudreau examines the implications for Canadian security of the informal sector, particularly the bottom-up transnational crime networks that increasingly pose a threat to Canada.

Three papers focus on the challenges to security posed by transnational criminal networks. James Sheptycki prefaces the discussion by noting how little we actually know about transnational crime in a Canadian context. He argues that what is needed is a new cadre of social science researchers who examine the micro-social structures of organized crime that can be connected to broader macro-social structures. For their part, Carlo Morselli and Mathilde Turcotte examine the impact of drug trafficking, prostitution and illegal gambling, arguing that criminal networks must be seen as dynamic and flexible actors that are highly sensitive to their environment, but also therefore capable of being affected by a responsive state, putting the police at the “heart of the solution.” Martin Bouchard argues that our understanding of transnational criminal activity could be enhanced using social network analysis that looks for a range of connections between individuals and groups based on friendship or kinship. What is common to these three papers is a recognition that more work needs to be done on transnational networks in order to develop appropriate policy responses.

Added to the threats posed by transnational criminal networks are threats posed by transnational extremism. Clark McCauley examines the mechanisms of radicalization of individuals and groups, focusing on terrorism and jihadist extremism. He suggests, however, that although there might be a recent decline in the number and severity of jihadist threats in North America, it is likely that other forms of extremist threats will increase, for example, from right-wing or eco-terrorist groups.

Most of the threats to security surveyed in this collection focus on threats posed by human actors and agents acting directly. Robert McLeman and Barry Smit, by contrast, examine the impact on Canadian security posed by climate change. They argue that the dramatic impact of climate change on Arctic waters, for example, will pose myriad challenges to Canadian

sovereignty in the Arctic. As the effects of climate change are felt globally, Canadians working overseas for the government as peacekeepers or aid workers are likely to be affected by instability in regions most affected by climate change. Most importantly, and dove-tailing with Leuprecht's observations about migration pressures, McLeman and Smit suggest that the effects of climate change will put increased pressure on both immigration and refugee movements to Canada.

These research notes are followed by a concluding reflection on some of the broad themes raised by the participants in the work, and in particular a discussion of the policy, program and research priorities that might be embraced for the future.

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## *Managing Across Boundaries*

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*Brian D. Finlay*

Even the most cursory review of the state of the world today leaves little doubt that it is being challenged by a growing array of vexing security threats that do not respect national borders or policy and bureaucratic stovepipes. Prevailing indicators reveal that these problems, often subsumed under the seemingly innocuous heading of “transnational threats,” are a growing cancer on the human condition and could result in an increasingly violent future and reversal of the very development opportunities that globalization has offered to date. For example:

- One quarter of the annual US\$4 billion small arms trade is unauthorized or illicit. Every day around the world, one thousand people die because of guns (International Action Network on Small Arms, 2006). And on average, 300,000 intentional firearm deaths occur each year as a direct result of armed conflict (Saavedra, 2007: 65).
- According to the US government, approximately 800,000 incidents of international human trafficking occur every year. This figure does not include the millions of others who are trafficked within their own countries. In total, the International Labor Organization (ILO) estimates that there are 12.3 million people around the world in forced labor, bonded labor, forced child labor, and sexual servitude. Other estimates range up to 27 million individuals (US Department of State, 2008).
- From January 1993 to December 2007, 303 incidents involving unauthorized possession and related criminal activities were confirmed by the International Atomic Energy Agency’s (IAEA) Illicit Trafficking

Database (ITDB). Fifteen illicit nuclear proliferation incidents reported to the ITDB involved highly-enriched uranium and plutonium (International Atomic Energy Agency, 2008). Just five or six kilograms of highly-enriched uranium – about the size of a grapefruit – would be sufficient to build a crude terrorist nuclear weapon capable of killing tens of thousands of people with a single attack.

- The spread of counterfeit goods has become global in recent years and the range of goods subject to infringement has increased significantly. According to studies by the Counterfeiting Intelligence Bureau (CIB) of the International Chamber of Commerce (1997), and the Organisation for Economic Co-operation and Development (2007) suggest that counterfeit goods make up 5 to 7 percent of world trade. Indeed the US Federal Bureau of Investigation (FBI) believes that the first bombing of the World Trade Center was financed by the sale of fake Nike and Olympic t-shirts by followers of Sheikh Omar Abdul Rahman (Mintz and Farah, 2002).
- As the international financial industry ballooned through the 1990s, it brought with it a proportional expansion in money laundering. By 1998, then-director of the International Monetary Fund (IMF) estimated the global flow of dirty money to be at 2 to 5 percent of the global economy. More recent estimates place the flow of laundered money at upwards of 10 percent of the global gross domestic product (Naím, 2005: 16).
- According to the UN Office on Drugs and Crime (2008a), the global drug trade is worth an estimated \$322 billion annually with 52,356 metric tons of opium, cannabis, cocaine, and amphetamine-type stimulant produced each year. According to the US Drug Enforcement Administration (2011), the social costs of drug abuse in the United States are approximately \$160 billion per year. An estimated 0.6 percent of the planet's adult population – about 26 million people – are considered to be problem drug-users (UN Office on Drugs and Crime, 2008b).

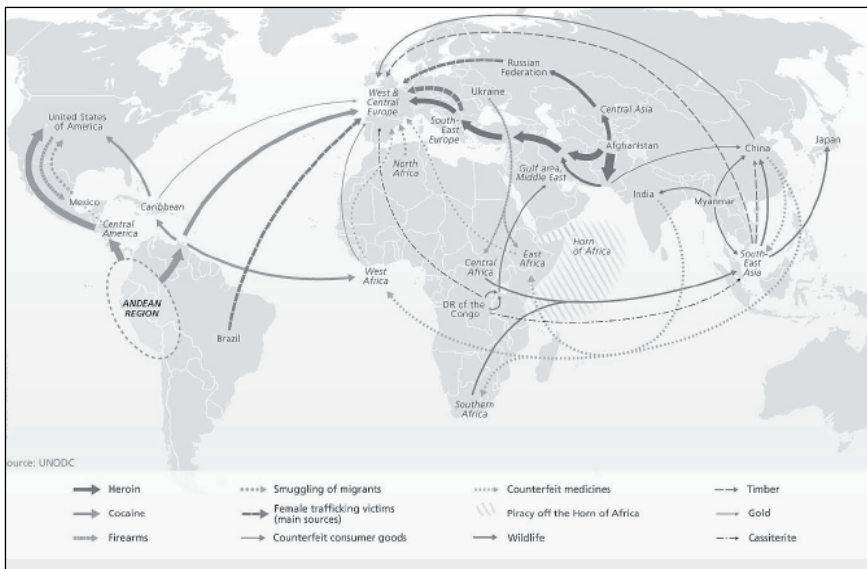
Although each of these transnational threats is a costly tragedy in its own right, the aggregate consequences reach much further. Criminal networks prey on weak and failing states, capturing key government agencies, undermining and ultimately controlling many of the critical functions of government, such as customs and border controls, the judicial system, police and banks. Smuggling and trafficking also raise direct concerns for human security, contributing to the persistence of intra- and interstate conflict which, in turn, stunts economic growth and development nationally



and often regionally. These factors can also contribute to large migrations of people across borders in search of safety or freedom from political oppression. The immediate implications for the local populace are often dreadful, but the repercussions just as often extend beyond the borders of the fragile state. According to the US Drug Enforcement Agency, terrorist “enablers” in the Tri-Border Area of South America funnel the profits of their drug enterprises through money laundering operations to Islamic Jihad and Hezbollah. Al Qaeda was able to grow and flourish in Afghanistan by co-opting the government of the Taliban. With near absolute freedom of action, the terrorist group was able to build a global network to fund its activities and ultimately wage a worldwide campaign of terror that led to the tragedy of 9/11.

**FIGURE 1**

**Map 1 – Main Global Transnational Crime Flows**



Source: United Nations Office on Drugs and Crime, 2010: 2.

Meanwhile, the size and scope of these challenges are so vast that they threaten to overwhelm the capabilities of even well-intentioned governments to defeat them. Prevailing models of government organization and the policy toolkits that support them are being capitalized upon by new global actors

— organized criminals, terrorists, nefarious business entities — so as to remain one step ahead of regulators and law enforcement. Whereas governments have parsed responsibilities into separate threat silos across an array of departments and agencies, illicit traders and traffickers have become economic agents who have developed functional specialties rather than unique product niches. In short, the privileges of national sovereignty are being turned into burdens and constraints on governments. This has led some to conclude gloomily that humanity is destined to lose its struggle against this dark side of globalization. Counter-trafficking strategies based solely upon government action are destined to founder on the inherent limitations of governments: national frontiers and bureaucratic processes. As such, not just “whole of government” but “whole of society” approaches must be developed to establish common bridges between actors with a vested interest in the legitimate benefits of globalization across the public and private sectors.

Disturbing statistics aside, history shows that uncontrollable violence fomented by these global ills is not inevitable. Mass violence on down to low level criminal behaviour can be tempered, and even prevented, with proactive diplomacy, habits of preventive investment, more effective mechanisms for controlling the production and movement of destructive weaponry, technologies, and illicit substances, enhanced protections for vulnerable populations, wider collaboration with key nongovernmental and industry actors, and a viable portfolio of standards and regulations based on a normative consensus regarding the responsibilities of governments towards their people and private sector players towards each other.

## **Global Political Trends**

Three trends in particular are likely to help shape the border security landscape and governance/decision-making around the globe over the next decade:

- the emergence of private actors as central cogs in the new global order;
- growth and prosperity across emerging markets of the Global South;
- and the resulting growing need for “whole of society” solutions.

### *Pervasive Role of the Private Sector*

As a direct result of globalization, the capacity to contribute to illicit activities has been placed in more hands, in more countries, in more corners of

the globe than at any other time in history. As private companies, initially in the developed world, gained access to new technologies, they sought to maximize profit and efficiency through outsourcing, off-shoring, supply-chaining, and other activities that drove intellectual and manufacturing capacity beyond Western shores. The corresponding transfer of information, processes, and technology led to the generation of new local enterprises, including subsidiary operations that collaborated with or competed for global market share. Soon, states that were thought to have lacked the indigenous expertise to perform complex research and development and manufacturing operations began to develop competitive industrial sectors (Fitzpatrick, 2007: 12). Over time, legitimate entities were co-opted into taking advantage of illicit trade either knowingly or unwittingly, and black market activities facilitated by and capitalizing upon this industry flourished.

Private companies also form the basis of the global circulatory shipping system through which the lion's share of trade occurs. Containerization, larger and more efficient ships, roll-on/roll-off cargo container vessels, new loading and unloading tools, more efficient port management, improved logistics, and satellite navigation and tracking all became part of a critical circulatory system within which globalization itself was able to flourish. In 2007, the volume of international seaborne trade reached an unprecedented 8.02 billion tons, while total air freight transported worldwide accounted for an additional 41 million tones on 29.3 million scheduled flights, serviced by 3,730 different airports around the globe (UNCTAD, 2008; ICAO, 2007). Since 2003, global container trade has averaged double-digit growth annually. At any given moment, there are some 20 million intermodal freight transport containers moving around the globe. More than 4,600 ships carry many of those containers on over 200 million trips per year (World Shipping Council, 2011).

As the global flow of legitimate goods grew, however, so too did the transshipment of illicit items – small arms, weapons-grade materials and technologies, drugs and counterfeit products. In unprecedented numbers, small and large scale traffickers began leveraging the legitimate supply chain to transport their illegal wares undetected amidst the burgeoning shipping and air freight industries. As the activities of this global underworld expanded, civil violence was fed with seemingly limitless supplies of small arms and light weapons, an astonishingly lucrative trade in counterfeit intellectual property began crowding legitimate markets sometimes funding terrorist activity, and the colossal profits of the illicit drug trade fed corruption and destabilized governments around the globe.

The common thread linking each of these transnational challenges is the global shipping industry without which the mass movement of both licit and illicit items could not occur. Identifying innovative means by which to transform that industry from a conveyor belt into a “choke point” for these illicit items *without* hampering competitiveness of “good actors” will be critical to deter further penetration by criminal elements and contain these worsening human scourges. As governments of the developed world reach the reasonable limits to their regulatory authority, convincing these often recalcitrant private sector actors of the merits of heightened (and often costly) security standards will require innovative new approaches that appeal both to the profit motives of private industry as well as the security priorities of governments. Regrettably, this has come at a time when the state of business-government relations are suffering under the after effects of the economic crisis and a mutual suspicion based in part upon a mutual lack of understanding.

### *The Rise of the Global South*

Despite the emergence of an array of transnational threats linked to globalization, it is equally clear the resulting dynamic has yielded direct benefit to many around the globe. In the past five years alone, more than half a billion people have been freed from grinding poverty and the implications of being forced to live on less than \$1.25 per day. Much of this success is attributable to the positive forces of globalization. As these capacities have spread into countries where governance and border security standards are lacking, convincing many governments of the Global South to take a more proactive role in combating an array of transnational threats is proving to be a significant challenge. This is both due to the perception that: enhanced security standards will threaten national prosperity, and the reality that other pressing national needs combined with capacity shortfalls yield a lack of prioritization, even when political awareness is raised.

In the face of these more immediate threats to human security and development, it is unsurprising that there is limited bandwidth in much of the world to sustain wide-ranging programmatic efforts to systematically address pressing transnational threats as defined by “the North.” Without capacity, or occasionally even motivation, to address these challenges, it is feared that the Global South could emerge as the next generation incubator of transnational criminal activity, environmental degradation, political extremism, and a host of other threats to international peace and security.

This has created a central disconnect between the security priorities of more economically advantaged countries, and the rest of the world where these new transnational threats are forming. As a result, security conscious governments must alter the terms of the debate. Preaching international standards and mandates will become increasingly ineffective as these emerging economies gain strength. Instead, new paradigms of engagement that appeal mutually to their enlightened self interest, as well as to global security priorities must be developed to ensure sustained engagement.

The story of these emerging powers is often characterized in economic terms. Yet governments across the South are just as often forging new roles in areas of global security. This collection of global aspirants including Indonesia, Argentina, Turkey, Egypt, Colombia, and Nigeria are increasingly bypassing traditional processes developed and dominated by Western governments. Brazil, South Africa, India, and Iran, for example, are seeking footholds in Africa. Wealthier Arab Gulf states are providing assistance to far flung countries with large Muslim population: Bosnia-Herzegovina and Tajikistan. And Brazil and China are developing partnership across the Middle East and Southeast Asia. (Paczynska, 2011) While much of this activity is driven by economic impetus, it also has very clear geopolitical and security dimensions.

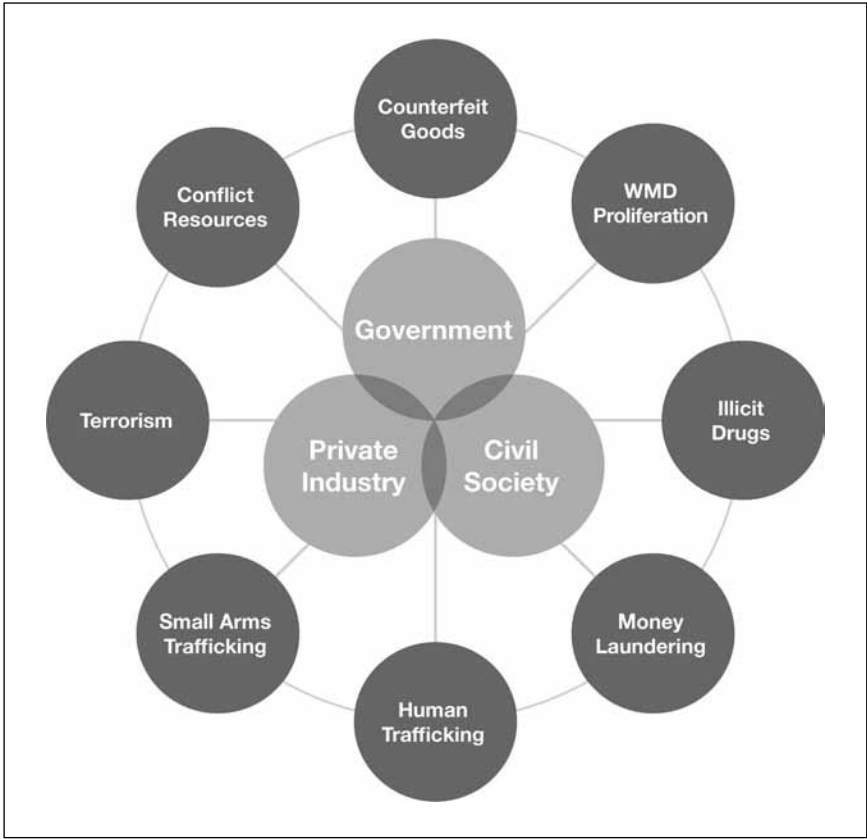
Although these developments are frequently viewed in negative terms, they may represent a significant opportunity for Western governments to leverage the new capacities of these new pivotal powers in ways that spread global responsibilities more widely and equitably, while also displacing unwanted geostrategic burdens. Recent patterns of shared responsibility on border security management in Latin America, the Pacific Islands, Southeast Europe, Eastern Africa and elsewhere suggest that innovative South-South approaches could help to more sustainably address a wide array of transnational threats. Identifying motivations and better tailoring cooperative relationships with these increasingly important governments will be key to managing these challenges into the future.

### *Mounting Need for “Whole of Society” Solutions*

Ironically, there is much to be learned from the scurrilous gray market entrepreneurs who have learned to adapt to and exploit the forces of globalization for private gain. Governments are being forced to work innovatively and more seamlessly across the traditional boundaries that have hampered efforts to alleviate these transnational threats. These boundaries

include: agency stovepipes within governments; barriers to collaboration across national borders; a reluctance to engage sub-state actors in the national security dialogue; and mounting downward pressure on government security budgets.

**FIGURE 2**



Source: <http://www.stimson.org/programs/managing-across-boundaries/>

Many of the transnational threats mentioned above have common solutions, but worsening statistics across almost all suggest that governments have yet to respond with a comprehensive strategy that would significantly mitigate their consequences. This can be attributed in part to the prevailing mode of international and government organization – policy silos across functional

areas within distinct departments and agencies whose relationship is more often characterized by competition than by cooperation. Seldom are transnational threats considered broadly in the context of common traits by a single government body. Instead, they are examined through defined parameters: threats to the homeland versus foreign threats; criminal versus terrorist threats; and threats by form or function: small arms versus illicit drugs versus humans versus counterfeit pharmaceuticals. As a result, programs are developed in stovepipes and often fail to fully leverage the full spectrum of useful government resources, much less industry and other non-state assets.

What is clear is that until all sectors and levels of society – including, most significantly, the private sector which increasingly controls the means of production and distribution of these transnational ills – adapt with greater cooperation and mutual transparency, the dark side of globalization will continue to gain ground and potentially outstrip the benefits of our expanding global connectedness. Moreover, these seemingly disparate challenges will continue to pose a direct threat to international security by weakening states around the world, providing critical terrorist funding, and driving the need for foreign military intervention.

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# *Economic Globalization and Canadian Security*

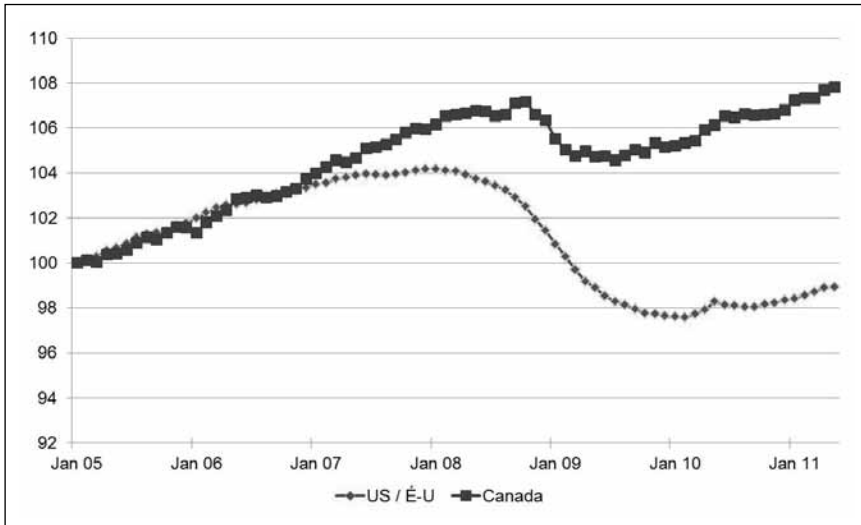
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*Jeremy Leonard*

## **The State of Knowledge**

There is no shortage of empirical research on Canada's current economic situation and outlook. Both the Bank of Canada and the major chartered banks produce voluminous quantitative work on Canada's near term macro-economic prospects as well as the underlying factors that influence them. In addition, think tanks such as the Institute for Research on Public Policy, the C.D. Howe Institute, the Conference Board of Canada and others examine how government policies affect the longer-term health of the economy.

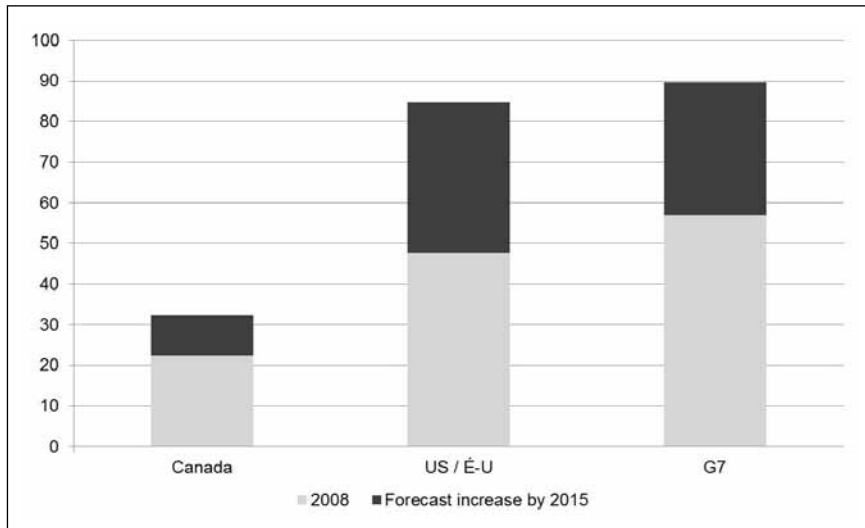
Compared to other major industrialized nations, Canada weathered the financial crisis and ensuing "Great Recession" of 2008-2009 well. There were no bank failures, and home foreclosures barely rose. Peak-to-trough, real GDP declined by 3.7 percent, compared to 4.1 percent in the United States and 4.9 percent for the G7 nations as a whole. Job trends tell an even more compelling story: total employment dropped by 2.2 percent in Canada, compared to 6.3 percent in the United States, and Canada has recouped all net job losses while US employment is still 5 percent below the pre-recession peak (Figure 1).

