

**Atomic Middle Power:  
Canada's Nuclear Export and Non-Proliferation Policy**

Susan Khazaeli

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School of Political Studies  
Faculty of Social Sciences  
University of Ottawa

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## **ABSTRACT**

This dissertation examines Canada's nuclear export and non-proliferation policy. It demonstrates that contrary to the received wisdom on nuclear behaviour, Canada does not think 'strategically' in the nuclear field. I argue that while the decision-making of great powers may be straightforward in the nuclear field, non-great powers can afford to be more ambivalent and even less cautious.

The focus of the dissertation is on Canada's nuclear export decisions from the 1950s to the late 1970s. My contention is that middle powers, like Canada, are rarely influenced by military-strategic interests, but that they, nonetheless, act according to their own particular self-interests when determining whether or not to export nuclear materials and technology.

In looking at Canada's nuclear decision-making from its entry into the nuclear age until the late 1970s, the dissertation offers three findings. First, Canada does not make decisions that fit a military-strategic calculus. Second, Canada is often ambivalent in the nuclear field. I argue that Canada can afford to be ambivalent because constraints on its decision-making do not stem primarily from security concerns or existential threats but from beliefs as to what Canada should do and should be in global affairs. Finally, Canada's nuclear export and non-proliferation policies have been defined primarily by its place – both real and imagined – in the world as a middle power.

The argument rests on insights drawn from liberal IR theory as well as domestic politics explanations of nuclear behaviour. My contention is that Canada's decision-making has been influenced by domestically held beliefs and perceptions of its identity – that is, where Canada ranks on the figurative power spectrum and what values it professes in relation to other actors in the international system. My research thus makes a contribution to the literature on nuclear supply and on the broader literature on nuclear behaviour, more generally.

### **Key Words**

International relations, international security, nuclear proliferation, nuclear cooperation, middle power, foreign and economic policy.

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like had it not been for their tremendous sacrifice, but I am humbled every time that I think about it.

## LIST OF ACRONYMS

ABACC	Argentine-Brazilian Agency for Accounting and Control of Nuclear Materials
AEC	Atomic Energy Commission
AECB	Atomic Energy Control Board
AECL	Atomic Energy of Canada Limited
CAF	Canadian Armed Forces
CANDU	Canada Deuterium Uranium
CAPD	Civilian Atomic Power Division
CCNR	Canadian Coalition of Nuclear Responsibility
CEAA	Canadian Environmental Assessment Agency
CENTO	Central Treaty Organization (also known as the Baghdad Pact)
CGE	Canada General Electric
CIDA	Canada International Development Agency
CEA	French Atomic Energy Commission (Commissariat à l'énergie atomique et aux énergies)
CTBT	Comprehensive Nuclear Test Ban Treaty
CIR	Canada-India Reactor
CIRUS	Canada-India-Reactor-United States
CNA	Canadian Nuclear Association
CNEA	Comision Nacional de Energia Atomica
CNP	Campaign for Nuclear Phase-out
CNS	Canadian Nuclear Society
CNS	James Martin Center for Nonproliferation Studies
CNSC	Canadian Nuclear Safety Commission
CNWC	Canadian Nuclear Workers Council
CoCom	Coordinating Committee on Multilateral Exports Control
COG	CANDU Owners Group
DEA	Department of External Affairs
DFAIT	Department of Foreign Affairs and International Trade
DFATD	Department of Foreign Affairs, Trade, and Development
DND	Department of National Defence
DPRK	Democratic People's Republic of Korea (North Korea)
EAEC	European Atomic Energy Community
EDC	Export Development Corporation
EURATOM	European Atomic Energy Community (also known as EAEC)
FMCT	Fissile Material Cutoff Treaty
GAC	Global Affairs Canada
GDP	gross domestic product
GNEP	Global Nuclear Energy Partnership
HEU	highly enriched uranium
IAEA	International Atomic Energy Agency
ICBM	intercontinental ballistic missile
ICSIR	Indian Council for Scientific and Industrial Research
IONP	International Organizations and Nonproliferation Program

IPAC	Institute of Public Administration of Canada
IR	International Relations
ITC	Department of Industry, Trade, and Commerce
KANUPP	Karachi Nuclear Power Plant
LEU	low enriched uranium
LWR	light water reactor
MAD	mutually assured destruction
MP	Member of Parliament
MPI	Middle Power Initiative
MW	megawatt
NAM	non-aligned movement
NATO	North Atlantic Treaty Organization
NDP	New Democratic Party
NIC	national identity conception
NCA	nuclear cooperation agreement
NNA	Neutral and Non-Aligned States
NNWS	non-nuclear weapons state
NNPA	Nuclear Non-Proliferation Act
NORAD	North American Aerospace Defense Command
NPT	Nuclear Non-Proliferation Treaty
NRC <sub>Can</sub>	Natural Resources Canada
NRC	National Research Council
NRU	National Research Universal
NRX	National Research Experimental
NSG	Nuclear Suppliers Group
NTI	Nuclear Threat Initiative
NWS	nuclear weapons state
OCI	Organization of CANDU Industries
OECD	Organization of Economic Cooperation and Development
OIF	Organisation internationale de la Francophonie
OPG	Ontario Power Generation
P5	Permanent 5 members of the UNSC
PAEC	Pakistan Atomic Energy Commission
PCSIR	Pakistani Council for Scientific and Industrial Research
PCO	Privy Council Office
PHWR	pressurized heavy water reactor
PMO	Prime Minister's Office
PSI	Proliferation Security Initiative
PWR	pressurized water reactor
RAPP-I	Rajasthan Atomic Power Plant-I
RAPP-II	Rajasthan Atomic Power Plant-II
RCAF	Royal Canadian Air Force
SCFAIT	House of Commons Standing Committee on Foreign Affairs and International Trade
SEATO	Southeast Asia Treaty Organization
TRR	Taiwan Research Reactor
UN	United Nations
UNAEC	United Nations Atomic Energy Commission

UNGA	United Nations General Assembly
UNSAC	United Nations Scientific Advisory Committee
UNSCEAR	United Nations Scientific Committee on the Effects of Atomic Radiation
UNSC	United Nations Security Council
US	United States
USSR	United Socialist Soviet Republic (now Russia)
WWII	World War Two
WMD	weapons of mass destruction
WNA	World Nuclear Association
WTO	World Trade Organization
ZEEP	Zero Energy Experimental Pile reactor

## INTRODUCTION

There was much controversy surrounding Canada's decision to renew nuclear cooperation with India.<sup>1</sup> On November 2012, Canadian Prime Minister Stephen Harper and Indian Prime Minister Manmohan Singh announced the conclusion of a civilian nuclear cooperation agreement (NCA).<sup>2</sup> This was not a run-of-the-mill export deal, however. The NCA represented a significant change to Canada's hitherto non-proliferation policy. The momentous agreement outlined the sale of uranium to India, overturning a long-standing moratorium on such bilateral trade. Critics charged that the deal undermined the non-proliferation regime by rewarding a nuclear-armed state that rests outside the non-proliferation regime. India is not a signatory of the Nuclear Non-Proliferation Treaty (NPT) or the Comprehensive Test Ban Treaty (CTBT). Eligibility for such transfers has long been predicated on a recipient's disavowal of nuclear weapons and good standing in the NPT. As such, the agreement flies in the face of established norms and laws concerning nuclear transfers. The deal thus called into question Canada's commitment to the global non-proliferation and disarmament effort.

Canada had also upended its own ban on nuclear trade with India – a policy that it adopted after India exploited a Canadian-supplied research reactor to produce plutonium for its 'Smiling Buddha' nuclear test in 1974. That incident was a watershed moment for non-proliferation, as it forced suppliers to face the connection between the export of civilian nuclear

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<sup>1</sup> The controversy began when the U.S., under the administration of George W. Bush, made a case to bring India into the NSG. The move created considerable debate about the non-proliferation regime, as membership in the NSG is extended only to those states that are members of the NPT, which India is not.

<sup>2</sup> 'PM Announces Conclusion of Negotiations on Canada-India Nuclear Cooperation Agreement,' *Prime Minister of Canada*, News Release. (6 November 2012). Accessed at: [www.pm.gc.ca/eng/node/21950](http://www.pm.gc.ca/eng/node/21950).

technology and materials and the horizontal spread of nuclear weapons.<sup>3</sup> At the time, Canada condemned India's actions and rallied fellow exporters to strengthen nuclear safeguards and arms controls, which resulted in the creation of the Nuclear Suppliers Group (NSG) two years later, in 1976.<sup>4</sup> In more recent times, Canada championed the indefinite extension of the NPT as well as related causes like the proposed fissile material cut-off treaty (FMCT). Considering Canada's professed commitment to non-proliferation, the decision to assist India's nuclear pursuits is puzzling. What happened to Canada's strong leadership on non-proliferation? And why did Canada make an exception for India, and not, for example, Pakistan – another non-NPT country in possession of nuclear weapons?

Recent scholarship on the causes of nuclear transfers provides an answer: The decision was intended to strengthen a strategic ally.<sup>5</sup> Given that Canada's decision followed on the heels on the U.S. decision to do the same, one that the then administration of George W. Bush obliquely justified in those terms, it is almost tempting to believe that the two had similar motivations.<sup>6</sup> Yet, Canada's decisions are not always subject to the same impulses and pressures as those of the United States. Indeed, there are several instances in which Canada took nuclear decisions that do not fit with prevailing expectations of 'strategic' interests. To offer an example, the Canadian government went back and forth several times on the Bomarc. It

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<sup>3</sup> This became known as the 'dual-use dilemma.' Dual-use refers to material and/or technology that can be used either to produce energy or to enhance the capacity to build nuclear weapons. Dual-use materials and technologies may include items such as certain kinds of medical isotopes. For a strict definition of dual-use materials, see: Matthew Fuhrmann, 'Exporting Mass Destruction: The Determinants of Dual-Use Trade,' *Journal of Peace Research* Vol. 45, No. 5 (2008): 633-652.

<sup>4</sup> The Nuclear Suppliers Group (NSG) worked to reduce the nuclear proliferation risk posed by state-to-state nuclear assistance by controlling the export and re-transfer of certain dual-use materials. It also mandated stringent safeguards on nuclear exports, limited trade only to countries in good standing with the NPT and that accepted full-scope safeguards on their entire nuclear program.

<sup>5</sup> This logic is explained in Matthew Kroenig, *Exporting the Bomb: Technology Transfers and the Spread of Nuclear Weapons* (Ithaca, NY: Cornell University Press, 2010).

<sup>6</sup> 'Why the United States Promotes India's Great-Power Ambitions,' *Monthly Review*, Vol 57, No 10 (March 2006). Accessed at: <https://monthlyreview.org/2006/03/01/why-the-united-states-promotes-indias-great-power-ambitions/>.

resisted the American request to store U.S. nuclear weapons on its territory even as it accepted and enjoyed the protection of the American nuclear umbrella. Rather than ingratiate itself to the United States, Canada often antagonized its powerful ally at dangerous junctures during the cold war, including at the height of the Cuban Missile Crisis.<sup>7</sup> Canada was clearly motivated by a different set of interests.

## **2 Canada's Nuclear Ambivalence**

Canada has a long tradition of nuclear cooperation with its great power allies, Britain and the United States. Though playing the role of the junior partner to the British and Americans, Canada was instrumental in the development of the first atomic bomb. It is often forgotten that Canada, with its large uranium reserves, was present from the beginning of the atomic age. Canadians achieved enormous technical and scientific feats in the nuclear field and did so in a remarkably short amount of time. For instance, the Canadian-designed ZEEP (for Zero Energy Experimental Pile) research reactor went critical on September 5, 1945 – the first reactor outside of the U.S. to do so.<sup>8</sup>

By the end of WWII, Canada had the industrial capacity and technical expertise to build an atomic bomb. Despite possessing the wherewithal, Canada did not, as realist or strategic theories envisage, develop nuclear weapons. Why did Canada not develop nuclear weapons after 1945? And if Canada decided to forgo nuclear weapons, what explains its decision to later permit the Americans to station nuclear weapons on Canadian territory and to fit the Canadian Armed Forces (CAF) with U.S. nuclear weapons both in Canada and in Europe? Why did it ultimately decide to have the weapons removed? Moreover, why did

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<sup>7</sup> Examining this interlude, Sean Maloney argues that Canada's nuclear policies were designed to influence both allies and enemies, and not to serve U.S. interests. Sean M. Maloney, *Learning to Love the Bomb: Canada's Nuclear Weapons During the Cold War* (Washington, DC: Potomac Books Inc., 2007).

<sup>8</sup> ZEEP went online only 16 months after conception and 11 months after approval. See: R.E. Green and A. Okazaki, 'ZEEP: The Little Reactor that Could,' *CNS Bulletin* Vol. 16, No. 3 (Autumn 1995): 3-8.

Canada offer nuclear cooperation agreements to known (e.g., India) and suspected proliferators (e.g., Argentina) while simultaneously professing a commitment to non-proliferation? The history of Canada's nuclear policy is rife with such examples of inconsistency, fickleness, and contradiction.

The commonly held view, as articulated by William Epstein, on Canada's nuclear abstinence is that there was a 'nationwide abhorrence of these weapons, the desire to prevent their proliferation, and to see them entirely eliminated, and the hope to benefit from the promising peaceful uses of nuclear energy.'<sup>9</sup> This explanation has gained traction largely because it fits comfortably with popular narratives on Canadian foreign policy that sees Canada as a norm-complying, multilateralist.<sup>10</sup> However, it does not explain why the Canadian government did not consider the production of nuclear weapons in the first place – a topic that is discussed in Chapter 2.

Much of the nuclear literature claims that strategic interests, such as strengthening military alliances or constraining a rival state, inform the decision-making calculus of states. Such strategic interests are expected to account for a significant portion of nuclear behaviour such as conspicuous development or technology transfers. Contrary to this received wisdom, such narrow interests have not generally motivated Canada's nuclear decision-making. For example, Canada forswore nuclear weapons because Canadian officials refused to conceive that a country of such a relatively small power stature warranted them. John Wendell Holmes, a

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<sup>9</sup> William Epstein quoted in: Jeffrey S. Lantis, *The Life and Death of International Treaties: Double-Edged Diplomacy and the Politics of Ratification in Comparative Perspective* (Oxford, UK: Oxford University Press, 2009), 129.

<sup>10</sup> See, for example: Thomas F. Keating, *Canada and World Order: The Multilateralist Tradition in Canadian Foreign Policy Second Edition* (Oxford: Oxford University Press, 2002). Many works have since challenged this perception of Canadian foreign policy, or have lamented the perceived departure from early ideals. See: Allan Gotlieb, 'Romanticism and Realism in Canada's foreign policy,' *Policy Options* Vol. 26, No. 2 (February 2005): 16-27; and Andrew Cohen, *While Canada Slept: How we lost our place in the world* (Toronto: McClelland & Stewart, 2003).

celebrated Canadian diplomat, writes that:

It was taken for granted that a country of Britain's assumed stature in the world would have [the bomb]. The Canadian situation was the reverse. At no time was serious consideration given to producing Canada's own bomb... There is no evidence of Canadian anxiety to have a finger on the control of such a weapon. Canadians were beginning to refer to themselves as a middle power, but few had ambitions for the *responsibilities of great-power status* [emphasis added].<sup>11</sup>

This reveals that Canada's apparent nuclear restraint was not the result of some kind of pacifism, but rather a function of its relative power position. Canadian decision-makers of the day were not programmed, as their British counterparts, to conceive of ambitious policies designed to preserve great power status. Unlike Britain, Canada was not motivated by great power aspirations or interests. It was, however, motivated by a desire to avoid expensive obligations.

### 3 The Literature

What motivates states has been a central question in the nuclear proliferation literature, which runs the gamut of behaviour and outcomes such as, nuclear proliferation, nuclear restraint, nuclear reversals, nuclear deterrence, nuclear posturing, and more recently, nuclear assistance.<sup>12</sup>

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<sup>11</sup> Duane Bratt, 'Canada's Nuclear Schizophrenia,' *Bulletin of Atomic Scientists* Vol. 58, No. 2 (March/April 2002), 47.

<sup>12</sup> On the question of why countries pursue the bomb, see Scott D. Sagan, 'Why Do States Build Nuclear Weapons? Three Models in Search of a Bomb,' *International Security* Vol. 21, No. 3 (1996/97): 54-86. For a more recent work, see: Dong-Joon Jo and Erik Gartzke, 'Determinants of Nuclear Weapons Proliferation,' *Journal of Conflict Resolution* Vol. 51, No. 1 (February 2007): 167-194. On why some states forgo nuclear weapons and why states do not use them, see the following: Etel Solingen, 'The Political Economy of Nuclear Restraint,' *International Security* Vol. 19, No. 2 (1994): 126-169; Nina Tannenwald, 'The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-Use,' *International Organization* Vol. 53, No. 3 (1999): 433-468; and Maria R. Rublee, *Nonproliferation Norms: Why States Choose Nuclear Restraint* (Athens, GA: University of Georgia Press, 2009). For a more sceptical perspective, see: William C. Potter, 'The NPT and the Sources of Nuclear Restraint,' *Daedalus* Vol. 139, No. 1, (2010): 68-81. On reversals, see: Ariel E. Levite, 'Never Say Never Again: Nuclear Reversal Revisited,' *International Security* Vol. 27, No. 3 (2002/03): 59-88. On the subject of nuclear deterrence, see the following works: Robert Powell, *Nuclear Deterrence Theory: The Search for Credibility* (Cambridge, UK: Cambridge University Press, 1990); Scott D. Sagan, 'The Perils of Proliferation: Organization Theory, Deterrence Theory, and the Spread of Nuclear Weapons,' *International Security* Vol. 18, No. 4 (1994): 66-107; and Scott D. Sagan, 'The Commitment Trap: Why the United States Should Not Use Nuclear Threats to Deter Biological and Chemical Weapons Attacks,' *International Security* Vol. 24, No. 4 (2000): 85-115. On nuclear posturing, see: Vipin Narang, 'Posturing for Peace? Pakistan's Nuclear Postures and South Asian Stability,' *International Security* Vol. 34,

Perhaps because security remains one of the most salient features of international politics, leading theories offer predominately neorealist explanations for the nuclear choices of states despite their divergent pathways.

Partly due to the enduring legacy of neorealist theory in the broader International Relations (IR) scholarship, much of the nuclear literature suffers from a tendency to expect certain behaviour from states, despite their difference.<sup>13</sup> Neorealism depicts a world in which the characteristics of the international system punish anything less than self-help, and therefore expects states to take measures to enhance their security or grow their power.<sup>14</sup> The anarchic structure means that all states, that want not to perish, are led to prioritize military-strategic objectives. The dominant view in the nuclear proliferation literature embraced neorealism in arguing that nuclear weapons offered the ultimate protection, and those states that could obtain them would do so.<sup>15</sup> Such expectations dominated the thinking of early nuclear strategists, as the nth-country problem attests.<sup>16</sup>

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No. 3 (2010): 38-78. On nuclear power, see: William C. Potter, *Nuclear Power and Nonproliferation: An Interdisciplinary Perspective* (Cambridge, MA: Oelgeschlager, Gunn & Hain Inc., 1982). For studies on the causes and consequences of nuclear assistance: Matthew Kroenig, *Exporting the Bomb: Technology Transfer and the Spread of Nuclear Weapons* (Ithaca, NY: Cornell University Press, 2010); Matthew Fuhrmann, *Atomic Assistance: How 'Atoms for Peace' Programs Cause Nuclear Insecurity* (Ithaca, NY: Cornell University Press, 2012); and Julian Schofield, *Strategic Nuclear Sharing* (New York, NY: Palgrave Macmillan, 2014).

<sup>13</sup> Waltz argued that the structure, which was comprised of functionally non-differentiated units (i.e., states) and the aggregation of their shared material power, determined outputs in international relations. See: Kenneth N. Waltz, *Theory of International Politics* (New York, NY: Random House, 1979).

<sup>14</sup> See John J. Mearsheimer, 'The False Promise of International Institutions,' *International Security*, Vol. 19, No. 3 (1994/1995), 46. See also: Kenneth N. Waltz, *Theory of International Politics* (New York, NY: Random House, 1979); John J. Mearsheimer, 'Back to the Future: Instability in Europe after the Cold War,' and Joseph M. Grieco, 'Anarchy and the Limits of Cooperation: A Realist Critique of the Newest Liberal Institutionalism,' *International Organization* Vol. 42, No. 3 (1988): 485-507. There is disagreement between defensive and offensive realists. The former argues that states aim only to survive while the latter argues that states seek to maximize power. See: Mearsheimer, *The Tragedy of Great Power Politics* (New York, NY: W.W. Norton and Company, 2001).

<sup>15</sup> A state seeking to prevent an attack on an ally may threaten the use of force to protect that ally and therefore deter any attacks on its ally. Extended deterrence is well-defined in Paul K. Huth, *Extended Deterrence and the Prevention of War*, (New Haven, CT: Yale University Press, 1991). For how extended deterrence can prevent the spread of nuclear weapons, see: T. V. Paul, Richard J. Harknett, and James J. Wirtz, *The Absolute Weapon Revisited: Nuclear Arms and the Emerging International Order* (Ann Arbor, MI: University of Michigan Press, 2000).

<sup>16</sup> The Nth country experiment aimed to assess the risk of nuclear proliferation based on a capabilities-approach and to determine when the 'nth' country might procure nuclear weapons. It gave rise to considerable fears

Neorealism overstates structure in determining the preferences and actions of states, however.<sup>17</sup> Realist expectations that states should want nuclear weapons, if only they have the opportunity to acquire them, have not panned out.<sup>18</sup> That most states abstained from nuclear weapons implied that there could be interests beyond power politics, or that they found other ways to satisfy their security needs.<sup>19</sup> Only a few states have actually developed nuclear weapons, others have either abandoned them or ditched efforts to obtain them, and even fewer have aspired to develop them.<sup>20</sup> These observable variations in state preferences and behaviour encouraged scholars to seek out different theories of IR, such as liberal institutionalism, constructivism, and domestic politics explanations, for understanding. As a result, the demand literature flourished beyond its parochial origins to include new theories, most notably the domestic politics model and the norms model.

The domestic politics model views the choice to weaponize as subject to an internal or

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about the prospect of rampant nuclear proliferation. See: Oskar Morgenstern, 'The N-Country Problem' *Fortune* Vol. 63, No. 3 (March 1961): 136-137, 205-209; Peter R. Lavoy, 'Predicting Nuclear Proliferation: A Declassified Documentary Record,' *Strategic Insights* Vol. 3, Issue 1 (January 2004): 1-6; and Lawrence Freedman, 'The European Nuclear Option.' In: *The Evolution of Nuclear Strategy*. (London: Palgrave Macmillan, 1989).

<sup>17</sup> For an early discussion of the debate on structure, see: Alexander E. Wendt, 'The Agent-Structure Problem in International Relations Theory,' *International Organization* Vol. 41, No. 3 (1987): 335-370.

<sup>18</sup> See: John J. Mearsheimer, 'Back to the Future: Instability in Europe After the Cold War,' *International Security* Vol. 15, No. 4 (1990): 5-56; Benjamin Frankel, 'The Brooding Shadow: Systemic Incentives and Nuclear Weapons Proliferation,' *Security Studies* Vol. 2, No. 3-4 (1993): 37-78; Bradley A. Thayer, 'The Causes of Nuclear Proliferation and the Utility of the Nuclear Non-proliferation Regime,' *Security Studies* Vol. 4, No. 3 (1995): 463-519; Siegfried S. Hecker, 'Lessons Learned from the North Korean Nuclear Crises,' *Daedalus* Vol. 139, No. 1 (2010): 44-56; and T.V. Paul, Richard J. Harknett, and James J. Wirtz, (eds) *The Absolute Weapon Revisited: Nuclear Arms and the Emerging International Order* (Ann Arbor, MI: University of Michigan Press, 1998).

<sup>19</sup> On nuclear non-use, see: Nina Tannenwald, *The Nuclear Taboo: The United States and the Non-Use of Nuclear Weapons Since 1945* (New York, NY: Cambridge University Press, 2007). This is one interpretation but others are more sceptical. See, for example, William C. Potter, 'The NPT and the Sources of Nuclear Restraint,' *Daedalus* Vol. 139, No. 1, (2010): 68-81.

<sup>20</sup> On the failure of most studies to imagine that states might deliberately opt for a non-nuclear security stance, see: Benoît Pelopidas, 'Reversal and Restraint,' in *Handbook of Nuclear Proliferation and Policy*, ed., Nathan E. Busch and Joseph F. Pilat (London: Routledge, 2015): 337-348. On where and why various attempts to predict the future of nuclear proliferation have consistently failed, see also: Moeed Yusuf, 'Predicting Proliferation: The History of the Future of Nuclear Weapons,' *Brookings Foreign Policy Paper Series*, Number 11, (January 2009): 1-88. Accessed at: [https://www.brookings.edu/wp-content/uploads/2016/06/01\\_nuclear\\_proliferation\\_yusuf.pdf](https://www.brookings.edu/wp-content/uploads/2016/06/01_nuclear_proliferation_yusuf.pdf)

institutional power struggle. It emphasizes incentives and disincentives that stem from domestic and economic considerations, arguing that some states eschew nuclear weapons because of some characteristic of the ruling coalition or government, or because of a preference for economic integration in global markets to nuclear weapons.<sup>21</sup> The latter shows that institutions and norms may alter the preferences of individual leaders and governments, and may even erode the desire for nuclear weapons. It points out that either acquisition or restraint can serve as key markers of a state's identity.<sup>22</sup> Thus, it is appreciated that institutions, norms, identities, and regime type, in addition to security concerns, are determinants of how states view nuclear weapons and whether they elect to pursue them.

The supply side of the equation has not kept pace. Despite rising interest in the subject, much of the literature on nuclear assistance privileges power politics considerations. It assumes that strategic interests guide the behaviour of all states, despite their many differences.

#### **4 Argument**

Although Canada weighed military-strategic aims when determining whether to provide nuclear assistance, such considerations were infrequently the key consideration. What explains Canada's nuclear non-proliferation and export policies? Unlike the great powers, Canada does not think 'strategically' about its involvement in nuclear matters. Less powerful countries are not afflicted by the same insecurities and interests as great powers. As Sir Winston Churchill famously observed: 'Where there is great power there is great responsibility, and where there

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<sup>21</sup> Peter R. Lavoy, 'Nuclear Myths and the Causes of Nuclear Proliferation,' *Security Studies* Vol. 2, No. 3-4 (1993): 192-212; Etel Solingen, *Regional Orders at Century's Dawn: Global and Domestic Influences on Grand Strategy* (Princeton: Princeton University Press, 1998); and Peter Liberman, 'The Rise and Fall of the South African Bomb,' *International Security* Vol. 26, No. 2 (2001): 45-86.

<sup>22</sup> Glenn Chafetz, Hillel Abramson, and Suzette R. Grillot, 'Role Theory and Foreign Policy: Belarussian and Ukrainian Compliance with the Nuclear Nonproliferation Regime,' *Political Psychology* Vol. 17, No. 4 (1996): 727-757; Peter J. Katzenstein (ed.), *The Culture of National Security: Norms and Identity in World Politics* (New York, NY: Columbia University Press, 1996); William J. Long and Suzette R. Grillot, 'Ideas, Beliefs, and Nuclear Policies: The Cases of South Africa and Ukraine,' *The Nonproliferation Review* Vol. 7, No. 1 (2000): 24-40; Tannenwald, *The Nuclear Taboo*; Maria R. Rublee, *Nonproliferation Norms*.

is less power there is less responsibility, and where there is no power there can, I think, be no responsibility.<sup>23</sup> My argument follows this basic logic. This does not mean that Canada behaves irresponsibly, however. It simply means that, given that few claim Canada to be a major or great power, it is less likely to be guided by military-strategic interests, as conceived by the great powers.<sup>24</sup>

In his seminal work on nuclear ambivalence, Itty Abraham explains that, ‘Without a careful appreciation of the political and historical context within which decisions are made to develop nuclear programs, it is not possible to get closer to understanding the desire for, likelihood of potential use of, and possibility of international control of nuclear weapons.’<sup>25</sup> In order to understand Canada’s nuclear ambivalence, it is also important to recognize that power differentials mean that states are not prone to the same interests and concerns. I do not wage an assault on neorealist tenets, nor contest the importance of power differentials. On the contrary, I agree that power tells us a lot about interests.<sup>26</sup> Classical realism casts interest overwhelmingly in terms of power. However, in contrast to structural realists, Morgenthau recognized that his concept of interest defined as power lacks ‘a meaning which is fixed once and for all.’<sup>27</sup> In other words, interest depends on the political and cultural context.

Major powers will consider the implications of the diffusion of nuclear technology on their ability to order the international system, whereas smaller powers will not.<sup>28</sup> Power

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<sup>23</sup> Winston Churchill, ‘The Parliamentary Debates,’ *House of Commons of the United Kingdom*, 28th Parliament, 1st Session, Vol. 152 (28 February 1906).

<sup>24</sup> David D. Dewitt and John J. Kirton, *Canada as a principal power: A study in foreign policy and international relations*, (Toronto: John Wiley & Sons Inc. Canada Ltd, 1983).

<sup>25</sup> Itty Abraham, ‘The Ambivalence of Nuclear Histories,’ *Osiris* Vol. 21 (2006): 51.

<sup>26</sup> Kenneth N. Waltz, *Theory of International Politics* (New York, NY: Random House, 1979); and Robert Gilpin, *War and Change in World Politics* (Cambridge, UK: Cambridge University Press, 1981).

<sup>27</sup> In his seminal work in which he lays out six principles of political realism, Morgenthau presents ‘the concept of interest defined in terms of power.’ See: Hans J. Morgenthau, *Politics Among Nations: The Struggle for Power and Peace*, Fifth Edition, Revised, (New York, NY: Knopf, 1978).

<sup>28</sup> This is something that Daniel Deudney considers. See: Daniel Deudney. ‘Unipolarity and Nuclear Weapons.’ In *International Relations Theory and the Consequences of Unipolarity*, eds. G. John Ikenberry, Michael Mastanduno, and William C. Wohlforth. (New York, NY: Cambridge University Press, 2011).

asymmetries mean states have different stakes in the international system. Consider, for example, that the United States role as the world's sole superpower. Its ambitions are commensurate with its status. The U.S. has the capacity to project its power across different regions of the world, and so its global interests, in turn, flow from its status. The U.S. has assumed the responsibility for preserving international peace and stability on terms favourable to itself, which includes providing security guarantees to its many international allies and networks and preventing potential rivals and adversaries from challenging its dominance. Since the U.S. enjoys a preponderance of power, it has a larger stake in maintaining the status quo and has a greater sensitivity to threats that might erode its ability to project power or otherwise constrain its freedom of action than a less powerful country like Canada. In contrast to the U.S., Canada is a relatively small actor in terms of conventional military capabilities. Canada cannot project military power across the globe, and no country relies on Canada for survival.<sup>29</sup> In other words, Canada is not constrained by such security burdens.<sup>30</sup> (Yet, it is worth noting that most Canadian decision makers have taken the view that the maintenance of America's ability to project power is a Canadian interest, even if Canada sometimes resents the way that

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<sup>29</sup> It should be clarified that though the Canadian Armed Forces are not fashioned to wage an independent large-scale military conflict throughout the globe, as is the American military, Canada does have an expeditionary capacity that allows it to make a significant contribution to multilateral missions (such as under the UN or NATO) – something that many states, including some of Canada's great power allies, do not.

<sup>30</sup> This is an insight from offensive realism. Offensive realism asserts that states are driven by the quest for power. The concept of power maximization, that is, that states are constantly seeking to maintain and augment their power, also means that states are sensitive to the loss of power to other actors in the international system. This idea also gained expression in the literature on nuclear supply. Matthew Kroenig contends that great powers that possess power-projection capabilities, defined as the ability to exert power and wage military combat over other states, have the most to lose by nuclear proliferation since the spread of nuclear weapons to states limits its ability to project power. As such, we would expect a great power like the U.S. to actively work to counter nuclear proliferation. Conversely, Kroenig explains that states that cannot project power (or cannot project power to a potential recipient) are less constrained in terms of action by the prospect of nuclear proliferation since they lacked the capability to project power in the first place. See: Matthew Kroenig, *Exporting the Bomb*. On offensive realism, see also: John J. Mearsheimer, *The Tragedy of Great Power Politics*,

the U.S. wields its power.) The decision-making of great powers is shaped – to use IR parlance – by strategic interests. Non-great powers that do not have the same interests.

My arguments, presented below, are informed by liberal IR theory, à la Andrew Moravcsik. Liberal IR theory recognizes that states are embedded in both domestic and international civil society, which constrains behaviour by influencing the underlying preferences that inform foreign policy.<sup>31</sup> Moravcsik offers a number of assumptions, all of which are useful for understanding Canada's nuclear decision-making. First, world politics is composed of individual actors and groups (e.g., interest groups, civil society, industry), with different interests and preferences. Second, states are not unitary actors, as realist theory assumes; they represent a segment of actors that compete for influence. Domestic individuals and groups pressure policy-makers to take decisions that are consistent with their preferences.<sup>32</sup> The state, then, represents the interests of some ever-shifting segment of domestic society. Because they consume resources, foreign policy decisions have material consequences. As such, foreign policy decisions may generate supporters and opponents, as exemplified by the patterns of consensus and conflict within states over policy. Third, interstate behaviour is influenced by patterns of state preferences (e.g., non-proliferation norms) rather than power. Accordingly, some actors attach importance to non-proliferation or compliance with arms control regimes while others prioritize industrial interests. This can help make sense of the ambivalence that characterizes Canada's nuclear decision-making.

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<sup>31</sup> Andrew Moravcsik, 'Taking Preferences Seriously: A Liberal Theory of International Politics,' *International Organization* Vol. 51, No. 4 (1997): 513-553.

<sup>32</sup> Helen Milner, *Interests, Institutions, and Information: Domestic Politics and International Relations* (Princeton, NJ: Princeton University Press, 1997).

The mechanisms by which actors exert influence over the government differ across regime type.<sup>33</sup> Another important consideration for governments is the issue of acceptability, and the degree to which acceptability matters varies according to the political system and the social environment. In representative democracies like Canada, decision-makers will be sensitive to the preferences and values of that segment of the domestic population that votes them in. The citizens in democratic states cast ballots to elect representatives, who then enact policy initiatives. Furthermore, in democracies, individual actors and groups are free to disseminate information, organize collective action, and lobby and pressure their elected officials to support or oppose policy initiatives. If elected officials undertake policies with which large segments of the population disagree, then they risk losing votes in the subsequent election. As such, policymakers aim to draft policies that will be deemed acceptable to the domestic population, and are careful not (at least openly) undertake those that will be met with opposition.

In looking at Canada's nuclear decisions, I am able to offer three points. First, Canada does not make decisions that fit a military-strategic calculus. The scholarship on nuclear supply lacks a theory that can fully explain the behaviour of states that are not compelled by military-strategic interests, such as less conventionally powerful states and those that do not face any direct external threats.<sup>34</sup> As such, it fails to appreciate both the way that less conventionally powerful countries derive interests and that those interests are what sets their behaviour apart from the power-projectors.

Second, Canada can afford to be ambivalent because constraints on Canada's decision-

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<sup>33</sup> Even authoritarian regimes are responsive to the preferences and interests of domestic actors. See, for example: Daron Acemoglu and James A. Robinson, *Economic Origins of Dictatorship and Democracy* (Cambridge UK: Cambridge University Press, 2006).

<sup>34</sup> Though Canada did face an external threat for most of the nuclear age, due to its geographical proximity to the United States, the Soviet threat was not primarily to Canada.

making do not stem primarily from security concerns or existential threats but from beliefs as to what Canada should do and should be in global affairs. To some extent, however, this is bound up with our security relationship with the U.S. and how that upsets our self-perception. Such expectations pose constraints. The expectation that Canada live up to the ideals associated with its identity constrains the foreign policy decisions that it can undertake, and at the least, influences manner in which it undertakes them. To be sure, officials appreciate that Canada, by virtue of its established identity and political culture, has an interest in preserving its reputation. For instance, when India used Canadian-supplied materials to detonate its first nuclear device, the Canadian government moved quickly to restore confidence in its commitment to the non-proliferation regime. Unlike American decision-makers, for example, Canadian decision-makers have the luxury of not worrying about how Canada's foreign policies might result in a loss of power; they do worry about how those policies might tarnish Canada's reputation. Thus, reputation concerns multiple audiences at both the domestic and international level, and balancing those is often a source of conflict.

After the end of the Second World War, Canada enjoyed an elevated international status, but rather than exploit its nuclear advantages to pursue a greater power status, as strategic theories might imagine, it advanced a different goal. Canada pursued a 'middle power' project that aimed to create a special tier of status that could be sustained long after the traditional order of power was restored. Despite possessing the fourth largest air force and navy at the end of WWII, Canada divested of this potential source of great power status.<sup>35</sup> After the War, it looked to augment its capacity or ability to direct or influence the behaviour

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<sup>35</sup> See: 'History of the Battle of the Atlantic,' Royal Canadian Navy, Department of National Defence, 27 April 2015. Accessed at: Government of Canada, [www.navy-marine.forces.gc.ca/en/navy-life/history-boa-home.page](http://www.navy-marine.forces.gc.ca/en/navy-life/history-boa-home.page); and 'The Second World War, 1939-1945,' Royal Canadian Air Force, Department of National Defence, 28 September 2015. Accessed at: [www.rcaf-arc.forces.gc.ca/en/on-windswept-heights-2/15-history-1939-1945.page](http://www.rcaf-arc.forces.gc.ca/en/on-windswept-heights-2/15-history-1939-1945.page).

of others or the course of global events through cooperation. Canada played an activist international role, particularly in helping to establish the United Nations (UN), and by 1947, established multilateralism and cooperation with like-minded states as the mainstays of its foreign policy doctrine.<sup>36</sup> Cognizant that international institutions afforded political leverage and influence that it would not otherwise have, Canada decided to favour a rules-based system that maximizes its capacity to exercise its own power as a middle-power – a power that depends on concert *with others* in contrast to unilaterally *over others*.<sup>37</sup>

This brings me to my third point, and main argument: Canada's nuclear export and non-proliferation policies have been defined primarily by its place in the world as a middle power. Canada's tradition of multilateralism has implications for foreign policy decision-making, given that it generates popular expectations of appropriate Canadian behaviour among domestic audiences. Canada's political identity has also become inextricably linked to the perception of Canadian influence on the world stage to the extent that where Canada ranks on the figurative power spectrum has become a national preoccupation. It is commonly held that Canada is – or was, at some point – a middle or modest power with noble goals.<sup>38</sup> That the middle power claim, as originally conceived, was to a rank much closer to the great powers than the small ones indicates that there was nothing modest about the middle power project. Nonetheless, the idea of a middle power, or multilateral identity, has evolved in such a way as to shape the set of beliefs that Canadians and Canadian decision-makers hold about how their government ought to behave globally. The belief that Canadian foreign policy ought to reflect

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<sup>36</sup> John Kirton, 'The Rule of Law from the Gray Lecture to Global Leadership,' Paper prepared for a conference on Louis St. Laurent's Gray Lecture at Sixty, Bishop's University, Lennoxville, Quebec, January 19-21, 2007.

<sup>37</sup> Andrew Richter argues that Canada prefers ad hoc institutions and issue-specific multilateral cooperation to better improve its chances at success vis-à-vis its more powerful allies. See: Andrew Richter, 'From Trusted Ally to Suspicious Neighbor: Canada-U.S. Relations in a Changing Global Environment,' *American Review of Canadian Studies* Vol. 35 No. 3 (2005), 471-502.

<sup>38</sup> Welsh uses the term 'modest power.' See: Jennifer Welsh, *At Home in the World: Canada's Global Vision for the 21st Century* (Toronto: Harper Collins Publishers Ltd., 2004).

supposedly ‘do-good’ middle power characteristics informs the policies that the Canadian government can take. Thus, Canada’s decisions have been shaped by popular and elite understandings of its national identity – that is, the awareness and related expectations of what Canada represents – relative to others on the international stage.

Though the maintenance of rules-based multilateralism is self-interested, and therefore arguably a strategic objective in that it bestows influence, Canada’s predilection for multilateral cooperation showcases it as a relatively benign actor to foreign audiences. Canada is seen an ‘honest broker’ in the eyes of the international community – an identity or position that sets it apart from its traditional allies (e.g., Britain, France, and the United States) who are seen to pursue purely self-interested policies, although it should be stated that championing this role enables self-interest.<sup>39</sup> This perception, or conferred identity, also proved useful at difficult and challenging junctures throughout the Cold War, enabling Canada to broker agreements on behalf of its Western allies with the developing world.

## **5 Contribution to Scholarship**

The project makes several contributions. First, it demonstrates that domestic politics, ideational, and institutional interests related to the preservation of Canada’s status or middle power identity have structured Canada’s nuclear policies and options to a considerable extent. It highlights the need for a more holistic approach to understanding and examining decisions related to nuclear supply. The second is to develop a set of generalizations that can help explain not only decision-making in the Canadian context, but also help explain other similar cases.

Grounded in existing theoretical and empirical observations from both the IR and nuclear scholarship, as well as primary data from archives and elite interviews with experts and

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<sup>39</sup> It is also shaped by our perception of self-interest, a point with which former Prime Minister Harper seemingly disagreed.

officials in Ottawa, this research demonstrates that Canada's nuclear export and non-proliferation policies embody the adage of 'where one stands, depends on where one sits.' In doing so, it makes a novel contribution to the literature on how non-power projecting states formulate nuclear policies. Indeed, it would seem that not only are conventionally less powerful states, like Canada, less receptive to strategic interests as commonly understood, but also that they often have uncertain and ambivalent interests in the nuclear field altogether.

## **6 Case Selection and Methodology**

This dissertation examines Canada's nuclear policies since its entry into the nuclear field in 1942 to 1990. Though demand-side cases, such as the decision to abstain from the development of an independent nuclear arsenal and the subsequent decision to accept U.S. nuclear weapons on Canadian territory and for the Canadian military will be explored, the main focus of the study will be on cases of nuclear exports from Canada to foreign governments. The study examines Canada's civilian nuclear exports to India, Pakistan, Argentina, and Romania.<sup>40</sup> I exclude nuclear exchanges that have not been endorsed by the Canadian government for two reasons. First, though such a study would indeed be valuable, incidents of illicit trade are extremely rare because governments closely monitor the exports of firms within their borders.<sup>41</sup> Second, this research is explicitly concerned with the process by which Canada decides to provide nuclear assistance.

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<sup>40</sup> Civilian nuclear assistance or nuclear exports refers to state-approved transfers of nuclear facilities, technology, materials, and knowledge from one state to another for peaceful purposes. The definition encapsulates transfers that assist the recipient to initiate, develop, operate, and enlarge a civil nuclear program. However, the global smuggling of nuclear commodities by sub-state actors, including individuals, networks, and agents without the expressed approval or knowledge of the host state are beyond the scope of this research. For instance, nuclear items supplied to one country could be diverted or exported to a third party, as demonstrated by the illicit A.Q. Khan network. See: Gordon Corera, *Shopping for Bombs: Nuclear Proliferation, Global Insecurity, and the Rise and Fall of the AQ Khan Network* (Oxford: Oxford University Press 2006).

<sup>41</sup> William C. Potter, 'Nuclear Exports from the Former Soviet Union: What's New, What's True,' *Arms Control Today* Vol. 23, No.1 (Jan. 1993): 3 – 10.

Given the small number of NCAs, the methodological approach will be qualitative in the form of a case study of Canadian nuclear exports. More specifically, the methodology will employ case study and process tracing to identify and explain the factors responsible for shaping Canada's decision-making. The purpose of this section is threefold. First, it will define and outline the case study method. Second, the section will introduce process tracing and justify its utility for constructing a case study. Third, the section will discuss the advantages and disadvantages of the chosen approach.

Case study research is generally conducted in three steps. The first step is to identify a set of cases displaying a common outcome. My research identifies the case of Canada's nuclear exports to foreign governments, which will be broken down to subunits in order to better understand the puzzle. A unit refers to a spatially bounded phenomenon such as a nation-state, revolution, person, political party, or, in this case, nuclear exports. The second step is to outline the similarities between the subunits in order to reveal the causal factors or the drivers of the outcomes. In order to satisfy the second step, my research aims to explain the factors behind different Canadian decisions to export nuclear materials and technologies (and to reverse or terminate such exports). In doing so, I can identify the conditions and similarities that shaped Canada's decisions. The identification of the similarities in the cases leads to the third step, which involves establishing a generality between all the units.<sup>42</sup> The end goal is to conclude with a generalization about the units.

The case studies will be constructed with the method of process tracing. Process tracing is the effort to 'infer causality through the identification of mechanisms and the data

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<sup>42</sup> Charles C. Ragin. *The Comparative Method: Moving Beyond Qualitative and Quantitative Strategies*, (Berkeley, CA: University of California Press, 1989), 45.

thereby generated are ‘causal-process observations.’<sup>43</sup> As such, case study research emphasizes the notion of temporality. An important element of time is the concept of path dependence. Path dependence focuses on and helps researchers understand the repercussions of early events on subsequent and possibly historically distant outcomes. For instance, how did the development of Canada’s early nuclear industry influence Canada’s decision-making regarding nuclear exports? The tools of the case study approach, including path dependence and temporal analysis, allow the researcher to paint a narrative that carefully examines the intervening variables between X and Y. The research relies on both secondary and primary sources, such as government documents, newspapers, diaries, and accounts of events. Specifically, the primary documents include parliamentary debates from the 1940s to the present; official governmental publications and reports such as the *Economic Impact of Nuclear Energy Industry in Canada* by the Canadian Nuclear Association; ‘A Background Paper on Nuclear Safeguards and Canadian Safeguards Policy’ by the Department of External Affairs; and more recent publications such as ‘Canada’s Historical Role in Developing Nuclear Weapons,’ by the Canadian Nuclear Safety Commission.