**FIGURE 1****Employment (index Jan-05 = 100)**

The proximate reasons for this are well understood and reflect global economic trends and government policies that were in place before the economic downturn. Canada was able to avoid the worst of the financial crisis thanks to regulations that required banks to maintain conservative capital reserves and prevented the widespread use of subprime mortgages and zero-down payment house purchases. In addition, prudent fiscal management in the fifteen years prior to the recession, largely under the stewardship of former finance minister Paul Martin, gave the current government the ability to inject fiscal stimulus when it was needed without jeopardizing long-term budget sustainability (Figure 2).

However, the main reason for Canada's ability to bounce back from the recession relatively quickly transcends domestic economic management. It is due to the soaring global appetite for the crude oil and industrial metals with which Canada is fortunate enough to be endowed. Thanks to steady commodities demand in China, the recession proved to be a mere hiccup in demand, and by mid-2010 commodity prices had risen sharply to approach pre-recession levels, to Canada's great benefit.

**FIGURE 2**  
**Net Government Debt**



### **Broad Trends and Empirical Findings**

Expanding on this brief sketch, there are three megatrends that will affect the Canadian economy over the next decade.

#### *Protracted Economic Weakness in the United States*

For the first time in the post-World War II era, the United States economy is lagging rather than leading the global economic recovery, despite nearly US\$1 trillion of fiscal stimulus, central bank short-term interest rates that have been at virtually zero (negative once the effects of inflation are taken into account) for the past two and a half years, and two rounds of “quantitative easing” (totalling US\$1.2 trillion) that are intended to lower long-term interest rates and stimulate borrowing and investment.

The fact that the US economy has been resistant to Herculean policy efforts to jump-start it suggests that structural rather than cyclical factors are to blame, and that is what much research shows. Courchene (2011)

identifies two fundamental challenges facing the United States. First is the unsustainable fiscal path, which is starting to worry the international investment community and could put global economic stability at risk if not managed properly. A second more pernicious trend is increasing income inequality that, along with the housing crisis, has eviscerated the US middle class and reduced the upward mobility that is the very core of the American dream. Courchene argues that the transformation of the United States into a “winner-take-all” model of capitalism will prove to be its undoing unless corrected.

US economic weakness has an adverse effect on Canada at many levels. The most obvious is economic: almost three-quarters of Canada’s exports (equivalent to just under 20 percent of total economic output) is destined for the American market, and the sluggish US recovery is one of the primary reasons that the Canadian manufacturing sector continues to struggle.

But at a more strategic level, a diminished United States also reduces the influence of Canada in global affairs by association. During the US global leadership of the post-World War II era, Canada’s geographic and cultural proximity to the United States, gave it a special role in global affairs, both as an “honest broker” in North American and its privileged access (and influence in some instances, though arguably many fewer than Canadians would like to believe) to US thinking and motivation with regard to policies affecting international trade and security.

### *Rise of Emerging Markets*

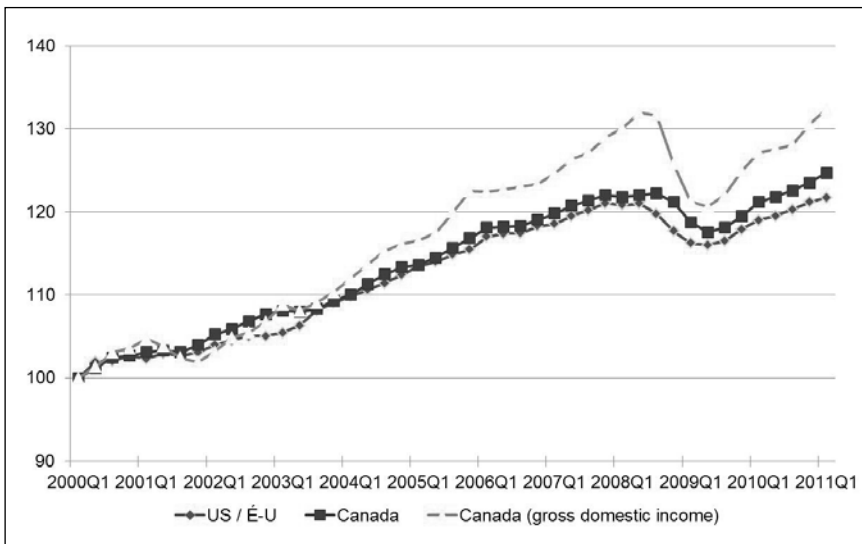
The second important trend is the continuing economic rise of the “BRICs” (Brazil, Russia, India and China). While this is far from being new development, ascribing all forces economic to the BRICs, as is often the case in the business press, trivializes the assertion and strips it of its concrete meaning.

From the perspective of Canada, rapid economic growth in China and other large emerging markets is important for two primary reasons. First, they are at a resource-hungry phase of development: China alone accounts for nearly 40 percent of demand for industrial metals and 10 percent of demand for crude oil. Chinese demand for crude oil in particular is expected to accelerate dramatically in the coming years as automobile ownership soars. As a major exporter of petroleum, natural gas and industrial metals, Canada has benefited from soaring demand and high prices, which has not only enriched the natural resource sector directly, but also has led to a significant increase in broader purchasing power.

To illustrate, one can compare the growth rate of real gross domestic product (the value of goods and services produced in Canada) with that of real gross domestic income (the purchasing power that results from selling those goods and services). From 2003 to the beginning of the recession, real GDP in Canada increased by 13.1 percent, while real GDI increased by 20.1 percent – more than half again as much (Figure 3). This improvement in the “terms of trade,” as it is known in economic parlance, transferred hundreds of billions of dollars of purchasing power from resource-consuming countries to Canada in the six years prior to the recession, a trend that continues today to drive robust domestic demand.

**FIGURE 3**

**Gross Domestic Product (index 2000Q1 = 100)**



A second reason for focusing attention on the BRICs is the large potential market for Canadian non-commodities exporters. As alluded to earlier, a nascent middle class is growing rapidly, particularly in China and Brazil. This presents an opportunity for Canadian firms, both via direct export and via integration with US supply chains. Emerson (2011) notes that developing the Pacific gateway would help cement Canada’s place in the North American production platform.

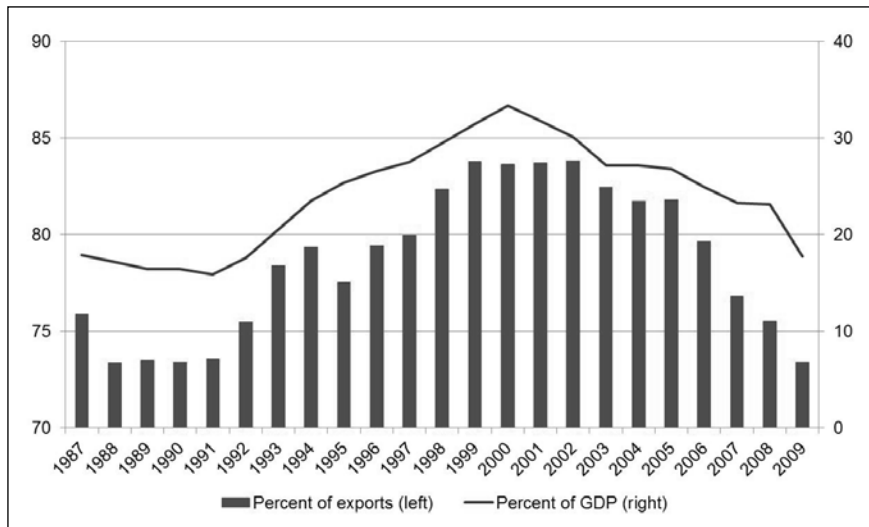
### *Population Aging*

A final trend, common to all developed countries, is the rapid aging of the population. This has important long-term implications for the growth potential of the Canadian economy. The “speed limit” of any economy is the sum of growth in the labour force and growth in productivity. In lay terms, the economy can grow only as fast as the quantity and quality of work effort it has to offer. For the past twenty years, economic growth in Canada has been shared more or less equally between the two. But as the baby boomers start to retire in larger and larger numbers, labour force growth is projected to drop to only 0.25 percent annually by 2016, even taking into account the partly offsetting effect of immigration and higher labour force participation of older workers (Denton and Spencer, 2009). Without a marked acceleration of productivity growth, Canada’s economic speed limit could be cut in half over the next several decades. As noted in Brox and Leonard (2009), this will require efforts to stimulate innovation, investment in information technologies that lead to more efficient production and higher-quality products, and assuring that the skills of Canadians are used to their full potential.

### **Implications for Canada and Canadian Security**

The economic watchword of the next decade is continuing globalization, with an economic centre of gravity shifting decisively away from North America and toward emerging markets, particularly China and India. As a result, Canada’s trade dependence on the US, while still considerable, has been reduced (Figure 4). This has benefited Canada over the past decade via the positive impact of strong natural resource demand, a trend which will in all likelihood continue for the next decade.

Nonetheless, Canada needs to make several key strategic decisions about how to position itself during the transformation. Should it proactively engage the emerging markets directly via bilateral trade agreements (as the government has announced for India), deepen North American economic ties as advocated by Hart (2007), or depend on the stalled Doha round of multilateral trade liberalization? Georges and Mérette (2011) show that building trade ties with emerging markets has larger economic benefits over the long term than deepening continental ties via a customs union, but there are other options for streamlining North American trade as noted in Dobson and Kuzmaonvic (2010). If successful, the “Beyond the Border”

**FIGURE 4****Canadian Exports to the US (percent of total)**

initiative will open up new opportunities regarding trade and new challenges in terms of security.

The rise of China as an important player in the global economy has tremendous implications with regard to security. While rigorous research on many of these issues is not yet well developed, the risks fall into two broad categories:

- *Economic espionage.* It is widely believed that China is actively sanctioning economic espionage in North America, both via cyber-attacks and agents operating in the country, and it is probably not alone. As trade linkages multiply, these risks are likely to increase. Anecdotal evidence suggests that the Chinese spy presence is particularly large in Canada.
- *Intellectual property protection.* Counterfeiting of everything from DVDs to automobiles is commonplace in China. There is also anecdotal evidence that North Americans are being compelled to share sensitive technologies. For example, Ford and Toyota have been told that they must share electric-vehicle technology in order to gain access to Chinese markets. In the knowledge economy, protection of IP is paramount.

Finally, Canada must grapple with the remote, though not impossible, scenario in which the United States does not succeed in addressing its structural economic challenges and sees its relative importance in global affairs gradually diminish. As noted earlier, this would have obvious adverse economic consequences for Canada, but could raise longer-term strategic questions with regard to security and Canada's role in the world.

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# *Cyber Security*

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*Ron Deibert*

Cyberspace is the domain of global digital electronic telecommunications. Broader than the “Internet,” it includes the entire spectrum of networked information and communication systems worldwide. As cyberspace permeates all aspects of society, economics, and politics, it is now widely recognized as “critical infrastructure” by governments around the world. At the same time, cyberspace is entering into a period of intense contests and potential chaos, as a multitude of different actors (states, civil society, private sector) struggle to shape the domain in their strategic interests and deal with a wide range of new threats that have emerged, including cyber crime, espionage, and warfare. Cybersecurity is the field of practice that covers both threats to and through cyberspace (Deibert and Rohozinski, 2010).

## **Cybersecurity Research**

Cyberspace is a relatively new field of study for security scholars. Like any new field, scholarship that explores the intersection of cyberspace, international security, and global affairs is nascent and fragmented amongst a range of sub-disciplines and theoretical foci. For example, the major international relations (IR) journals have only seen a few articles on cyberspace. Searches for terms related to the field of the politics of cyberspace (“cyberspace,” “Internet,” “ICT”) in the ten IR journals with the highest impact factor in 2009 yielded only fifteen total results from 2000 to 2011. However, despite this gap in journal publications there are signs

that the community of scholarship on cyberspace is growing. For example, the number of articles presented at the annual International Studies Association (ISA) convention on cyberspace issues steadily increased from 2009 to 2011, and the 2012 convention of the ISA will focus on “Power, Principles, and Participation in the Global Information Age.” The defence and strategic studies literature on cybersecurity and cybewarefare is also growing substantially. The following sections outlines several major trends in cybersecurity, some research questions that relate to those trends, and examples from our own empirical work.

### *CyberWarfare*

Cyberspace is emerging as a new domain of war fighting. Cyberspace is now explicitly recognized in United States strategic doctrine as equal in importance to land, air, sea, and space (U.S. Department of Defense, 2006), and a dedicated strategic command has been established in the United States military around cyberspace. Although estimates vary widely, several dozen states are actively developing military doctrines for cyberspace operations (Hughes, 2010), while others may be employing unconventional cyberspace strategies. There is an arms race in cyberspace looming on the horizon that suggests a period of intense hostility operating within and through this domain. Questions of whether and how traditional concepts of strategic thought, such as deterrence, apply in the cyber domain are now very much alive in the strategic studies literature (Callaghan, 2008).

While the rhetoric of cyber war is often heated and exaggerated to serve policy ends (Walt, 2010), there are recent cases of international conflict in which cyberspace has played a prominent and important role. During the 2006 war in South Lebanon, for example, Hezbollah was able to dominate the information environment by exploiting the Internet and other technologies as part of its distributed communication infrastructure. Likewise, in Estonia, the state’s banking and public administration systems were brought to a standstill in 2007 as millions of computers from around the world were hijacked and harnessed together as a botnet to flood the country’s national backbone. Given the way that information and communication technologies permeate all aspects of society, economics, and politics today, it is impossible to engage in armed conflict separate from cyberspace. The key research questions are to what extent cyberspace matters.

The impact of cyberspace can clearly be seen in the international conflict between Russia and Georgia over the disputed territory of South Ossetia in

August 2008 (Deibert, Rohozinski, and Crete-Nishihata, 2010). Operations *in* and *through* cyberspace were present throughout the war and were leveraged by civilian and military actors on both sides. Russian and Georgian forces made use of information operations alongside their conventional military capabilities. Civilian leaderships on both sides clearly appreciated the importance of strategic communication, and targeted domestic and international media in order to narrate the intent and desired outcome of the conflict. The Internet played an important role as a redistribution channel of media products and communications, including news, influential blog sites, and rumors, that rapidly spread between individuals through e-mail, instant messaging, and word of mouth. Computer network operations, consisting of attacks designed to disable or degrade key infrastructure, and exploitation or hijacking of government computer systems, were present during the conflict and employed by both sides (or their sympathizers). In particular, numerous Georgian government Web sites, and a few Russian media Web sites were subject to large scale distributed-denial-of-service (DDoS) events. The command-and-control servers responsible for the DDoS against Georgian systems and Web sites, as well as the source of other forms of malicious hacking, originated from networks and resources located in the Russian Federation, or on Russian telecom operators. The Russian government has never claimed responsibility for these activities and it remains ambiguous as to whether these cyberspace operations were coordinated, encouraged, or officially tolerated by Russian authorities. This ambiguity in and of itself is significant, as it points to an important emergent property of war fighting in the cyber domain that should be the focus of future security research.

### *CyberArms Control*

Many dismiss the relevance of arms control to cybersecurity. Information – the central ingredient of cyberwarfare – is thought to be impossible to control in today’s digitally networked and highly distributed environment. Moreover, attackers can hide their tracks and muddy attribution, making verification of any arms control agreement difficult. However, there are reasons to believe that lessons can be derived from arms control regimes that do not restrict classes of weapons but actor behaviour or behaviour in domains (e.g., outer space, Antarctic, etc). There is also a largely informal and quite influential cybersecurity “epistemic community” that cuts across public and private sectors that secures cyberspace in an ad hoc but

occasionally very coordinated fashion that could be thought of as a form of cybersecurity control. The takedown of the Coreflood botnet in April 2011, resulting in a major decrease in global spam traffic, was coordinated via this community.

### *Cybercrime, CyberEspionage, CyberWarfare*

Although cybercrime has formed a hidden shadow along every step of the Internet's history, its growth has suddenly become so explosive in recent years by virtually any estimate that it is beyond control, and perhaps even beyond estimation. According to security companies there are around 80,000 new malicious software (malware) samples discovered every day, with the number rising steadily. Massive botnets – global networks of infected computers – now routinely count in the tens of thousands worldwide. A huge black market for cybercrime tools and products thrives as a kind of hidden underbelly of globalization, driving everything from petty identity theft to high-stakes political and commercial espionage. If precise estimates could be obtained, it would surely rank as one of the world's largest economic growth sectors, as millions of new digital natives from the developing world find a rewarding and elegant means to personal enrichment.

Cybercrime is connected to security issues in a variety of ways. Beyond the obvious impact on public and private institutions' information and communications security, there is considerable evidence to suggest a blurring of cybercrime, cyber espionage, and even cyberwarfare is occurring. One feature of any of the numerous high-level breaches in recent years is that the techniques and tradecraft employed by the attackers were largely indistinguishable from those employed in conventional cybercrime. These developments suggest an important and potentially fundamental transformation of the world of signals intelligence and espionage. Going further, the Stuxnet worm that in July 2010 targeted Iranian nuclear enrichment facilities showed how an "Frankenstein" of cybercrime tools and methods can be brought together to sabotage a state's critical infrastructure (Farwell and Rohozinski, 2010). That case is seen by some as a watershed in the evolution of cyberwarfare. It is also noteworthy in this respect that the botnets used in the attacks against Georgian government websites during the August 2008 conflict were re-purposed from the world of cybercrime. We should expect a further blurring of boundaries of these areas as the ecology of cybercrime continues to expand and insecurities in cyberspace grow.

*Cyberspace Controls and Counter-Controls/Social Mobilization*

There has been a sea-change the world over in the way governments approach cyberspace. Ten years ago, states were either oblivious to the Internet or took a laissez-faire approach; today they are moving swiftly to assert their power and shape the domain in ways that suit their strategic domestic and foreign policy interests. Whether for purposes of copyright control, anti-terrorism, or to shore up regimes from meddlesome human rights and opposition networks, governments are building up an advanced suite of cyberspace controls, ranging from filtering and surveillance to computer network exploitation.

For example, since 2003 the OpenNet Initiative project (a collaboration among the Citizen Lab at University of Toronto, Harvard University's Berkman Center, and the SecDev Group) has documented the growth of cyberspace controls through testing and research conducted in more than 70 countries worldwide (<http://opennet.net/>). Its research shows that more than 40 countries engage in Internet content filtering in some manner (Deibert, 2008). It has also documented the growth of second and third generation control techniques, ranging from regulations, informal pressures, targeted surveillance, information projection and denial, and computer network attacks (Deibert, 2010). Pro-patriotic computer network attack groups have sprouted up in Syria, Iran, China, and Burma, infiltrating opposition groups and creating a climate of fear and self-censorship. Governments with more "territorialized" visions of cyberspace controls are not just exercising their muscles in domestic contexts; they are developing a very ambitious and increasingly internationalized strategy, coordinated through regional venues (like the Shanghai Cooperation Organization) and standard-setting bodies that were once largely restricted to technical discussions (e.g., ICANN, IETF).

This greater assertion of state power is not going unchallenged. In fact, these growing controls are largely in direct response to the ways in which new information and technologies have enabled new forms of social mobilization and even regime change, as witnessed in the coloured revolutions of the countries of the former Soviet Union and more recently in the "Arab Spring." Networks of civil society actors, in some cases openly supported by countries like the United States and the European Union, and by private sector actors like Google, are developing a vast array of techniques and methods to circumvent state controls. The stakes are becoming more acute as governments and civil society actors' battles in cyberspace spill

into battles in the streets, as the contests in Tunisia, Egypt, Libya, Yemen, and Syria demonstrate (as well as Belarus, Burma, Thailand, Kyrgyzstan before them).

### *Political Economy of CyberSecurity*

The vast majority of cyberspace is owned and operated by the private sector. As governments begin to impose greater controls and assert security strategies, a greater demand is placed on private sector actors to police and secure the communications they control. In authoritarian contexts, such pressures have become extensive and far-reaching, including requirements to monitor users, retain and share data, and engage in content filtering. Naturally such demands can be awkward for private sector actors, raising questions of accountability and transparency. Research-in-Motion, the Canadian maker of Blackberry products, has been dogged by such demands to the point of seeming frustration. When asked by the BBC whether RIM had made deals to hand over its encrypted data to security services, CEO Mike Lazardis cut short the interview.

Some companies have seized on the commercial opportunity opened up by cyberspace contests; a massive cybersecurity market, now measured to be anywhere between \$80 and 150 billion annually, provides filtering, data mining and fusion, and computer attack capabilities to security services worldwide. One of our research projects, the OpenNet Initiative, has documented how a Canadian company, Netsweeper, provides censorship services to the regimes of United Arab Emirates, Qatar, and Yemen. While attention is often focused on actions of government agencies, the private sector controls far greater volumes of information and communication, and a huge market for the commodification of “big data” is having an impact on cybersecurity. A growing cybersecurity military industrial complex may be starting to sway public security policy in a number of countries (Brito and Waktins, 2011)

### *Politics of CyberSecurity Strategy*

Although security is often defined in technical-functional terms, security is always an essentially contested concept. As cybersecurity strategies are being rolled out worldwide, the study of the politics of cybersecurity is becoming more important. Drawing from securitization theories, cybersecurity paradigms can be compared in terms of the object of security (that

which is to be protected), the threats that are envisioned, and the policies that flow from the objects and threats (Hansen and Nissenbaum, 2010; Deibert, 2002). Research in this area raises questions of the appropriate balance between national security and civil liberties and human rights, such as privacy and freedom of speech, as governments struggle worldwide to cope with the threats emanating from this domain.