This dissertation will also rely on primary data collected from elite interviews, which is useful for process tracing.<sup>44</sup> Data collected from elite interviews can be used in three ways. First, the data can strengthen the robustness of the findings gathered from other primary and secondary sources.<sup>45</sup> Second, such data can often uncover new information related to the research topic.<sup>46</sup> Third, information collected from elite interviews can be employed to

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<sup>43</sup> James Mahoney and Celso M. Villegas, ‘Historical Enquiry and Comparative Politics,’ in Carles Boix and Susan C. Stokes (eds.), *The Oxford Handbook of Comparative Politics* (New York, NY: Oxford University Press, 2007), 76.

<sup>44</sup> Oisín Tansey, ‘Process Tracing and Elite Interviewing: A Case for Non-Probability Sampling,’ *PS: Political Science & Politics* Vol. 40, No. 04 (2007), 766.

<sup>45</sup> Oisín Tansey, ‘Process Tracing and Elite Interviewing’ 766.

<sup>46</sup> Oisín Tansey, ‘Process Tracing and Elite Interviewing’ 766.

extrapolate the views and preferences of a small group to that of a larger population. The last point is particularly true in a democratic political system, where the preferences and views of the larger population should be reflected in those of politicians and other officials in the government and public bureaucracy. The interviewees include prominent anti-nuclear and disarmament activists, officials from nuclear think-tanks and non-governmental agencies, and current and former nuclear scientists, officials and decision-makers with relevant experience in bureaucrat departments and agencies as well as in various relevant non-proliferation, arms control, and disarmament institutions.

Process tracing is useful for two reasons. It can distinguish between spurious correlations and cause and effect. It can also identify which of the many causal mechanisms is the most influential. The problem, however, is that process tracing may reveal numerous causal mechanisms, even simultaneously, and so it may be difficult to discern which to prioritize. In such cases, the researcher must identify the most important causal mechanisms and further examine them to determine their effect on the outcome.

Qualitative, small-N studies are particularly effective at uncovering specific causal mechanisms between the independent variables and dependent variable.<sup>47</sup> This approach attempts to identify the causal mechanism (or mechanisms) that occurs between some background variable and an outcome. They seek to connect background factors with definite but more remote outcomes.<sup>48</sup> Like any methodological approach, the case study method has weaknesses and strengths and, therefore, requires the researcher to accept trade-offs when adopting this methodology. The case study is advantageous because it provides in-depth

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<sup>47</sup> James A. Caporoso, 'Is there a Quantitative-Qualitative Divide in Comparative Politics? The Case of Process Tracing,' In: Todd Landman and Neil Robinson (eds.), *The Sage Handbook of Comparative Politics* (Los Angeles, CA: Sage Publications, 2009).

<sup>48</sup> James A. Caporoso, 'Is there a Quantitative-Qualitative Divide in Comparative Politics?,' 70.

analysis, constructs validity, identifies causal mechanisms, and generates theories.<sup>49</sup> The trade-offs between the case study method and the quantitative method, for example, are depth for breadth, construct validity over generalizability, and identifying causal mechanisms rather than causal effects.

The advantages of the case study method also include identifying and thoroughly ‘measuring’ the important variables and concepts. Statistical studies, on the other hand, must stretch concepts by including dissimilar cases to get the larger-N necessary for statistical analysis.<sup>50</sup> A second advantage is that case studies identify new variables and lead to new hypotheses through the study of deviant or outlier cases and fieldwork.<sup>51</sup> Finally, the depth of case studies allows for the identification of the causal mechanisms (or intervening variables) responsible for an outcome.<sup>52</sup> Depth refers to the ‘detail, richness, completeness, wholeness, or degree of variance that is accounted for by an explanation.’<sup>53</sup> Gerring sums up in this way: ‘Research designs invariably face a choice between knowing more about less and knowing less about more.’<sup>54</sup>

There are also disadvantages to the case study method. One of the primary critiques against case study research is the issue of ‘selection bias.’<sup>55</sup> This occurs when researchers select their cases on the dependent variable and therefore have the same outcome.<sup>56</sup> In other words, by selecting cases with the same outcome, a researcher will identify only the factors responsible

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<sup>49</sup> Darren Hawkins, ‘Case Studies,’ In: Todd Landman and Neil Robinson (eds.), *The Sage Handbook of Comparative Politics* (Los Angeles, CA: Sage Publications, 2009), 59.

<sup>50</sup> Alexander L. George and Andrew Bennett, *Case Studies and Theory Development in the Social Sciences*, (Cambridge, MA: MIT Press, 2005), 20.

<sup>51</sup> Alexander L. George and Andrew Bennett, *Case Studies and Theory Development in the Social Sciences*, 21.

<sup>52</sup> John Gerring, ‘What Is a Case Study and What Is It Good for?’, *The American Political Science Review* Vol. 98, No. 2 (May, 2004): 348.

<sup>53</sup> John Gerring, ‘What is a Case Study and What is it Good For?’, 348.

<sup>54</sup> Alexander L. George and Andrew Bennett, *Case Studies and Theory Development in the Social Sciences*, 22.

<sup>55</sup> Alexander L. George and Andrew Bennett, *Case Studies and Theory Development in the Social Sciences*, 22.

<sup>56</sup> Barbara Geddes, ‘How the Cases You Choose Affect the Answers You Get: Selection Bias in Comparative Politics,’ *Political Analysis* Vol. 2, No. 1 (1990), 135.

for those cases without providing an explanation for cases with a different outcome. In order to circumvent the issue of selection bias, the subunits in this dissertation include divergent instances, such as cases in which Canada refused to export nuclear materials.

A second criticism is that case study research is not representative of a larger universe of cases. That is, case study researchers are willing to trade-off generalizability in order to construct an in-depth explanation that will apply to a set of 'well-defined' cases with a 'high degree of explanatory richness.'<sup>57</sup> Generalization, although limited, is still possible with this approach. According to Ragin, case study research can produce 'limited generalizations' regarding specified categories common to a case.<sup>58</sup> In addition, and as mentioned above, the primary objective of case study research is to identify and explain the conditions and causal mechanisms under which a phenomenon occurs. This makes it suitable for the intended objective of this dissertation to identify the conditions that have shaped Canada's policy in the nuclear field.

## **7 Conclusion**

The project consists of six chapters including this Introduction. Chapter 1 presents and evaluates the extant nuclear proliferation literature on the decision-making calculus of states. It provides a comprehensive discussion and treatment of the prevailing scholarly explanations on nuclear supply-side behaviour, and addresses the strengths and limitations of the existing approaches that are pertinent to the subject of nuclear assistance. It also offers some alternative hypotheses, and concludes by presenting the hypothesis, grounded in liberal IR theory, of this project.

Chapter 2 traces Canada's decision-making since its entry into the nuclear field,

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<sup>57</sup> Alexander L. George and Andrew Bennett, *Case Studies and Theory Development in the Social Sciences*, 30.

<sup>58</sup> Charles C. Ragin, *The Comparative Method*, 35.

including its decision to forgo the production of nuclear weapons, its consequent custodianship of nuclear warheads, and its development of a nuclear industry. The focus of the research in the following chapters will then turn to various case studies of bilateral nuclear trade agreements. The chapter helps to set the background for understanding Canada's nuclear exports policies in the subsequent chapters. It concludes by examining the politically tumultuous question of acquiring U.S. nuclear weapons for the Canadian military stationed both in Canada and its North Atlantic Treaty Organization (NATO) forces. Chapter 3 examines Canada's nuclear export agreements with India and Pakistan, two countries that rejected the emerging non-proliferation regime. Chapter 4 discusses Canada's nuclear agreements with Argentina and Romania in the 1970s until the late 1980s. Although Canada extended nuclear cooperation agreements beyond the 1980s, these are not examined in this dissertation. The intent of the dissertation here is not to provide an exhaustive, in-depth analysis of all of Canada's nuclear interactions, but rather to demonstrate that contrary to the conventional wisdom, Canada's nuclear decision-making has not been strategic as defined in the extant nuclear literature. The last chapter presents the conclusion and offers avenues for further research.

## CHAPTER ONE

### A Theory of Middle Power Nuclear Decision-making

The literature on nuclear proliferation is voluminous, though much of it is devoted to questions related to the causes and the consequences of nuclear weapons, such as why some states want nuclear weapons, why some states abandon nuclear weapons, or refrain from their development and use altogether.<sup>59</sup> The question of nuclear supply, by contrast, has received scant attention. Until recently, only a handful of studies existed on the subject, which mostly focused on the effects of export controls, or on specific bilateral agreements.<sup>60</sup> Although the dissolution of the former Soviet Union, which birthed new ‘nuclear states,’ spurred an interest in the subject of nuclear transfers,<sup>61</sup> there had been no serious attempt to understand why countries provide nuclear materials and technologies to one another until the past decade.

Led by Matthew Fuhrmann and Matthew Kroenig, the most recent wave of

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<sup>59</sup> On nuclear weapons, power, and demand, see: Thomas Schelling, *Arms and Influence* (New Haven: Yale University Press, 1966); Richard N. Betts, *Nuclear Blackmail and Nuclear Deterrence* (Washington D.C.: Brookings Institution, 1987); Scott D. Sagan and Kenneth N. Waltz (eds.), *The Spread of Nuclear Weapons* (New York, NY: W.W. Norton, 1995); and Sonali Singh and Christopher R. Way, ‘The Correlates of Nuclear Proliferation,’ *Journal of Conflict Resolution* Vol. 48, No. 6 (2004): 859-885. For an interesting study of learning under nuclear deterrence, see: Jeffrey W. Knopf, ‘The Concept of Nuclear Learning,’ *The Nonproliferation Review*, Vol. 19, No. 1, (March 2012): 79-93. For studies examining nuclear restraint and non-use, see also: Etel Solingen, *Nuclear Logics* and Nina Tannenwald, *The Nuclear Taboo*, respectively.

<sup>60</sup> For policy-orientated studies on export controls and nuclear proliferation, see: Gary K. Bertsch, Richard T. Cupitt, and Steven Elliot-Gower (eds.), *International Cooperation on Nonproliferation Export Controls: Prospects for the 1990s and Beyond* (Ann Arbor, MI: University of Michigan Press, 1994); and Michael May, ‘Nuclear Weapons Supply and Demand,’ *American Scientist* Vol. 82, No. 6 (1994): 526-537. For trends and case studies, see: William Lowrance, ‘Nuclear Futures for Sale: To Brazil from West Germany, 1975,’ *International Security* Vol. 1, No. 2, (1976): 147-166; Robert Boardman and James Keeley (eds.), *Nuclear Exports and World Politics* (New York, NY: St. Martins, 1983); William C. Potter (ed.), *International Nuclear Trade and Nonproliferation* (Lexington, MA: Lexington Books, 1990); T.V. Paul, ‘Chinese-Pakistani Nuclear/Missile Ties and Balance of Power Politics,’ *Nonproliferation Review* Vol. 10, No. 2 (2003): 21-29; and Duane Bratt, *The Politics of CANDU Exports* (Toronto: University of Toronto Press, 2006).

<sup>61</sup> For examples, see: Gloria Duffy, *Soviet Nuclear Energy: Domestic and International Policies* (Santa Monica, CA: Rand, 1979); Norman Gall, ‘Atoms for Brazil, Dangers for All,’ *Foreign Policy* Vol. 23 (1976): 155-201; and Gordon Corera, *Shopping for Bombs: Nuclear Proliferation, Global Insecurity, and the Rise and Fall of the AQ Khan Network* (Oxford: Oxford University Press, 2006). See also: Gary K. Bertsch and William C. Potter (eds.), *Desperate States: Russia, Belarus, Kazakhstan, and Ukraine*. (New York, NY: Routledge, 1999).

scholarship charts a familiar path insofar as it provides predominately strategic – or put differently, realist-based – explanations for such behaviour.<sup>62</sup> As such, considerable nuclear supply activities are missed. For instance, strategic explanations offer no insight into why Canada transferred nuclear goods to Romania in exchange for frozen strawberries. Why did Canada take the decision in the midst of the cold war? The nuclear literature thus still lacks an explanation that accounts for such decisions.

The supply literature does not adequately explain how nuclear decision-making is made in the Canadian context. Existing theories, though insightful, do not offer compelling explanations for why an abiding ambivalence, and not a coherent strategic imperative as classically defined, seems to typify decisions. Why does Canada sometimes hold dear non-proliferation standards and at other times regard them dispensable? Why does Canada not take supply decisions that fit a military-strategic calculus, as dominant theories on nuclear behaviour would anticipate? Further elaborating on the assertions made in the introduction, I illustrate that Canada's nuclear policies are the result of a country hamstrung by perceptions of its relative power position and constrained by its concomitant identity as a 'middle power.'

The chapter proceeds as follows. The next section begins by providing a review of the extant literature on nuclear supply. It introduces three main theories of nuclear assistance: the regime theory; the economic theory; and strategic theory, and then identifies some of the gaps as well as shortcomings of this body of work. Particular attention is devoted to examining the strategic theory of nuclear assistance. The third section makes a case for domestic politics explanations of the liberal IR variety for nuclear decision-making. It demonstrates how a

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<sup>62</sup> Matthew Kroenig, 'Exporting the Bomb: Why States Provide Sensitive Nuclear Assistance,' *American Political Science Review* Vol. 103, No. 01 (2009a): 113-133; Matthew Kroenig, 'Importing the Bomb: Sensitive Nuclear Assistance and Nuclear Proliferation,' *Journal of Conflict Resolution* (2009b): 113-133; and Matthew Fuhrmann, *Atomic Assistance: How 'Atoms for Peace' Programs Cause Nuclear Insecurity* (Ithaca, NY: Cornell, 2012).

number of relatively recent studies on the subject of nuclear demand have made effective use of liberal IR and domestic politics approaches in order to illuminate cases that were previously taken for granted or inadequately explained.<sup>63</sup> In the fourth section, the theoretical foundation of the research is laid and the hypothesis is presented. I argue that liberal IR theory, with its emphasis on preference formation, identity perceptions, and domestic *as well as* international politics, offers the best explanation for Canada's seemingly ambivalent decision-making. In the fifth section, I conclude.

## **2 The Literature**

This section introduces the dominant theoretical models on nuclear supply. It surveys and evaluates three main explanations for nuclear assistance: regime theory, economic theory, and strategic theory. Regime theory claims that states offer nuclear assistance in order to obtain a means of monitoring and enforcing compliance with the non-proliferation regime. The economic theory holds that states supply for economic reasons. Finally, the strategic theory argues that states supply to strengthen their allies and to constrain their adversaries. The subsequent pages will elaborate on these and identify their limitations.

### **2.1 Regime Theory**

Regime theory emphasizes the role of international regimes in influencing the provision of

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<sup>63</sup> Other contemporary liberal theories in IR include: neoliberal internationalism and neoliberal institutionalism. Neoliberal internationalism argues that democratic states rarely, if ever, go to war with each other. It does not contend that democracies are less aggressive than other systems of government, but rather that they are peaceful with other democratic systems. Proponents, sometimes called neo-idealists, favour democracy to other forms of government believing that it facilitates interdependence that can attenuate conflict. Neo-liberal institutionalism, on the other, holds that states are more important than non-state actors; accepts that the international system is anarchic but caveats that regimes and institutions can mitigate its effects through cooperation; and argues that absolute gains are more important than relative gains. See the following: Michael W. Doyle, 'Kant, Liberal Legacies, and Foreign Affairs,' *Philosophy and Public Affairs* 12, No. 3 (1986a): 205-235; Robert Keohane, 'International Institutions: Two Approaches,' *International Studies Quarterly*, Vol. 32, No. 4 (1988): 379-396; and Joseph Nye and Robert Keohane, *Power and Interdependence* (New York, NY: Longman, 2001).

nuclear transfers.<sup>64</sup> The theory finds basis in the founding logic of the Atoms for Peace program, a U.S.-led policy precursor to the existing regime that includes the Nuclear Non-Proliferation Treaty (NPT) and the International Atomic Energy Agency (IAEA).<sup>65</sup> It may be instructive to examine the genesis of the non-proliferation regime. The Soviet acquisition of an atomic weapon in 1949 signalled the end of the American nuclear monopoly and generated panic about the threat of horizontal proliferation.<sup>66</sup> The twin policies that emerged from these considerations were massive retaliation, which aimed to deter possible Soviet aggression and Atoms for Peace, which set the groundwork for the non-proliferation regime.<sup>67</sup>

The latter had several aims. First, it allowed the United States to reassure a frightened public that had witnessed the terror and destruction of Hiroshima and Nagasaki about the alternate possibilities of atomic energy. Apart from raising hopes for a peaceful nuclear future, the U.S. also wanted to show that countries could have nuclear technology, which was something both new and enticing, without having to go the weapons route. (At the time, nuclear development was not devoted to energy production but rather a strictly guarded military secret between the U.S., Canada, and Great Britain as per the Québec Agreement of

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<sup>64</sup> Stephen Krasner defines international regimes as ‘principles, norms, rules, and decision-making procedures around which actor expectations converge in a given issue-area.’ Stephen D. Krasner, ‘Structural Causes and Regime Consequences: Regimes as Intervening Variables,’ In: Stephen D. Krasner (ed.), *International Regimes* (Ithaca, NY: Cornell University Press, 1983), 2.

<sup>65</sup> The Atoms for Peace program was an American initiative, whose name borrows from a speech given by President Dwight D. Eisenhower at the United Nations General Assembly (UNGA), to promote peaceful nuclear sharing in exchange for non-proliferation guarantees. The initiative allowed the U.S. to exercise a degree of control over the recipient’s activities. In order to ensure that recipients of peaceful technology and material maintain the commitment to non-proliferation, the IAEA was established in 1957 to oversee civilian nuclear trade, recommend safeguards, and conduct verifications.

<sup>66</sup> Lawrence Freedman, *The Evolution of Nuclear Strategy* (London: Palgrave Macmillan, 2003), 156-157

<sup>67</sup> Eisenhower’s Atoms for Peace program was a deliberate and calculated component of the administration’s foreign and defence policy, or the New Look doctrine (i.e., Massive Retaliation) to use nuclear weapons in response to Soviet aggression anywhere in the world. Atoms for Peace thus helped justify the export of nuclear technologies that, in turn, allowed for the nuclearization and readiness of NATO forces in Europe. See: Evan Thomas, *Ike’s Bluff: President Eisenhower’s Secret Battle to Save the World* (New York, NY: Little, Brown, and Company, 2012). See also: Martin J. Medhurst, ‘Atoms for Peace and Nuclear Hegemony: The Rhetorical Structure of a Cold War Campaign,’ *Armed Forces & Society* Vol. 23, No. 4 (1997): 571-593.

1943.<sup>68</sup>) Lastly, the program created a political cover for a U.S. nuclear arms build-up, allowing it to slow the arms race through a centralized system of sharing nuclear materials and technologies and therefore to preserve American power.<sup>69</sup> The strategic objectives behind Atoms for Peace largely succeeded: It established one norm for the United States – and the other superpowers – and another for everyone else.<sup>70</sup> The NPT that divides states into two groups: *recognized* nuclear weapons states (NWS includes Britain, China, France, Russia, and the U.S.) and non-nuclear weapons states (NNWS) embodies this double standard (or what some others call Faustian bargain).<sup>71</sup>

Given the NPT's overall success in limiting the number of NWS, regime proponents argue that civilian cooperation is an effective arms control mechanism because eligibility is based on a recipient's renunciation of nuclear weapons, compliance with verifiable safeguards, and submission of facilities to inspections.<sup>72</sup> Nuclear cooperation under the auspices of regimes also reduces uncertainty about the intentions of recipients. This claim is similar to Robert Keohane's assertion that, 'Regimes make it more sensible to cooperate by lowering the likelihood of being double-crossed.'<sup>73</sup> Regimes determine state behaviour because of the incentives states face in international politics, and they operate as 'intervening variables' – to use Stephen Krasner's words – between state interests, action, and outcomes.

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<sup>68</sup> Francis George Gosling. *The Manhattan Project: Making the Atomic Bomb* (Washington, DC: United States Department of Energy, History Division, 1994).

<sup>69</sup> To be sure, there was a tension between the two American strategies. While Atoms for Peace was an early arms control and non-proliferation mechanism, massive retaliation, which was the threat of preparedness to use nuclear weapons against Soviet aggression anywhere in the world, encouraged an American arms build-up.

<sup>70</sup> It is perhaps worth a mention that the Soviets initially disparaged the plan, noting that providing the world with nuclear energy would lead to proliferation. Evan Thomas, *Ike's Bluff*.

<sup>71</sup> Other NWS include India, Israel, North Korea, and Pakistan.

<sup>72</sup> The treaty was opened for signatures in 1968 and came into force in 1970. The NWS are legally recognized possessors of nuclear arsenals (though, under the NPT, they undertake a general and indeterminate commitment to disarm), while all other states are not. Article IV of the NPT stipulates that, in exchange for their disavowal of nuclear weapons, the treaty will facilitate access to peaceful nuclear knowledge and materials to signatories in good standing. Non-signatories, by contrast, are denied foreign assistance.

<sup>73</sup> Robert O. Keohane, *After Hegemony: Cooperation and Discord in World Political Autonomy* (Princeton, NJ: Princeton University Press, 1984), 77.

Some proponents of regimes tend to take a constructivist approach, arguing that suppliers have a normative obligation to share technology and materials as doing so builds confidence in the regime and trust in other states. Regime adherents insist that assistance does not necessarily lead to proliferation if adequate safeguards are in place and international monitoring is enforced. Alexander Montgomery's recent study finds support for the claim, demonstrating that civilian assistance can decrease the probability that those states seeking to proliferate succeed.<sup>74</sup> Thus, regime proponents argue that institutions manage the risk of proliferation more than any of the existing alternatives; the alternative is not no nuclear cooperation, but rather unconstrained cooperation. To be sure, institutions give suppliers a degree of control and access over the supply chain that otherwise would not exist.

Yet, apart from making nuclear cooperation 'more sensible,' it does not seem that the presence of regimes, as such, determines whether or not a country extends the offer of nuclear cooperation to another. Suppliers appreciate the implications of refusing to cooperate. Denial could encourage states determined to have nuclear technology to develop it indigenously, or to procure materials elsewhere, contributing to a black market. It could also enable those interested in developing nuclear weapons to do so covertly without the risk of detection. Prior to the creation of the NSG, which established a universal set of guidelines, suppliers had to consider another consequence of refusal. It is what William Lowrance described as the 'Non-proliferator's Quandary.'<sup>75</sup> Lowrance pointed out that suppliers sometimes faced a stark choice

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<sup>74</sup> Montgomery turns the strategic explanations on the causes and consequences of nuclear assistance on their head. By reducing the universe of cases to only those where states have actively pursued nuclear weapons, he shows that assistance has often limited weapons proliferation. Montgomery does not attribute the negative relationship between assistance and acquisition to non-proliferation regimes, however. His finding supports Jacques Hymans' study on non-traditional or neo-patrimonial ruling structures and the inability of such regimes to bring large-scale nuclear projects to fruition. See: Alexander H. Montgomery, 'Stop Helping Me: When Nuclear Assistance Impedes Nuclear Programs,' In: *The Nuclear Renaissance and International Security* (Stanford, CA: Stanford University Press, 2013).177-202. See also: Jacques E. C. Hymans, 'Assessing North Korean Nuclear Intentions and Capacities: A New Approach.' *Journal of East Asian Studies* Vol. 8, No. 2 (2008): 259-292.