### *Ethics and Principles of Research Methods*

Our research group, the Citizen Lab (<http://www.citizenlab.org/>), has been involved in several cases of cybersecurity research where ethical and legal issues confronted us directly. The cases include documenting major global cyber espionage networks infecting thousands of computers in hundreds of countries (Information Warfare Monitor, 2009), recovering copies of hundreds of classified documents that were exfiltrated from victims in national security establishments and embassies (Information Warfare Monitor, 2010), downloading from Chinese-based servers evidence of millions of personally-identifiable chats that were obtained without consent by a covert surveillance system (Villeneuve, 2008), and revealing the operations of a major global cybercrime network (Villeneuve, 2010). In these and numerous other instances, we were faced with ethical and legal dilemmas ranging from the nature of our methods, to the retention and storage of data, to responsibilities we may have notifying victims, law enforcement, intelligence, and foreign governments. As the research area was novel, with very few prior cases of relevance, there was little to no precedent for us to guide the choices we made. In many ways we were (and to a large degree still are) in *terra incognita*.

All research methods entail ethical considerations. Over time, scholars adhere to protocols and best practices that are conventionalized within the discipline, as well as local laws of the jurisdictions within which they live. Research areas that are novel, however, present special challenges as boundaries and legal limits around acceptable practices and methods may not be settled, and there may not be an obvious set of precedents from which to draw. As a dynamic, newly emerging, and increasingly contested domain that cuts across numerous political jurisdictions, and public and private sectors, research on cyberspace politics and security squarely falls into the latter category. There are at least three distinct areas of concern: methods; data-handling; and notification (to law enforcement and intelligence and to victims and hosting providers). We are presently preparing

a major report, based on an interdisciplinary workshop held in Toronto in January 2011 that examines these issues in detail.

## Issues for Canada

The Canadian government is late to the cybersecurity arena, and only recently released a cybersecurity strategy in the fall of 2010. It devotes relatively few resources to the problem, does not fully address the division of appropriate institutional responsibilities, and only barely nods at the importance of a foreign policy for cyberspace. Not surprisingly, Ottawa's capacity to engage forcefully and strategically on these issues has been muted.

Canada is not a forceful presence in the international arenas where cyberspace governance is debated and territorialized controls are being normalized by China, Russia and other democratically challenged states. A recent investigation revealed our public sector infrastructure was so thoroughly infiltrated with malicious activity emanating from foreign jurisdictions that the entire Treasury Board Secretariat was taken offline for months. A recent security study ranked Canada third among countries for the hosting of malicious content (Deibert, 2011).

Along with other liberal democratic countries, Canada's interests and values align with a secure and open commons of global information. How to ensure that the ecosystem of cyberspace evolves in that direction, in spite of major trends to the contrary, will be a major challenge.

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# *Security Implications of Demographic Change: A Canadian Perspective*

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*Christian Leuprecht*

The world is at a demographic crossroads. Hitherto, high birth rates had ensured predominantly young populations with few older people. War and epidemics, such as the plague, would intervene to depress population growth. By contrast, depressed population growth today is a function of an historically unprecedented decline in birth rates: women are consistently having fewer (or no) children than at any previous time in history (for reasons that are beyond the scope of this research note). Demographically, the world is entering unknown territory owing to historically unprecedented changes in the three variables that make up demography: fertility, mortality, and migration. Differentials in fertility and mortality are not just affecting population structure. Population structure affects political stability, and political instability tends to be a catalyst for migration. By gaining a better grasp of the demographic drivers of political and economic in/stability, Canada can take strategic action to mitigate push factors of migration. Canada's capacity to act in concert with allies, however, is constrained by the costs and stagnant tax base associated with population aging which, in an age of fiscal austerity, is bound to increase competition over scarce resources among different policy priorities and strategic objectives.

## **Current State of Knowledge**

Rarely can analysts claim to be documenting new phenomena. Population aging, however, is one of these revolutionary developments. Never before has humanity witnessed such dramatic, widespread aging among the world's most industrialized and powerful democracies. Two long-term demographic trends coincided to produce population aging: decreasing fertility rates and increasing life expectancy. Fertility rates refer to the average number of children born per woman in a given country. For a state to sustain its population (assuming zero net immigration), fertility levels must exceed about 2.1 children per woman. Today the United States is the only liberal democracy that comes close to meeting this requirement. Most other liberal democracies fell below this threshold some time ago.

While population stagnation and decline mark the global north, population growth will be concentrated in developing countries throughout the global south that are projected to add around 2.3 billion people by 2050. Demographic trends are not only largely irreversible; but demographic projections are more accurate than for just about any other measure in the social sciences. The reason for this certainty is simple: the elderly of the future are already born. Except for some global natural disaster, disease pandemic, or other worldwide calamity, the number of people in the world who are over 65 will grow exponentially over the coming decades. Even in democracies with comparatively good demographic prospects, the proportion of that cohort is projected to double by 2040.

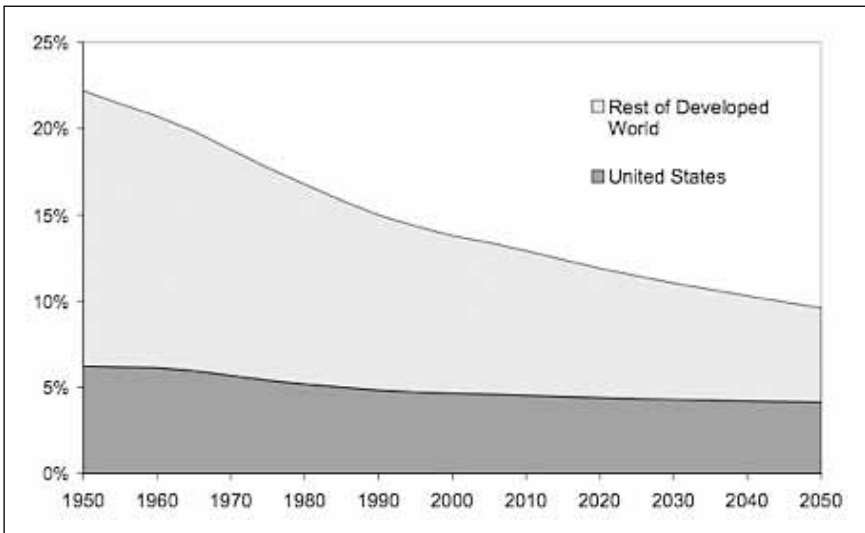
The strain on governments' resources from national debt and the cost of aging populations have the potential to exacerbate systematically both the number of fragile states and the extent and depth of that fragility. Fragile states are not only a catalyst for migration but tend to harbour organized crime and terrorism. The prospect of having to contend with a proliferation of fragile states with fewer resources at the allies' disposal could prove the single greatest security challenge of this century (Jackson and Howe, 2008: chaps. 4–5). This will likely be complemented by an already reduced capacity to realize other key international objectives, including preventing the proliferation of weapons of mass destruction (WMD), funding nation-building, engaging in military humanitarian interventions, and various other costly strategies of international conflict resolution and prevention.

## **Broad Trends**

Population aging will beset much of the world at some point this century. In fact, the aging problem in many developing states is likely to be as acute as for industrialized countries, but the former have the added disadvantage of growing old before growing rich, thus greatly handicapping their ability to pay for elder-care costs. For example, in China the comparative advantage associated with a large working-age population relative to a small proportion of children and elderly will begin to wane around 2015, a problem that will be further exacerbated by a growing excess of men over women. The ratio of working-age adults to elderly is projected to shrink from just under 10 in 2000 to 2.6 by 2050 when China's median age is projected to be just over 45 years of age. That median age will make China one of oldest populations in the world – older than Japan, the country with the oldest population today – and is projected to have a median age of 43 by then.<sup>1</sup>

As Figure 1 shows, the proportion of the world's population that resides in advanced industrialized democracies will continue to decline: from 24 percent in 1980, to 18 percent today, and 16 percent by 2025. This is a remarkable reversal: Between 1700 and 1900, Europe's population and its overseas offshoots had doubled its proportion of the world's total population from 20 percent to 40 percent. As late as 1950, Europe, Japan, and North America together comprised roughly one-third of the world's population, compared to one-fifth today and under one-seventh by 2050. That will translate into an expected total increase of less than 40 million people by 2030 (primarily concentrated in North America as Europe's overall population starts to shrink) as opposed to 1.5 billion people in the rest of the world.

In absolute terms, India's population will grow the most (by 240 million to 1.45 billion people followed by an increase of 100 million in China for a total population of 1.3 billion). Growth will also be robust throughout Africa, Latin America, and the Caribbean. By contrast, in Russia, Italy, Japan, and much of Eastern and Central Europe, the population will decline by as much as 10 percent. Bucking the trend are the traditional Anglo-Saxon settler countries – the United States, Canada, Australia, and New Zealand – where population growth between 2010 and 2025 is projected to exceed 10 percent. Its current growth rate of 1.4 percent notwithstanding, China's population, by contrast, is projected to start declining by 2025 (when it will officially be overtaken by India as the world's most populous country although many demographers already believe India to be more populous

**FIGURE 1****Developed World Population as a Percentage of World Total**

Source: UN World Population Prospects, 2008; for demographic scenarios see Jackson and Howe, 2008: Appendix 1, Section 3.

than China). Russia's population, by contrast, is projected to fall from 141 to 130 million by 2025 as its population ages rapidly. While these developments have but a moderate effect on the pecking order among the world's three most populous countries, Table 1 shows that the impact on "the rise and fall" of other "great powers" (measured by population size) is marked.

The scope of the aging process is remarkable. By 2050, at least 20 percent of the population in allied countries, but also in China and Russia will be over 65. In Japan it will be as high as one-third of the population. By 2050 China alone will have more than 330 million people over 65. Population aging, as Table 2 shows, is accompanied by a diffusion of absolute population decline. Russia's population is already decreasing by 500,000–700,000 people per year.

Global population is expected to grow by 1.2 billion by 2025, an increase of not quite 20 percent from the current 6.8 billion, and 2.3 billion by 2050. However, that is well below the rate of increase between 1980 and 2009 when the globe's population grew by 2.4 billion. While the rate of growth

**TABLE 1****Largest Countries Ranked by Population Size, 1950, 2005, and 2050**

<i>Ranking</i>	<i>1950</i>	<i>2005</i>	<i>2050</i>
1	China	China	India
2	India	India	China
3	United States	United States	United States
4	Russian Federation	Indonesia	Indonesia
5	Japan	Brazil	Pakistan
6	Indonesia	Pakistan	Nigeria
7	Germany	Bangladesh	Bangladesh
8	Brazil	Russian Federation	Brazil
9	UK	Nigeria	Ethiopia
10	Italy	Japan	DR Congo
11	Bangladesh	Mexico	Philippines
12	France	Vietnam	Mexico
		(14) Germany	(18) Japan
		(20) France	(26) Germany
		(21) UK	(27) France
		(23) Italy	(32) UK
			(39) Italy

Source: Adapted from Jackson and Howe (2008); future rankings for select developed countries which are projected to fall below 12th place are indicated in parentheses.

is decelerating, the impact of natural increase is still staggering. The populations of 50 countries are projected to grow by a third, in some cases by two thirds, by 2025 (which, of course, places additional stress on natural resources, services, and infrastructure). These are predominantly large, Islamic countries of 60 million people or more that are located primarily in sub-Saharan Africa as well as the Middle East and South Asia. With the demographic transition progressing more rapidly in the Middle East and South Asia (Figure 2), the challenges associated with population growth, such as youth bulges, will be greatest in sub-Saharan Africa.

The youth bulge<sup>2</sup> (the proportion of the adult population aged 15–29) will be greatest in Afghanistan, Pakistan, the Democratic Republic of Congo, Ethiopia, Nigeria, Guatemala, Iraq, Ethiopia, Angola, Chad and Yemen,

**TABLE 2**

**Countries Projected to Have Declining Populations, by Period of the Onset of Decline, 1981–2045**

<i>Already declining</i>	<i>Onset of decline: 2009–2029</i>	<i>Onset of decline: 2030–2050</i>
Hungary (1981)	Italy (2010)	Azerbaijan (2030)
Bulgaria (1986)	Slovakia (2011)	Denmark (2031)
Estonia (1990)	Bosnia and Herzegovina (2011)	Belgium (2031)
Georgia (1990)	Greece (2014)	Thailand (2033)
Latvia (1990)	Serbia (2014)	North Korea (2035)
Armenia (1991)	Serbia (2014)	Singapore (2035)
Romania (1991)	Portugal (2016)	Netherlands (2037)
Lithuania (1992)	Cuba (2018)	Switzerland (2040)
Ukraine (1992)	Macedonia (2018)	UK (2044)
Moldova (1993)	Spain (2019)	Puerto Rico (2044)
Belarus (1994)	Taiwan (2019)	Kazakhstan (2045)
Russian Federation (1994)	South Korea (2020)	
Czech Republic (1995)	Austria (2024)	
Poland (1997)	Finland (2027)	
Germany (2006)	China (2029)	
Japan (2008)		
Croatia (2008)		
Slovenia (2008)		

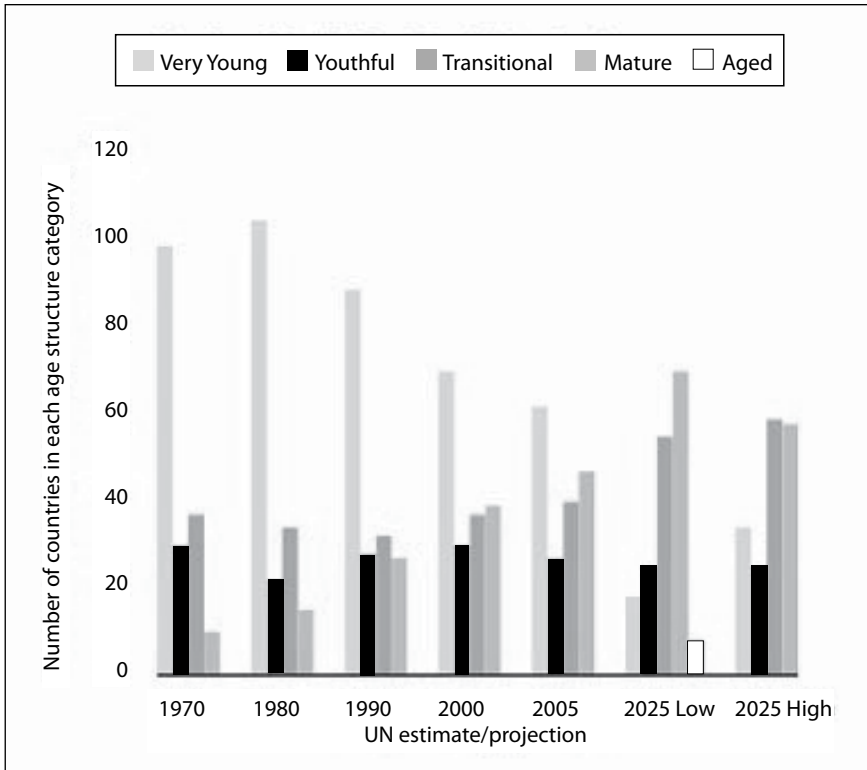
Source: Adapted from Jackson and Howe (2008); excludes countries with populations less than 1 million.

producing population growth rates of over 2 percent annually (see Table 3) with populations in those countries doubling every 30–35 years. Even if fertility rates in Nigeria or Afghanistan were to decline, they are currently so high that, at best, each country might barely transition from a young to a youthful age structure by 2025.

Although youth bulges are on the wane in the Middle East and Southeast Asia, by 2025 three-quarters of the countries with persistent youth bulges will be in sub-Saharan Africa. A key driver of this development is HIV/AIDS which delays the entry of populations with high incidence rates of infection through the demographic transition by compromising the elderly proportion of the population.



**FIGURE 2**  
**The Global Population Structure, 1970–2025**



Source: Leahy et al., 2007: 19.

### Relevant Findings

Countries with youth bulges are depicted in Figure 3. Such countries have been shown to be at greater risk for civil conflict due to strains on systems of schooling and socialization as well as un- or under-employment, concomitant propensity for deviance; countries where more than 60 percent of the population is under 30 have been shown to be four times as prone to civil war than countries with mature populations (Leahy et al, 2007).

Another way to make the case for the correlation between fecundity, youth bulges, and the propensity for conflict is to examine the association

**TABLE 3****Fastest Growing Countries 2005–2010 (at least 1 million people)**

<i>Country*</i>	<i>Annual Growth Rate, %</i>
Liberia	4.1
<b>Niger</b>	3.9
<b>Afghanistan, Burkino Faso</b>	3.4
<b>Syria</b> , Timor L'este, Uganda	3.3
Benin, <b>Palestine (occupied)</b>	3.2
<b>Eritrea</b>	3.1
<b>Jordan</b>	3.0
Burundi, <b>Tanzania, Yemen</b>	2.9
<b>Chad</b> , Congo (DR), <b>Gambia</b> , Malawi, UAE	2.8
Angola, Rwanda, Madagascar, <b>Sierra Leone</b>	2.7
<b>Ethiopia</b> , Kenya, <b>Senegal</b>	2.6
Guatemala, Togo	2.5
<b>Kuwait, Mali, Mauritania</b> , PNG, Zambia	2.4
Cameroon, Côte d'Ivoire, <b>Guinea</b> , Mozambique, <b>Nigeria, Somalia</b>	2.3
<b>Guinea-Bissau, Iraq, Pakistan, Sudan</b>	2.2
Ghana, <b>Oman, Saudi Arabia</b>	2.1
Honduras, <b>Libya</b>	2.0
Cen.Afr.Rep., Congo, Namibia, Nepal	1.9
Bolivia, <b>Egypt</b> , Gabon, Ireland, Laos, Paraguay, Philippines	1.8
Israel, <b>Malaysia</b> , Venezuela	1.7
Cambodia, Haiti, Panama, <b>Tajikistan</b>	1.6
<b>Algeria</b> , Colombia	1.5

\*Countries with 50 percent or more Muslim population in **Bold**.

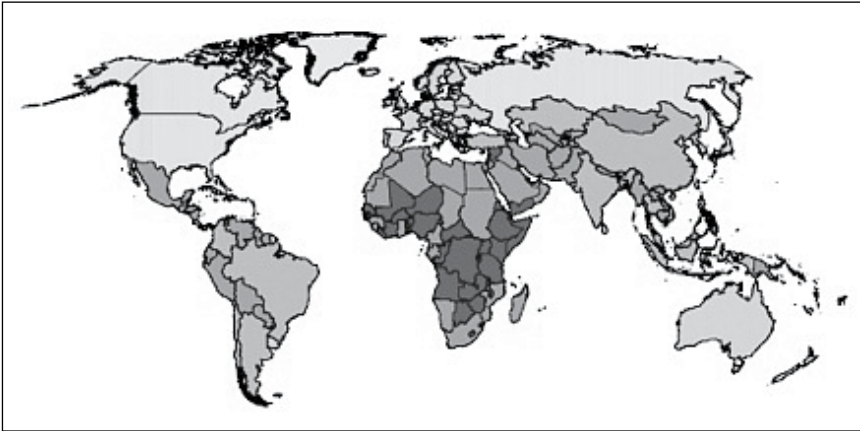
Source: United Nations, 2008.

between a country's position along the demographic transition and the outbreak of civil war (as shown in Figure 4): The further along a country's population is in the demographic transition, the lower the probability of civil war.

Populations in the West Bank/Gaza, Iraq, and Saudi Arabia will continue to grow and remain comparatively youthful; therefore, we can expect continued political instability and outmigration among those countries.

**FIGURE 3**

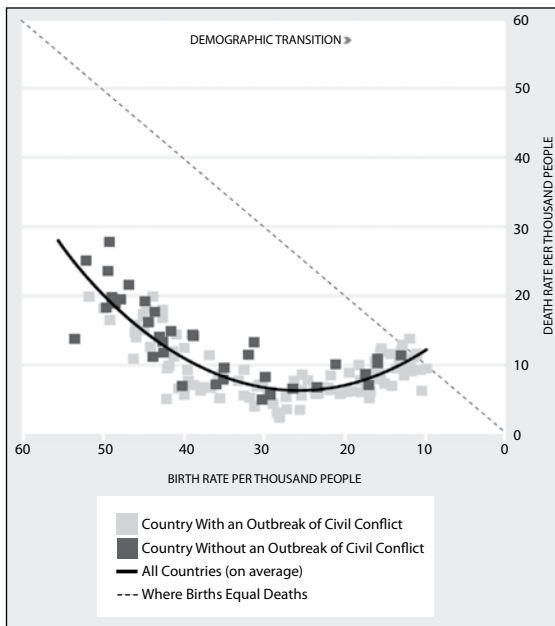
**Geographic Distribution of the Youth Bulge, 2005**



Source: Cincotta et al, 2003: 42.

**FIGURE 4**

**Demographic Transition and Outbreak of Civil War**



Source: Cincotta et al., 2003: 28.

## **Implications for Canadian Security**

Global population aging is likely to make the twenty-first century particularly precarious for Canada's international interests. Although demographic determinants of domestic instability are on the rise, the demographic determinants of international war are on the wane and demographic projection make it possible to pinpoint likely hotspots. The bulk of conflict and political instability will be scattered across the Middle East, Asia, and some Pacific islands, but is likely to be concentrated in sub-Saharan Africa. Since conflict is the single greatest "push factor" of migration, immigration pressures from sub-Saharan Africa to Europe (but also to places such as South Africa) are expected to continue unabated and may accelerate as climate change makes life even less viable in that part of the world.

Migration and age structure have several connections, one of which is that the most mobile populations also tend to be youthful. That is, migrants are overwhelmingly between 15 and 35 years old. There are a number of reasons for this, but perhaps most importantly, these age groups stand to reap the greatest long-term payoff from migrating and they have the least to lose from being uprooted.