<sup>75</sup> William Lowrance, 'Nuclear Futures for Sale.'

between providing assistance to a suspected proliferant, and squandering an opportunity to other suppliers that observed different standards.<sup>76</sup> One of the shortcomings with regime theory, illuminated by Lowrance's Quandary, is that it completely disregards that states have incentives to export nuclear items independent of the protection afforded by regimes. However, as Lowrance demonstrates, states that do not export nuclear items forfeit economic profits.

## 2.2 Economic Theory

A competing theory emphasizes precisely that.<sup>77</sup> The so-called economic theory emerged in the wake of the collapse of the Soviet Union, which possessed 27,000 nuclear weapons and enormous stockpiles of weapons-grade plutonium and uranium, and scientists that could not be paid.<sup>78</sup> The collapse also ended the nuclear arms race, but created a new set of dangers, including the accidental or unauthorized use of nuclear weapons and the illicit trade of nuclear materials, warheads, and technology to the developing world.<sup>79</sup> It was feared that those seeking nuclear weapons capability would seek to hire unemployed nuclear scientists available in large number throughout the former Soviet Union.<sup>80</sup> As William Potter explained, 'It is possible that in the present environment of decentralized authority, porous borders, and underdeveloped export structures, that trade in dual use nuclear goods was undertaken by

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<sup>76</sup> It is worth noting, however, that with the establishment of the Nuclear Suppliers Group (NSG) in 1976, most nuclear suppliers tend to operate by the same set of rules and guidelines.

<sup>77</sup> William C. Potter (ed.), *International Nuclear Trade and Nonproliferation*; Jean-Francois Rioux (ed.), *Limiting the Proliferation of Weapons: The Role of Supply Side Strategies* (Ottawa: Carleton University Press, 1992); and Jed C. Synder and Samuel F. Wells, Jr., *Limiting Nuclear Proliferation* (Cambridge, MA: Ballinger Publishing Co, 1985).

<sup>78</sup> Council on Foreign Relations, 'Loose Nukes,' *Council on Foreign Relations*, January 1, 2006. Accessed at: [www.cfr.org/weapons-of-mass-destruction/loose-nukes/p9549#p1](http://www.cfr.org/weapons-of-mass-destruction/loose-nukes/p9549#p1).

<sup>79</sup> Bruce G. Blair, *The Logic of Accidental Nuclear War* (Washington, DC: Brookings Institution, 1993).

<sup>80</sup> Sharon K. Weiner, *Our Own Worst Enemy? Institutional Interests and the Proliferation of Nuclear Weapons Expertise* (Cambridge, MA: MIT Press, 2011).

private entrepreneurs without the knowledge or sanction of host governments.<sup>81</sup> Indeed, confirmed cases of smuggling revealed that activities often took place without the knowledge or the endorsement of the governments, and that in many cases some kind of payment was collected.<sup>82</sup>

The economic theory worked to identify conditions or characteristics, such as government indifference towards non-proliferation, lack of export controls or unsafeguarded facilities, unemployed nuclear scientists, and stockpiles of available fissionable material, which would make a country more prone to transfer nuclear goods.<sup>83</sup> Because dire economic conditions, widespread crime and corruption, and poor safeguards were common in the former Soviet republics of Belarus, Kazakhstan, and Ukraine that had inherited nuclear weapons, there was reasonable worry about the possibility of illicit nuclear sales.<sup>84</sup> Proponents of the economic theory maintain that less affluent suppliers – especially those in need of hard currency or with weak command and control – are more likely to sell their nuclear materials and technology than those less in need of profits.<sup>85</sup> While the economic theory has made significant contributions, especially in drawing attention to the possibility of third parties gaining access

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<sup>81</sup> William C. Potter, 'Nuclear Exports from the Former Soviet Union: What's New, What's True,' *Arms Control Today* Vol. 22, No. 1 (1993): 4. See also: Rensselaer W. Lee, *Smuggling Armageddon: The Nuclear Black Market in the Former Soviet Union and Europe* (London: Palgrave MacMillan, 2000).

<sup>82</sup> Investigation into the illicit nuclear export network of A. Q. Khan, however, revealed that the network was not the single-handed doing of a rogue scientist even though there is suspicion that the Pakistani government had either been aware or tacitly approved of Khan's activities. According to Fitzpatrick, there is no evidence that confirms the Pakistani government's involvement. See: Mark Fitzpatrick, *Nuclear Black Markets: Pakistan, AQ Khan and the Rise of Proliferation Networks: A Net Assessment* (London: IISS, 2007), 93. Others doubt Khan's claims that he operated alone. For example: James Doyle, *Nuclear Safeguards, Security and Nonproliferation: Achieving Security with Technology and Policy* (Amsterdam: Elsevier, 2011), 570.

<sup>83</sup> William C. Potter, 'Nuclear Exports from the Former Soviet Union.' See also: Scott D. Sagan, *The Limits of Safety: Organizations, Accidents, and Nuclear Weapons* (Princeton, NY: Princeton University Press, 1993).

<sup>84</sup> Though the former Soviet republics returned their weapons to post-communist Russia, all three continue to hold stockpiles of weapons-grade uranium and plutonium and Kazakhstan and Ukraine both have nuclear facilities capable of producing fissionable materials that could be used for weapons.

<sup>85</sup> Etel Solingen, 'Brazil: Technology, Countertrade, and Nuclear Exports,' In: William C. Potter (ed.), *International Trade and Non-Proliferation: The Challenge of Emerging Suppliers* (Lexington, MA: Lexington Books, 1990): 111-152; and Sarah Tanis and Bennett Ramberg, 'Argentina,' In: William C. Potter (ed.), *International Trade and Non-Proliferation*, 95-110.

to dangerous nuclear materials and facilities, it is of limited value in explaining the vast majority of nuclear transfers. This is not an indictment of the theory, as it was constructed to examine the inducements of less-developed states.

Transactions for nuclear goods are often lucrative, to be sure. Yet, the scholarship still lacks a theory that considers the trade and industrial drivers of nuclear export decisions. Are only poor states lured by the potential to profit, or are rich countries too? In one such study, it is shown that affluent states provide nuclear assistance with greater frequency than cash-strapped countries.<sup>86</sup> Given that nuclear suppliers comprise mostly affluent countries, one might reason that they possess well-developed nuclear industries or commercial sectors and that these entities try to influence the preferences and the decisions of the state in support of nuclear transfers. Much like regime theory, the economic theory does not amount to a serious tool for analyzing the causes of nuclear assistance.

### **2.3 Strategic Theory**

A fairly recent addition to the literature, the strategic camp is the product of the quantitative research of two scholars, Matthew Kroenig and Matthew Fuhrmann.<sup>87</sup> Kroenig's work examines cases of sensitive nuclear assistance, defined as providing information on weapons design or construction, large quantities of weapons-grade fissionable material, or assisting in the construction of facilities that could be used for the production of such material. Fuhrmann focuses on the causes and consequences of peaceful nuclear technology. (Interestingly, both works point to a decline in support for the non-proliferation regime: Kroenig finds that NSG states are more likely to provide sensitive nuclear assistance than those outside of it, whereas

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<sup>86</sup> See: Jennifer Hunt Morstein and Wayne D. Perry, 'Commercial Nuclear Trading Networks as Indicators of Nuclear Weapons Intentions,' *The Nonproliferation Review* Vol. 7, No. 3 (2000): 75-91.

<sup>87</sup> Matthew Kroenig, 'Exporting the Bomb;' Matthew Kroenig, 'Importing the Bomb;' Matthew Fuhrmann, *Atomic Assistance*.

Fuhrmann finds that non-signatories of the NPT are more likely to be on the receiving end of civilian assistance.<sup>88</sup>) Because the strategic camp represents the first serious attempt to devise a theory on the causes of nuclear assistance, it warrants a more comprehensive examination than the two preceding theories.

Strategic theory takes two forms: a focus on material power as a key driver of nuclear assistance, or on political relationships.

### **2.3.1 Material Power as an Independent Variable**

One compelling argument is that a state's view of the effects of nuclear proliferation depends on its relative power position in the international system. States with the ability to project conventional military force over a given state stand to lose the most from nuclear proliferation in that state as it will constrain their ability to continue to project power, whereas states that lack the ability to project conventional power over a given state in the first place have less to lose from nuclear proliferation in that specific state. Because the possession of nuclear weapons by a state has a more pronounced effect on the actions of power-projecting states, non-power projecting states are less inhibited to promote nuclear proliferation in a third state, particularly if they view it as a potential ally.<sup>89</sup> Such is the basis of the claim that states that are incapable of projecting conventional power over a potential nuclear recipient are more likely to offer sensitive nuclear assistance than power-projecting ones.

Grounded in realist theory, this model posits that states transfer nuclear materials and capabilities to buttress their military allies and strategic partners.<sup>90</sup> Kroenig boldly claims that

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<sup>88</sup> This had escaped my notice, but was picked up by Alexander H. Montgomery, 'Stop Helping Me,' 177-202. Montgomery turns the strategic explanations on the causes and consequences of nuclear assistance on their head, finding that assistance can decrease the probability that those states seeking to proliferate succeed.

<sup>89</sup> It is neither clear nor logical how the supplier augments its own power from supporting proliferation in a patron state, even if it ultimately succeeds in reducing the projection capabilities of a rival state.

<sup>90</sup> For Example: Matthew Kroenig, 'Exporting the Bomb,' Matthew Kroenig, 'Importing the Bomb,' and Erik Gartzke and Matthew Kroenig, 'A Strategic Approach to Nuclear Proliferation,' *Journal of Conflict Resolution* Vol. 53, No. 2 (April 2009): 151-160.

some states provide militarily sensitive nuclear assistance to the enemy of their enemy in order to facilitate weapons proliferation in that state.<sup>91</sup> Kroenig distinguishes between power-projecting and non-power-projecting states, adding that the latter do not provide such assistance when they can already project power over the recipient.<sup>92</sup> His statistical findings indicate that nuclear capable states are three times more likely to assist those over whom they cannot project military power than those they can; seven times more likely to assist those with whom they share an adversary than with those that they do not; and five times less likely to do so when they rely on superpower security assurances.<sup>93</sup> Kroenig writes, 'In short, states provide nuclear assistance for strategic reasons. They are more likely to export sensitive nuclear materials and technology when it would have the effect of constraining an enemy and less likely to do it when it would threaten themselves.'<sup>94</sup>

This approach subscribes to the neorealist theory of IR. According to neorealism, 'the existence of several states in anarchy renders the security of each one problematic and encourages them to compete with each other for power or security.'<sup>95</sup> Security is the main concern for states in the international system, and as a consequence, international politics is

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<sup>91</sup> Matthew Kroenig, *Exporting the Bomb*, 10-14. Kroenig provides a narrow definition of 'sensitive' nuclear assistance, which includes assistance with the design and construction of nuclear weapons, the transfer of significant quantities of weapons-grade fissionable materials, and help in the construction of uranium enrichment and/or plutonium reprocessing facilities. Kroenig excludes the sale of nuclear reactors, even though spent fuel from reactors can be used in the production of weapons.

<sup>92</sup> Kroenig owes this qualification to the notion in the deterrence literature that proliferation poses a greater threat to strong powerful nations than weaker ones. For instance, see: Thomas Schelling, *Arms and Influence*; Robert Powell, *Nuclear Deterrence Theory: The Search for Credibility* (Cambridge: Cambridge University Press, 1990); Robert Jervis, 'Rational Deterrence: Theory and Evidence,' *World Politics* Vol. 41, No. 2 (1989): 183-207. Yet, it is worth noting that powerful states also have alternate means of empowering their allies and alliances, such as the stationing of conventional military bases and extending nuclear deterrence. See also: Alexander Lanoszka, 'Protection States Trust? Major Power Patronage, Nuclear Behavior, and Alliance Dynamics,' Working Paper.

<sup>93</sup> Matthew Kroenig, *Exporting the Bomb*, 62.

<sup>94</sup> Matthew Kroenig, *Exporting the Bomb*, 4.

<sup>95</sup> Stephen Walt, 'The Enduring Relevance of the Realist Tradition,' In: Ira Katznelson and Helen Milner (eds.), *Political Science: The State of the Discipline* (New York: W.W. Norton and Company, 2002), 200.

viewed as a 'self-help' system wherein states must rely on their own capabilities for security.<sup>96</sup> Strategic explanations of the causes of nuclear assistance therefore focus on typically realist variables such as militarized disputes, distribution of power, and enduring rivalries. Yet following the logic of self-help, one might expect that states would deny others from obtaining the technology.

The explanation offers adversarial threats as a conditional variable. In other words, relatively weaker states will be more inclined to exploit the asymmetrical effects of nuclear proliferation in providing nuclear assistance to a state with which they share a common adversary. This explanation posits that countries do so when it hurts their rivals, but spares themselves. But breeding proliferation does more than hurt rivals.<sup>97</sup> It distresses all actors in the international system about the intentions of the proliferating state, including those who already possess arsenals.<sup>98</sup> Indeed, suspected proliferants run the risk of preventative attack.<sup>99</sup> Thus, one could argue that rather than enhance the security of the ally it seeks to empower,

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<sup>96</sup> The acquisition of power is essential for political actors. A significant difference between the classical realists and the neorealists, at least defensive realists, is the question of just how much power states want. Where the classical realists believe that power is an end in itself, the neorealists say power is a means and not an end; security/survival is the highest end. The first concern of states is not to maximize power but to maintain their relative position in the system. States therefore prefer to join the weaker of two coalitions and we do not expect to see the strong combining with the strong (i.e., balancing instead of bandwagoning).

<sup>97</sup> In a controversial claim, Kroenig argues that states export sensitive nuclear materials and technologies because of, not in spite of, the anticipated consequences. See: Matthew Kroenig, *Exporting the Bomb*.

<sup>98</sup> The security dilemma causes states to worry about relative power as well as one another's future intentions. See John H. Herz, *International Politics in the Atomic Age* (New York, NY: Columbia University Press 1959).

<sup>99</sup> Although the use of kinetic military force is rare, the following studies all examine the potential responses, especially militarized campaigns that horizontal proliferation frequently triggers. On the use of force to prevent proliferation, see: William Burr and Jeffrey T. Richelson, 'Whether to Strangle the Baby in the Cradle: The United States and the Chinese Nuclear Program 1960-1964,' *International Security* Vol. 25, No. 3 (2000): 54-99; Matthew Fuhrmann and Sarah E. Kreps, 'Targeting Nuclear Programs in War and Peace: A Quantitative Empirical Analysis, 1941-2000,' *Journal of Conflict Resolution* Vol. 54, No. 6 (2010): 831-859; and Sarah E. Kreps and Matthew Fuhrmann, 'Attacking the Atom: Does Bombing Nuclear Facilities Affect Proliferation?' *Journal of Strategic Studies* Vol. 34, No. 2 (2011): 161-187. Kreps and Fuhrmann (2013), however, find that military strikes have produced uneven results in countering proliferation. It is worth noting that they have included the Allied bombing of suspected German nuclear facilities (1942-1945) in their dataset, which renders the finding rather banal given the indiscriminate bombing that occurred during the 'total war' period. For a policy analysis of whether preventive attacks accelerate or delay nuclear weapons pursuit, see: Malfrid Braut-Hegghammer, 'Attacks on Nuclear Infrastructure: Opening Pandora's Box?' Policy Brief, Belfer Center for Science and International Affairs, Harvard Kennedy School, October 2011. Accessed at: [www.belfercenter.ksg.harvard.edu/publication/21439/attacks\\_on\\_nuclear\\_infrastructure.html](http://www.belfercenter.ksg.harvard.edu/publication/21439/attacks_on_nuclear_infrastructure.html).

sensitive nuclear transfers do (at least in the short term) just the opposite. It remains unclear why a state would elect to assist another to acquire a nuclear weapon to advance interests that could otherwise be achieved effectively through measures such as transferring conventional arms to an adversary's rival, fomenting unrest by supporting dissident groups, or conducting covert or sabotage operations that are far less destabilizing.<sup>100</sup> It is hardly surprising then that those few that have done so are nuclear-armed themselves, as it gives them immunity from the wrath of other nuclear-armed powers.

It is also important to consider that the acquisition of nuclear weapons takes a long time even for those countries that receive considerable help.<sup>101</sup> If producing a new nuclear weapons state is the goal of the supplier, then why does it not achieve that aim more quickly by passing nuclear weapons directly to the intended target? That states have stopped short of arming one another with nuclear weapons suggests that they take pause to consider the consequences of flagrant actions that run afoul of established international norms. There are domestic and international costs for violating revered institutional and normative rules as well. The distribution of relative material power is not sufficient to explain nuclear behaviour. If it were, we would expect countries that are unable to project conventional power to transfer nuclear materials and technologies far more often, and less discriminately. Clearly, however, there are additional factors, such as the presence of norms, regimes, superpower pressure, and

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<sup>100</sup> Countries often prefer covert actions because of the lower human and operational expense, the decreased probability of direct military confrontation, and the deflection of 'plausible deniability.' See: Lindsey A. O'Rourke, *Secrecy and Security: U.S.-Orchestrated Regime Change during the Cold War* (Dissertation, University of Chicago, 2013).

<sup>101</sup> Experts estimate that it took Israel, which received sensitive nuclear materials and technology from France, about nine-12 years to acquire a nuclear weapon from the time it initiated a nuclear weapons program. Hymans shows that the time for nuclear aspirants to successfully proliferate is actually increasing. See: Jacques E. C. Hymans, 'Botching the Bomb: Why Nuclear Weapons Programs Often Fall on Their Own – and Why Iran's Might, Too.' *Foreign Affairs* Vol. 91, No. 3 (2012): 44-53.

perhaps even reputation, that inhibit less powerful suppliers from rampantly exporting their technology.

Neorealist variables such as the shared enemies, relative military capabilities, and security alliances are determinants of some instances of nuclear assistance. However, they are not necessarily sufficient for transfers to take place, and do not capture anomalous cases of nuclear restraint. For instance, India refrained from providing sensitive nuclear assistance to Taiwan, with which it shares a common rival, China, even when Taipei expressed an interest in nuclear weapons. But India refused, and France – a country with no palpable geopolitical interests – assisted Taiwan.<sup>102</sup> One possible explanation for India's restraint is that unlike France, it does not have a strong tradition of supplying munitions and arms. Or alternately, India appreciates that it is already in a tenuous position in the nuclear universe and does not want to become more of an outlier than it already is.

Further, for the theory to be valid, we should expect the opposite to be true – that is, states should not provide nuclear assistance in the absence of geostrategic gains. However, throughout the 1970s, West Germany supplied Brazil with all kinds of nuclear materials even though it was not involved in any enduring rivalry with another state in Latin America and was vulnerable to superpower pressures by the U.S. on which it depended for its security.<sup>103</sup>

### ***2.3.2 Relationships as the Independent Variable***

The other strategic theory emphasizes political relationship as the independent variable.<sup>104</sup> Complementing literature on enduring conflicts, alliances, and democratic peace with a dataset

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<sup>102</sup> Although a case can be made that because France is further geographically removed from Taiwan, it has fewer concerns about proliferation in Asia. It could also be argued that the Indians' restraint was due to their perception that they already have enough trouble with China.

<sup>103</sup> Norman Gall argues that the deal needs to be situated in the context of the global energy crisis, which created the conditions for a German-Brazilian economic partnership to form. See Norman Gall, 'Atoms for Brazil, Dangers for All,' 155-201.

<sup>104</sup> Matthew Fuhrmann, 'Exporting Mass Destruction: The Determinants of Dual-Use Trade,' and Matthew Fuhrmann, 'Spreading Temptation: Proliferation and Peaceful Nuclear Cooperation Agreements.'

on all civilian nuclear cooperation agreements signed from 1945 to 2000, Fuhrmann advances three reasons for nuclear assistance: to reinforce their military allies or alliances, to strengthen their relationship with the enemies of their enemies, and in the case of democratic suppliers, to fortify their pre-existing relationships with democratic countries.<sup>105</sup> He maintains that democratic states are more likely to provide nuclear assistance to fellow democrats than to their autocratic brethren.

Although autocrats have been on the receiving end of democratic nuclear assistance, he demonstrates that states have incentives to trade with allies and democratic regimes and disincentives to do so with high-risk states or regions.<sup>106</sup> States will be opposed to nuclear transfers to their enemies and will have fewer reservations when it involves their friends (presumably, because it enhances the aggregate power of the alliance where there is one).<sup>107</sup> This seems intuitive. States should be most concerned about the prospect of nuclear weapons in the hands of their enemies, but they should also be concerned about proliferation, writ large. The spread of nuclear weapons also makes the world a more dangerous place: It leads to hubris,

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<sup>105</sup> Matthew Fuhrmann, 'Taking a Walk on the Supply Side the Determinants of Civilian Nuclear Cooperation,' *Journal of Conflict Resolution* Vol. 53, No. 2 (2009b): 181-208; and Matthew Fuhrmann, *Atomic Assistance*.

<sup>106</sup> The third point bears resemblance to the democratic peace thesis, which ranks the likelihood of armed conflict between democratic allies as low. Rooted in Kant's *Perpetual Peace* essay in which he postulated that war would cease in a world comprised of constitutional republics, the democratic peace theory gained traction in international relations for its ability to explain the absence of militarized conflict between democratic allies. Democratic peace theory posits that democracies rarely fight each other. Critics have pointed out the rarity of war and the relative newness of democracies, arguing that the two are not casually linked, and others have offered counter explanations such as economic interdependence or realist variables such as military alliances. For further reading, see: Michael W. Doyle, 'Kant, Liberal Legacies, and Foreign Affairs,' *Philosophy and Public Affairs* 12, No. 3 (1986a): 205-235; Michael W. Doyle, 'Kant, Liberal Legacies, and Foreign Affairs, Part 2,' *Philosophy and Public Affairs* Vol. 12, No. 4 (1986b): 323-35; and Bruce Russett, Christopher Layne, David E. Spiro, and Michael W. Doyle, 'The Democratic Peace: And Yet It Moves,' *International Security* Vol. 19, No. 4 (1995): 164-75. See also: Erik Gartzke, 'The Capitalist Peace,' *American Journal of Political Science* Vol. 51, No. 1 (2007): 166-191; Sebastian Rosato, 'The Flawed Logic of Democratic Peace Theory,' *American Political Science Review* Vol. 97 No. 4, (2003): 585-601.