One way to account for migration is thus as a function of push-pull factors. Between 2008 and 2010, Gallup conducted a rolling survey of 401,490 people across 146 countries (Esipova and Ray, 2011). It found that 14 percent of the world's population – some 630 million people – would like to migrate to another country if they could. People across sub-Saharan Africa (33 percent), North Africa (23 percent) and the Middle East, and Latin America (23 percent), had the greatest urge to move permanently. The United States as the destination of choice (23 percent) is followed by Canada and the United Kingdom (7 percent each). In Canada's case, that would amount to some 145 million migrants – in a "super-diverse" (Vertovec, 2007) country that already has one of the highest per capita migration rates in the world with about 20 percent of its population having been born abroad (a proportion comparable only to Australia and Switzerland). In practice, only 3 percent of the world's population lives outside its country of birth; most of those migrants reside in countries bordering or in immediate proximity to their country of birth. This sizeable discrepancy between desire to migrate and actual residence is indicative of a large pool of potential unauthorized migrants making for stiff competition among migrants, a pool that is unlikely to shallow anytime soon. First, some of greatest population growth is taking place in precisely those countries with the least capacity to cope. Second, the stresses of climate change and political instability are likely to prove

unrelenting push factors. Third, the demand for foreign labour contrasts with an absence of means to facilitate legal migration.

The supply side of the migration equation contrasts starkly with the demand side. Borders are not open, public opinion in most countries seems disinclined towards migration, and the UN projects only about 1.1 million immigrants annually over the coming decades (compared with population growth in the order of 60 million annually). Demographic change is thus bound to exacerbate the divide between north and south over the coming decades. There is plenty of discussion on a more effective migratory regime in institutions such as the Global Commission on International Migration, Global Forum on Migration and Development, and the Global Migration Group. Yet, outside of the World Trade Organization's (WTO) weak rules on labour mobility remain, and highly specific and fairly weak UN Convention and Protocols regarding the Status of Refugees, there is little international agreement or law. With no one in charge and no one stepping up to take charge, migration will pose a major challenge to Canada over the coming decades. So will the second-order effects of migration. More than half of Canada's immigrants originate in countries whose norms are not democratic and where violence is engrained in the local political culture. Not only does this antecedent pose a mounting challenge for Canada's ability to socialize immigrants and thus the resilience of Canada's social fabric; but it also exposes Canada to transnationalist (Vertovec, 2009) exploitation by nefarious elements within diasporic communities looking to fuel domestic conflict abroad.

## Notes

1. The effects of China's one-child policy on median age notwithstanding, in 2008 the Chinese government significantly increased the fines for wealthy couples who violate the law and have more than one child.
2. Technically most are not bulges; only a large proportion of the population happens to be youthful.

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# *Movement of Persons and Border Security*

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*François Crépeau*

## **The State of Knowledge**

The main difficulty for research on this area is the secrecy that surrounds border management issues. It was always so before the attacks of 11 September 2001, but has considerably increased since then. It is extremely difficult to obtain information, collect data, and interview government officials with knowledge of the issues.

Management of the movement of persons at the border is indeed a public security issue as it relates to criminals trying to enter the country, especially when it relates to international criminal activities: drug trafficking, arms trafficking, organ trafficking, trafficking in persons, and mafia-type criminality. It may also be a national and international security issue when we are dealing with subversion, espionage, trafficking in dangerous materials, terrorism, etc.

However, the overall number of individuals crossing the Canada-U.S. border is huge relative to the number of problematic cases. The issue is therefore how to facilitate vast number of unproblematic crossings and prevent the tiny number that warrants security treatment. The present problem is that all crossings have been “securitized,” which requires enormous resources that could be much more effective if they were dedicated to the very small number of at-risk situations.

The securitization problem seems to be less the creation of the intelligence and law enforcement communities than of the political class. For

electoral purposes, political elites have encouraged a public discourse on immigration that criminalizes irregular migrants and constantly escalates the repression of irregular movements of persons, rather than focus on the real criminal issues related to border crossings. In Europe, extreme right parties have been thriving on this issue for almost three decades.

## **Broad Trends**

Since 9/11, we have seen a pervasive public discourse that faults foreigners for all kinds of social ills (such as unemployment, criminality, health, and terrorism), a discourse which served to justify the implementation of a wide array of mechanisms destined to exert more control over foreigners of all kinds, including residents from particular countries, documented migrants who let their visas expire, undocumented migrants, asylum seekers, and trafficking victims. Those mechanisms were often considered exceptional, in that they deviated from the standard legal processes established over decades (or even centuries) of practice. Often they derogated from basic human rights principles. The deviations were justified, mostly implicitly, but sometimes explicitly, by the idea that foreigners are entitled to less human rights protection when the security of citizens is at stake. These developments were also often shrouded in secrecy, as though what the authorities can do to foreigners in the name of national security does not require the same level of accountability as other government business.

At the same time, however, this trend has increasingly been challenged by courts and tribunals in countries where an independent judiciary has been called to intervene and has the constitutional law tools to do so. There has been an increasing recognition that 9/11 has not “changed everything” in our basic legal framework; that international human rights law provides for exceptions and derogations (with strict conditions) in times of emergency; and that human rights are meant to be universal, applying as they do to all human beings and not only to citizens. Judges reaffirmed the central principles of the rule of law, which include the fact that, under the general principles of human rights law, whether at international or domestic level, all human beings are equal and discrimination is prohibited. Distinctions remain possible, but they must be justified “in a free and democratic society” if they are to survive court challenges. To be considered legitimate, distinctions based solely on citizenship or immigration status must be justified like any other. States do not have a greater “right” to violate human rights guarantees just because the victims happen to be foreigners.



For example, we have seen the Supreme Court of Canada remind authorities that “the overarching principle of fundamental justice that applies here is this: before the state can detain people for significant periods of time, it must accord them a fair judicial process.” Not distinguishing between foreigners and citizens, the Supreme Court effectively crippled the “security certificate” program that aimed at detaining foreigners without charges for unspecified periods of time (often years), without the individual or their representative ever being able to access the information (it was never framed as “evidence”) upon which the decision was based and therefore to defend themselves properly. The Supreme Court of the United Kingdom did the same with the British program of “control orders” and has prevented government officials at the Prague airport from discriminating between Czech citizens to exclude those who seemed of Roma origin from boarding aircraft flying to Britain. The Supreme Court of the United States has put pressure of the American authorities regarding the treatment of prisoners at Guantanamo Bay. The Australian High Court has done what it could to limit the effect of the “Pacific Solution” (which included sending undocumented migrants picked up at sea, including asylum seekers, to countries such as Papua New Guinea or Nauru, systematically detaining all inland undocumented migrants, including children, and several other measures for which Australia has been severely condemned by international human rights treaty bodies), but with little result since the Australian legal system is still based on parliamentary sovereignty and lacks a constitutional charter of rights and freedoms.

### **Relevant Empirical Findings**

In the period of post-war prosperity, irregular migration was seen as a minor cost to be paid to meet the soaring demand for unskilled labour. It was the oil crisis of 1973 that led to and justified the relative closure of Global North borders to foreign workers. Combined with an increased accessibility to international travel and communications, the number of asylum claims and later of irregular migrants soared. States reacted with a strong anti-asylum discourse and with repressive and deterrence measures against irregular migration.

*Deterrence measures* attempt to discourage irregular migrants from entering the country by raising the cost and diminishing the benefits of migration. They focus on reducing the entitlements offered to migrants, such as the elimination of appeals in the immigration process and restriction of

access to legal aid, labour market and social protection. Migrant smuggling is increasingly criminalized. States resort more to international agreements to facilitate the return of undesirable migrants. In addition, migrants face increased detention.

*Preventive measures* are designed to impede the arrival of irregular migrants on “our” territory altogether, in order to avoid the possible intervention of NGOs, lawyers, politicians or journalists to fight deportations, since none of these actors do intervene in favour of someone who is maintained abroad. Measures include visa regimes, such as the visas imposed on Mexican and Czech nationals by the Canadian government in response to the rise in the number of asylum claims from those two countries. There are also carrier sanctions (fines imposed on transportation companies for bringing foreign individuals without appropriate documentation), the effect of which is a partial privatization of migration controls. States also resort to interception mechanisms abroad in order to prevent irregular migration: for example, Canada has deployed “migration integrity officers” abroad. Immigration intelligence is widely shared without effective control on access to the personal information found on such databases. International economic cooperation arrangements – such as the Barcelona Process in the Mediterranean, the Puebla process for Central America, or the EU-ACP development agreements – nowadays all contain chapters obliging countries in the Global South to implement migration control mechanisms that “protect” the Global North by subcontracting checks to countries with more “effective” policing due to dubious human rights records. Borders and seas are militarized: Guantanamo during the 1990s was used to “warehouse” Haitians picked up on the high seas before returning them home; the enduring Pacific Solution in Australia has applied the same mechanism towards migrants coming through Indonesia; the European Frontex agency is patrolling the Mediterranean to the same end. European countries have discussed the idea of an “externalization” of asylum procedures, which would only take place abroad, in such countries as Libya, Morocco, Albania and Mauritania. Tony Blair even threatened to withdraw the UK from the *European Convention on Human Rights* regarding asylum seekers if their number remained too high, breaking thus a half-century-long taboo.

All in all, states have securitized their migration policies, are instrumentalizing their legal tools in order to support the security discourse aimed at migrants, and are increasingly coordinating efforts to set within

a coherently articulated strategy their arsenal of measures for preventing irregular movements of persons, including asylum seekers and refugees, and reducing the “burden” of such migration.

These measures proceed from a transformation of the political paradigm, reflected by a new public discourse on migrants. Especially since 9/11, as well as the bombing attacks in Bali in 2002, in Madrid in 2004, and in London in 2005, migrants are often considered suspect, dangerous, untrustworthy. More than before, they are associated with economic ills (unemployment, welfare state crisis, etc.), insecurity (inner cities, petty violence, organized crime, terrorism, etc.) and identity anxiety (demographic changes, identity markers). The “*us and them*” mentality is at work, creating discrimination and easily manipulated into hatred. Migration is now part of a new international security paradigm structured around the “securitization of public space” (water security, food security, energy security, communication security, environmental security, migration security, etc.).

But is it justified? Irregular entry is not a crime against persons or against property: it is essentially the crossing of a virtual line in the sand, which hurts no one by itself. Moreover, for refugees, the use of smuggling rings is often the last resort, when all other avenues of protection are closed. In history, countless people were saved by smugglers, as illustrated in the movie *Casablanca*. The large majority of irregular migrants pose no security risk (Homeland Security recently ended a post-9/11 immigrant registration programme that targeted men from Muslim countries: 80,000 men were registered and 2870 were deported, but none of them were charged with terrorism). Although framed as a fight against international criminality and in favour of international security, the migration control mechanisms serve more to reassure citizens that governments are “doing something” about immigration, than to meaningfully increase their security by appropriate measures.

Furthermore, measures against irregular migration are inefficient, as they rarely address a central root cause for migration, i.e., the need for exploited labour in the Global North. The exploitation of vulnerable migrants in specific sectors of the economy (construction, agriculture, domestic workers, cleaning or catering services, for example) enhances the competitiveness of Global North economies. These “illegal employers” are an essential pull factor that is systematically forgotten in government discourse regarding irregular migration. The public discourse emphasizes how migrants come to “take” jobs from locals, but never mentions that local employers offer

jobs at exploitative wages to vulnerable migrants willing to accept them: the fact that “we” are co-responsible for the phenomenon is rarely mentioned.

### **Implications and Inferences for Canada and Canadian Security**

The legitimacy and constitutionality of our security measures should be a major objective for the authorities, as this would reinforce whatever measures have passed the judicial tests and give confidence to the citizenry that the government is not trampling everyone’s rights at will. Instead of this, we have recently seen a minister of Immigration and Citizenship take issue with some judicial decisions, arguing that the courts were actually preventing him from doing his job of protecting Canadians.

Moreover, the public discourse on migration should be transformed. At present, anything goes. Migrants do not vote and are politically insignificant. Migrants rarely complain and are legally insignificant. There is no political cost to saying whatever goes through one’s mind on migrants: on the contrary, the most outrageous allegations or insinuations will bring in votes, as right-wing parties in Europe have well understood. This was particularly exemplified in Canada regarding the passengers of the *Ocean Lady* and *MV Sun Sea*: despite a huge campaign to convince the Canadian public of the dangers of this kind of irregular entry into the country, very few have had security risks actually stick long enough to warrant a deportation, and the security evidence adduced was often judged flimsy by the courts.

The public discourse should recognize that, in democracies, borders cannot be sealed and irregular migration is there to stay as a permanent feature of our societies. Dealing with it is the task for the future, not simply ignoring, denouncing or criminalizing it.

This done, security issues relating to foreigners can take their real (not imagined) place: resources can appropriately be allocated to the intelligence community as well as to all law enforcement bodies to try to prevent crime and threats to public, national or international security.

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# *Informality, Governance and the Rule of Law in an Urban World: Implications for Canada*

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## **State of the Knowledge and Broad Trends**

In a rapidly urbanizing world, new transnational threats are emerging, most notably the growing transnational ramifications of informality.<sup>1</sup> Davis (2007) has shown that in milieus with histories of informality, there is a concentration of violence caused by competition between mafias controlling illicit activities in this space and formal commercial interests who want to develop the area. This is particularly visible in city centres where redevelopment is desired to attract global investments, and where informal practices have long been flourishing: for instance, Mexico City's Centro Histórico, where street vendors have long been active, New York's Time Square, known for drug dealing and prostitution before its redevelopment, or the park Émilie Gamelin in Montreal, where punks have a history of congregating, which does not please the promoters of the new *Quartier des spectacles*. But even far from city centres, in residential neighbourhoods where there is a flourishing of informal activities, inhabitants find themselves in spaces "where network of obligations and reciprocities are not necessarily coincident with or loyal to the institutions of the nation-state, and where sub-local or transnational networks of reciprocity are more significant for their daily lives" (Davis, 2010: 407). This is often the case

in neighbourhoods where recent (and sometimes clandestine) immigration is concentrated.

Tolerance of informality will vary across places and managing urban space is a key element to maintaining a balance between informality and formality. Deals at the neighbourhood level, for instance, can hardly be sustained nationally because the central state does not have that sort of control over space. This is why a comparative outlook is necessary to understand how various countries and levels of government regulate and respond to increasingly important transnational informal networks.

With the expansion of informality and the strengthening of transnational legal spaces, state capacities are changing and laws are legitimated differently. In the 1990s, much research focused on the effects of neoliberalization and deregulation on weakening state capacities to provide welfare to citizens. We are now witnessing more than global pressures on state action (through institutions such as the World Trade Organization, the International Monetary Fund, the World Bank), but also a push from the bottom directly into transnational spaces (clandestine immigration, drug trafficking, commerce of pirated products, etc.). In light of this bottom-up transnational pressure on state capacities to provide security, we might ask whether neoliberal deregulation was really about “getting rid of the laws.” It was arguably more the expression of a power struggle on who can use the laws for their benefit. Much work focused on how deregulating some sectors is usually accompanied by the overregulation of other sectors at different levels of government (for instance, deregulating global trade, breaking down labour laws, but criminalizing panhandling). Rather than looking at laws and regulation strictly for their content, it would be important to also consider how laws are used as tools and resources by certain groups (bankers, state officials, drug dealers, for instance).

In order to be effectively implemented, laws need to be perceived as legitimate by those in charge of enforcing them: police officers, front-line workers, brokers, and so on. Research needs to ask: *Who* is the law, rather than solely *what* is the law. Locating actors and their relation to the law (either as police officers, policy-makers, politicians, civil servants, lobbyists, migrant smugglers, and so on) can lead to a better understanding of how the law is used, negotiated, and legitimated in practice. Such questions are important if we want to have a better grasp on transnational informal practices.

This leads to a number of questions: (a) Under what conditions do informal practices become illegal and punishable under the law?; (b) Are there



new forms of informality emerging in this global context which affects degrees of state tolerance?; or again (c) Are there new forms of transnational learning (or prejudices) which can change degrees of state tolerance to informality?

### **Relevant Empirical Findings for Prevention Programs**

In the Continental Research Network on Informality in Metropolitan Spaces (RECIM), we are currently exploring the role of informal negotiation in the regulation of youth illicit activities in Mexico and Canada. More specifically, we are looking at street gang prevention programs in Mexico City and Montreal and their impact on youth-police relations. Our general question is: “Are there newly intense forms of street-level negotiation emerging in the urbanizing global context which affect degrees of state tolerance to informality?” We are concerned with gang-related informal (and sometimes transnational) activities, but also, more generally, youth activities that may not be illicit but nevertheless can be considered informal in that they question the established ways of regulating security.

Processes of urbanization bring new sets of economic, social, political, and cultural conditions that affect how people act and interact (Boudreau, 2010). Urbanization brings more needs for mobility, changing the area-based logic of action prevailing in the modern state system. Most prevention programs, along with the very organization of police work, are designed with a well-bound territory of action in mind (in this case the neighbourhood and the borough). Such territorial restrictions on police and prevention action are out of sync with the very mobile life of targeted youth. “At-risk” youth as well as active gang members do not live exclusively in their neighbourhoods. They move around the city – and the world.

These moments of mobility are rarely considered important. However, they are central to the development of personal skills and the feeling of competence, which are considered important resilience factors to counter other neighbourhood-related risk factors (such as poverty, lack of self-confidence, single-parent households, etc.). We have demonstrated in a pilot project in three Montreal neighbourhoods that youth who show the highest levels of mobility (calculation based on a combination of migration/travel mobility, residential mobility, and commute distances) also show a stronger feeling of competence and more social engagement with their milieu and even politics. These findings point to the relevance of further exploring how

mobility practices could be part of prevention programs: providing youth with mobility experience, teaching them how to move around, in order to foster self-confidence and social engagement.

Beyond mobility, processes of urbanization also affect how people react to threats and unpredictable events. As urban rhythms accelerate, it creates complex situations entangled with one another. This makes evaluating future consequences of an act more difficult. The complexity, fluidity, and rapidity of urban life pose challenges to how people plan and strategize and this has direct consequences on decision-making. Pedrazzini (1994) suggests that youth in neighbourhoods marked by histories of informality, whether they are active or not in street gangs, have understood these urban transformations more than state actors. They have adopted an urban logic of action more attuned to the contemporary period. His work shows how “at-risk” youth in Caracas construct a “culture of emergency” and ruse. They know how to act tactically (reactively) and not only strategically (preventively). This points to a logic of action very different from what drives policy-makers. When youth in Parisian *banlieues* are said to perpetrate “incivilities” or when youth in street gangs are said to be “asocial,” the underlying discourse is that they act in a way that is difficult to understand from a rational perspective.

Our ongoing research explores in two politically and institutionally different contexts (Montreal and Mexico City), how youth and police interact. The objective is to understand what guides youth action: how do they conceive of what they do? How do they move around the city and the world, how do they interact with authority (police officers, school teachers, social workers)? How do they react to threats? Understanding their logic of action, which, following Pedrazzini (1994) is more attuned to the urban world in which we live, may give us cues on how to adapt state programs and police action. This can enhance police capacity to build on youth more “grounded” urban knowledge and may be helpful for police practice. It will help in understanding the milieu in which youth act and the reasons for acting the way they do.

### **Implications and Inferences for Canada and for Canadian Security**

Informality may be less visible in Canada than elsewhere. Our cities are not filled with street vendors, irregular slum dwellings, and gang turfs. However, our cities are home to many informal activities, from contraband

to counterfeit, from drug dealing to squatting. Informality also makes its way in neighbourhood level deal-making: flexibility in the application of the rule, small-scale negotiations between youth and police. At this level, informality is easier to manage and better tolerated than at the national level. Any consideration of informal activities will need to be sensitive to the scale of regulation and the differentiated state capacities according to the scale (from the neighbourhood to the transnational).

If informal activities are less visible in Canada than elsewhere, they are nevertheless increasingly linked to bottom-up transnational networks that affect Canada. We are talking of business networks (drug, human trafficking), but also networks of allegiances and reciprocities for migrants for instance. In order to face this transnational pressure, we can learn much from countries where informality is more visible. And perhaps, also, from Canadian youth who understood that our world is urbanizing and that this affects opportunities of action and how to act and react. Their logic of action may have much to teach to policy-makers and decision-makers.

## Note

1. We define informality as all *illicit* activities (that may be unregulated, but not necessarily illegal) escaping state control (Castells and Portes 1989). This includes the informal economy (otherwise known as the gray, underground economy or black market, which involves unregulated commerce, employment, and production – such as counterfeiting), informal settlements (squats, unauthorised construction), and informal trafficking (clandestine immigration, flows of illegal goods across borders, global traveling for the consumption of illegal – health, sex, etc. – services).

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# *Transnational Organized Crime*

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*James Sheptycki*

## **The Current State of Knowledge**

Generally speaking there is very little Canadian research on transnational organized crime (TOC). A recent literature review undertaken for Public Safety Canada revealed a paucity of Canadian research on the subject (Sheptycki et al, 2010). While there is a strong case to develop research on the subject within academic criminology in Canada, there are barriers. According to two UK-based academic experts,

Terminology found in the “organized crime” literature is often ambiguous: that is both its political strength (for producing consensus around increasing resources, domestic powers, and international co-operation) and its analytical weakness.

That the terminology is analytically weak is a concern for policy development. How can the extent of the phenomena be assessed or the effectiveness of counter-measures be evaluated in the absence of scientifically agreed conceptualization? Although there is a reasonably robust research literature in other countries, with few exceptions, Canadian criminologists are notably absent from international debates about transnational organized crime. There is some research on organized crime in Canada (e.g., Beare, 1996; Morselli, 2009; Schneider, 2009), but this scholarship not only tends towards historical accounts, but also tends to be restricted to looking at the phenomena in Canada, with little reference to transnational linkages. The base-line of knowledge about problems due to transnational organized crime

in Canada is weak. My own examination of the methodology of Organized Crime Threat Assessment (OCTA) in the Canadian police sector revealed considerable problems (Sheptycki, 2003). Not unexpectedly, agency accounts of threat assessment methods are less so (e.g., Strang, 2000). Such differences in points of view are mirrored elsewhere and the criticisms leveled by academics in Canada concerning police-centric assessment of TOC are largely in accord with the work of academics elsewhere (Innes and Sheptycki, 2004; Klerks, 2007 Ratcliffe, 2009; van Duyne, and vander Beken, 2009; von Lampe, 2008). The policy conclusions drawn from OCTAs have been drawn into question.