<sup>107</sup> For an explanation of the contrasting U.S. response to Indian and Iranian proliferation, see: Richard N. Haass, 'India, Iran, and the Case for Double Standards,' *Council on Foreign Relations*, (14 May 2006), Accessed at: [www.cfr.org/publication/10685/india\\_iran\\_and\\_the\\_case\\_for\\_double\\_standards.html](http://www.cfr.org/publication/10685/india_iran_and_the_case_for_double_standards.html). For a discussion of US non-proliferation responses, see also: Peter Douglas Feaver and Emerson M. S. Niou, 'Managing Nuclear Proliferation: Condemn, Strike, or Assist,' *International Studies Quarterly* Vol. 40, No. 2 (1996): 209-233.

uncertainty, instability, and increases the chances of an accident as well as of their being introduced in conflict.<sup>108</sup> Further, if states really face the ever-present threat that others will use force to threaten, harm, or conquer them, then they should abstain from providing others with the means to do so. After all, common ties may unbind, friendships may sour, and alliances may collapse. As Iran's nuclear program powerfully attests, 'today's alliance partner might be tomorrow's enemy.'<sup>109</sup>

Unlike the power-centred argument, perceptions of friendship or enmity are what matter.<sup>110</sup> In contrast to Kroenig, Fuhrmann assumes all suppliers share the same considerations regardless of their material capabilities.<sup>111</sup> His study is concerned with the broad relationship between civilian nuclear assistance, which includes dual-use commodities such as nuclear reactors, and weapons proliferation.<sup>112</sup> He finds that: 'Peaceful cooperation is among the few variables that is consistently salient in explaining both nuclear weapons program onset and weapons acquisition.'<sup>113</sup> He explains that this is because recipients of nuclear cooperation agreements are likely to abuse the technology if their security environment alters or if they face

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<sup>108</sup> For arguments against nuclear weapons proliferation, see: Scott D. Sagan, *The Limits of Safety: Organizations, Accidents, and Nuclear Weapons* (Princeton: Princeton University Press, 1995); and Steven E. Miller, 'The Case Against a Ukrainian Nuclear Deterrent,' *Foreign Affairs* Vol. 73, No. 3 (1993): 67-80. In contrast, Matthew Kroenig's analysis has been shaped by the neorealist view on the stabilizing effects of nuclear proliferation. The idea that more nuclear weapons 'may be better,' which developed around the logics of MAD, was first advanced by Waltz in his controversial Adelphi Paper. Theorists attached to the principles of MAD argued that by making war mutually destructive for both sides, nuclear weapons essentially took the war option off of the proverbial table, see: John J. Mearsheimer, 'Back to the Future,' John J. Mearsheimer, 'The Case for a Ukrainian Nuclear Deterrent,' *Foreign Affairs* Vol. 72, No. 3 (1993): 50-66; and Kenneth N. Waltz, 'Nuclear Myths and Political Realities,' *American Political Science Review* Vol. 84, No. 3 (1990): 730-745).

<sup>109</sup> John J. Mearsheimer, 'The False Promise of International Institutions,' 11. The U.S. readily provided Iran with nuclear assistance in order to maintain its strategic relationship, and now works to prevent Iran from obtaining the same technology that it was previously supplying.

<sup>110</sup> Walt argues that countries respond to threats when arranging security cooperation agreements. See: Stephen M. Walt, *The Origins of Alliances* (Ithaca, NY: Cornell University Press, 1987).

<sup>111</sup> Fuhrmann does distinguish between democratic and non-democratic suppliers, expecting the former to be more likely to provide assistance to democratic allies.

<sup>112</sup> Matthew Fuhrmann, 'Exporting Mass Destruction? The Determinants of Dual-Use Trade,' *Journal of Peace Research* Vol. 45, No. 5 (2008): 633-652; Matthew Fuhrmann, 'Spreading Temptation: Proliferation and Peaceful Nuclear Cooperation Agreements,' *International Security* Vol. 34, No 1 (2009a): 7-41; Matthew Fuhrmann, 'Taking a Walk on the Supply Side;' and Matthew Fuhrmann, Atomic Assistance: How 'Atoms for Peace' Programs Cause Nuclear Insecurity.

<sup>113</sup> Matthew Fuhrmann, 'Exporting Mass Destruction: The Determinants of Dual-Use Trade,' 9.

a real or perceived threat.<sup>114</sup>

The connections between nuclear assistance and weapons proliferation are not robust, however. Fuhrmann neglects to include a measure for safeguards, and so treats all NCAs as equal when they are not.<sup>115</sup> He also takes for granted the prior intentions of recipients, though acknowledges that civilian assistance bear bureaucratic interests that may (or may not) support proliferation.<sup>116</sup> As Rensselaer Lee points out, ‘The decision to develop a nuclear weapons capability could well have preceded the acquisition of civilian nuclear technology and expertise, making the [civilian nuclear cooperation] more of a dependent than an independent variable.’<sup>117</sup>

Contemporary supply side studies have built on this body of strategic work. For instance, Julian Schofield advances a similar security calculus model that explains why states engage in nuclear sharing (i.e., permissive or deliberate transfers).<sup>118</sup> In examining renewed U.S.-India nuclear cooperation, Saadat Hassan also argues that the decision was intended to balance a common rival, China.<sup>119</sup> Hassan says, ‘The transformation in Indo-U.S. relations in the post-Cold War world is rooted in the belief that a strong democratic India will serve U.S. interests in preserving the balance of power in the Asian continent and sustaining peace and stability in the Indian Ocean littoral.’<sup>120</sup> The NCA implied recognition of India as a de facto

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<sup>114</sup> Matthew Fuhrmann, ‘Exporting Mass Destruction: The Determinants of Dual-Use Trade,’ 15.

<sup>115</sup> Consider the case of US nuclear assistance to South Korea and Japan between the 1970s to the present, and 1970s and 1980s, respectively.

<sup>116</sup> A notable work that examines the question of whether and how peaceful nuclear programs could contribute to weapons proliferation and/or to illegal nuclear trafficking is Adam Stulberg and Matthew Fuhrmann (ed.), *The Nuclear Renaissance and International Security* (Stanford, CA: Stanford University Press, 2013).

<sup>117</sup> Christoph Bluth, Matthew Kroenig, Rensselaer Lee, William C. Sailor, and Matthew Fuhrmann, ‘Correspondence: Civilian Nuclear Cooperation and the Proliferation of Nuclear Weapons,’ *International Security* Vol. 35, No. 1, (2010), 191.

<sup>118</sup> Schofield, *Strategic Nuclear Sharing*. Other studies echo the view that the ‘strategic benefits’ are the main reasons states pursue nuclear weapons. See also: Erik Gartzke and Matthew Kroenig, ‘A Strategic Approach to Nuclear Proliferation,’ *Journal of Conflict Resolution* Vol. 20, No. 10 (2009), 2.

<sup>119</sup> Saadat Hassan, ‘Indo-US Nuclear/Strategic Cooperation: Chinese Response,’ *Strategic Studies* Vol. 32, No. 1 (2012), 77.

<sup>120</sup> Saadat Hassan, ‘Indo-US Nuclear/Strategic Cooperation,’ 44.

NWS, which ‘sends an inflationary signal to the global marketplace.’<sup>121</sup> While the ideas and arguments presented by Kroenig and Fuhrmann have done much to advance the nuclear supply as an area of study, the strategic explanations have been far too wedded to realist variables to account for variation in supply, such as assistance to recipients that are not military allies or to those that share no common enemies.

There is no one-size-fits-all theory that explains nuclear behaviour. As Scott Sagan argues, the decision to pursue or shun nuclear weapons is influenced by more than one reason. He explains, ‘Different historical cases are best explained by different causal models.’<sup>122</sup> Pluralism in demand scholarship revealed that the commitment to parsimony (something that is often required by each theory if applied on its own) resulted in inattention to the varying conditions and interests across different states. The supply scholarship has not benefited from the application of different IR theoretical approaches, however.

### **3 Insights from the Domestic Politics Literature on Demand**

Different causal models were required to understand why different states make different demand calculations. The same should hold true for supply calculations. The domestic politics literature on nuclear demand has done much to improve our understanding of state behaviour and decision-making. Domestic politics explanations broadly fall into two categories. The first emphasizes the ways in which domestic politics can result in suboptimal foreign policy outcomes. It asserts that the process by which states arrive at a foreign policy decision is a function of the competition between various individuals, groups, industries, and institutions at the domestic level. An example is Graham Allison’s popular model of bureaucratic decision-

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<sup>121</sup> Saadat Hassan, ‘Indo-US Nuclear/Strategic Cooperation,’ 51-52.

<sup>122</sup> Scott D. Sagan, ‘Why Do States Build Nuclear Weapons?: Three Models in Search of a Bomb,’ *International Security* Vol. 21, No. 3 (1996-1997): 73-85.

making, which emphasizes the conflictual and sometimes compromising nature of bureaucratic politics.<sup>123</sup> The second focuses on factors like institutions, economic structures, cultures, regime type, or ideology.<sup>124</sup> Such explanations might stress the role of an established political culture or identity and its impact on a foreign policy outcome.<sup>125</sup> In the following pages, I evaluate a number of recent demand studies from this latter category that provide compelling accounts of decision-making.<sup>126</sup>

One of the critical findings of more recent domestic politics explanations is the idea of nuclear ambivalence – that is, the notion that countries seldom have predetermined, or fixed interests and that they frequently wrestle with the question of whether or not to weaponize. This insight underpins my theory of Canada’s nuclear behaviour, which will be elaborated upon in the subsequent section.

Recent contributions have vastly improved the literature by focusing on the domestic-level factors that influence nuclear behaviour. They stress the interests, perceptions, and preferences of individual state leaders and governments. Two such studies take particular issue with the notion that states have certain nuclear intentions with respect to nuclear weapons. Using India as a country case, both George Perkovich and Itty Abraham challenge the

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<sup>123</sup> Graham Allison, *Essence of Decision: Explaining the Cuban Missile Crisis* (New York, NY: Little, Brown, 1971). See also: Barry R. Posen, *The Sources of Military Doctrine* (Ithaca, NY: Cornell University Press, 1984); Stephen Van Evera, ‘The Cult of the Offensive and the Origins of the First World War,’ *International Security* Vol. 9, No. 1 (1984): 58-107; and Jack Snyder, *The Ideology of the Offensive* (Ithaca, NY: Cornell University Press, 1984); Richard C. Snyder, H.W. Bruck, and Burton Sapin, *Foreign Policy Decision-Making: An Approach to the Study of International Politics* (New York: The Free Press, 1962).

<sup>124</sup> James D. Fearon, ‘Domestic Politics, Foreign Policy, and Theories of International Relations,’ 302.

<sup>125</sup> Helen Milner, *Interests, Institutions, and Information: Domestic Politics and International Relations* (Princeton: Princeton University Press, 1997); Sharyn O’Halloran, *Politics, Process and American Trade Policy* (Ann Arbor, MI: University of Michigan Press, 1994); Daniel Verdier, ‘Democratic Convergence and Free Trade?’ *International Studies Quarterly* Vol. 42, No. 1 (1998): 1-24; and Daniel Verdier, *Democracy and International Trade* (Princeton, NY: Princeton University Press, 1994).

<sup>126</sup> Some noteworthy works in this ever-growing field include: Jacques Hymans on psychology and emotions, Etel Solingen on domestic politics, and T.V. Paul as well as Nina Tannenwald on norms and taboos. See: Jacques E. C. Hymans, *The Psychology of Nuclear Proliferation: Identity, Emotions and Foreign Policy* (New York, NY: Cambridge University Press, 2006); Etel Solingen, *Nuclear Logics: Contrasting Paths in East Asia and the Middle East*; and T.V. Paul, *The Tradition of Non-Use of Nuclear Weapons* (Stanford, CA: Stanford University Press, 2009).

orthodoxy on why states pursue and retain nuclear weapons.<sup>127</sup> First, Perkovich reveals that policy ambivalence was endemic among decision-makers and recurrent throughout India's early nuclear history. Indian decision-makers grappled with the question in the face of clashing national and cultural values, such as a moral distaste for nuclear weapons and a desire to assert independence and gain recognition.<sup>128</sup> Perkovich explains that one camp felt that 'manifesting nuclear prowess could refute racially tinged stereotypes about the capacities of Third World scientists.'<sup>129</sup> The Indians also worried that weaponizing would earn them the reputation as hypocrites, given that they had condemned the great powers for doing the same.

Abraham also questions the conventional narrative on India's motives, arguing that domestic and ideational factors rather than national security were paramount.<sup>130</sup> Abraham puts forth an explanation that emphasizes variables such as, 'political culture, the meanings and values attributed to political actions and the role of politics as a mass cultural form.'<sup>131</sup> His study introduces the novel concept of 'nuclear ambivalence.'<sup>132</sup> The nuclear proliferation literature neglects that states hold conflicting feelings when it comes to nuclear weapons. Abraham demonstrates that many states, particularly in the developing world, do not have rigid nuclear preferences, and that they may be swayed in other direction or another based on

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<sup>127</sup> George Perkovich, *India's Nuclear Bomb: The Impact on Global Proliferation* (Berkeley, CA: University of California Press, 1999).

<sup>128</sup> George Perkovich, *India's Nuclear Bomb*, 58-60.

<sup>129</sup> George Perkovich, *India's Nuclear Bomb*, 59.

<sup>130</sup> Abraham also dismisses other explanations focused on political leadership, which hold that Indira Gandhi approved nuclear weapons in an effort to restore her standing in the face of tremendous pressure and dissatisfaction from senior members of the Indian bureaucracy. He points out that Gandhi possessed even less support prior to the 1974 explosion. See: Itty Abraham, *The Making of the Indian Atomic Bomb: Science, Secrecy, and the Postcolonial State* (London: Zed Books, 1998), 16-17.

<sup>131</sup> Itty Abraham, *The Making of the Indian Atomic Bomb*, 16.

<sup>132</sup> Abraham's scholarship introduces the notion of nuclear ambivalence to the nuclear acquisition subfield. See, for example: Itty Abraham, *The Making of the Indian Atomic Bomb*; Itty Abraham, 'The Ambivalence of Nuclear Histories,' *Osiris* Vol. 21 (2006): 49-65; and Itty Abraham, 'Contra-Proliferation: The Indian Bomb and Nuclear Developmentalism,' In: Scott D. Sagan (ed.), *Inside Nuclear South Asia* (Stanford, CA: Stanford Univ. Press, 2009): 106-136.

a range of political, economic or social factors.<sup>133</sup> He argues that India's nuclear program was intended to 'create a new basis for Indian nationalism' and to establish it as a legitimate and powerful actor on the international stage.<sup>134</sup> A state's nuclear technology can thus have significant meaning for its identity.

The third study worth further examination is the work of Jacques Hymans, who highlights the importance of identity perceptions, specifically the national identity conception (NIC), of the leader in office. He defines NIC as an 'individual's understanding of the nation's identity – his or her sense of what the nation naturally stands for and of how high it naturally stands, in comparison to others in the international arena.'<sup>135</sup> Hymans explains that, 'Some political leaders hold a conception of their nation's identity that leads them to desire the bomb; and such leaders can be expected to turn that desire into state policy.'<sup>136</sup> Those leaders are the minority, he maintains.

Hymans identifies different forms of NICs, including oppositional nationalism, non-oppositional nationalism, and sportsman-like nationalism. Sportsman-like nationalists are characterized by cooperation and opposition to nuclear weapons, and though will not seek nuclear weapons, are likely to build a nuclear technology infrastructure for practical and prestige reasons.<sup>137</sup> Where existential threats do not exist, only states whose leaders are oppositional nationalist will desire nuclear weapons.<sup>138</sup> Hymans explains, 'Oppositional national identities are based on a stark contrast with an external enemy who is seen as threatening and inimical to values and interests. Oppositional identities produce a

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<sup>133</sup> Itty Abraham, *The Making of the Indian Atomic Bomb*; Itty Abraham, 'The Ambivalence of Nuclear Histories.'

<sup>134</sup> Itty Abraham, 'The Ambivalence of Nuclear Histories,' 62.

<sup>135</sup> Jacques E. C. Hymans, *The Psychology of Nuclear Proliferation*, 18.

<sup>136</sup> Jacques E. C. Hymans, *The Psychology of Nuclear Proliferation*, 1.

<sup>137</sup> Jacques E. C. Hymans, *The Psychology of Nuclear Proliferation*, 39.

<sup>138</sup> Jacques Hymans, 'Of Gauchos and Gringos: Why Argentina Never Wanted the Bomb, And Why the United States Thought it Did.' *Security Studies* Vol. 10, No. 3 (2001): 156.

predisposition to feel fear in interactions with the enemy.<sup>139</sup> Oppositional nationalist leaders view external dangers as existential threats to their state's security. Oppositional nationalists are most inclined to pursue weapons – the decision steeped not only in 'fear and pride' but one 'that goes beyond calculation, to self-expression.'<sup>140</sup>

Non-oppositional nationalism is characterized by a deep sense of national pride without fear of the 'other.' Taking Argentina as the case study, Hymans argues that from the 1960s to 1989, decision-making in Buenos Aires was largely driven by 'non-oppositional nationalism,' which generated national pride in its nuclear capabilities and opposed any form of restrictions from an outside actor.<sup>141</sup> Although Argentina did not develop nuclear weapons, it built up its nuclear technology and capabilities in defiance to international pressure. In the 1990s, under President Carlos Menem, Argentina underwent an identity makeover that included rapprochement with the U.S.<sup>142</sup> Hymans explains, after dropping its non-oppositional nationalism, Argentina turned away from developing its nuclear program in favour of international integration.<sup>143</sup>

Fourth, Etel Solingen's *Nuclear Logics* provides further support for the role of domestic politics in determining whether states develop or forswear nuclear weapons.<sup>144</sup> She shows that different nuclear outcomes can be observed between those states whose leadership pursue integration in the international economy and those whose leadership shun it (inward-looking nationalists). Because of the high costs of violating the norms against nuclear weapons proliferation would limit the domestic goal of integration, the former will be disinclined to

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<sup>139</sup> Jacques Hymans, 'Of Gauchos and Gringos,' 156.

<sup>140</sup> Jacques E. C. Hymans, *The Psychology of Nuclear Proliferation*, 35.

<sup>141</sup> Jacques E. C. Hymans, 'Of Gauchos and Gringos,' 155.

<sup>142</sup> This shift may have been impelled by Argentina's hyperinflation, which necessitated sound economic and foreign policy that would promote Argentina's interests. See: Jacques Hymans, 'Of Gauchos and Gringos,' 183.

<sup>143</sup> Jacques E. C. Hymans, 'Of Gauchos and Gringos,' 183.

<sup>144</sup> Etel Solingen, *Nuclear Logics*, 4.

proliferate. This supports Hymans' case on Argentina. By contrast, Solingen explains: 'leaders and ruling coalitions rejecting internationalization incur fewer such costs and have greater incentives to exploit nuclear weapons as tools in nationalist platforms of political competition and for staying in power.'<sup>145</sup> She uses this regime to explain why East Asian leaders renounced nuclear weapons whereas Middle East leaders pursued them.

Collectively, the aforementioned works produced a number of key insights into the nuclear decision-making of states. Most notably, Abraham jettisoned the notion that states that embark on, or establish civilian nuclear programs with prior or clear intentions in the nuclear field. Perkovich illustrated that competing domestic, ideational, and security pressures interfere with different nuclear options, and that policy outcomes reflect this tension. Others, such as Hymans and Solingen, draw attention to the influence of perceptions of identity, the preferences of the leadership, and the relationship with the international community or external actors. Hyman's definition of an NIC is particularly valuable in explaining Canada's nuclear behaviour.

#### **4 Towards A 'Middle Power' Theory**

Existing scholarship on nuclear supply overlooks the political and cultural context in which decisions are made. Because interests are assumed and non-structural factors are suspended, realist theories on which strategic explanations rely are problematic for understanding the behaviour of non-power-projecting states. This is so, in part, because realism was not intended to explain foreign policy, nor the actions of lesser powers.<sup>146</sup> Rather, it was devised to explain specific regularities in international politics – such as interstate conflict and balancing – most

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<sup>145</sup> Etel Solingen, *Nuclear Logics*, 5.

<sup>146</sup> Waltz's claims that his theory, realism, explains 'why states similarly placed behave similarly despite their internal differences.' See: Kenneth N. Waltz, 'International Politics is Not Foreign Policy,' *Security Studies* Vol. 6, No. 1 (1996): 54-57.

typical of great powers.<sup>147</sup> Such behaviours are distinct from foreign policy, however.<sup>148</sup> Theories that focus on the external environment alone cannot account for foreign policy decisions, such as whether a country decides to pursue nuclear weapons or whether a country decides to strike a nuclear cooperation agreement with another. Although foreign policy is shaped by the very presence of other states and interactions with them, the actions, interests, and politics of states are also decided according to internal processes. In other words, the domestic and international realms are inextricably interrelated.<sup>149</sup>

In this section, I present my theory of middle power decision-making,<sup>150</sup> which draws on liberal IR theory as espoused by Andrew Moravcsik.<sup>151</sup> I argue that we should not expect a middle power like Canada to undertake the same decisions and in the same way in the nuclear field as we might from the U.S.

First, it is important to define what is meant by the term ‘middle power.’ As the term suggests, a middle power is a state that falls somewhere in the middle of the conventional power spectrum. It is not as powerful as great powers, that is those that can, to use a neorealist interpretation of power, project conventional power over most other states. Great powers have means (often military might) and influence to influence other states and events in the international systems. The great powers are commonly considered to consist of the Permanent

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<sup>147</sup> Kenneth N. Waltz, *Theory of International Politics*, 121.

<sup>148</sup> James D. Fearon, ‘Domestic Politics, Foreign Policy, and Theories of International Relations,’ *Annual Review of Political Science* Vol.1 (1998a): 289-313.

<sup>149</sup> Solingen also contends that the link between domestic and global processes is inextricable. She says that a state’s preferences are a reflection of the domestic, regional, and global contexts. See: Etel Solingen, *Regional Order at Century’s Dawn*, 18. See also: Joseph S. Nye Jr., Gideon Rachman, Walter Russell Mead, and John J. Mearsheimer et al., *The Domestic Sources of American Foreign Policy: Insights and Evidence* (Lanham, MD: Rowman & Littlefield, 2012).

<sup>150</sup> There is no consensus as to what constitutes a middle power. Some definitions emphasize military strength, and others look to economic indicators such as GDP. A middle power is understood to be a country that exerts influence on international affairs, but is not a great power. For a discussion, see: Carsten Holbraad, *Middle Powers in International Politics*, (London: Palgrave Macmillan, 1984).

<sup>151</sup> Andrew Moravcsik, ‘Taking Preferences Seriously: A Liberal Theory of International Politics,’ *International Organization* Vol. 51, No. 4 (1997): 513-553.

Five members of the United Nations Security Council that is, Britain, China, France, Russia, and the United States, though the United States (notwithstanding treaties on its decline) is widely recognized to be the world's sole superpower since the end of the Cold War. After the Second World War, however, Canada found that it had an elevated status on the global stage largely because the war had delivered a blow to the European powers. Although Canadian decision-makers recognized that the country still lacked the prominence of the British or power of the Americans, they also noticed that Canada had moderate influence, and so saw an opportunity to capitalize on it. Thus, they embarked on a conscious enterprise to harness that power in order to remake the post-war order in a way that could preserve its position. The notion of a middle power was emboldened by the recognition that Canada was not a small and insignificant country like the vast majority of states in the international system. The middle power project was thus ambitious in that it was fueled by the sense that Canada was closer to the great powers than the smaller ones. It did not have implications for how Canada would wield power; notions of conflict mediation, values-based leadership, and peacekeeping did not emerge until much later.

In addition, I often refer to strategic in the 'classical' or 'traditional' sense. This calls for clarification since, of course, there is no consensus on its meaning. For analytical reasons, I adopt the neorealist construe of strategic that dominates explanations of nuclear behaviour, as it highlights how assumptions of why states act as they do when it concerns attitudes and behaviour in respect of nuclear technology privilege 'strategic' rationales above all others. I show then that Canada's nuclear non-proliferation and export policies do not comport with strategic expectations as so defined. Indeed, I argue that we should not expect small and middle powers to formulate nuclear policies according to the same strategic logic that impels

the great powers; rather their place in the international pecking order conditions them to prize other interests beyond and besides conventional power.