In his assessment of Europol's OCTAs, Klerks suggests that: "Europol should be challenged to make better use of the wealth of information available to its analysts, when producing public strategic assessments" (2007: 98). OCTAs "leave the readership none-the-wiser about how these particular actors actually accomplish these variegated crimes" and, since "any genuinely intelligence-led identifications of measures liable to reduce organized crime requires a causal account of these activities" (Edwards and Levi, 2008: 369), this is a fundamental problem with them. The limited conceptual understanding of the organized crime problem and the scant reference to hard data renders OCTAs technically and practically useless from an operational policing policy point of view. Measures of police-agency process such as arrests, convictions, assets seized, criminal groups disrupted and the like are not a substitute for impact measures that show how such phenomena are being minimized through agency action. Concerted academic study of the wide-ranging phenomena that fit under the heading of transnational organized crime would provide a valuable counterweight to existing threat assessment produced by law enforcement. The scope, intensity and direction of police efforts to counter the organization of crime are guided by these threat assessments and therefore the quality and reliability of OCTA programmes "should be a matter of concern to policymakers and administrators, as well as the academic community" (Klerks, 2007: 372). Edwards and Levi point out that an "important role for social science is to reign in unrealistic expectations of government of the kind that pervade debates over security, and to broaden argument to encompass cognate issues often proscribed by relatively narrow analytical foci on the subject of criminal justice or situational prevention" (2008: 382). The development of a strong social science base for understanding transnational organized crime in Canada is indispensable if policy is to move beyond the narrow range of what Edwards and Levi term "the threat assessment industry."

## **Theoretical Trends and the Possibilities for Empirical Research in Canada**

Since there is a paucity of empirical research on the subject of transnational organized crime in Canada, it is useful to take a step back and look more generally at the theoretical parameters of the issue.

It is possible to derive from Varese's (2011: 7-12) account of "how Mafias move" a more general theoretical frame that defines the conditions necessary for transnational organized crime to thrive and become entrenched in any given jurisdiction. This can be useful in conceptualizing a research agenda. The first aspect of this theoretical frame concerns the population of motivated offenders: that is people who have the skills, knowledge and world view necessary to undertake serious organized criminal activity. From where do such populations emanate and how do they propagate? The theoretical literature is suggestive, but again, with few exceptions, there is scant literature in Canada that asks these types of questions (but see: Desroches, 1995, 2005; Morselli, 2009). The second is the existence of illicit markets: there must be a reasonably significant demand for products among the general population for products and services that cannot be obtained legally in order for organized crime to thrive economically. Drugs, sexual services and gambling have traditionally provided the economic feeding ground for the organization of crime, but there may be others as well. In the contemporary period there has emerged in the developed countries of the West, including Canada, an appetite for cheap labor (Keung, 2011). Again, there is a paucity of empirical research in Canada, but the theoretical frame and the example of work done elsewhere is highly suggestive (e.g., Hales, and Silverstone, 2005; Hobbs, 1998; Pearson and Hobbs, 2001; Ruggiero, 2000; Turner and Kelly, 2009). The third aspect of this theoretical frame concerns state-government's weakness or inability to provide accessible and efficient dispute resolution. This is partly related to the existence of illicit markets where informal dispute resolution can lead to ongoing violence. When drug dealers get robbed, they cannot go to the police to report a crime. However, this lack of legitimate state-based dispute resolution can also spill over into the legitimate economy. For example, Varese points to the construction industry. When significant numbers of illegal immigrants or otherwise marginalized labor are exploited in this industry, it can give rise to violence as informal means to control labor. Also when strong competition emerges between suppliers in such a volatile and unregulated market, mafia-type groups can come forward to enforce cartels that leech

off the public purse. These problems cannot be assessed by reference to the sorts of quantitative measures favored in police Threat Assessments and Edwards and Levi, among many others, recommend that only qualitative and ethnographic studies that pay close attention to the micro-social relations of organized criminality can cast meaningful light on the nature of the problems and give some sense of what can realistically be done (Edwards and Levi, 2008: 378-381). Lastly, and not un-relatedly, at a more macro-level, lack of social trust and low levels of civic engagement create fertile grounds for the organization of crime. Reference to the concept of “culture conflict,” long established within academic criminology (Sellin, 1938), has been moribund in Canada for quite some time, but the advent of “cultural criminology” in the United Kingdom and the United States (Ferrell et al., 2008) shows the continuing utility of paying attention to the cultural seed-beds of crime and conflict. This analytical focus on the social structural basis of organized criminality fits well with the concern to develop the social scientific study of these phenomena.

### **Relevant Empirical Findings**

One strand of my research of direct relevance to these discussion concerns the architecture of intelligence-led policing (Sheptycki, 2002; 2004; 2007a, 2007b, 2009). This work describes and names the organizational pathologies of police intelligence systems and explains why and how the analytical products that emanate from them leave so much to be desired from a policy perspective. In brief, this work suggests that the preponderance of “organizational pathologies” in the police intelligence system make its functioning deeply problematic. The principal result of flawed knowledge about the problems of transnational organized criminality and related phenomena is the “security control paradox.” This can be defined as a process whereby increasing provision of security against serious and organized crime makes people actually feel less secure. Police “intelligence products” are woven into, and help to compose, the collective insecurity of Canadian society.

### **Implications and Inferences for Canada and Canadian Security**

The overwhelming conclusion that should be reached through sober analysis of what is known about transnational organized criminality and related phenomena in Canada is that we simply do not know enough. There needs



to be a concerted program of Canada-wide research that pays attention to the qualitative dimensions of such sources of insecurity and this can only be done by fostering a cadre of researchers who can employ ethnographic research methods aimed at the micro-social structures that underpin the organization of crime and connect it to the macro-social structures that shape the field of action. We are a long way from this in Canada.

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# *Transnational Organized Crime and its Associated Threat*

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*Carlo Morselli and Mathilde Turcotte*

The perceived threat of organized crime is gradually being replaced by that of transnational organized crime, the idea of criminal networks whose operations extend beyond national borders. Canada is not immune to this movement of social construction of the “new” face of organized crime. An official report on action taken under the National Agenda to Combat Organized Crime describes key changes to organized crime groups in Canada since the 1990s (Public Safety Canada, 2007: 2–3). The report notes that organized crime groups operating in Canada have diversified their criminal activities, expanding beyond the more traditional activities (drug trafficking, prostitution and illegal gambling) to trafficking in humans and firearms, identity theft, cybercrime, production of counterfeit goods and money, securities fraud and more. Another notable change according to Public Safety Canada relates to the composition of crime groups, which it reports are now based more on criminal capabilities than ethnicity – explaining the emergence of the many multi-ethnic criminal networks on Canadian soil. The structure of crime groups has also reportedly undergone considerable change. Today’s criminal networks are thought to be more flexible and sophisticated and are often based on temporary alliances requiring particular resources to complete specific criminal enterprises. Transnational organized crime is considered an effect of globalization and the spread of technology, as well as of the new crime, communication and mobility opportunities flowing from them.

Although official response to transnational crime has been prompt both nationally and internationally, research on the topic seems to have remained at the exploratory stage. There is no generally accepted definition of organized crime (Finckenauer, 2005) and, as noted by Sheptycki (2003: 124), it is unlikely that adding the modifier “transnational” will settle the debate over the notion. In the late 1990s, certain problems were raised, such as the almost total absence of empirical studies on transnational organized crime and the rather descriptive (rather than analytical) nature of what little field research there was (Reuter and Petrie, 1999). Ten years later, there are still laments regarding the dearth of empirical studies on transnational organized crime (Morselli, Turcotte and Tenti, 2010). Further, researchers are skeptical about literature that purportedly shows the existence of a powerful, sustained global criminal conspiracy. According to Dupont (1999: 433), much of this literature manipulates the facts to give the impression of imminent catastrophe when the data are far from convincing. Generally speaking, research on local and national organized crime and related topics has not succeeded in confirming certain of the premises underlying the official view of transnational organized crime.

One such premise relates to the source of the threat. In intelligence circles, for example, it is recognized that crime groups are becoming increasingly ethnically heterogeneous. This shift recently led Criminal Intelligence Service Canada to alter the structure of its annual report, replacing the typology of the sources of organized crime (Italian, Aboriginal, Asian, etc.) with a categorization of criminal markets. Immigration, however, continues to be seen as a factor that fosters the emergence of crime groups whose operations extend beyond national borders. Canada’s position concerning the role that immigration plays in transnational organized crime is very clearly stated on the website of Foreign Affairs and International Trade Canada:

Transnational organized crime fuels crime in Canada; its adverse impacts touch all Canadians. It is important to look beyond our borders to countries where threats to Canada originate. Crime prevented and combated abroad does not hit Canadian streets. (<http://www.international.gc.ca/crime/index.aspx?lang=eng&view=d>).

In other words, the threat is perceived as essentially outside Canada. It therefore comes down to controlling entry to contain crime on Canadian soil. Beyond the fact that the findings of studies examining the link between immigration and crime are generally ambiguous and non-conclusive (Wortley, 2009), a report based on data gathered in 1996 showed that, in 19 member countries of the European Union, most crime groups were

“home-grown” (though 11 member countries report that most crime groups are of foreign origin) (Committee of Experts on Criminal Law and Criminological Aspects of Organised Crime, 1998). Further, the study by Barnes (2009) on deportation practices in Canada since the passing of Bill C-44 and his “public danger” article in 1995 suggests that mechanics that make it possible to declare certain foreign nationals major criminals or a danger to public safety and to deport them merely displace the danger. And as Barnes notes, “[i]f global concerns about security are to be taken seriously, it seems counter-intuitive that the nations at the forefront of the charge to create a safer global community would deliberately engage in action that effectively shifts the burden of maintaining that security to countries that are at least equipped to do so” (Barnes, 2009: 444).

A second premise underlying the official view of transnational organized crime, which is closely linked with the first premise, on the source of the threat, relates to the mobility potential of crime groups. Based on the assumption that the threat essentially comes from outside Canada, it is also assumed that it is relatively easy for crime organizations to establish satellite groups on foreign soil. This premise is in fact at the basis of work such as journalist Mischa Glenny’s book *McMafia* (2008) and the work of Leps (1997) and Bagley (2004), which focus on the spread of the Russian Mafia in particular but also crime groups from Eastern Europe and Asia across the globe (including into Canada). Today’s organized crime groups are generally portrayed as highly strategic, desirous of extending their reach and equipped with considerable resources, enabling them to easily seize opportunities to infiltrate new markets.

In a review of literature on the mobility of criminal groups, Morselli, Turcotte and Tenti (2010) distinguished between strategic and emerging mobility. The first, on which the official view of transnational organized crime focuses, refers to the mobility schemes of crime groups. Yet earlier research leads us to question how easy it actually is for organized crime groups to extend their reach to new territories and take over new markets – and thus carry out their mobility schemes if indeed such schemes exist. The research, whether approached from a market perspective (Broude and Teichmann, 2009; Chin, Zhang and Kelly, 1998; Tremblay, Cusson and Morselli, 1998; Reuter, 1983), an organizing crime perspective (Hill, 2003; Varese, 2001; Milhaupt and West, 2000 ; Gambetta, 1993 ; Block, 1991), or an ethnic succession perspective (Ruggiero, 2010 ; Paoli, 2004 ; McIlwain, 1999 ; Ianniet Reuss-Ianni, 1972), has in fact shown that those involved in criminal networks are forced to adapt to the constraints of the

criminal markets and law enforcement, which shape their action to a significant degree. Local and international criminal networks identified are not simply products of their ambition and strategies. The shape and size of crime groups are the result of a process of adaptation to environmental constraints. Crime groups will thus emerge and become organized in environments where vulnerabilities exist and there are opportunities for interaction with players in other markets, industries or territories.

Another premise, also advanced in the work of Glenny (2008), relates to the major role played by Canada in international drug trafficking. The country's importance in the production and export of cannabis has been addressed in various reports and publications. The website of the U.S. Drug Enforcement Agency (DEA) lists several major investigations that have led to the arrest of Canadian citizens. In recent years, Canada also seems to have acquired a reputation as an international source of synthetic drugs (Kirby and MacDonald, 2009). According to the United Nations' World Drug Report for 2009, Canada has grown to be the "most important producer" of MDMA for North America. That same report indicates that methamphetamine from Canada accounts for 62 percent of seizures in Japan and 83 percent of seizures in Australia. The U.S. Department of Justice estimates that the sale of drugs in the United States yields between US\$56.2 and 337 billion per year for Canadian traffickers (Kirby and MacDonald, 2009). The National Drug Intelligence Center attributes the size of the MDMA trade to Asian crime groups, especially since 2005. However, despite numerous anecdotal accounts and much speculation, there has actually been very little precise empirical research on drug trafficking between Canada and the United States.

Although research regarding the issue of mobility has primarily revealed the difficulties faced by crime groups, other official premises regarding transnational organized crime appear more realistic. This is notably the case with the arguments relating to the flexibility and size of criminal networks and the temporary nature of alliances therein. The official view of organized crime has often been criticized for portraying crime organizations as long-standing organizations with highly structured hierarchical systems that systematically turn to violence and have monopolies over certain illegal markets. However, it seems that that criticism has been heard, at least in Canada. Today, official definitions have shifted to emphasize the dynamism and flexibility of the networks, which form and dissolve as criminal schemes require.

This flexibility of criminal networks is seen beyond the markets traditionally associated with organized crime. In a study on firearm trafficking in Quebec, Morselli, Petit, Turcotte and Gagnon (2010) showed that most respondents were able to acquire firearms through open or brokerage networks that put them in touch with a large number of suppliers (in the open networks) or reliable intermediaries (in the brokerage networks). In this context, even if law enforcement succeeded in eliminating key suppliers from the market, consumers could adapt fairly quickly by tapping into one of the other channels to which they had access. Overall, however, the study by Morselli et al. (2010) highlighted the importance of informal supply channels within these markets. Respondents who had attempted to obtain firearms from Aboriginal reserves near Montreal, which are a hot issue for law enforcement authorities and the media, described just how difficult it had been to make initial contact. Hence, for the average buyer of illegal firearms, resellers on Aboriginal reserves are not regular or easily accessible suppliers.

All countries have to contend with a large number of vulnerabilities that leave them open to the emergence of local, national and international organized crime groups. Admittedly, however, at least in the Canadian context, the threat is not as great as it is portrayed to be. A number of factors must be in play in order for a network to emerge or move. Even though many groups may have expansion schemes, earlier research has shown that mobility or moving into new territory or new markets is easier said than done.

One of the factors identified in most of the research to explain the failure or success of establishment or relocation attempts by crime groups is law enforcement. Systematic, targeted action by police is likely to keep markets competitive and the groups operating in those markets small and short lived. Lax law enforcement, on the other hand, will attract crime groups and enable them to infiltrate an area or sector. Consequently, the biggest mistake that police forces can make is to ignore a problem or vulnerability. From this perspective, police are at the very heart of the solution.

The challenges faced by countries determined to eradicate crime groups that fill a real need for illegal goods and services appears sizeable. However, a number of realistic control strategies can be used. For legitimate industries, for example, clear rules and procedures are among the most important protective factors. It is up to the responsible authorities, especially at ports and in other legitimate industries (e.g., the construction industry), to fill voids and respond to emerging opportunities in their environment. In

these at-risk sectors, greater attention must be paid to industries in which there is high level of interaction between the criminal underworld and the legitimate world and a large unskilled workforce. Failure to address the problems noted fosters the emergence of crime groups in the same way as lax law enforcement does. Additionally, elimination of grey areas that leave room for discretion should also be considered (e.g., awarding of contracts). Such grey areas allow a whole series of small deviations from the norms that are apt to turn into a group phenomenon. Having sufficient human and legal resources in place is also crucial for avoiding recourse to alternative, Mafia-style forms of protection. At the same time, it is important to ensure that power is not concentrated in the hands of a single group or a select number of groups within a sector, as this would open the door for crime groups to move in through infiltration.

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# *Criminal Networks in a Transnational Context*

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*Martin Bouchard*

## **The State of Knowledge and Broad Trends**

There are multiple approaches to the study of organized crime. Williams and Godson (2002) offer a useful distinction in five broad models: the political model, which emphasizes the relative strength or weakness of governments, and how it may lead to opportunities for organized crime; the economic model, where the focus is on the dynamics of supply and demand, and the economics of criminal enterprises; the social model, which pays attention to the socio-cultural relationships between organized criminals; the risk management model, based on the idea of criminal organizations trying to minimize risks of law enforcement detection; and the hybrid model, based on a combination of two or more of the other four approaches. In this note, I discuss the state of knowledge in regards to the third model, social (criminal) networks in a transnational context.

Social networks can be defined as a set of actors (individuals, organizations) who are linked by one or more types of connection, such as friendship, kinship, or membership in a criminal organization. The mapping and the analysis of those connection patterns form the basis of social network analysis. Many law enforcement agencies have adopted the term “network” to characterize organized crime that is flexible and loosely structured. This is the so-called “network model” of organized crime that can be distinguished from a “hierarchical model” that more formally integrates members in

pre-defined division of labour. However, the concept of network more generally should not be limited to purely loose forms of relationships, or confused as an entirely novel form of organizing crime. What is (relatively) novel is the ability to analyze the relationships of organized criminals without assuming formal membership to a larger organizational entity. It follows that a network approach does not preclude the analysis of hierarchies, it simply focuses on the actual relationship patterns to understand the functioning of the organization (whether or not it actually functions like a hierarchy becomes a research question). For example, Carlo Morselli drew from network analytic techniques to study the criminal career of Sammy Gravano in the Cosa Nostra (Morselli, 2003), and later to study the relationships found between outlaw motorcycle bikers of different ranks and chapters (Morselli, 2009a). In short, network *methods* transcend *models* of organized crime, that is, they can be used to study any form of criminal social structure.

This initial distinction brings us to another important feature within the network approach: whether one is interested in analyzing the network from the point of view of one individual (egocentric analysis), or a “complete” network of ties between the members of an entire group (sociometric analysis). Egocentric analyses have been used to examine how one’s position within a personal network can influence outcomes, such as the ability to make money out of crime (Morselli and Tremblay, 2004), or to avoid arrest (Bouchard and Ouellet, 2011). For law enforcement agencies, egocentric analyses can be used to target players that are important within the network of the main or initial target. The ability to then re-construct a network based on a second, or third target within that initial ego network may lead to the construction of a complete network. Most studies in criminology aim to analyze relatively complete networks, but are constrained by the limitations of the data from which these networks are constructed (which is rarely focused on more than a handful of actors in the network).

Morselli (2009) argues that a network approach allows us to identify structure where many see disorder – loose-knit and flexible does not mean “disorganized” (see also Williams and Godson, 2002). This is true even when one focuses on the more notorious criminal organizations. Kenney’s (2007) fieldwork on the Colombian cocaine trade offers a good example, showing how flexibility is, and has always been, the norm for the so-called “Colombian cartels.” Contrary to the popular view, cocaine trafficking in Colombia has never been dominated by one or more criminal organizations exerting monopoly control. Instead, the trade is fluid and diffused;

it is flat rather than vertical. This pattern is typical of illegal markets and organized crime in general.

### **Transnational Criminal Networks: Canadian Studies**

It may at first be difficult for the casual observer to understand how illegal products can be efficiently transferred from the point of production to the final consumers without the planning and coordinating body of a formal criminal organization. Approaching this issue from the perspective of network analysis allows us to see not only that it is possible, but also the main way in which illegal products travel. For example, Bruinsma and Bernasco (2004) showed that three separate network clusters are linked together in the smuggling of stolen cars from the Netherlands to a foreign country (a network cluster of local thieves, one of local recyclers or body-switchers, and one of importers abroad and transporters), with only a single individual needed to connect between each of the clusters, but no other connections. These findings have been replicated in a detailed Canadian analysis of car exportation rings where as many as five discrete stages were held together by a handful of brokers who connected with two or more of the stages (Morselli and Roy, 2008). These brokers are the key players found in criminal networks; they are the actors, if removed, will cause the most disruption to the network (e.g., Schwartz and Rousselle, 2009; Westlake et al., 2011). Although targeting key players is certainly a defensible strategy for law enforcement agencies aiming to disrupt criminal organizations, these brokers may well be the least visible, and the most elusive, components of criminal networks (Morselli, 2010).

Two other Canadian studies are useful to illustrate the utility of thinking about transnational criminality in network terms. Malm and Bichler (2011) studied individuals who were linked to criminal enterprises and had previously been extracted from criminal intelligence records and threat assessment reports of RCMP's E Division in British Columbia. After mapping the associations of all individuals and their co-offenders, Malm and Bichler reproduced the full drug distribution chain, mapping individuals with the role they were playing in the chain. Individuals could occupy a position in the production, transport, financial, courier, parasite, supply, or retail niche. Some individuals occupied multiple niches, adding a layer of complexity to the network, but also increasing the efficiency of the distribution process. As it happens, these individuals turned out to be

the key players in the drug distribution system in British Columbia. They were mostly involved in smuggling, financing, or supplying activities. Removing these individuals literally “broke the chain,” fragmenting it into multiple, unconnected components. In a quasi-replication of this study, I drew from self-report network data collected from incarcerated traffickers in the United Kingdom; my study (2010) found that middle market level distributors occupied the true key position in the chain, the one allowing the most disruption opportunities for law enforcement agencies.

The second study was Morselli and Petit’s (2007) longitudinal social network analysis of a drug importation network operating from Montreal. The criminal investigative team decided to seize any drug shipment arriving at the border, but to delay making any arrests for two years. During this period, the main organizers of the network were under surveillance, wired, allowing the police (and eventually the study authors) to observe the traffickers’ reactions to the seizures, and their capacity to re-organize. It also allowed the network to grow and its structure to change. For example, those associated with the initial shipments became less and less central to the network, as participants were becoming increasingly suspicious of each other. The police witnessed new routes being created, new contacts being made in producing countries to find alternative, potentially “safer” supply sources, providing us with a unique case study in network adaptation and re-configuration in a transnational context.