In middle power decision-making, the ‘configuration of state preferences’ – rather than the distribution of relative power – matters most.<sup>152</sup> As the reference to middle power attests, I do not deny the importance of the distribution of relative power. Power differentials mean that states will not all have the same interests, preferences, or same concerns. Non-power projecting states face different consequences than power-projectors. As Kroenig’s study demonstrates, power projectors consider how a course of action might boost or limit their power and influence when determining whether to extend nuclear assistance.<sup>153</sup> In other words, they act according to a military strategic calculus. Conversely, non-power projectors are not encumbered by this consideration since they cannot project power in the first place. As such, we should not expect countries like Canada to follow the strategic calculus of great powers when figuring out its nuclear policies.

It is worth recalling Moravcsik’s three assumptions.<sup>154</sup> First, the key actors in international politics are individuals and private groups with varying preferences and interests. Second, the state is composed of a segment of domestic society that jostles to capture government institutions. Interests are not fixed, but rather, as the research of both Perkovich and Abraham illustrate, reflect the preferences of ‘powerful domestic groups enfranchised by representative institutions and practices.’<sup>155</sup> Third, state behaviour is influenced by patterns of preferences (i.e., a degree of interdependence exists).<sup>156</sup> In other words, states pursue

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<sup>152</sup> Andrew Moravcsik, ‘Taking Preferences Seriously,’ 513.

<sup>153</sup> Kroenig argues that the U.S. refrains from providing sensitive nuclear assistance because of the constraining effects nuclear proliferation would have on its own power.

<sup>154</sup> Andrew Moravcsik, ‘Taking Preferences Seriously,’ 516-520.

<sup>155</sup> Andrew Moravcsik, ‘Liberal International Relations Theory: A Social Scientific Assessment,’ 519-520.

<sup>156</sup> Moravcsik explains that policy interdependence refers to ‘the set of costs and benefits created for foreign societies when dominant social groups in a society seek to realize their preferences.’

preferences and policies under the constraints posed by others in the international domain. This assumption encompasses classically realist constraints as well as institutional and normative ones that have ‘audience costs’ implications.<sup>157</sup>

I add a fourth assumption to Moravcsik’s theory. The individuals who comprise the state and fill its bureaucracies do not merely execute the policies declared to them, but these actors also have their own ideas of the national interest. These ideas might concern their own personal interests, those of the institutions or groups to which they belong, or ideas about what interests the country should represent.

This discussion leads to the following hypothesis:

### **Hypothesis**

*Canada’s nuclear export and non-proliferation policies are influenced by domestically held beliefs and perceptions of Canada’s identity – that is, where Canada ranks on the figurative power spectrum and what values it professes in relation to other actors in the international system.*

The hypothesis, in effect, echoes Hymans’ definition of NIC.<sup>158</sup>

This project will demonstrate that Canada’s nuclear decision-making has largely been a function of beliefs and interests related to Canada’s international identity, and that these views of what Canada is (i.e., a multilateralist) and what Canada is not (i.e., not American) have, in turn, been influenced by perceptions of Canada’s standing in the international system.

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<sup>157</sup> Although the term was originally coined to explain the implications of backing down on a foreign policy decision, it has since been used to explain the domestic costs associated with taking one decision or another, particularly in democracies. For instance, given the popularity of Canada’s public image as a peacekeeper, the government tries to conceal its tradition as an arms dealer. Canada was involved in the sales of military commodities to both aggressors of the Iran-Iraq war, but the government concealed its participation from the public by third parties. On audience costs, see: Michael Tomz, ‘Domestic Audience Costs in International Relations: An Experimental Approach,’ *International Organization* Vol. 61, No. 4 (2001). For a study on this tradition, see: Ernie Regehr, *Arms Canada: The Deadly Business of Military Exports* (Toronto: Lorimer & Company, 1987), xiv. For the recent controversy over the sale of LAVs to the Saudis, see: Neil Macdonald. ‘Canada’s review of arms sales to Saudia Arabia runs into a bit of a snag,’ CBC News, 24 August 2017.

<sup>158</sup> The definition again is: ‘individual’s understanding of the nation’s identity – his or her sense of what the nation naturally stands for and of how high it naturally stands, in comparison to others in the international arena.’ See: Jacques E. C. Hymans, *The Psychology of Nuclear Proliferation*, 18.

Canada has cultivated a particular multilateralist or middle-power identity. From 1945 to 1968, Canada's foreign policy is described as a 'pattern of [Pearsonian] internationalism,' which was defined as 'an exercise in collaboration on the part of Canadian governments, groups, or individuals with likeminded governments or peoples elsewhere.'<sup>159</sup> In this period, Canada's middle power status enabled it to be 'the industrious tailor of the international system, stitching together workable compromises of rather patternless and (often) threadbare material.'<sup>160</sup> Canada was successful in this period largely because of the competence of an elite external affairs staff and the relative autonomy that they enjoyed. Andrew Cooper describes the era as a 'closed approach to policymaking' because officials did not consult with the Canadian public.<sup>161</sup> He further explains, 'a small group of politicians and officials acted with a great deal of autonomy from societal forces to pursue their concept of the national interest.'<sup>162</sup> Yet, these practices began to change with subsequent governments, starting with the Conservative government of John G. Diefenbaker.<sup>163</sup>

As a relatively small actor devoid of the power and responsibilities of its great power allies, Canada pursues its foreign policy interests primarily through rules-based international and multilateral institutions. These institutions are thus particularly important for Canada, not so much because they mitigate the effects of anarchy as neoliberals would argue, but more

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<sup>159</sup> Michael Tucker, *Canadian Foreign Policy: Contemporary Issues and Themes* (Toronto: McGraw-Hill Ryerson Limited, 1980), 1-2.

<sup>160</sup> Andrew F. Cooper, *Canadian Foreign Policy: Old Habits and New Directions* (Scarborough: Prentice Hall Allyn and Bacon Canada, 1997), 36.

<sup>161</sup> Andrew F. Cooper, *Canadian Foreign Policy*, 41.

<sup>162</sup> Andrew F. Cooper, *Canadian Foreign Policy*, 41.

<sup>163</sup> This characterization, however, is not entirely accurate. For one, it is anachronistic since the conception of Pearsonianism – attributed to the cleverness of Lester B. Pearson when he was still a civil servant with the Department of External Affairs (now, Global Affairs Canada) in defusing the Suez Crisis – did not take hold until the late 1960s. The idea of Pearsonianism is a popular romanticization of an era. Significant segments of the Canadian public excoriated the Liberal government for having turned its back on its two mother countries, Great Britain and France, during the Crisis. The subsequent Conservative government took note, choosing to maintain relations and deepen economic ties with Britain even when closer relations with the United States better served Canadian interests.

so because such entities allow Canada – to use an oft-repeated expression – to ‘punch above its weight.’<sup>164</sup> Underlying Canada’s earned identity as a multilateralist were two rather pragmatic, if unambitious, ideas. The first was that Canada could project different kind of ‘power’ or force in the world and that an identity or role distinct from Great Britain (and later the United States) would be auspicious, especially since it was clear that Britain would not defend Canada’s interests vigorously against the U.S.<sup>165</sup> The second was the recognition that active participation in international institutions, particularly at their inception, would allow Canada an opportunity to shape the proverbial rules of the game in favourable ways.

Canadian decision-makers are thus attentive to upholding multilateralist institutions and preserving Canada’s middle power identity both at home and abroad.<sup>166</sup> For example, as Chapter 2 will show, Prime Minister Diefenbaker’s reading of domestic support for nuclear weapons resulted in a muddled foreign policy that alienated Canada’s most important ally, the U.S, and ultimately played a significant role in costing him the next election. Indeed, renowned Canadian foreign policy theorist, Kim Richard Nossal reminds researchers not to ‘ignore the effect of domestic politics on the international policies of the government in Ottawa.’<sup>167</sup> In studying the direction of Canadian foreign policy, attention must also be paid to the features of the domestic population (e.g., demographics, linguistic or regional cleavages, etc.).<sup>168</sup> Nossal argues that foreign policy is ‘forged at the nexus of politics at three levels –

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<sup>164</sup> Robert O. Keohane and Joseph Nye, *Power and Interdependence*, Third Edition (New York, NY: Longman, 1977); Margaret E. Keck and Kathryn Sikkink, *Activists Beyond Borders: Advocacy Networks in International Politics* (Ithaca, NY: Cornell University Press); and Michael Barnett and Martha Finnemore, ‘The Politics, Power, and Pathologies of International Organizations,’ *International Organization* Vol. 53, No. 4 (1999): 699-732.

<sup>165</sup> For example, Canada invoked its North American character to avoid becoming entangled in British conflicts, such as the Chanak Affair.

<sup>166</sup> On the influence of societal demands and even the perceptions of those on foreign policy outcomes, see Nossal, who identifies two forms of societal demands, organized and unorganized interests: Kim Richard Nossal, *The Politics of Canadian Foreign Policy*, 11.

<sup>167</sup> Kim Richard Nossal, *The Politics of Canadian Foreign Policy*, Third Edition (Scarborough, Ontario: Prentice Hall Canada Inc., 1997), 11.

<sup>168</sup> Kim Richard Nossal, *The Politics of Canadian Foreign Policy*, 11.

international, domestic, and governmental – and that to understand foreign policy making, one must look at the interplay of all three.<sup>169</sup> This is similar to James Rosenau’s proclamation that ‘those who study foreign policy must, perforce, concern themselves with politics at every level.’<sup>170</sup> At the international level, Nossal says, that a state is influenced by its ‘geographic location, its status relative to other states, its external economic linkages, its alignments in international politics, and its capabilities and power.’<sup>171</sup>

In order to understand and to explain what determines Canada’s nuclear export and non-proliferation policies, including why its decisions extoll non-proliferation as a value at sometimes, and not at others, we need to understand Canada’s domestic and international context.<sup>172</sup> Canadian decision-makers are bound by Canada’s identity and perceived reality as a middle power, which constrains what Canada can – or believes it can – or ought to do.

My middle power theory also demonstrates that ambivalence should not be so surprising especially if we consider Canada’s non-power projecting status, its geopolitical condition in addition to perceptions of a national identity that exist at both the international and domestic levels. Identity is something fluid – it is transactional, generational, and relational, and different features of that identity will matter at different times.

## **5 Conclusion**

This chapter offered a discussion on the topic of nuclear assistance. In examining the three main schools, regime theory, economic theory, and strategic theory, the intent was to show that they, in the Canadian context, prove insufficient in explaining foreign policy decisions.

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<sup>169</sup> Kim Richard Nossal, *The Politics of Canadian Foreign Policy*, xiv.

<sup>170</sup> James S. Rosenau, ‘Introduction: New Directions and Recurrent Questions in the Comparative Study of Foreign Policy,’ In: Charles F. Hermann, Charles W. Kegley Jr., and James S. Rosenau (eds.), *New Directions in the Study of Foreign Policy* (Boston: Allen and Unwin, 1987), 1.

<sup>171</sup> Kim Richard Nossal, *The Politics of Canadian Foreign Policy*, 7-8.

<sup>172</sup> Duane Bratt, ‘Canada’s Nuclear Schizophrenia,’ *Bulletin of Atomic Scientists* Vol. 58, No. 2 (March/April 2002), 44-50.

Through the discussion, I recognize that all three schools of thought have made important contributions in shedding light on the various factors that may influence states to exchange nuclear commodities and technology. However, such macro-level theories have limited explanatory power because they tend to overlook the historical, political, and cultural context in which decisions are made.

Understanding the decision-making that leads Canada to provide nuclear assistance requires a comprehensive approach, one that considers domestic-level variables. Following a recent turn in the nuclear demand literature towards domestic-politics explanations, which is discussed above, I draw on liberal IR theory to account for the research question under investigation – that is, what explains Canada’s ambivalence in the nuclear field.

The dissertation will demonstrate that Canada does not make strategic decisions, as classically understood, in the nuclear field. Its nuclear policies are not designed with the view of strengthening allies, and are not made in consideration of the implications on its conventional military power. Canada does, however, have incentives to preserve its status, and as such, will avoid taking foreign policy decisions that will tarnish its reputation. This does not mean that Canadian nuclear policy is not self-interested or rational. Canadian nuclear policy has aimed to advance different political and economic interests over time, with varying success. Indeed, Canada has been quite prudent, even if it has taken decisions that are not strategic in the realist sense. Calculations, though, have often concerned political and cultural considerations at the domestic level.

The point here is to show that strategic imperatives – in the classical realist sense – have not been the primary consideration for policymakers in Canada. Those in search of a single overarching strategy in Canada’s nuclear history will be disappointed. The next chapter examines Canada’s ascent as a nuclear supplier, beginning with its involvement in the

Manhattan Project with its closest allies, the United States and Britain.

## CHAPTER TWO

### From Manhattan to Bomarcs

The dominant view in the nuclear proliferation literature holds that nuclear weapons are widely recognized instruments of power. Realists, in particular, claim that states covet nuclear weapons, and that they would spare no effort to obtain them, or, if necessary, to align with a nuclear-armed ally. Even those who reject that they are universally desirable recognize that they remain highly attractive to some, and that the decision to eschew nuclear weapons is often as deliberate as the decision to go nuclear.<sup>173</sup> States flirting with the idea may ultimately decide that pursuing nuclear weapons is not worth incurring the wrath of nuclear-armed powers.<sup>174</sup> Such was the case with Sweden and Switzerland.<sup>175</sup> After all, states need not necessarily develop nuclear weapons to enjoy their advantages (e.g., leverage, security, or influence), and in some instances, the initiation of a nuclear program is sufficient in helping them do so. For example, some states (e.g., South Korea) have embarked upon the conspicuous exploration of a nuclear weapons program in order to extract security reassurances from a nuclear patron.<sup>176</sup> The

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<sup>173</sup> For an exception, see: Benoit Pelopidas, 'Reversal and Restraint,' In: Nathan E. Busch and Joseph F. Pilat (eds.) *Handbook of Nuclear Proliferation and Policy* (London: Routledge, 2015): 337-348.

<sup>174</sup> It is worth noting that nuclear reversals are often attributed to a reduced threat environment (e.g., in the case of the two South American rivals, Argentina and Brazil) and domestic regime changes (e.g., Argentina, Brazil, and South Africa). On why some countries chose to restrain their nuclear ambitions, see: Mitchell Reiss, *Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities* (Washington DC: Woodrow Wilson Center Press, 1995); Maria Rost Rublee, *Nonproliferation Norms: Why States Choose Nuclear Restraint* (Athens, GA: University of Georgia Press, 2009); Etel Solingen, 'The Political Economy of Nuclear Restraint,' *International Security* Vol. 19, No. 2 (1994): 126-169; William C. Potter, 'The NPT & The Sources of Nuclear Restraint,' *Daedalus* Vol. 139, No. 1 (2010): 68-81; and P. R. Chari, 'Nuclear Restraint, Nuclear Risk Reduction, and the Security-Insecurity Paradox in South Asia,' *The Henry L. Stimson Center* (2001).

<sup>175</sup> Ariel E. Levite, 'Never Say Never Again: Nuclear Reversal Revisited,' *International Security* Vol. 27, No. 3 (2002/03): 63, 65.

<sup>176</sup> In the cases of South Korea and Taiwan, other factors were also responsible for nuclear abstinence, chiefly their economic interdependence. Etel Solingen argues that the East Asian states shelved nuclear aspirations largely in favour of economic integration. Etel Solingen, *Nuclear Logics: Contrasting Paths in East Asia and the Middle East: Contrasting Paths in East Asia and the Middle East* (Princeton, NJ: Princeton University Press, 2009).

demand literature thus acknowledges that countries might be content with a level of nuclear capacity or even latency that allows them to reap benefits without actually bearing the associated costs of developing weapons.<sup>177</sup>

The literature on supply is relatively scant, and takes its direction from the demand scholarship. Existing supply studies assume that states will take their prowess (i.e., relative power) into account when making nuclear decisions, and will avoid actions that might curb their strength. Supply side scholars thus argue that states choose to offer nuclear assistance when doing so would advance a strategic objective and will withhold nuclear assistance when doing so would diminish their security, standing, or freedom of action.<sup>178</sup> In sum, the scholarship provides predominantly strategic explanations not only for why states decide to embark on, ratchet up, and scale back from nuclear programs, but also for any decision involving them.

While strategic theories provide insight into the nuclear calculus of certain states, not all nuclear decisions are the product of such hard-nosed considerations. An examination of Canada's decision-making in this sphere suggests that there is often no single overriding objective, let alone a strategic one. This chapter examines Canada's early nuclear decision-

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<sup>177</sup> Nuclear latency refers to a state's capacity to build nuclear weapons without actually doing so. There is a slowly growing literature on nuclear latency. For a discussion of latency, see: Scott D. Sagan, 'Nuclear Latency and Nuclear Proliferation,' in William C. Potter and Gaukhar Mukhatzhanova (eds.), *Forecasting Nuclear Proliferation in the 21st Century*. Vol. 2 (Stanford, CA: Stanford University Press, 2010): 80-101; Mark Fitzpatrick, 'Can Iran's Nuclear Capability Be Kept Latent,' *Survival* Vol. 49, No. 1 (2007): 33-57; Matthew Fuhrmann and Benjamin Tkach, 'Almost Nuclear: Introducing the Nuclear Latency Dataset,' *Conflict Management and Peace* Vol. 32, No. 4 (2015): 443-461; Vipin Narang, 'What Does it Take to Deter? Regional Power Nuclear Postures and International Conflict,' *Journal of Conflict Resolution* Vol. 57, No. 3 (2013): 478-508; Michael C. Horowitz, 'Nuclear Power and Militarized Conflict: Is there a link?' in Adam N. Stulberg and Matthew Fuhrmann (eds.), *The Nuclear Renaissance and International Security* (Stanford, CA: Stanford University Press): 288-312; Steven E. Miller and Scott D. Sagan, 'Alternative Nuclear Futures,' *Daedalus* Vol. 139, No. 1 (2010): 126-137; and William C. Potter and Gaukhar Mukhatzhanova, 'Divining Nuclear Intentions: A Review Essay,' *International Security* Vol. 33, No. 1 (2008): 139-169.

<sup>178</sup> For examples, see: Matthew Kroenig, *Exporting the Bomb: Technology Transfer and the Spread of Nuclear Weapons* (Ithaca, NY: Cornell University Press, 2010); and Matthew Fuhrmann, *Atomic Assistance: How 'Atoms for Peace' Programs Cause Nuclear Insecurity* (Ithaca, NY: Cornell University Press, 2012).

making on civilian transfers and weapons. It covers the period from the wartime years to 1963. It traces Canada's foray into the nuclear field, starting with its involvement in the Allied effort to produce the first atomic bomb and early efforts to develop and later expand a civilian nuclear industry. What is notable is Canada's apparent lack of strategic guidance in this period. Nuclear policies were not animated by strategic factors, but often times, domestic ones.

## **2 A Nuclear Power is born**

'Okay, let's go,' said Clarence Decatur 'C.D.' Howe, Canada's wartime Minister of the Department of Munitions and Supply. With these terse words, Canada entered the nuclear field. It was 1942, and Canada was fighting in the Second World War (WWII). Howe had been asked to consider a top-secret request from a key wartime ally, Britain. What the British wanted seemed simple enough. They were seeking to relocate their Cambridge-based Cavendish nuclear laboratory to Canada, where it would be safe from German bombers. At Cavendish, the British were working on a clandestine project to develop an atomic bomb, code-named 'Tube Alloys.' The Americans were also running a nuclear project, independent of the British. Early on, collaboration between the two countries was frequent, but the Americans had become reticent. For one, the U.S. program had advanced so far ahead of the British that continued cooperation hardly seemed beneficial. The Americans were also uneasy about some of the senior scientists on the British team, as it consisted of refugees from German occupied countries, who were deemed vulnerable to blackmail if pressure were placed on their families by the Nazis. By 1942, as the British nuclear program stalled, the Manhattan Project graduated from a research project designed to determine the feasibility of building atomic weapons to a full-scale enterprise committed to building them. A reliable supply of uranium would need to be found.

Outside of Nazi-occupied territories, Canada and the Belgian Congo were the only two known sources of natural uranium. The only uranium refinery in North America was in Port Hope, Ontario – far away from German bombers. While the British would have preferred to exclude the Canadians and limit cooperation to the Americans, they needed Canada. Canadian participation was essential not only because it had the requisite uranium but also because its location could allay American reservations concerning Nazi subversion of the British program.

On February 19, 1942, Britain's High Commissioner to Canada, Malcolm McDonald, Sir George Thomson, and W.A. Akers paid the Canadian prime minister, William Lyon Mackenzie King, and the President of the National Research Council (NRC) of Canada, Dr. Chalmers Mackenzie a visit.<sup>179</sup> They pitched the idea of a joint British-Canadian nuclear laboratory, but the prime minister was not entirely persuaded. King deferred the matter to Howe on June 15, and it was discussed twice more on August 17 and September 2. On September 2, the Canadian government finally agreed to lend support. Shortly thereafter, a research facility in Montréal (the precursor to the Chalk River Laboratory) welcomed nuclear physicists and projects from Cambridge. This is how Canada came to play a part – albeit a junior one – alongside its wartime allies, the U.S. and Britain, in the research and development of the atomic bomb.<sup>180</sup>

Canada's principal role was to ensure a steady supply of uranium for the wartime atomic project, however. Private mining companies had begun the extraction and processing

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<sup>179</sup> George C. Laurence, *Early Years of Nuclear Energy Research in Canada* (Ottawa: Atomic Energy of Canada Limited, 1980), 3. Accessed at: <http://www.iaea.org.proxy.bib.uottawa.ca/inis/collection/NCLCollectionStore/Public/11/568/11568567.pdf>.

<sup>180</sup> For a comprehensive account of the numerous dimensions of nuclear research and development in Canada from 1943 to 1985, see Donald G. Hurst (ed.), *Canada Enters the Nuclear Age: A Technical History of Atomic Energy of Canada Limited As Seen from Its Research Laboratories* (Montréal & Kingston: McGill-Queen's University Press, 1997).

of radium ores at the Eldorado Mine at Port Radium in the Northwest Territories in the 1930s, which were discovered to contain uranium oxide.<sup>181</sup> However, the Eldorado Mine had been forced to shut in 1940 in part because a surplus of radium had closed European markets. Canada had to reopen the mine.

There was a major problem. Eldorado was privately owned. Howe entertained summoning existing emergency powers to bring Eldorado under government control, but assessed that the seizure of a private company would cause unwanted publicity.<sup>182</sup> Invoking the War Measures Act would also mean that government control would expire once the war ended. Howe recognized that uranium would have an enduring importance, however. As such, he decided on the voluntary purchase of Eldorado Gold Mines Ltd. from Gilbert LaBine, who was a good friend and a respected prospector.<sup>183</sup>

The division and ownership of the Eldorado's shares was the next issue to be considered. The British proposed that Britain and the U.S. assume the majority shares, and were delighted and surprised that Howe did not, despite the apparent implications for Canadian sovereignty, reject them. One delegate remarked, 'Indeed [Howe's] present view seems to be that the Canadian Government would not even mind having no large share of control provided we had this either by ourselves or with the American Government.'<sup>184</sup> Thus, Eldorado would be placed under the control and ownership of the three governments and the details of the arrangement would be kept in the absolute, strictest secrecy.