## **Conclusion**

The potential of social network analysis (SNA) for improving knowledge on transnational security threats is immense. In fact, SNA has the potential to contribute to an understanding of co-offending and criminal organization in a way that now makes it an unavoidable framework for law enforcement agencies and researchers. Although many Canadian law enforcement agencies started to integrate the network methods to their routine intelligence data collection activities, those efforts remain the exception rather than the norm. The utility of SNA has been demonstrated many times, the integration step will require close collaboration between researchers and governmental agencies.

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# *Politically Motivated Violent Extremism*

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*Clark McCauley*

## **Current State of Knowledge and Broad Trends**

Contrary to the wisdom of three decades ago, terrorists are not crazy. To be more precise, terrorists are no more likely to have diagnosable mental disorders than non-terrorists. The psychology of terrorists is different for different roles: perpetrators of violence, planners of violence, and sympathizers and supporters of violence.

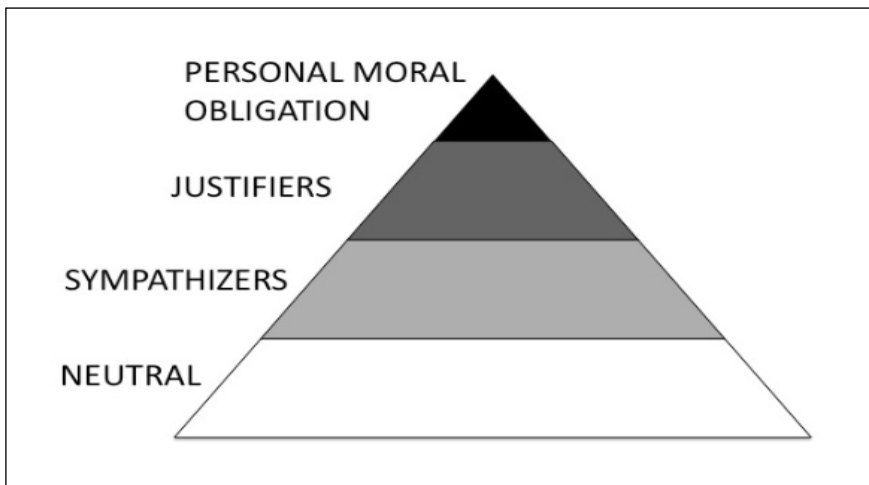
Group dynamics are important for understanding radicalization of most terrorists, but lone-wolf terrorism now appears not so rare as had been thought. Attacks like that of Major Nidal Hasan have brought new attention to the possibility that there is a particular individual psychology associated with self-radicalizing terrorists.

Since about 2008, there has been rising interest in de-radicalization, which takes two forms: individual-level and group-level. Individual-level de-radicalization usually targets both radical ideas and illegal violence, although Bjorgo and Horgan (2009) distinguish between *deradicalization* (giving up radical ideas) and *desistence* (giving up political violence).

Individual-level “de-radicalization programs” for militant Muslims have been instituted in a number of countries, including Saudi Arabia, Yemen, Singapore, Indonesia, and Malaysia. Programs vary in the mix of carrots and sticks, family involvement, and involvement of imams. There has not yet been published any definitive research on the success of any of these programs.

Group-level desistence can occur in broadly two ways: a decision with the terrorist organization still operational, or terrorist organizational breakdown (McCauley, 2009). Different paths to group desistence arise out of complex interaction of multiple actors. On the terrorist side, there are other groups competing to represent the terrorist cause, the pyramid of terrorist sympathizers and supporters (Figure 1), and possibly governments sympathetic to or supporting the terrorists.

**FIGURE 1**  
**The Opinion Pyramid**



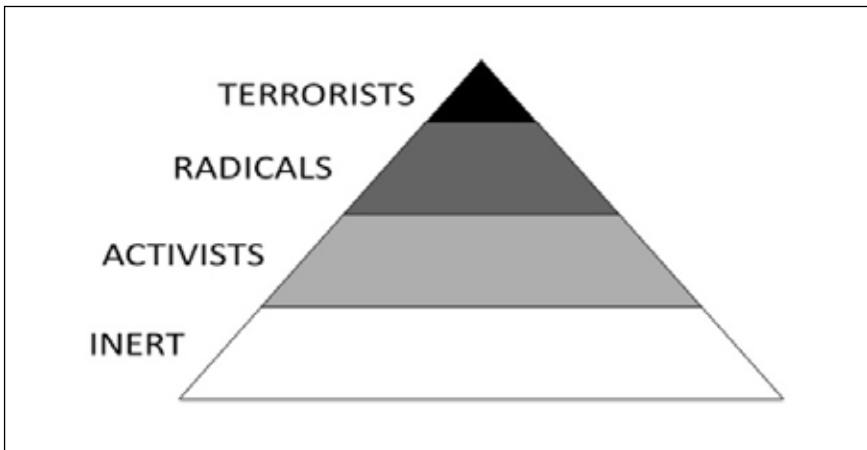
On the government side, there are security forces competing for bureaucratic turf, competing political interests and parties, the pyramid of government sympathizers and supporters, and possibly other governments allied in the fight against terrorism. Emotions are important in radicalization, although rational choice approaches to political behaviour in general and political violence in particular have so far left little room for research on emotion.

### **Relevant Findings from Research: Mechanisms of Radicalization**

McCauley and Moskalenko (2011) define political radicalization as changes in beliefs, feelings and behaviour in the direction of increased support for

one side of a political conflict. This support may be in the form of radical opinion (Figure 1), radical action (Figure 2), or both. For jihadist terrorists, radical opinions usually include seeing the war on terrorism as a war on Islam (sympathizers), or, more extremely, justifying suicide bombing in defense of Islam. As visualized in Figure 2, jihadist radicalization in action occurs when individuals and groups move to support or participate in legal and nonviolent political action (activism such as Hizb ut-Tahrir) or illegal and violent political action (al-Qaeda). It is important to note that we lack strong theory that can connect the dynamics of the opinion and action pyramids.

**FIGURE 2**  
**The Action Pyramid**



An extreme of radicalization in action is terrorism, in which a nonstate group targets not only government forces but civilian citizens supporting the government. Another extreme of radicalization is genocide, in which a state targets every member of an enemy group, including civilians. Thus by this definition, the bombing of enemy cities during the Second World War was state terrorism (Pape, 1996).

This research note focuses on mechanisms of political radicalization in action, including radicalization to terrorism, for non-state terrorist groups. These mechanisms operate at three levels: individuals, groups, and mass publics. Individuals are moved to join existing radical groups by a range

of personal motives and experiences. Activist and radical groups become more extreme through competition with government forces and with groups trying to represent the same cause. Mass publics are radicalized in intra- and inter-state conflicts. No mechanism enables a 100-percent prediction of radicalization; rather, each is a contributor for movement toward radicalization. Radicalization usually requires a combination of mechanisms.

### *Individual-level Mechanisms*

Individual mechanisms are the most relevant for understanding how individuals join an already radicalized group. The next section, group-level mechanisms, focuses on how an existing group becomes more radical over time. In practice, the two levels of mechanisms tend to become mutually reinforcing.

1. *Individual Radicalization through Personal Grievance.* An individual can be radicalized as a result of the perception of unjustified harm to self or loved ones. Although often cited as an explanation for terrorism, this mechanism is difficult to quantify. We are not aware of any research that attempts to count the proportion of terrorist group members with a personal grievance against their target group.

Terrorist groups may include individuals seeking revenge, but a terrorist group aims to represent a political cause that is more than a collection of vendettas. Indeed, personal motives of revenge can undermine the cohesion and united action that make an effective terrorist group. Thus, we argue that personal grievance seldom leads to radicalization unless it is interpreted (with help of group and mass-level rhetoric) as part of a larger political struggle.

2. *Individual Radicalization through Political Grievance.* An individual can be radicalized as a result of strong identification with a political group or cause that is highlighted in the mass media or Internet. It is rare that this mechanism of radicalization goes all the way to violent action without some group or organizational support; more commonly the growing radicalization of beliefs and feelings leads the individual to associate with similar others through group dynamics described in the next section. But cases of lone-wolf radicalization, such as Mohammed Khawaja, do occur with non-negligible frequency. In these cases, identification with a group seen as victimized may be enough to move an individual to violence.

3. *Individual Radicalization in Action: The Slippery Slope.* Individuals may become radicalized as a result of experiences they have after joining an existing radical group. Except for suicide bombers, it is rare for a terrorist recruit to be entrusted with carrying out a lethal attack. Instead, interviews with former group members indicate that progression toward the most radical behaviours is deliberately slow and gradual. At first, a recruit may be asked to carry insignificant pieces of information, or to serve as a lookout. Later, the recruit may be asked to deliver a weapon and later still asked to drive a senior member to a meeting. This progression continues until the now-tested recruit is ready to use a bomb or a gun.

The power of this progression is its gradual nature. The first step is easy with little risk to the recruit and little harm to anyone. Each new step in the progression is only minimally more extreme. On this slippery slope there is no transition marked “terrorist,” and an individual looking back on a terrorist career can find it difficult to answer questions about “When did you decide to become a terrorist?”

4. *Individual Radicalization in Relationship: The Power of Love.* An individual may join a radical group in order to be with or protect a loved one who is already a member. The bond that brings people into the group is likely to become even stronger as they share common experiences of threat from the authorities or rival groups, as well as the experience of isolation common to radical groups that tends to make group members more dependent on one another. Love can bring radicalization in behaviour without radicalization of opinions or ideology: even politically inert individuals can feel the pull of a loved one asking for help.

5. *Individual Radicalization in Status and Thrill-Seeking.* Radical groups offer a number of rewards to those who seek adventure and the admiration of others: access to a secret society with grandiose goals; the thrill of operations that involve guns and money; and status and fame unparalleled by the achievement of an ordinary life. Young men, in particular, are susceptible to the appeal of these rewards as they transition from adolescence into young adulthood, trying to position themselves relative to their peers. For some individuals, the ideology of the group they join matters less than the anticipation of thrill and status. Abu Musab al-Zarqawi was an example of this kind of radicalization.

6. *Individual Radicalization as Escape.* There are places in the world – parts of Colombia, Yemen, and Somalia for instance – where an individual

is safer in a group with guns than on the street alone. In these places joining a radical group can be a move to relative safety and security. Similarly, an individual who believes he or she is sought by police or security forces, and who fears mistreatment and incarceration, may join a radical group as an escape from streets that are no longer safe.

7. *Individual Opening to Radicalization: "Unfreezing."* For most individuals, the path to radicalization is blocked by everyday routines of commitment and responsibility. Supporting a family, building a career, and attachments to friends and neighbors would all be jeopardized by joining an illegal and dangerous organization. But what if these commitments and attachments are lost? Perhaps parents or a spouse die suddenly. Or an individual moves far from home for schooling or a new job, and has to begin again with no social ties and few resources. Thus disconnected, an individual is an easy prospect for any group that offers comradeship and connection. If these come with new ideas of grievance and what to do about it, the combination may be easily swallowed.

It is important to note that unfreezing can open an individual to the attractions of many new identities, but for a Muslim living in a non-Muslim country, shared religion is a likely to be a salient source of similarity and support. The 9/11 attacks began with young Arab men seeking new friends in Germany.

### *Group-level Mechanisms*

There are a few individuals who translate their own personal or group grievance into political violence without participation in a radical group, but radical power comes from groups with enough cohesion and organization to plan and carry out collective action. This section identifies mechanisms that can move a whole group together toward political radicalization.

8. *Extremity Shift (Group Polarization) in Like-minded Groups.* Group discussion among like-minded people tends to move average group opinion further in the direction favored initially by a majority of group members. Discussion among people who favor the same political candidate, for instance, is likely to move average opinion toward even stronger approval of this candidate. This tendency is the result of two forces.

First, discussing an issue will bring out new arguments, not previously considered by individual group members. In a like-minded group, most of

the new arguments will be in the direction already favored. Group members are then persuaded by the new arguments they hear and become more confident and more extreme in the initially favored direction.

Second, individuals who are more extreme in the group-favored direction are viewed as more admirable and influential. Less extreme members of the group then tend to gravitate toward the more extreme opinions in order see themselves as more influential and admirable.

These two forces are likely to affect groups of people who come together around some issue of political reform (saving redwoods, animal rights) or of resisting reform (integrated schools, gun control). A group drawn together by concern for the same political issue is likely to become more radical over time, especially if their efforts do not seem to be making enough difference. In the U.S., the Student Non-Violent Coordinating Committee (SNCC) came to their first demonstrations in 1960 in jackets and ties, with the Bible in one hand and the Constitution in the other. By 1966 SNCC leader Stokely Carmichael was talking "Black Power" and violent confrontation with whites.

9. *Group Radicalization in Competition with State Power: Condensation.* This mechanism of radicalization arises in conflict between a government and an activist group challenging the government. When the state response is repressive and the costs of continuing political action are raised, the less committed members drop out. Those who remain are likely to turn to more radical rhetoric and action (Mechanism 7), typically leading to even harsher response from the state. Over time, only a tiny fraction of hardened radicals remains and may go underground as a terrorist group.

The group dynamics at the heart of this mechanism are a reliable consequence of facing outside threat or attack. Hostility toward the threatening group is the obvious result, but equally important is the effect of threat on the interactions among those feeling threatened. Perceived interdependence within the threatened group increases as group members see they will share the consequences of the outside threat. The result is increased ingroup identification, idealization of ingroup values, increased respect for ingroup leaders, and increased readiness to punish anyone dissenting from group norms. This mechanism is a powerful source of ingroup cohesion: a group facing threat moves toward the unity of thought, feeling, and action that prepares them to fight the threat.

In Italy in the 1970s, the terrorist Red Brigades condensed out of leftist protest movements, after years of escalating conflict between protestors

and Italian police. Similarly, the Weather Underground condensed out of the Students for a Democratic Society after escalating conflicts between protestors and U.S. security forces.

10. *Group Radicalization in Competition for the Same Base of Support: Outbidding.* Groups rallying behind the same political cause can be in competition for the same base of sympathizers and supporters, who can be crucial in providing cover, money, and new recruits for a radical group. As competing groups try different tactics to advance their cause, the competition may escalate to gradually more radical acts if sympathizers favor these. The Popular Front for the Liberation of Palestine (PFLP) is a Marxist-Leninist group that eschewed the rhetoric of jihad and did not organize martyrdom actions in the early years of the Second Intifada. Polls of Palestinians indicated that support for the PFLP was dwindling. The PFLP began talking about jihad, fielded its own suicide bombers, and its poll numbers recovered.

11. *Group Radicalization from Within-group Competition: Fissioning.* The intense pressure for conformity within a radical group can result in factions and internal conflict. The conflict may be about tactics, with one faction advocating more violence, or may be about personalities and internal power struggles. Sometimes the conflict can escalate to violence but even if it does not, the factions may separate to form new groups. The ingroup dynamics resulting from external threat (Mechanism 6) come into play, and at least some of the new groups are likely to be more radical than the group from which they separated. The IRA provides an example of many competing factions – Official IRA, Provisional IRA, Real IRA, Continuity IRA, INLA – who sometimes targeted one another.

12. *Social Reality Power of Isolated Groups: The Multiplier.* In group dynamics theory, the only source of confidence in answering questions of value is consensus: agreement with others. Systems of meaning and values represented in religions and secular ideologies offer abstract answers to these questions, but the specifics for implementing these systems in relation to a current situation typically depend on group consensus. When an individual belongs to many different groups with competing values, any one group has little power over the individual. But when a group is isolated from outside influences, its power over individual members becomes extremely strong. Isolated groups – terrorist groups, youth gangs, religious



cults, soldiers in combat – have unchecked power to determine value and meaning for group members. Consensus power in such groups can justify and even require extreme beliefs, feelings, and actions against anyone who threatens the group.

The unchecked value-setting power of an isolated group is a multiplier, but it is not necessarily the propensity for illegal and violent action that is multiplied. In a monastery, isolation can serve to multiply religious fervor and prayer. In an underground terrorist cell, however, isolation is likely to multiply the intensity of violence and justify escalation of violent tactics. Group radicalization through condensation, outbidding, and fission is multiplied to the extent that group members are cut off from all but fellow-radical group members.

### *Mass Public Mechanisms*

Like small groups, mass publics can be radicalized by threat and conflict. This larger-scale radicalization can be important in providing support to a militant group, which usually depends on information, cover, money, and recruits from a much larger pyramid of sympathizers.

13. *Mass Radicalization via Threat: Jujitsu Politics.* Just as groups are radicalized in conflict with government or other groups, so mass publics can be radicalized under threat of attack. The U.S. after the 9/11 attacks is an example of this mechanism at work. As a nation, U.S. citizens showed increased ingroup identification (patriotism), idealization of ingroup values (“they hate us for our values”), increased respect for ingroup leaders (sharply increased poll numbers for President George W. Bush and every element of the U.S. government), and increased readiness to punish anyone dissenting from group norms (beginning of hate crimes against Muslims).

The public response to attack is so reliable that it can be used as a terrorist strategy. Al Qaeda hoped that 9/11 would elicit a U.S. invasion of Muslim countries that would mobilize Muslims for jihad. In this strategy of “jujitsu politics” the goal of an attack is to elicit an over-reaction that will increase support for the attacker.

14. *Hate.* Hate can be thought of as a very strong form of negative identification that includes perception that the enemy has a bad essence. Negative identification means positive emotions such as joy and pride when the enemy is losing or dwindling, and means negative emotions such as

fear and shame when the enemy is winning or strengthening. Intergroup competition usually brings negative identification with the outgroup as well as positive identification with the ingroup. But the key additional ingredient in hate is seeing the enemy as having a bad essence: they act like that because that's the way they are. Essence is the deep-down ineradicable something that makes living things what they are: the something that made the Ugly Duckling not a duckling but a swan. When a mass public comes to see *them* as having a bad essence, and *us* as having a good essence, it becomes justifiable to kill any of them we can reach. If we can't eradicate the bad essence, we turn to eradicating the whole group defined by the bad essence.

15. *Martyrdom*. A martyr makes a great sacrifice for a cause. Whatever the martyr's impact on the enemies of the cause, the impact on sympathizers may be stronger. Sympathizers and supporters of the martyr's cause are moved to increased commitment to that cause – commitment that may include imitation of the martyr's act. It is the mobilizing power of martyrdom that makes suicide bombers more than just *smart bombs*; the martyr's effect on sympathizers can be greater than the effect on the enemy.

### Implications for Canadian Security

Taken together, the fifteen mechanisms of radicalization identified in the previous section have several implications. First, there is not likely to be a profile or "conveyor belt" for political radicalization, and thus no "radicalization process" to speak of. The many possible combinations of many mechanisms mean that there are many different trajectories of radicalization.

Second, it seems likely that mechanisms of radicalization are also mechanisms that bring individuals to legal activism. It is a challenge for security services to identify mechanisms of radicalization without stigmatizing legal activism.

Third, most mechanisms of radicalization do not depend on ideology, which may be more rationalization for violence than a driver of violence. Takfiri Islam, for instance, is at most associated with group grievance ("war on Islam") and martyrdom ("shaheed"). Unfortunately, there are many possible rationalizations for political violence: the future of the proletariat, the promises of nationalism, revenge, self-defense. Targeting any one rationalization is unlikely to be effective.

Fourth, counterterrorism is mostly concerned with individual-level and group-level mechanisms of radicalization, which can help us understand the pyramid of action in which the base is inert, the next level is activist, the next level radical, and the apex terrorist. The war of ideas is more concerned with mass-level mechanisms of radicalization, which can help us understand the pyramid of opinion in which base is neutral, the next level sees a “war on Islam,” the next level justifies suicide bombing in defense of Islam, and the apex feels a personal obligation to participate in political violence. The action pyramid and the opinion pyramid are different problems because 99 percent of those with radical ideas never act, and because radicalization in action can occur without radical ideas via mechanisms of love, slippery slope, escape, and status-and-thrill-seeking.

Fifth, recent research indicates some surprising complexities in the opinion pyramid. For instance, Muslims who justify suicide bombing in defense of Islam may be no more likely to approve of Al Qaeda than other Muslims (McCauley, in press). Another example: Ottawa Muslims who approve the governments of Canada and the U.S. are no more likely to disapprove Hamas and Al Qaeda (Leuprecht et al, in press). The war of ideas might be better supported if we understood the origins and extent of these surprising results.

Sixth, the mechanisms identified are associated with continuing competition and conflict over time. Grievances, slippery slope, love, status-seeking, escape, and unfreezing operate over extended periods of time. Group polarization, group isolation, and group competition are part of extended conflicts in which governments and militants act and react over time. Jujitsu politics, hate, and martyrdom appear in histories of extended conflict. Counter-terrorism is the government response to militant actions, and the competition of militants and government is a dynamic interaction over time. It is this interaction that must be understood for effective counter-terrorism. We will know we are making progress in understanding the interaction when there are as many data bases of government reactions to terrorists as there are data bases of terrorist incidents.

More generally the perspective advanced in this research note leads to several observations about the likely future of terrorism in Canada. First, the internet is providing new opportunities for radicalization. It appears that individuals such as Mohammad Khawaja can “self-radicalize” via internet, without participation in anything like the intense group dynamics that have often thought to be the key to moving normal individuals to abnormal violence.

Second, the decline of jihadist threat is likely to be the occasion of new terrorist threats. In the U.S. right-wing militance, ending in the Oklahoma City bombing, arose after the fall of the Soviet Union. It seems likely that removing an external threat reduces citizens' tolerance for larger and more powerful government. If this interpretation is correct, it follows that right wing and eco-terrorism (Animal Liberation Front, Environmental Liberation Front) are likely to increase in Canada as the threat of jihadist terrorism declines.

Both right and left wing movements have already embraced "leaderless resistance" and ALF and ELF have shown the coercive power of attacks on property and infrastructure. These attacks have the further advantage of avoiding the public outrage and police attention that is associated with killing people. Violence against objects but not people, committed by lone wolf or tiny groups in "leaderless resistance" are likely to be the dominant form of terrorism in North America as jihadist efforts fade.

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# *Climate Change and Canadian Security*

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*Robert McLeman and Barry Smit*

## **Current State of Knowledge**

Scientific evidence of increases in global average air and ocean temperatures, melting of snow and ice and of rising sea levels is unequivocal (IPCC, 2007). The impacts on natural systems will include: a disappearance of late-summer sea ice in the Arctic; increased frequency of extreme heat and extreme precipitation events; increased tropical cyclone intensity and a poleward shift of storm tracks; decreases in precipitation in most subtropical land regions; and, a continued rise in mean sea levels, by up to 1m by 2100 (IPCC, 2007)

It is widely believed that less-developed regions, resource-dependent populations, and those living in highly exposed areas such as low-lying coastal areas and dryland agricultural areas, are among the most vulnerable to these changes in natural systems (Agrawal and Perrin, 2009). However, events such as the 2005 extreme heat wave in Europe, Hurricane Katrina, and the 1998 eastern Canadian ice storm show that climate-related events can cause loss and extreme damage to infrastructure even in developed nations that are perceived to have great adaptive capacity because of their substantial wealth.

A variety of linkages have been made between the impacts of climate change and transnational security (Barnett, 2003; Rogers, 2004; Dabelko, 2009). Areas of particular interest to Canada include:

- the potential for large-scale displacements of environmental refugees/distress migrants;
- exacerbation of regional tensions/conflicts and tipping of fragile states into conflict due to scarcity of critical resources, including food and water;
- competition for control over Arctic resources and transportation routes.

Rising sea levels hold the potential to displace tens of millions of people from low-lying coastal regions (McGranahan et al., 2007; Dasgupta et al., 2009). Media reports have claimed to identify the world's first climate change refugees in locations as disparate as coastal Alaska, the Carteret Islands near New Guinea, and Africa's Lake Chad region (Willis, 2004; Vidal, 2005; IRIN, 2008; York 2010). The United Nations Environment Programme (UNEP) reports that the Darfur conflict has been exacerbated by the severity and longevity of droughts in Sudano-Sahelian Africa (UNEP, 2007). Reports prepared for US military and security organizations describe climate change as a "threat multiplier" that magnifies the potential for insurgencies and conflicts, and that has a potentially adverse effect on overseas operational capacity (Randall and Schwarz, 2003; CNA, 2007; NRC 2011). Arctic land and sea ice is already in retreat, and may open summer-ice free transportation corridors across northern Canada by 2040 (Wang and Overland, 2009). Considerable mineral, oil and gas resources have already been identified in the region, over which Russia, the US and Denmark seek to establish territorial control (Young, 2009).

## Broad Trends

*Displacement and distress migration:* Droughts in dryland regions of Africa and Asia have been associated with significant migration events in recent decades (Meze-Hausken, 2000; Ezra and Kiros, 2001; Deshingkar and Start, 2003; Leighton, 2006). Hurricanes Jeanne, Katrina, and Mitch have caused large-scale displacements and migration in the Caribbean region (Giro, 2002; Manuel-Navarrete et al., 2007; Fussell et al., 2010). The growing frequency and/or severity of events such as these can be expected to raise the risks of displacements and distress migration in many populated regions. Rising sea levels threaten the populations of low-lying coastal areas and small island states (Barnett, 2003). Ten percent of the world's population (and 15 percent of its urban population) lives within 10 m of sea level (Mcgranahn et al., 2007). Densely populated "mega-deltas" in Africa

and Asia are exposed to a combination of risks in addition to sea level rise, including cyclonic storms and storm surges, erosion, subsidence and soil salinization (Ericson et al., 2006; Walsham 2010). Forecasts of the number of people at risk of displacement vary from anywhere between 200 million to one billion by mid-century (Myers, 2002; Christian Aid, 2007; CARE International, 2009).

*Food security:* Climate change is expected to exacerbate existing stresses on critical resources for human well-being, especially food and water (Rosegrant and Cline, 2003; Gregory, 2005), with resulting knock-on effects on transnational security. In recent years, global commodity markets have become extremely volatile and prone to speculation, and react strongly to weather-related effects on crop harvests in exporting countries (Ghosh, 2010). This has led to such recent events as China importing large quantities of grain, Russia exercising controls on wheat exports, and the resulting price shocks causing protests in several regions (Sternberg, 2011). One outcome has been the entry of Asian and Middle Eastern corporations into Africa, to convert extensive area to large-scale industrial agriculture, with the potential to generate internal tensions and instability in host states (Cotula and Vermulen, 2009).

*Water security:* Fresh water resources are expected to become increasingly scarce in semi-arid and dryland regions on most continents and in western Canada (Vorosmarty et al., 2000; Schindler and Donahue, 2006). The presence of shared water resources increases the potential for conflict between groups or states (Toset et al., 2000). Water scarcity has been associated with various local and intraregional conflict, but the number of large-scale violent conflicts over water resources has in recent decades been relatively small (Raleigh and Urdal, 2007). Turkish dam building on the Tigris and Euphrates has been accused of causing water scarcity in Iraq and Syria, conditions that have been worsened by droughts of recent years (Jongerden, 2010). Water management and water-use conflict resolution mechanisms will be of growing importance in coming years (Wolf, 2000; Sowers et al., 2010).

*Climate as a threat multiplier:* In international security hotspots, such as the Horn of Africa (Blackwell, 2010), Iraq (Chulov, 2009), and Afghanistan (Palmer-Moloney, 2011), droughts have had a destabilizing influence in recent years. Water and food scarcity is acute in Yemen (Albert, 2009). Disputes over water access in the Indus system are a present point of tension between India and Pakistan (Bagla, 2010). Severe flooding in Pakistan in 2010, in response to which the central government showed itself to be

less than fully competent, created severe public health and food security problems, and allowed extremist groups an opportunity to promote their legitimacy through involvement in flood relief (IISS, 2010). This bodes poorly for Pakistan, where seasonal water scarcity and severe flood events are expected to become increasingly problematic as a result of climate change (Akhtar et al., 2008; Vaughn et al., 2010).

*Arctic change:* The disappearance of land and sea ice across the Arctic appears to have accelerated faster than suggested in IPCC reporting (Wang and Overpeck, 2009). The impacts of such changes are already being experienced by Inuit communities in the Canadian Arctic, who are having to adapt hunting and transportation activities to new conditions (Ford and Pearce, 2010). For the past decade, Russia has been actively engaged in staking claims to large amounts of Arctic Ocean and building up the world's largest naval icebreaker fleet (Borgerson, 2008). Large seabed oil and gas fields are already in production, with more hydrocarbon and mineral plays expected to open up as ice continues to retreat. Arctic shipping routes between Europe and Asia, Europe and western North America, and eastern North America and Asia are considerably shorter than existing alternatives, and so pressure to utilize these routes will grow in coming years.

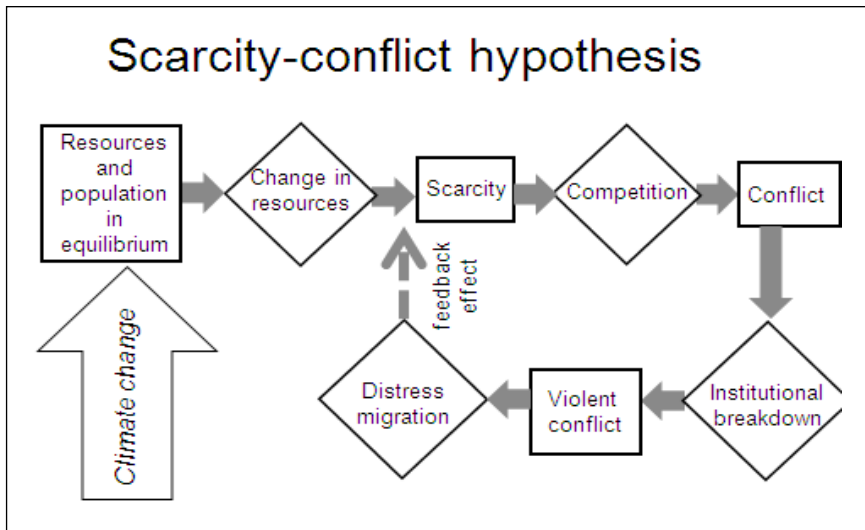
### **Relevant Empirical Findings from Recent Work**

Our own work has looked at the pathways by which climatic conditions and events may lead to insecurity, conflict and distress migration; and, the ways by which such pathways may be avoided through adaptive capacity building in vulnerable regions.

There are a variety of ways by which climate change may have adverse effects on security. Some impacts of climate change, such as sea level rise, threaten to render certain regions uninhabitable, and will present the international community with previously unencountered challenges such as what to do about the populations of UN member states that have ceased to exist, beginning with a number of small island states in the Pacific (Yamamoto and Esteban, 2010). The scarcity-conflict pathway (Figure 1) could develop in areas where climate change causes a decline in the abundance, accessibility or quality of critical resources such as freshwater or precipitation, with Africa and the Middle East often being cited as areas at risk (Brown et al., 2007; Brown and McLeman, 2009; McLeman, 2011).



FIGURE 1



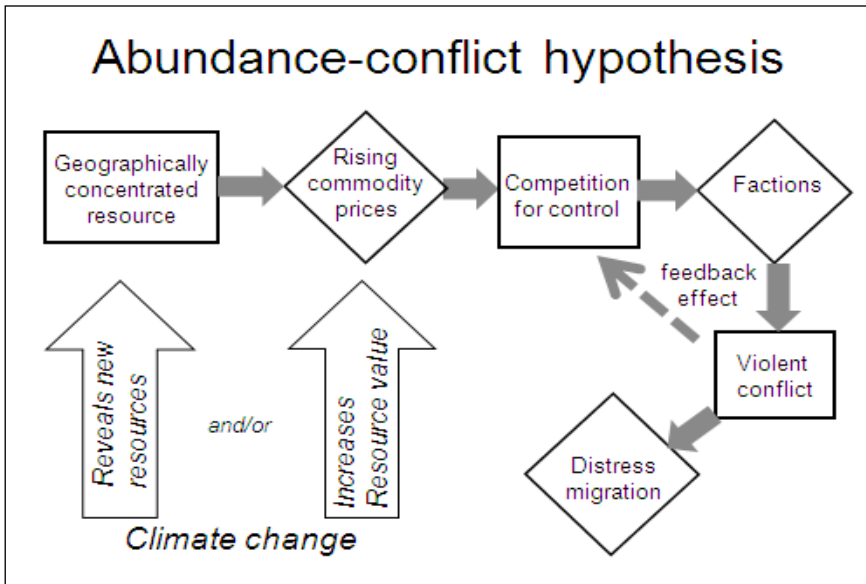
Adapted from McLeman 2011.

Where conditions of scarcity persist, competition for these resources may devolve into factionalization, institutional breakdown and eventually violent conflict (which in turn reinforces conditions of scarcity and may stimulate distress migration). Another possibility is the abundance-conflict process (Figure 2), whereby climate change reveals previously inaccessible resource plays or through shocks to commodity markets creates opportunities for those who through strength or stealth seize control of strategically located resources (McLeman, 2011).

Figures 1 and 2 show that pathways to violence and conflict involve a considerable number of progressive steps, allowing multiple opportunities throughout the process for intervention to avert violence, conflict, instability and distress migration. One key way is through building adaptive capacity among vulnerable populations, another area where the authors have been involved in research in various regions of Canada, the United States, West Africa, South America and South Asia. These include areas where water scarcity, precipitation change, food security, and low level conflicts are real and present issues (Nyong et al., 2007; Pouliotte et al., 2009; Westerhoff and Smit, 2009; Young et al., 2009). Through our research we have identified

barriers, challenges and opportunities for building adaptive capacity at all levels, from individuals and households to national governments and international organizations. While no one-size-fits-all method exists for capacity building, its success is closely connected to the basic tenets of sustainable development (Smit and Pilfsova, 2001, Smit and Wandel, 2006). Fair trading partnerships, harnessing of transnational social networks and capital, investing in education and health, supporting traditional conflict resolution institutions, and providing broad access to emerging technologies are just some of the ways by which adaptive capacity can be built and the risk of instability and conflict can be reduced (Brown and McLeman, 2009; McLeman, 2011).

**FIGURE 2**



Adapted from McLeman 2011.

### Implications for Canadian Security

Climate change will influence Canadian security on a number of fronts. These include:

- challenges to Arctic sovereignty

- threats to the safety of Canadian peacekeeping troops, development assistance workers and other Canadians overseas;
- instability in regions where Canada has strong ties through transnational communities
- increased pressure on Canadian immigration and refugee resettlement programs and resources (McLeman and Smit, 2003, 2006; McLeman, 2007)

Climate change is stimulating a massive transformation of the Arctic. The well-documented, rapidly changing ice conditions in the Arctic are already inviting international interest in Arctic shipping routes. The Russian ambassador to Canada has stated publicly that Russia is keen to open the Northeast Passage between Europe and Asia (on CBCNN *Power & Politics*, 27 May 2011) and the international community will be looking to Canada to do the same with the Northwest Passage. Canada's claim to the Northwest Passage being internal waters is not internationally accepted (Carnaghan and Goody, 2006) and places it at odds with other Arctic nations, including the United States. The retreat of land and sea ice will reveal newly accessible offshore mineral, oil and gas resources that will create an environment of competition between Canada and other Arctic states over territorial rights to control such resources (Young, 2009). Canada lacks deep water port facilities in its Western Arctic, and presently lacks infrastructure and supporting population centres to exert strategic or administrative control over territorial and resource claims in much of the Arctic. With development of a port facility at Nanisivik, Canada will have some facility to administer the movement of shipping through the eastern entrance to the Northwest Passage.

The long-term success of the Canadian presence in Afghanistan as it converts to a development mission, and the safety of Canadians involved in it, will be affected by food and water security in that region. Any hopes of bringing permanent stability to Afghanistan must stabilize the agricultural sector, which the largest component of Afghanistan's economy and employs 80 percent of the workforce (Torell and Ward, 2010). Three decades of conflict have greatly reduced the amount of arable land in production (de Beurs and Henebry, 2008). Lack of infrastructure and basic institutions leave farmers highly exposed to drought conditions, and climate change is expected to magnify the risks to water supplies.

In recent decades, threats to Canadian security in terms of domestic terrorism and fund-raising for terrorism and conflicts abroad have been experienced through our transnational migration linkages to India, Pakistan,

Sri Lanka, Somalia, and Algeria (McLeman and Smit, 2003). Each of these countries contains large regions and populations where the potential exists for climate change-related events and conditions to have a threat-multiplying effect in terms of resource scarcity, instability and insecurity. Canada will continue to experience ongoing exposure to movements of individuals and financial assets related to violent groups through transnational networks so long as unstable conditions persist in the source countries.

Key source countries of migration to Canada – China, India, Mexico, Pakistan, and the Philippines, among others – also contain large areas and populations with high levels of exposure to disruptive climatic events and conditions. Climate change can be expected to generate additional migration pressure from these regions in coming years through legal channels, and through irregular ones that require increased interdiction resources. Canada can also expect the international community to look for it to play a significant role in the resettlement of populations displaced from small island states that cease to be viable.

In summary, climatic trends already underway will challenge Canada's Arctic sovereignty, whilst the impacts of climate change abroad, especially in already unstable regions like the Middle East, dryland Africa and South Asia, will amplify existing risks to Canada's domestic security and Canadian strategic interests abroad. Mitigating such risks is possible, and entails proactive engagement in adaptive capacity building at home and abroad.

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# *Trends and Discontinuity: Charting a Canadian Research Agenda*

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*Christian Leuprecht and Todd Hataley*

Strategic foresight aims at reducing uncertainty about future events. It seeks to discern significant trends that are likely to shape future events, and explores both the probability and the impact of possible developments, events or shocks. Strategic foresight can thus be used as a useful tool to establish research priorities. Research can offer comparative insights into the intended and unintended consequences of a range of possible policy options. It can provide an evidence-base in support of decision-making, but also holds out the potential to perform a “red-teaming” challenge function. Such knowledge is particularly valuable in a time of fiscal austerity: when resources are a premium, allocation should be optimized. This concluding chapter seeks to distill the research notes and workshop discussion. The analysis is designed to enhance scholarly capacity on the intersection of transnational trends and concomitant federal stakeholder departments’ priorities with respect to national and border security. It does so by highlighting key trends and discontinuities and formulating possible lines of inquiry.

## **Population Displacement**

The impact on Canadian security of migration and population shifts as a function of push factors, such as domestic conflict, climate change,

resource scarcity (including relative deprivation, food and water security), and economic opportunities, is a dominant theme throughout. During the workshop, and in their accompanying research notes, François Crépeau and Daniel Hiebert cautioned that the widening gap between people looking to emigrate and the number of immigrants destination countries such as Canada are prepared to accept threatens to undermine the legitimacy of international borders. Borders function as filters, and they are supposed to prevent the inbound flow of undesirable people and material (as well as the outbound flow of people and goods that might precipitate problems elsewhere). Demographic models project that populations will flow from areas of high stress to areas of low stress that hold out the promise of greater opportunity. Scenario projections can be useful for understanding what *can* happen under current and international conditions, but only Canadian-centric research can work out the specific implications for Canada and the levers at the disposal of Canadian policy-makers. Concomitantly, Canadian research is better positioned to identify unintended consequences and weigh the costs and benefits associated with different policy options. By providing unintended incentives for illegitimate activities, policy can have a significant effect on strategic behaviour. Research can help identify vulnerabilities in Canada's immigration program and border controls, help conceive policy options, and assess potential payoffs.

### **Emerging Shifts in the Loci and Distribution of Economic and Political Power**

A second dominant theme was the changing security climate engendered by the new logics of new centres of power, new economic actors, and diasporas. What does this global shift in power entail for Canada's secure posture? Jeremy Leonard and Brian Finlay document the opportunities and security challenges associated with the rise of Brazil, India, and China and an ever-globalizing trade regime. As Canadian businesses and investors reach out to access new markets, Morselli and Turcotte, Bouchard, and Boudreau observe that trade and economic development also become pathways for organized crime and terrorist organizations. Understanding weak links is critical to maintaining Canadian security.

A related issue for Canada is the potential for international corruption as Canadian businesses increase contacts in countries whose economies and business practices are less regularized than those in Canada and the United States. As Canadian companies increase their global footprint,

the potential for corruption increases. Notwithstanding the Corruption of Foreign Public Officials Act of 1998, the Royal Canadian Mounted Police did not create the first units specifically dedicated to investigating such crimes until 2008. Economic globalization is not without criminal cost for Canada: in 2011 the RCMP had twenty investigations ongoing involving Canadian companies operating overseas. At the same time, the prevalence of counterfeiting, weak intellectual property regimes, and the availability of medicine and medical treatments not approved in Canada pose both financial and health risks to individual and corporate Canadians.

### **The Globalization, Regionalization, and De-territorialization of Threats**

The global reverberations of fragile domestic institutions and hostile foreign governments alike is a third major theme. Given its geo-strategically privileged position, Canada is far removed from the world's "bad neighbourhoods." Nonetheless, the migratory and humanitarian crises emanating from these neighbourhoods have second-order consequences on Canadian national security through their regionally destabilizing impacts and the push factors that have an adverse effect on the integrity of Canada's borders. Be it the arrival of a boatload of illegal immigrants, the illicit flow of undocumented migrants across the Canada-US border, or diaspora sympathy and support for politically destabilizing violence abroad, weak domestic institutions in countries far afield are thought to pose a security challenge for Canada. Conversely, weak institutions are problematic insofar as they can become safe havens that make it possible for terrorists, organized crime groups and human traffickers to operate with impunity, diffuse regional instability, and orchestrate or catalyze acts of domestic and international terrorism. Do certain instances of institutional fragility pose a greater threat to Canadian security interests than in others? What sorts of threats pose a specific risk to Canada, and what mitigation strategies are at Canada's disposal? Are some of them likely to be more effective than others? Answering such questions is difficult: researchers do not have a good grasp of the actual relationship, let alone causal mechanisms and effects, between weak domestic institutional capacity abroad and the first- and second-order effects on Canadian national and border security.

The conditions that facilitate recruitment and radicalization among Canadian diaspora communities – as well as the conditions that make such communities resilient against violent extremism – merit research. Young

people who are combat trained, and experienced in and committed to violent extremism, have the potential to foment violent extremism among their Canadian diaspora. Similarly, as the case of LTTE operatives raising (and extorting) funds among Canada's Tamil diaspora demonstrates, the linkages between Canadian diaspora groups, their sympathy and material support for violent extremism in their home country, and their ability to act as force-multipliers for domestic and regional instability has received little scholarly attention. We need more research on tipping points within diaspora communities that may make them more susceptible to support for or engagement in illegal activities. Even more importantly, we need to know why some diaspora communities in Canada are more resilient to such potential vulnerability than others. Such research has the potential to inform decision-making in the federal stakeholder departments with respect to policies that proactively bolster community resilience, rather than defaulting to remedial action.

At the same time, there has been a proliferation of state-sponsored (as opposed to state-based) threats. As debilitating attacks in February 2011 on the networks of the Treasury Board Secretariat, the Department of Finance, and Defence Research and Development Canada show, Canada is not immune from cyberattacks. Cyber-threats have evolved from hackers, script kiddies and web defacements to crime cartels with links to hostile foreign entities, on whose behalf they operate criminal/spy robot networks at arm's length. The rise in Distributed Denial of Service attacks (DDoS), the documented temporary manipulation of data flows on the Internet by Chinese authorities, and a Chinese state-owned Internet service's temporary redirection of a large amount of Internet traffic from North American networks exemplify the vulnerabilities of communications info-structures and infrastructures. As exemplified by Ronald Deibert's University of Toronto-led team that was instrumental in uncovering one of the largest international cyber spy rings to date, Canadian research can make a real difference.