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<sup>181</sup> Before the discovery of nuclear fission in December 1938, radium deposits at Eldorado were refined for use in cancer treatment. Uranium, a derivative of the refining process, had little value throughout most of the 1930s.

<sup>182</sup> Robert Bothwell, *Eldorado: Canada's National Uranium Company* (Toronto: University of Toronto Press, 1984), 121.

<sup>183</sup> Robert Bothwell, *Eldorado*, 121.

<sup>184</sup> Robert Bothwell, *Eldorado*, 121.

On June 15, 1942, Howe met with Mackenzie King to discuss the plan for the acquisition and transfer of Eldorado from LaBine. Howe detailed his plan. He would offer to buy the shares from LaBine and then assume control of the company. LaBine could be trusted, and so he would be permitted to remain onboard until time was precipitous for the takeover. In the interim, Howe, with the assistance of his team of bureaucrats and friends, would run the company while the actual managing would remain under LaBine.<sup>185</sup> After consulting with the Minister of Finance J.L. Ilesley to procure the necessary monies and his financial advisor, Frank Brown, to determine a fair price, on July 7, 1942, Howe made LaBine an offer. LaBine agreed, promising to sell his shares at a rate of \$1.25/share to the government. The only snag was that LaBine and his family were not the majority shareholders in the company, whose total shares numbered about 4,000,000.

This was unexpected. The shareholders would all need to be located, and their shares purchased. The transactions would also have to be negotiated privately with each shareholder to not upset the stock market nor raise any suspicion. LaBine and John Proctor of the Imperial Bank thus embarked on an 18-month long purchasing scheme to buy up all of Eldorado's shares with the following instructions from Howe: "The utmost secrecy is necessary for strategic reasons understood by you."<sup>186</sup> Even when the share prices dipped down to 40 cents later that summer, the government had to abstain from buying directly on the market. To any outside observer, operations appeared to be business as usual, as Eldorado continued to trade on the stock market.

The Canadian government reopened the mine later that year, and expropriated the company (renamed Eldorado Mining and Refining Limited) the following year. Eldorado

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<sup>185</sup> Robert Bothwell, *Eldorado*, 122-123.

<sup>186</sup> Robert Bothwell, *Eldorado*, 124.

quickly ramped up extraction, refinement, and production activities in order to supply uranium to the American facility in Los Alamos. In addition to contributing raw materials including plutonium produced at the Montréal facilities, Canada provided critical research and technical assistance to the British and Americans in support of the Manhattan Project.<sup>187</sup>

## 2.1 Explaining the Decision

What motivated Canada's participation? It seems to be a foregone conclusion that the decision to join in the development of the atomic bomb was a function of military-strategic objectives, such as assisting allies and empowering alliances. And to a large extent, it was. In 1942, Canada had already been at war with Nazi Germany for three years, and was fighting alongside the United States and Britain. There was fear that Nazi Germany, whose intelligence service was then trying to uncover what was going on in the United States and Britain, might acquire atomic weapons first. A look of terror appeared on Prime Minister Mackenzie King's face, recalled Michael Perrin, one of the interlocutors sent by Britain to enlist Canada's involvement, when told that: 'The first country to possess a military weapon of this kind would win the war.'<sup>188</sup> Indeed, a very realist worry persuaded the Canadian prime minister that collaboration in the development of a nuclear weapon was vital to winning the war.

It is curious that Canada did not immediately acquiesce to the British request. King, however, was an exceedingly cautious politician, ever sensitive to changes in public opinion.<sup>189</sup> He also did not quite understand what was being asked. But he knew precisely whom he could entrust with the matter – Howe. Unlike the Prime Minister, Howe had some prior knowledge of the scientific work on nuclear fission and appreciated the implications of the 'Tube Alloys'

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<sup>187</sup> Canada continued to supply uranium for military applications until 1965.

<sup>188</sup> Robert Bothwell, *Eldorado: Canada's National Uranium Company* (Toronto: University of Toronto Press, 1984), 120.

<sup>189</sup> Allan Levine. *King: William Lyon Mackenzie King: A Life Guided by the Hand of Destiny*, 2011.

project. In meeting with Howe, the British visitors expressed concern about price increases on the supply of uranium, and impressed upon Howe of the importance that the mine be brought under government control. Howe had reservations. Government control meant operating part of the British and American nuclear programs in Canada, and more crucially, it represented expenditures in millions of dollars and the diversion of Canadian scientists and resources from other war efforts.

Even so, Howe imagined that atomic energy would hold enormous promise after the war, and thought that such collaboration presented an invaluable opportunity to train Canadian scientists.<sup>190</sup> Mackenzie revealed: ‘The *deciding* consideration was that when peace returned atomic energy would be bound to have applications of social and economic significance far beyond the possibilities of imagination and prediction, and the proposed Canadian-United Kingdom research effort would provide an opportunity for the training of Canadian scientists in this field [emphasis added].’<sup>191</sup> Thus, the decision was not solely the consequence of imposing wartime strategic requirements.

The strategic literature would argue that considerations such as the security dilemma encouraged Canada to pursue the nuclear weapons option in partnership with its allies. This explanation is compelling given that Canada and the Allied Powers feared that their common enemy, Nazi Germany, might be the first to develop them. However, this theory does not offer much insight into the actual decision-making process. While such perspectives might tell us the conditions under which different states are likely to take a certain action, they cannot tell us how states decide, including what factors were considered and how they were

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<sup>190</sup> Canadian scientists were already conducting nuclear research at this time. See: D.G. Hurst, ‘Overview of Nuclear Research and Development,’ In: Donald G. Hurst (ed.), *Canada Enters the Nuclear Age* (Montréal & Kingston: McGill-Queen's University Press, 1997).

<sup>191</sup> George C. Laurence, *Early Years of Nuclear Energy Research in Canada*.

prioritized. In other words, we cannot be sure if the strategic goal of empowering allies was more important than other objectives. Although it seems that the Canadian government never seriously considered saying no to Britain's request, given the nature of relationship between the two, it was not the principal factor in Canada's decision to participate in the atomic project.<sup>192</sup>

Even though certain security concerns encouraged Canada's participation in the Manhattan Project, a number of other important considerations were factored into the government's decision. Domestic politics was one such consideration. The King government understood that financial support would be required. Britain was nearly bankrupt, but aid had a political price. The Liberal government had to be cautious of taking any decision where expenditures would be high in order to avoid losing support among politicians, French Canadians, and the public.<sup>193</sup> The French Canadian population, which was largely opposed to conscription, was a worry for the prime minister.<sup>194</sup> Canada's contributions to the allied war effort, though imperative to end the war, had thus far been a domestic liability that needed to be managed. It helped then that the project – and therefore any Canadian involvement– was to be secret.

Further, the Canadian government's requirement for secrecy was prioritized over efficiency. The Canadian government had rejected the possibility of confiscating the company outright, which would have sped up the plan to appropriate Eldorado. Instead, the Canadians

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<sup>192</sup> Though it is worth noting here that when King met Hitler in Berlin he found him to be affable and did not believe that war would be unlikely. Yet, in 1937, the Prime Minister had already determined that Canada would follow suit if a war erupted between Britain and Nazi Germany. For more discussion on King's pre-WWII considerations, see: Robert Bothwell, Ian M. Drummond, and John English, *Canada 1900-1945* (Toronto: University of Toronto Press, 1990): 313-314.

<sup>193</sup> Robert Bothwell, Ian Drummond, John English. *Canada Since 1945: Power, Politics, and Provincialism* (Toronto: University of Toronto Press, 1981): 57. See also: Robert Bothwell, *Eldorado*, 99-100.

<sup>194</sup> According to a Gallup poll, 90 percent of French Canadians opposed conscription. This figure is cited in Robert Bothwell, Ian M. Drummond, and John English, *Canada 1900-1945*, 325.

concocted a scheme that, although achieved the overall objective of controlling Eldorado, represented a delay. It should also be mentioned that the Canadians anticipated that Eldorado would be enormously profitable in future years, and that such expectations made the market scheme a more attractive long-term option than seizing the company temporarily. Howe strongly supported collaboration with Britain, primarily because Britain was a vital ally and Canada's support was needed to win the war. However, it was also appreciated that such collaboration would help advance Canada's nuclear research. Together, these considerations motivated Canada's entry into the nuclear field.

### **3 Post War Years**

Throughout the Second World War, Canada worked alongside its wartime allies, Britain and the U.S., to develop the atomic bomb while guarding the information so as to prevent other countries from doing the same. After the War, Canada possessed a unique opportunity to pursue nuclear power and nuclear weapons – a competitive advantage that was not lost on Canadian officials, decision-makers, and business. The Canadian government decided to forgo nuclear weapons (a decision that will be discussed in the subsequent section) despite possessing the capacity to make them. Instead, the Canadian government turned its efforts on developing civilian nuclear technology, eventually cultivating a nuclear policy around the idea and practice of sharing of technology and materials with select Western states.<sup>195</sup>

While there is a vast literature on the causes and consequences of nuclear proliferation, little has been said on why some countries might seek civilian nuclear capabilities alone. There is a tacit expectation that states embark on civilian nuclear programs as a means of acquiring a latent nuclear weapons capability for reasons of security, or at least welcome such a capability

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<sup>195</sup> Ron Finch, *Exporting Danger: A History of the Canadian Nuclear Energy Export Programme* (Montréal: Black Rose Books, 1986), 75.

as a by-product. Canada, however, represents a case in which an actor made a conscious decision to concentrate exclusively on developing industrial-scale nuclear programs for reasons that were primarily domestic and economic in nature. In this and the next sections, I demonstrate that Canadian officials never considered the prospect of developing nuclear weapons, but undertook a clear decision to expand the civilian nuclear program in such a way as to create an industry capable of providing domestic energy and exporting nuclear technology.

Under the aforementioned tripartite agreement, Canada remained a junior partner despite the fact that Howe's ministry assumed most of the operational responsibilities of managing Eldorado. The tripartite agreement began to unravel after the War, however. The U.S., having developed the world's first nuclear weapon, felt that the agreement no longer fully served its interests and wanted to reduce cooperation with its wartime partners. Determined not to be left behind, Britain clung onto the agreement, even seeking to expand the terms so that it could develop its own nuclear arsenal. Canada just wanted out.

Ottawa had a different, new purpose: nuclear power. First, it needed to free itself from the constraints of agreement. Canadian officials recognized that they would have to regain full control over uranium supplies, which were still going to the British and the Americans under the Anderson-Groves agreement, if they were to develop an indigenous civilian nuclear sector.<sup>196</sup> In December 1945, Lester B. Pearson expressed disgruntlement with Canada's status in the arrangement, writing, 'Frankly, I feel that, as a junior third party in this Committee, we may be dragged along in directions where we might not desire to go but over which we would have little control.'<sup>197</sup> Pearson was not alone in his concern. When the British pushed for more

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<sup>196</sup> Robert Bothwell, *Eldorado*, 175-176. See also; Brian Buckley, *Canada's Early Nuclear Policy: Policy Fate, Chance, and Character* (Montreal & Kingston: McGill-Queen's University Press, 2000), 61.

<sup>197</sup> Quoted in Brian Buckley, *Canada's Early Nuclear Policy*, 61.

Canadian uranium, Howe angrily declared that, ‘Our U.K. friends seem to be moving toward obtaining control both of the operation of the Eldorado mine and the output therefrom. Canada cannot agree to this.’<sup>198</sup> Canadian officials in this period appreciated that uranium was an incredible asset, and that they would have to start exercising Canadian autonomy over their industries and resources.<sup>199</sup>

The next year, in 1946, the nuclear division within the NRC (formally the Atomic Energy Division of NRC) moved from Montréal to Chalk River, where a reorganization took place.<sup>200</sup> Although the Chalk River laboratory did not have a specific mandate, Howe expected that the nuclear technology would be developed and then commercialized by private industry.<sup>201</sup> (Federal and provincial crown corporations comprised the nuclear industry at this time as government control was deemed a necessary security measure.<sup>202</sup>) To this end, the Atomic Energy Control Board (AECB) was created but given substantial independence to develop and expand Canada’s nuclear energy program. Apart from providing it with a budget, the government exerted little actual control over the AECB.<sup>203</sup> Indeed, David Jackson and John de la Mothe explain that: ‘The powers given the AECB were remarkable even for that period: the act empowered the board to expropriate companies and private property at will, to create Crown corporations, to control and suppress information, and to seize intellectual property.’<sup>204</sup> The AECB eventually led to the formation of the Atomic Energy of Canada Limited (AECL)

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<sup>198</sup> Quoted in Robert Bothwell, *Eldorado*, 179.

<sup>199</sup> Robert Bothwell, *Eldorado*, 181.

<sup>200</sup> R. G. Hart, ‘Business Development, Revenue Generation and the Impact of a Changing Environment,’ in Donald G. Hurst (ed.), *Canada Enters the Nuclear Age* (Montréal & Kingston: McGill-Queen’s University Press, 1997), 391.

<sup>201</sup> R.G. Hart, *Business Development, Revenue Generation and the Impact of a Changing Environment*, 391.  
<sup>202</sup> G. Bruce Doern, *Government Intervention in the Canadian Nuclear Industry* (Montréal: The Institute for research on Public Policy, 1980), 45.

<sup>203</sup> Ron Finch, *Exporting Danger*, 25.

<sup>204</sup> David Jackson and John de la Mothe, ‘Nuclear Regulation in Transition: The Atomic Energy Control Board,’ in G. Bruce Doern, Arslan Dorman, and Robert W. Morrison (eds.), *Canadian Nuclear Energy Policy: Changing Ideas, Institutions, and Interests* (Toronto: University of Toronto Press, 2001), 100.

in 1952; a crown corporation established to further develop Canada's nuclear industry and to cut bureaucratic ties.<sup>205</sup> The AECL would later be tasked with marketing CANDU nuclear reactors abroad.

The AECL served two broad interests in security and commerce. First, it helped promote Canadian security through technical and scientific contributions to the American and British nuclear weapons program at a time when tensions between the West and the Soviet Union were high. Estimates indicate that Canada supplied the Americans and the British with enough uranium for 15,000 nuclear bombs.<sup>206</sup> For two decades following WWII, Canada sold plutonium and uranium in support of the nuclear programs of both countries.<sup>207</sup> Canada's decision to sell to plutonium and uranium was intended to preserve close ties with its allies, who were rivalling amongst themselves while at the same time ensuring that the industry could remain afloat. Second, the AECL had a commercial dimension as foreign trade was believed to be necessary for domestic economic prosperity.<sup>208</sup> Canada thus committed to the development and expansion of its nuclear industry so that it could strengthen its economy through the trade of nuclear technology and materials.<sup>209</sup> Prestige and power also played a role, of course. This was a new and advanced technology. And it was the way of the future – and no one in Canada seemed to understand that prospect better than Howe.

One of the fundamental objectives, as mandated by AECL, was to expand Canada's nuclear manufacturing industry by establishing domestic and foreign markets for components,

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<sup>205</sup> Robert Bothwell, *Nucleus: The History of Atomic Energy of Canada Limited* (Toronto: University of Toronto Press, 1988):178. See also: Constance D. Hunt, 'Canadian Policy and the Export of Nuclear Energy,' *University of Toronto Law Journal* Vol. 27, No.1 (1977), 71.

<sup>206</sup> Ron Finch, *Exporting Danger*.

<sup>207</sup> Gordon Edwards, 'Canada's Nuclear Industry and the Myth of the Peaceful Atom,' 125.

<sup>208</sup> Robert Bothwell, *Nucleus*, 349.

<sup>209</sup> Constance D. Hunt, 'Canadian Policy and the Export of Nuclear Energy,' 72.

fabricated fuels, and other materials.<sup>210</sup> It is no surprise then that the response to President Dwight Eisenhower's 'Atoms for Peace' speech in 1953, which aimed to harness nuclear technology for energy production and offered to share civilian nuclear technology and materials, which until that point was largely classified information, to countries that had not previously had nuclear technology, was favourable.<sup>211</sup> Following Eisenhower's initiative, the nuclear industry began relentlessly competing for markets in the developed and the developing world.<sup>212</sup> The former offered limited opportunities for trade growth.<sup>213</sup> The competition would thus take place among the third world.<sup>214</sup> It was within this difficult international economic context that Canada's nuclear industry developed.

Although Eisenhower had envisioned an establishment of a neutral international body to regulate the transfer of fissile material to nuclear programs, it would be some time before such an agency was established; the International Atomic Energy Agency (IAEA) formed in 1957. In the interim, nuclear regulations were treated as secondary to the activities of commercial enterprise,<sup>215</sup> even though the Canadian government was active in negotiating and promoting the IAEA and later the NPT.<sup>216</sup>

It was around this time, in the midst of growing public support for the development of a peaceful nuclear industry, that the CANDU conception of nuclear energy emerged.<sup>217</sup> The

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<sup>210</sup> Canadian Nuclear Association, *Economic Impact of Nuclear Energy Industry in Canada*. Detail Report (Leonard & Partners Limited, 1978), III-2.

<sup>211</sup> Ron Finch, *Exporting Danger*, 76.

<sup>212</sup> Ron Finch, *Exporting Danger*, 47. See also: Duane Bratt, *The Politics of CANDU Exports* (Toronto: University of Toronto Press, 2006), 50.

<sup>213</sup> Ron Finch, *Exporting Danger*, 47.

<sup>214</sup> Ron Finch, *Exporting Danger*, 47.

<sup>215</sup> Gordon Edwards, 'Canada's Nuclear Industry and the Myth of the Peaceful Atom,' 127.

<sup>216</sup> Duane Bratt, *The Politics of CANDU Exports*, 52.

<sup>217</sup> The NRC is Canada's central national research and technology organization. See R.G. Hart, 'Business Development, Revenue Generation and the Impact of a Changing Environment,' In: Donald G. Hurst (ed.), *Canada Enters the Nuclear Age: A Technical History of Energy Canada Limited* (Montréal & Kingston: McGill-Queen's University Press, 1997), 391. See also: George C. Laurence, *Early Years of Nuclear Energy Research in Canada*, 9-10.

CANDU reactor ranked (and still does) as one of Canada's most significant and impressive technological achievements. In a relatively short period, Canada gained a position of importance in the post-war nuclear world. Donald Hurst explains, 'Canada earned a high status in nuclear matters at the United Nations. It had membership on the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) and on the United Nations Scientific Advisory Committee (UNSAC).'<sup>218</sup> Howe's bet on the brighter nuclear future seemed to have paid off. By 1959, uranium sales alone had generated \$300 million in revenue.<sup>219</sup>

Once the cloud of secrecy over nuclear technology was lifted, Canada worked to implement an economic vision through an aggressive marketing plan to advance its nuclear industry.<sup>220</sup> What it lacked was a concomitant non-proliferation policy. Although it would have been unusual for Canada to have imposed safeguard measures on its nuclear exports, it would be a mistake to assume that Canada was oblivious to the possible risks of civilian nuclear trade. Constance Hunt writes that the 'terms of the treaties signed between 1957 and 1965 suggest a *continuing ambivalence* in Canadian policy on nuclear exports. Few concrete pledges of peaceful-use were obtained [emphasis added].'<sup>221</sup> In other words, though Canadian officials were aware of the risks inherent in transferring nuclear technology and materials, there were conflicting ideas about non-proliferation measures. Canadian nuclear policy operated without attention to meaningful safeguards until India detonated a nuclear device using Canadian materials in 1974. (Canada's then Department of External Affairs (DEA) later acknowledged

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<sup>218</sup> Donald G. Hurst, 'Overview of Nuclear Research and Development,' 19.

<sup>219</sup> T.V. Paul, 'Aligned Middle Powers: Canada and Australia,' in T.V. Paul (ed.), *Power Versus Prudence: Why Nations Forgo Nuclear Weapons* (Montréal: McGill University Press, 2000), 64

<sup>220</sup> Robert Bothwell, *Nucleus*, 349.

<sup>221</sup> Hunt reveals that the Indian experience forced Canadian officials to confront the very real risk of nuclear cooperation and impressed that Canada had to be 'more explicit' about the safeguards and peaceful use of nuclear materials in future agreements. See: Constance D. Hunt, 'Canadian Policy and the Export of Nuclear Energy,' 78, 81.

that the bilateral agreements during this period ‘proved unsatisfactory’ due to the ineffective inspections mechanisms required for verifying compliance).<sup>222</sup> As a consequence (the experience with India is discussed in Chapter 3), Canada imposed independent safeguards on the sale of its nuclear technology and materials even while most of the other suppliers did not.<sup>223</sup>

As will be shown in subsequent chapters, Ottawa valued its nuclear industry not only for economic reasons but also because trade in this area was thought to enhance Canada’s identity as an ‘honest broker.’ Robert Bothwell explains, Canada believed that ‘offering its services as an honest broker attempting to bridge the gaps between East and West, and increasingly between the ‘have’ and ‘have-not’ nations of the world’ could help advance Canada’s diplomatic standing.<sup>224</sup>

### **3.1 Explaining Canada’s Post-War Program**

A number of factors contributed to Canada’s decision to develop and expand an indigenous nuclear program. The first were external. The United States terminated direct nuclear cooperation with Britain and Canada. Canada’s nuclear program, as it were, had lost its *raison d’être*. However, there remained a global demand for uranium for both military and civilian applications that Canada was both able and willing to meet. Though the war had ended, Canada still sat on a large supply of natural uranium, and would remain the largest exporter of uranium ore in the world until it was overtaken by Kazakhstan in 2009. It also already had a nuclear infrastructure and scientific base due to its contributions to the Manhattan Project.

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<sup>222</sup> Department External Affairs, ‘A Background Paper on Nuclear Safeguards and Canadian Safeguards Policy,’ Government of Canada (March 1976), 9.

<sup>223</sup> Constance D. Hunt, ‘Canadian Policy and the Export of Nuclear Energy,’ 91.

<sup>224</sup> Robert Bothwell, *Nucleus*, 350.

Chief among these was the technical knowledge for the production of heavy-water reactors. Post-war demand thus provided support for the creation of Canada's reactor industry.

Further, the Canadian government had made a commitment to assist its allies in the development of nuclear energy and research for mutual benefit.<sup>225</sup> To that end, Canada continued to sell plutonium and uranium to the U.S. and Britain for use in their weapons programs.<sup>226</sup> In 1955, Canada renewed nuclear cooperation with the U.S. for the exchange of nuclear materials that 'did not preclude using nuclear materials for military purposes.'<sup>227</sup> (According to Gordon Edwards, a 'sense of loyalty, coupled with a desire to maintain close ties with the nuclear establishments America and Britain' motivated these trade agreements.<sup>228</sup>) Canadian decision-makers and officials during this time recognized the need for a Western nuclear deterrent.<sup>229</sup> Indeed in 1953, Howe revealed that, 'we in Canada are not engaged in military development, but the work that we are doing at Chalk River is of importance to military developments.'<sup>230</sup> Besides, revenues from these sales helped to finance the expansion of Canada's nuclear research program.