### **Potential Lines of Inquiry**

The state of knowledge as synthesized by the research notes reproduced in this volume thus gives rise to different lines of inquiry with immediate relevance to Canada to guide prospective future research, funding and partnership opportunities between academic research and the federal stakeholder departments. The overarching purpose of these potential lines of inquiry is to raise awareness of issues that emerged as both particularly

important for Canada and areas where research and partnerships stand to yield especially valuable payoffs. These lines of inquiry and associated questions are premised on two basic propositions about the relationship between transnational threats and Canadian security. At the global level, international stability is a *prima facie* Canadian national interest, since it is a precondition for the sort of open trade routes on which Canadian prosperity is heavily dependent. At the domestic level, Canada's overarching national interests include ensuring public safety, social resilience and the physical security of all Canadians as well as the protection of private property as a means to sustaining Canada's economic security writ large. The following lines of inquiry broadly reflect some of the research interests of academics, policy-makers and federal departments and agencies. Stakeholders from business and industry, education, social-advocacy and legal communities, and the realm of private citizens stand to complement this suggestive list. The following issues frame opportunities for collaboration between researchers and federal departments and agencies that seem particularly promising:

*Shifting economic fundamentals and market structures in a multipolar world:* As exemplified by the research notes by Leonard and Finlay, this line of inquiry focuses on the implications of the shift to emerging economies, industrial espionage, and the position of the United States in the global economy. Concomitantly, the research notes by Deibert and Leuprecht raise concerns about the way developments in cyberspace and demography can conjure up security problems in Canada involving non-state actors whose origin is far afield and thus largely beyond Canada's purview.

- Do state-owned enterprises "distort" the global economy and global markets and can states exploit distortions to give their economies a competitive edge?
- How are shifting employment patterns likely to affect undocumented and legal migration?
- Many emerging economies are also projected to be hit hard by climate change. What might be the implications for Canadian prosperity and economic security?
- What effect are growing sovereign debt loads and protracted economic weakness among many of Canada's key traditional trading partners and allies likely to have on Canada's ability to leverage soft-power and collective action in support of Canadian national interests?
- As the proportion of imports from emerging markets grows and the percentage of total Canadian exports to the United States falls, how

might Canada optimize scarce customs and border-security resources to achieve maximum strategic effect?

- How should Canada balance an open export-oriented economy without making Canadian intellectual property and Canadian cyberspace any more vulnerable than necessary?
- What threats and security risks emanate from the proliferation of private actors in the new economic order?
- Does the globalization of trade make Canada's borders more vulnerable?

*The globalization of the movement of goods and people:* As exemplified by the notes by Leuprecht, Crépeau and Finlay (as well as remarks by Hiebert at the workshop), changing dynamics in trade and migration raise serious concerns about safeguarding the integrity of Canada's borders.

- How can Canada protect its borders without endangering trade?
- How will risk assessments and "business models" be transformed to provide real-time integrated risk management frameworks? What sort of data and automation is required to this end?
- Is it in our economic interest to engage more fully with perceived security threats? If so, how should we proceed?
- What are the costs and benefits of tough border controls?
- What is the future of border management? How can our detection systems keep pace with evolving designer drugs and chemicals?
- In this light, how should the risk posed by borders be managed?
- What sort of bilateral, multilateral and international institutional-building and programmatic activities yield the greatest (and lest) payoffs to mitigate transnational threats to Canada's national security? Are there case studies and best practices Canada might want to follow or replicate?
- How can Canada position and prepare vis-à-vis one of the highest per capita immigration rates in the world?
- With immigration important to economic security, how should Canada manage (increasing) diversity?
- What are potential threats posed by irregular and vulnerable migration? How do we balance this threat with the protection of individual rights and Canada's international treaty obligations?
- What are the perceptions of legitimacy of Canadian social institutions from different perspectives?

*Illicit networks and organized crime:* The research notes by Sheptycki, Morselli and Turcotte, Bouchard, and Boudreau point to a dearth of knowledge about illicit networks and organized crime in Canada in particular, and their transnational dimensions in general. Sheptycki highlights the relationship between the micro-social structures of organized and broader macro-social structures; Morselli and Turcotte point to the dynamics and flexibility of actors and networks, positing their sensitivity to their environment as a prospectively fruitful avenue of research in terms of using different means available to the state to influence strategic behaviour; Bouchard singles out friendship and kinship as characteristics that have been shown to shape criminal networks, a matter of particular interest in as diverse a country and with as many diaspora groups as Canada; and Boudreau draws our attention to the informal sector and concomitant transnational activities that are being exploited by organized crime.

- What inclines friendship and kinship networks towards criminal activity and how might those forces be directed away from deviant behaviour?
- What is the nature and extent of the transnational linkages of organized crime in Canada? How and to what extent is organized crime engaged in illicit traffic across Canadian borders? What policies incentivize and disincentivize the genesis and subsequent expansion of transnational links?
- What attributes determine how likely a Canadian or Canadian communities are to become involved in organized crime?
- What do the transnational networks of organized crime and terrorist organizations look like? Might research into one allow us insights into the other? How extensive are they? What are the determinants that drive these networks: ideology or cost-benefit analyses? To what extent do they exploit counter-veiling transaction costs across borders?
- What are the links and networks between organized crime and terrorist groups?
- What can academia tell us about the functioning of illicit markets?
- How can we find new and creative ways to gather scarce data on crime?
- What measures can we use to determine the success of drug policies holistically? How might we move away from success measured in terms of arrests made and kilos seized and towards indicators that measure a reduction in individual and social harm?
- What kinds of gender divides are present in illicit networks?

*Terrorism, violent extremism, and political radicalization:* McCauley's research note reinforces just how little is actually known about the drivers of radicalization and the circumstances and vexing mechanism that turn a law-abiding individual who happens to have ideas that are deemed radical into a violent extremist, or someone who sympathizes with or supports violent extremists. McCauley also raises the spectre of shifting terrorist threats, with an apparent trajectory from international terrorism to domestic terrorism, as well as the growth and decline of ideological paradigms that inform violent extremism. Yet, McCauley also cautions inferring nefarious behaviour from attitudes, suggesting a dearth of good insights into the intervening variables and enabling conditions that might turn an apologist into a terrorist.

- What attributes determine how likely a Canadian or Canadian communities are to sympathize with, support, or engage in violent extremism?
- What are the conditions, behavioural characteristics, attitudinal structures and tipping points associated with the radicalization process leading to violent extremism among Canadians, how does the process work in Canada, and how wide-spread is the problem?
- Why do some diaspora communities appear more resilient than others? In this regard, what are the internal dynamics of diasporas: the role of families and family structure, the nature and extent of continued links with the country of origin, the reproduction of social norms dynamics of the country of origin within the diaspora, the contribution of publications for and by diasporas?
- What is the most effective way to reach out to and persuade against radicalization in local communities?
- Does government-led "youth outreach" have an appreciable effect on reducing the emergence of terrorist networks?
- How might cultural communities and authority figures within them minimize radicalization within their communities?
- To what extent does research on the influences and drivers of violent extremism elsewhere hold up in Canada, and to what extent is Canada different?
- How effective has "counter-radicalization" been in other countries (especially those countries with similar systems of government and legal systems)?
- What sort of "counter-messaging" might work in Canada?
- What should be the role of government versus communities be?



- What social movements can be triggered or reinforced in response to disruptive trends such as a recession? What determinants affect the likelihood of a segment of society resorting to a violent agenda?
- What are the similarities and differences between transnational extremist movements, such as Islamists and the extreme-right, motivated by misinterpretations of a religious ideology and secular ones?
- How great a threat do they pose?
- To what extent do research findings for violent religious extremists hold true for secular ones, and vice versa?
- How will the shifting international environment shape the agenda and prospects of al-Qaeda and affiliates?
- Are violent extremist non-state actors and hostile states/foreign intelligence activities mutually reinforcing?
- Will the different al-Qaeda affiliates be able to overcome the very particular contexts in which they operate and which drive their struggle to coalesce into a broader movement?
- How might that affect Canada (for instance, in specific reference to the organizations affiliated with or inspired by al-Qaeda, such as Al-Shabaab, who have recruited actively among Canada's Somali diaspora)?
- How do different al-Qaeda affiliates choose to operationalize violence? Differences in the way they view society will affect strategic behaviour which, in turn, can have a significant impact on the likelihood of success.
- What is their definition of success; to what extent is capturing a state in the short-term interests of affiliates of al-Qaeda, such as al-Shabaab?
- Is the purpose of capturing a state primarily domestic or international in orientation?
- Why does Canada not have much of a "security culture," at least in comparison to other allied democracies including the United States, the United Kingdom, Australia, France, Germany, Spain, and the Netherlands?
- How do weak states rather than failed states, serve as propitious arenas for the development and advancement of terrorism?
- What are the unintended consequences of the hastily crafted policies that emerged immediately following 9/11? Were these policies effective?
- How does the globalization of regional tensions (and the resulting international notoriety) affect how and where terrorist networks emerge?

*Technological change and innovation:* Technological trends are among the most difficult to anticipate but, as the advent of the Internet and mobile technology show, can have game-changing effects. While uncertainty in this field is particularly high, it is clear that in the same way that organized crime and violent extremists have been exploiting borders and the forces of globalization to their benefit, the same is true for cybersecurity. Cyberespionage, for instance, is low cost yet highly effective. As Ron Deibert's research note explains, Canada is particularly vulnerable. The potential economic and political payoffs from successful infiltration, the mere costs associated with an attack, and the ready availability of technology to hostile state and non-state actors make this an area of exceptional concern.

- What balance should Canada strike between ready access to Personal Identifiable Information to optimize the security of Canadian networks and Canadians' right to privacy?
- What role do social media and the Internet play in the process of radicalization as well as violent extremism in Canada? What is their impact?
- What is the impact of social media when dealing with Canadian and international security?
- What are we able to do to protect ourselves while still maintaining an open internet?

*Mitigating the effects of climate change:* McLeman and Smit's research note drives home the domestic sovereignty issues climate change poses for Canada and the disproportionate effect climate change is projected to have on precisely those countries with the least institutional capacity to respond.

- How do demographic and climate change affect migratory models and what are the projected impacts on Canada? What sort of preventive bilateral and multilateral assistance might Canada initiate to mitigate potential flows?

Research also needs to account for interaction effects and feedback loops within and among these lines of inquiry, so-called threat multipliers. For example, demographic change, migration, climate change, or poverty, serve to compound both regional and international threats to security. Similarly, food scarcity is intensified by drought that is brought on by climate change and unsustainable farming practices that seek to increase the production of food but whose feedback mechanism further aggravates anthropogenic climate change. Instead of treating problems in isolation, futures analysis

and research have been taking a systemic-ecological approach that is able to account for these sorts of mutually reinforcing effects.

Research and related activities undertaken under the aforementioned lines of inquiry are anticipated to:

- inform policy, actions, decisions, and practices through evidence, analysis and insights on key issues and problems, including how policy frameworks affect – and are bound to affect – the security of Canadians individually and corporately throughout the twenty-first century;
- deepen our understanding of
  - Canada's national security, the challenges and opportunities presented by different transnational dynamics, and their impact on Canadians, Canadian society, and the private sector;
  - the evolving and changing role and impact of information technology on Canadian security;
  - behavioural patterns and attitudinal structures among those who resort to violence for political reasons, or who use Canada as a staging ground to acquire material, money or support to sow destruction and political instability abroad;
  - what makes communities resilient;
  - how Canada should position itself internationally to realize desired security benefits at home.
- provide a cost-benefit analysis of policies;
- promote engagement in research and sustained relationships among policy-makers, practitioners, professional associations, communities and their organizations; provide new research insights on national-security practices and their impact on Canadians individually and collectively.

While the federal stakeholder departments stand to benefit from more research and greater research capacity on the impact of transnational trends on national and border security, researchers stand to benefit from the perspectives held by the federal government stakeholder departments on such issues and opportunities for knowledge mobilization in support of policy priorities. On the one hand, the federal stakeholder departments benefit from building bridges with the academic community; on the other, scholars stand to benefit from greater awareness of the information-sharing constraints to which federal departments are subject, including privacy and official secrets legislation governing the disclosure and use of data and information, as well as national-security and operational requirements.

## **Conclusion**

In a spirit of open policy development that seeks to bring ideas and thinkers from outside the federal government to the policy process, this volume has sought to map the landscape of the changing global threat environment by identifying key transnational trends, the way they are projected to affect Canada over the foreseeable future, and the sort of linkages and research that might prove useful to confront these challenges proactively by planning strategically. This volume has sought to take stock of the Canadian research capacity in this area, and offer a cursory review of the state of knowledge. It is meant as an impetus for change by identifying some research gaps through a survey of some of the stakeholders' needs as well as suggesting lines of inquiry. Genuine insights are bound to flow from an inter-disciplinary dialogue that is grounded in methodological pluralism. Such dialogue forms the basis for research that will enhance the evidence base that informs decision-making; it will also bolster Canadian democracy by bringing together government stakeholders and scholars while drawing the private sector and Canadian public into a discussion on confronting and mitigating the impact of transnational trends on Canadian security.

## *Biographies*

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**Martin Bouchard, PhD.** After completing his PhD at University of Montreal in 2006 and post-doctoral studies at University of Maryland in 2007, Martin Bouchard became Assistant Professor at the School of Criminology, Simon Fraser University. Dr. Bouchard's research is at the intersection between illegal drug markets, criminal careers, and organized crime. Over the past 5 years, Dr. Bouchard has authored or co-authored over 35 peer-reviewed articles and book chapters on these topics. Recent publications appeared in *Addiction*, *Global Crime*, *International Journal of Drug Policy*, *Journal of Criminal Justice*, *Journal of Drug Issues*, *Journal of Quantitative Criminology*, and *Justice Quarterly*. He is also the co-editor of two recent books: 2010's *Illegal Markets and the Economics of Organized Crime*; and 2011's *World Wide Weed: Global Trends in Cannabis Cultivation and its Control*. He can be contacted at [mbouchard@sfu.ca](mailto:mbouchard@sfu.ca).

**Julie-Anne Boudreau** is Doctor of Urban Studies from the School of Public Policy and Social Research of the University of California at Los Angeles. She is Associate Professor at the Institut national de la recherche scientifique, Centre Urbanisation Culture Société (INRS-UCS) in Montreal, and holder of the Canada Research Chair on urbanity, insecurity, and political action. She founded the Laboratoire City and Political Spaces (Ville et ESPaces politiques – VESPA [www.labovespa.ca](http://www.labovespa.ca)). Her work focuses on the relationship between political mobilisation, urbanization and state restructuring processes. Her various projects in Los Angeles, Montreal, Toronto, Paris, Brussels, and Hanoi interrogate this relationship from the angle of feelings of insecurity and the experience of mobility and displacement. Working with migrants, domestic workers, motobikers, street vendors, and youth, she explores how the city influences the formation of political subjectivities.

She is co-Editor of the *International Journal of Urban and Regional Research* (IJURR) and has published numerous scientific articles. Her most recent book is entitled *Changing Toronto: Governing urban neoliberalism* (University of Toronto Press, 2009), co-authored with Roger Keil and Douglas Young.

**François Crépeau** is Professor, Hans and Tamar Oppenheimer Chair in Public International Law, and Scientific Director of the Centre for Human Rights and Legal Pluralism, Faculty of Law, McGill University. His work bears on human rights guarantees as they apply to foreigners (migrants and refugees), beyond the border, at the border or inland.

**Ron Deibert** (PhD, University of British Columbia) is Professor of Political Science, and Director of the Canada Centre for Global Security Studies and the *Citizen Lab* at the Munk School of Global Affairs, University of Toronto. The Citizen Lab is an interdisciplinary research and development hothouse working at the intersection of the Internet, global security, and human rights. He is a co-founder and a principal investigator of the *Open-Net Initiative* and *Information Warfare Monitor* projects.

**Brian D. Finlay** is a Senior Associate at the Stimson Center where he directs the Managing Across Boundaries Program, a multi-year initiative focusing on combating an increasing array of transnational challenges – from WMD proliferation and the global drug trade, to contemporary human slavery, small arms trafficking, and economic underdevelopment.

Prior to joining the Stimson Center, he served as an Executive Director with Veterans for America, as an International Program Officer at The Century Foundation, and as a Senior Researcher at the Brookings Institution. Before emigrating from Canada, he was a Project Manager for the Laboratory Center for Disease Control (Health Canada) in Ottawa. He has also served as a consultant to The Department of Foreign Affairs and International Trade where he worked on the Ottawa Treaty on Landmines and the Comprehensive Nuclear Test Ban Treaty. He holds an MA from Norman Patterson School of International Affairs at Carleton University, a Graduate Diploma from the School of Advanced International Studies, Johns Hopkins University, and an Honors BA from the University of Western Ontario. He sits on the Advisory Board of Trojan Defense, LLC, and is a member of the Board of Directors of iMMAP, a pioneering organization leading the way forward in the effective use of information management practices in the service of humanitarian relief and development.

**Todd Hataley** is adjunct assistant professor of political science at the Royal Military College of Canada and a fellow of the Queen's Centre for International and Defence Policy.

**Jeremy Leonard** has been affiliated with the IRPP in a variety of research capacities since 1994. He is the co-editor of *A Canadian Priorities Agenda: Policy Choices to Improve Economic and Social Well-Being* (2007), and currently directs the Institute's Competitiveness, Productivity and Economic Growth research program. Prior to his association with the IRPP, Jeremy was a policy analyst with the Committee for Economic Development, based in Washington, DC, and an economist with the Manufacturers Alliance/MAPI in Arlington, Virginia. He holds an MA in economics summa cum laude from McGill University and a BA in philosophy from the University of Pennsylvania.

**Christian Leuprecht** is Associate Professor in the Department of Political Science and Economics at the Royal Military College of Canada, fellow of the Centre for Security and Armed Forces and Society, and cross-appointed to the Department of Political Studies and the School of Policy Studies at Queen's University where he is also a fellow of the Queen's Centre for International and Defence Policy, the Institute of Intergovernmental Relations, and the Chair in Defence Management Studies.

**Clark McCauley** is Rachel C. Hale Professor of Sciences and Mathematics and co-director of the Solomon Asch Center for Study of Ethnopolitical Conflict at Bryn Mawr College. His research interests include the psychology of group identification, group dynamics and intergroup conflict, and the psychological foundations of ethnic conflict and genocide. He is founding editor of the journal *Dynamics of Asymmetric Conflict: Pathways toward Terrorism and Genocide*.

**Robert McLeman** is Associate Professor, Department of Geography and coordinator of the Environmental Studies Program at the University of Ottawa. He collaborates with researchers in Canada and internationally on a range of research that investigates interactions between environmental change, human wellbeing, migration and state security. He has provided reports and invited presentations for a variety of international organizations, government ministries, and think-tanks in Canada and abroad, including CIC, CSIS, DFAIT, IOM, INHES, RUSI and UNITAR. He is an award-winning teacher and an Associate with the International Institute for Sustainable Development. A former Foreign Service Officer, Dr. McLeman

served as First Secretary and Immigration Control Officer for Central Europe at the Canadian Embassy in Vienna, in addition to earlier postings to Canadian missions in Seattle, Hong Kong, New Delhi and Belgrade.

**Carlo Morselli** is a professeur at the École de criminologie, Université de Montréal and Deputy Director of the International Centre for Comparative Criminology. He is a widely published, internationally recognized, and foremost expert on organized crime. His recent books include *Inside Criminal Networks* (2008, New York: Springer) and *Contacts, Opportunities, and Criminal Enterprise* (2005, Toronto: University of Toronto Press). His research has appeared (in both French and English) in the *Canadian Journal of Criminology and Criminal Justice*, *Crime, Law, and Social Change*, *Criminologie*, *Criminology*, *Déviance et Société*, *Global Crime*, *Journal of Research in Crime and Delinquency*, *Journal of Contemporary Criminal Justice*, *Social Networks*, and *Trends in Organized Crime*. He is the author of several reports commissioned by governmental bodies in Quebec and the Canada. He is also the editor of the journal, *Global Crime*. His current research projects revolve around synthetic drugs markets and illegal gun circulation in Canada.

**James Sheptycki** is Professor of Criminology at York University. He has published widely on criminological topics including organized crime, money laundering, transnational policing and comparative criminology. His recent book, with Andrew Goldsmith, is titled *Crafting Transnational Policing* (2007, Oxford: Hart Publishing). More recently, he edited a special issue of *Criminology and Criminal Justice* concerning guns, crime and social order (Vol. 9 No. 3, 2009, with Adam Edwards, Cardiff University, UK). A book written with Ben Bowling (King's College, London) entitled *Global Policing* will be published by Sage in 2011. Broadly speaking, he is interested in the intersection of governance, crime, policing and the global system.

**Barry Smit** is professor of Geography and Canada Research Chair in Global Environmental Change at the University of Guelph, and a leading scholar in interdisciplinary, applied research addressing the vulnerability and adaptations of communities and socio-economic systems to global environmental changes, especially climate change. Dr. Smit's contributions relating to conceptualizations of vulnerability and adaptation are widely employed internationally and in the IPCC. Dr. Smit has been involved in adaptation and development initiatives in Asia, Africa, the Americas, the Pacific and the Arctic through partnerships with CIDA, IDRC, UNDP, FAO and numerous other international organizations, departments and



agencies. In Canada, Dr. Smit has advised federal departments, the Senate, the National Round Table on Environment and Economy and several provincial governments and business groups. He directs major international interdisciplinary consortiums exploring the human dimensions of climate change in the Arctic. He is a member of Ontario's Expert Panel on Climate Change Adaptation, and is a co-recipient of the 2007 Nobel Peace Prize for his role in the Intergovernmental Panel on Climate Change (IPCC).

**Mathilde Turcotte** is a research professional at the Université de Montréal and at the Université de Sherbrooke. In 2008, she completed her doctoral studies at the École de criminologie, Université de Montréal. During 2008-2010, she pursued her research as a post-doctoral researcher at Oxford University's Extra-legal Governance Institute. Mathilde is an expert in both qualitative and quantitative analysis of criminal behaviour systems and offender-police interactions. Her recent work includes a study of the evolution of shelters for battered women, a qualitative investigation of common process factors and the therapeutic alliance in youth centres, an analysis of criminal group mobility, and survey research on the illegal firearm market. Mathilde is also the assistant editor of *Global Crime*.