Within the country, bureaucratic and commercial interests coalesced in the creation of the 'nuclear establishment' in Canada.<sup>231</sup> There were individual actors at play who envisioned

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<sup>225</sup> Ron Finch, *Exporting Danger*, 25.

<sup>226</sup> Gordon Edwards, 'Canada's Nuclear Industry and the Myth of the Peaceful Atom.'

<sup>227</sup> Between 1959 and 1964, Canada sold about 252 kilograms of plutonium was sold to the US. The material was sent from Chalk River Laboratories to the Savannah River Site in South Carolina, US. See: Government of Canada, 'Canada's Historical Role in Developing Nuclear Weapons,' *Canadian Nuclear Safety Commission*. 28 May 2012. Accessed at: <http://nuclearsafety.gc.ca/eng/resources/fact-sheets/Canadas-contribution-to-nuclear-weapons-development.cfm>.

<sup>228</sup> Gordon Edwards, 'Canada's Nuclear Industry and the Myth of the Peaceful Atom.' Edwards adds that many individuals made a fortune from the uranium industry, but that Canada as a whole received little economic benefit from the sales.

<sup>229</sup> Robert Bothwell, *Nucleus*, 349.

<sup>230</sup> Brian Buckley, *Canada's Early Nuclear Policy*, 109.

<sup>231</sup> F.H. Knelman, 'Canadian Nuclear Energy – Who Needs It?' *Our Generation* Vol. 13, No. 1 (1979): 23-34.

'bringing the peaceful applications of nuclear energy to commercial fruition.'<sup>232</sup> Between 1953 and 1957 Canada's atomic energy policy was largely dictated by three men: C.D. Howe, C.J. Mackenzie, and W.J. Bennett.<sup>233</sup> The primary objective of these men was to make the AECL financially self-sustaining and independent from the government.

Canadian officials had three purposes in mind. The first was scientific. It was directed at providing research and development in the area of nuclear energy.<sup>234</sup> Howe, in particular, was determined to see Canada's nuclear program develop into an independent source of economic power and technological pride. According to Hart, it was 'clear that C.D. Howe, the federal minister responsible for the NRC, expected that the practical peaceful applications would be developed and that he wanted such applications to be commercialized by the private industry.'<sup>235</sup> The second was to contribute to Canada's defence and security by contributing to the U.S. nuclear weapons program.<sup>236</sup> The third was economic, and its cause was taken up by Bennett.<sup>237</sup> As Bothwell explains, 'Bennett habitually ran matters of commercial policy past his board, he kept diplomacy to himself.'<sup>238</sup>

The costs of maintaining a nuclear energy program were considerable, however. The AECL continued to rely on financial support from the federal government.<sup>239</sup> Howe and Bennett proposed using revenues collected from sales to the U.S. to invest in the development

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<sup>232</sup> Gordon Edwards, 'Canada's Nuclear Industry and the Myth of the Peaceful Atom,' In: Ernie Regehr and Simon Rosenblum (eds.), *Canada and the Nuclear Arms Race* (Toronto: James Lorimer & Company, 1983), 125.

<sup>233</sup> Robert Bothwell, *Nucleus*, 179.

<sup>234</sup> Robert Bothwell, *Nucleus*, 349.

<sup>235</sup> R. G. Hart, 'Business Development, Revenue Generation and the Impact of a Changing Environment,' 391.

<sup>236</sup> Robert Bothwell, *Nucleus*, 349.

<sup>237</sup> Robert Bothwell, *Nucleus*, 349.

<sup>238</sup> Robert Bothwell, *Nucleus*, 350.

<sup>239</sup> Robert Bothwell, *Nucleus*, 183; Ron Finch, *Exporting Danger*, 26.

of a nuclear power reactor partly to justify the continued existence of and funding for the AECL.<sup>240</sup> The proposal received government approval in March 1955.

#### **4 Why not Nuclear Weapons too?**

Canada's decision to forgo nuclear weapons is noteworthy. Canada was one of the first countries to have the whole spectrum of a civilian nuclear capability, ranging from reactors, expertise, and technology to raw materials. At the time, Canada was one of the largest global producers of uranium, possessed a large number of nuclear scientists, and through its contributions to the U.S. nuclear weapons program, had the know-how. The dominant theory on nuclear proliferation asserts that states want nuclear weapons, and that they will develop them if they have the opportunity. Not only was Canada positioned to develop nuclear weapons in a relatively short time, it also had the capability to do so long before all other states (except for the United States). However, Canada decided not to pursue an independent nuclear weapons program. That Canada abstained from developing an independent nuclear arsenal defies conventional expectations. Why did Canada not develop nuclear weapons? Why was there not even a serious debate over it?

The decision remains a curious one both from the perspective of policy and from the perspective of the nuclear proliferation literature. The dominant and traditional theory in IR contends that countries aspire to possess nuclear weapons for reasons primarily related to security. Countries that do not, it is argued, abstain because of superpower pressures or threats, such as military strikes, sanctions, or the refusal of military support, or because they acquire a nuclear guarantee. In attempting to explain Canada's decision to forgo nuclear weapons, scholars have drawn on the existing theories on nuclear demand.

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<sup>240</sup> Duane Bratt, 'Canada's Nuclear Schizophrenia,' *Bulletin of the Atomic Scientists* Vol. 58 No. 2 (2002): 49; Ron Finch, *Exporting Danger*, 27; and Robert Bothwell, *Nucleus*, 210

The scholarship has advanced three main theories. The first emphasizes realist variables such as the role of alliances and security guarantees. It argues that Canada did not believe that it required nuclear weapons for security since it could enjoy the protection of a nuclear superpower, the United States. In addition, because of its economic and security dependence on the U.S., Canada was susceptible to American pressure to forgo nuclear weapons. The second explanation looks towards identities, ideas, and norms. This theory claims that Canada's abstention from nuclear weapons was the product of broader Canadian values, identities, and practices in addition to material considerations (such as superpower protection).<sup>241</sup> The third explanation emphasizes economic factors, arguing that Canada abstained because of the high costs of nuclear weapons production.

This section evaluates these theories as they have been applied to the Canadian case. It demonstrates that existing explanations are inadequate. They are lacking for the simple reason that they have largely focused on the question of why Canada decided to forgo nuclear weapons when no such deliberate decision was ever made. Contrary to extant theories, Canada's nuclear 'restraint' was not so much the result of cost-benefit calculations – that is, decision-makers were not really concerned with whether nuclear weapons acquisition would hurt their economy or power or some other variable. Rather, the outcome was a function of a country averse to risky enterprises and disinterested in great power status, and devoted to cultivating a new rules-based identity for the country.

Some contemporary theories of nuclear weapons restraint argue that there exists a strong nuclear taboo that constrains countries from crossing a normative and figurative line towards nuclear weapons production.<sup>242</sup> Yet, the nuclear taboo had not yet emerged when

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<sup>241</sup> T.V. Paul, 'Aligned Middle Powers: Canada and Australia,' 62-83

<sup>242</sup> Nina Tannenwald, 'Stigmatizing the bomb: Origins of the Nuclear Taboo,' *International Security* Vol. 29, No. 4 (2005): 5-49. It should be noted that even before the taboo emerged, there were certainly segments of

Canada could have elected to weaponize. Other explanations argue that states might abstain from nuclear weapons proliferation if they are unwilling or unable to bear the costs required for their production and/or are unwilling or unable to withstand the punitive costs of trade sanctions and other forms of economic strangling associated with violating the non-proliferation regime. In the time period in which Canada could have contemplated or pursued an independent nuclear program, there were no economic or other penalties for doing so. Neither satisfactorily accounts for why the Canadian government decided to forgo nuclear weapons when it did.

Popular explanations of Canada's nuclear restraint posit that Canada was able to rely on the United States for its security, and did not perceive a need to develop its own nuclear arsenal. In 1938, U.S. president Franklin D. Roosevelt assured Canada that 'the United States will not stand idly by if domination of Canadian soil is threatened by any other empire,' and trust in that assurance only grew stronger in the nuclear age. Andrew Pierre argues that, 'For the Canadians, security was guaranteed by their geographical location next to the United States. An attack on Canada, it was felt, would assuredly activate American retaliation, as all of North America was within the sphere of the vital interests of the U.S.'<sup>243</sup> Geography naturally extended the American nuclear umbrella over Canadian territory, and so Canadian officials did not question the credibility of U.S. extended deterrence, as did other U.S. allies. In contrast, the French government believed that the United States might, if push came to shove in the form of a Soviet attack, sacrifice Paris than allow its own cities to be destroyed. In order to hedge against the perceived incredibility of U.S. security guarantees, France

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the Canadian and international populations that were opposed to its use, particularly after the bombing of Hiroshima and Nagasaki. Further, not all accept the taboo. For a notable exception, see: William C. Potter, 'In Search of the Nuclear Taboo: Past, Present, and Future.' *Proliferation Papers* No. 31 (2010).

<sup>243</sup> Andrew J. Pierre, *Nuclear Politics: The British Experience with an Independent Strategic Force, 1930-1970* (London: Oxford University Press, 1972), 77.

developed nuclear weapons. Canadian politicians never asked themselves the same question. To be sure, they appreciated that geographical proximity to major cities in the U.S. meant that the intended target would be essentially meaningless in an attack situation. Given the time restraints of a warning in an attack, the United States would have no choice but to regard an attack on Toronto as a possible attack on New York.

Other scholars, including Matthew Trudgen, Brian Buckley, and Joseph Levitt, offer similar explanations for Canada's decision to forgo nuclear weapons. They argue that, unlike Britain and France, Canada did not believe that it had an overriding security need or desire for nuclear weapons.<sup>244</sup> Because of Canada's middle power status and umbrella protection from the U.S., these analysts believe Canada determined it did not require nuclear weapons.

Did Canada behave in a strategic fashion? According to the camp that hails nuclear weapons as the ultimate weapon, Canada did not.<sup>245</sup> Canadian decision-makers of the day did not seem to subscribe to the predominantly realist view that each state must guarantee its own survival since all other states are potential threats. Even more intriguingly, Ottawa eschewed nuclear weapons without so much as a discussion. There is no record of any significant debate on the question of whether Canada should procure nuclear weapons. Indeed, on 5 December 1945, in response to a question posed in the House of Commons, Howe stated, 'We have not manufactured atomic bombs; we have no intention of manufacturing atomic bombs.'<sup>246</sup> Four

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<sup>244</sup> Matthew Trudgen, 'Do We Want 'Buckets of Instant Sunshine'? – Canada and Nuclear Weapons 1945-1984,' *Canadian Military Journal* Vol. 10, No. 1 (2009), 47; Brian Buckley, *Canada's Early Nuclear*, 131; and Joseph Levitt, *Pearson and Canada's Role in Nuclear Disarmament and Arms Control Negotiations, 1945-1957* (Montreal & Kingston: McGill-Queen's University Press, 1993), 76.

<sup>245</sup> Nuclear optimists, such as John Mearsheimer and Kenneth Waltz, argue that nuclear weapons were responsible for maintaining the relative peace during the Cold War. For a debate, see: Scott D. Sagan, and Kenneth N. Waltz (eds.). *The Spread of Nuclear Weapons* New York, NY: W.W. Norton, 1995.

<sup>246</sup> T.V. Paul, 'Aligned Middle Powers: Canada and Australia,' 64

years later, in 1949, Prime Minister Louis St-Laurent reaffirmed that, 'We did not want to make bombs, neither to have title to them nor to use them.'<sup>247</sup>

The second explanation emphasizes the constraining effects of norms and identities. In one of the leading and comprehensive works on the subject of why some countries have shunned nuclear weapons, *Power Versus Prudence*, T.V. Paul presents a unique hybrid theory that blends ideational and realist variables.<sup>248</sup> Paul contends that non-great powers such as Canada and Australia forswore nuclear weapons because they had superpower security guarantees and because they established norm-based identities that weaponization would have overturned. Paul notes that Canada resides in a relatively safe neighbourhood; it has no enduring rivalries and militarized conflict is scarce.<sup>249</sup> Outside of the Cold War, there were no security concerns compelling Canada to proliferate. Second, Paul points out that Canada's proximity to the U.S. meant that deterrence was credible, and so Canada could enjoy the protection of nuclear weapons without bearing the brunt of their actual and normative costs.<sup>250</sup>

This is a compelling explanation, which may explain Canada's decision-making vis-à-vis the acquisition of nuclear warheads from the U.S. in the late 1950s and early 1960s. However, the non-proliferation norm did not exist in the postwar period from 1945 to 1950, and Canada had not yet formed a multilateralist identity. In 1959, Soviet leader Nikita Khrushchev delivered a speech at the United Nations calling for worldwide nuclear disarmament. It was not until the 1960s, though, that the international community began to work towards the issue of global disarmament. Indeed, the nuclear taboo – if it exists – did

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<sup>247</sup> T.V. Paul, 'Aligned Middle Powers: Canada and Australia,' 64

<sup>248</sup> T.V. Paul, (ed.), *Power Versus Prudence: Why Nations Forgo Nuclear Weapons* (Montréal: McGill University Press, 2000). Mitchell Reiss also examines eight countries that either possessed weapons programs or were weapons aspirants (e.g., Argentina, Belarus, Brazil, Kazakhstan, India, Pakistan, South Africa, and Ukraine) that have exhibited some kind of nuclear restraint, such as slowing or reversing their activities, or dismantling their programs. See: Mitchell Reiss, *Bridled Ambition*.

<sup>249</sup> T.V. Paul, 'Aligned Middle Powers: Canada and Australia,' 69.

<sup>250</sup> T.V. Paul, 'Aligned Middle Powers: Canada and Australia,' 69.

not take hold until the 1960s nearly a decade after the Canadian government could have pursued nuclear weapons. And because there was no such taboo or punitive structure discouraging states from proliferation (apart from, perhaps, U.S. pressure from which Canada had immunity, given the U.S. mutual reliance on Canadian-supplied fissile material), the production of nuclear weapons in the late 1940s would not likely have resulted in international ostracization.

Echoing Paul, Jon McLin argues that Canada did not have a strategic or security imperative for acquiring nuclear weapons.<sup>251</sup> However, McLin offers an additional perspective. He claims that after the bombing of Hiroshima and Nagasaki, Canada rejected a weapon that had the power to inflict such calamitous damage. Canadian officials, including Prime Minister Mackenzie King and then Canada's Ambassador to the U.S., Pearson, believed that nuclear weapons and the prospect of a nuclear war would be catastrophic for the world.<sup>252</sup> This explanation lends credence to the second theory that explains Canada's restraint in terms of norms and ideational variables. Yet, this explanation is unsatisfactory in light of the Canadian government's contributions to the U.S. nuclear weapons program. Canada had no compunction about providing weapons-grade spent fuel to the U.S.<sup>253</sup>

A third explanation asserts that Canada abstained from the production of nuclear weapons because it was deterred by the enormous expenditures required.<sup>254</sup> Canada decided not to pursue nuclear weapons because it did not want to assume the economic costs of production, and of managing a nuclear arsenal. Sean Maloney argues that, 'The best

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<sup>251</sup> Jon B. McLin, *Canada's Changing Defence Policy, 1957-1963: The Problem of Middle Power in Alliance* (Baltimore, MD: Johns Hopkins Press, 1967).

<sup>252</sup> Andrew Richter, *Avoiding Armageddon: Canadian Military Strategy and Nuclear Weapons, 1950-63* (Toronto: UBC Press, 2002), 16-17.

<sup>253</sup> After 1946, Canada conducted independent research into plutonium separation. See: Wilfrid Eggleston, *Canada's Nuclear Story* (London: Harrap Research Publications, 1966), chapter 12.

<sup>254</sup> Brian Buckley, *Canada's Early Nuclear Policy*, 136. See also: Sean M. Maloney, *Learning to Love the Bomb: Canada's Nuclear Weapons During the Cold War* (Washington DC: Potomac Books, Inc., 2007).

disincentive to production was economic. Why should Canada spend massive amounts on an independent program if it could profit from sales of uranium to the United States while deriving protection from the Americans, who would spend money for nuclear weapons and the associated delivery systems?<sup>255</sup> Trudgen also argues that Ottawa felt its expenditures could be better used elsewhere.<sup>256</sup>

#### **4.1 Explaining Canada's Nuclear Abstinence**

In 1950, Canada was one of the world's wealthiest states, with the sixth largest gross domestic product per capita. Canada could have afforded to develop nuclear weapons if it had wanted to do so. That less developed countries (e.g., Pakistan, North Korea) pursued nuclear weapons and succeeded in acquiring them suggests that economic conditions are hardly an insurmountable obstacle. Economic considerations do not thus account for Canada's abstention from weapons production. If the Canadians wished to develop nuclear weapons, economic restrictions would not have held them back.

While the scholarship has grappled to explain why Canada abstained from the production of nuclear weapons, it has been driven by the wrong question. The Canadian government of the day did not 'decide' not to build nuclear weapons; it simply did not seriously consider or debate the option. Sean Maloney reveals that, 'There is no hint that a purely Canadian production program was ever seriously considered before 1955.'<sup>257</sup> Given its tremendous capacity for the production of nuclear weapons – a capacity that would have afforded the young country with the ability to project power and influence, why did Canadian

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<sup>255</sup> Sean M. Maloney, *Learning to Love the Bomb*, 2.

<sup>256</sup> Matthew Trudgen, 'Do We Want 'Buckets of Instant Sunshine?'' 47.

<sup>257</sup> Sean M. Maloney, *Learning to Love the Bomb*, 67.

officials not at the very least hold a debate on the merits of proliferation as we have witnessed in other countries?

That there is virtually no record of a debate on the question implies that ‘restraint’ was not the result of a significant decision. The ‘decision,’ concede McLin and Trudgen, was made without much debate in the bureaucracy or the government.<sup>258</sup> McLin states that Canada’s decision was not ‘so much by deliberate choice as by *unconscious assumption* [emphasis added].’<sup>259</sup> The notion of restraint obfuscates the real question of why did Canada not consider obtaining an independent nuclear arsenal. Canada did not develop nuclear weapons because it lacked great power ambitions.

The Canadians, accustomed to being junior partners, simply did not think ‘strategically’ about power. Unlike the British, who were greatly motivated by a desire to hold onto the last vestiges of power and empire, Canada had no expansionist mind-set or feelings of grandeur driving it to proliferate. For instance, when the U.S. put an end to trilateral cooperation with the passing of the McMahon Act in 1946, no one in the Canadian government raised so much as an eyebrow. As Paul points out, as soon as the war ended Ottawa turned its attention to bringing the atom under international control.<sup>260</sup> The Canadians were not riled, as the British were, that the Americans had excluded them from direct participation in the U.S. nuclear weapons program. Furthermore, in contrast to Canada’s strong post-war economy, the British economy was in shambles when it decided to pursue an independent nuclear arsenal. The British were incensed that the Americans had cut out their access to atomic developments. The British Foreign Secretary, Ernest Bevin, felt he had been so shoddily treated by the Americans that he vowed to acquire nuclear weapons

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<sup>258</sup> Matthew Trudgen, ‘Do We Want ‘Buckets of Instant Sunshine?’ 47.

<sup>259</sup> Jon B. McLin, *Canada’s Changing Defence Policy, 1957-1963*, 125.

<sup>260</sup> T.V. Paul, ‘Aligned Middle Powers: Canada and Australia,’ 64.

irrespective of the high expenditures. In a declaration that came to constitute Britain's post-war nuclear policy, Bevin said, 'We've got to have this thing over here *whatever it costs*. We've got to have a bloody Union Jack on top of it [emphasis added]'.<sup>261</sup> Canada's instinct was to avoid being dragged into a dispute between its two allies.

Canada's apathetic response to the McMahon Act is unsurprising, however, if one considers that Canada was, at the time, quite accustomed to being unheeded. Although Canada was, in principle, an independent state, the international community largely viewed Canada as a British colony devoid of a foreign policy of its own.<sup>262</sup> The King government may not have liked that the British continued to dictate to Canada, but his agitation concerned their lack of awareness of Canada's domestic cleavages, and not a bruised ego.

Canada's disinterest in nuclear weapons production partially reflected a domestic political climate that was highly cautious of risk.<sup>263</sup> When the Second World War broke out, Canada was led by a prime minister who was wary of international commitments, and an undersecretary for external relations who held a rather isolationist outlook.<sup>264</sup> Mackenzie King was a cautious leader, whose foreign policy was designed with the view of avoiding divisive debates in Canada. Following the War, Canada found itself in a new, uncharted waters in which it had a seat at the proverbial table. The war forced Canada to abandon the ambivalence

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<sup>261</sup> Alan Macmillan, 'Strategic Culture and National Ways in Warfare: The British Case,' *The RUSI Journal* Vol. 140, No. 5 (1995), 36.

<sup>262</sup> Even as late as 1956, Canada was still seen as a British outpost. For example, Gamal Abdel Nasser initially opposed Canadian peacekeepers because he suspected they served British interests. See: Michael B. Oren, 'Faith and Fair-Mindedness: Lester B. Pearson and the Suez Crisis,' *Diplomacy and Statecraft* Vol. 3, No 1 (1992): 48-73.

<sup>263</sup> This supports Jacques E. C. Hymans' (2006) argument that leaders may not even want to pursue nuclear weapons since doing so is fraught with risk and uncertainty. He calls it 'a leap into the dark.' Jacques E. C. Hymans, *The Psychology of Nuclear Proliferation*, 12.

<sup>264</sup> King retained the position of Secretary of State for External Affairs for himself. Instead, he appointed his close friend and colleague, O.D. Skelton, as the Undersecretary of External Affairs. The two shared similar sensibilities and were sensitive to the cleavages of Canadian domestic politics. After Skelton's death, Louis St-Laurent became King's closest confidant and assumed successor. In 1945, King promoted St-Laurent to the portfolio.

and isolationism that had, until then, characterized its approach to global politics.<sup>265</sup> Yet Canada continued to assume the familiar role of a junior partner to the U.S. and Britain. In the dawn of what has been called the 'Golden Age' of Canadian diplomacy, Canadian decision-makers and officials did not conceive of Canada as a potential great power in the international system even as they sought to distinguish themselves from the rest, that is the smaller powers.<sup>266</sup> Indeed, the clerk of the Privy Council Office, Arnold Heeney was ambivalent about the Canada's defence policy and nuclear future. He believed that Canada needed to contribute to continental defence if it were to have a voice but that 'as a small country with limited resources... [Canada should work] in concert with our larger partners, the United Kingdom and the United States.'<sup>267</sup>

Contrary to the prevailing discourse on how states perceive nuclear weapons, the government did not foresee any significant benefits to acquiring nuclear weapons.<sup>268</sup> King could appreciate that nuclear weapons conferred prestige to a country like Britain, but he himself was unmoved by great power ambitions. This came to the disappointment of the DEA, which though it had no apparent desire to weaponize, was eager to bolster Canada's international standing. However, even after King retired in 1948, there still was no appetite for weapons.

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<sup>265</sup> Inspired by David Mitrany's idea of functionalism, Hume Wrong, for example, set out to establish a third category of power between great and small (i.e., middle powers) that could distinguish countries on the basis of influence or skill rather than material power. It is worth adding that while Canada was a more significant actor than most states in 1945, neither Wrong nor other Canadian officials possessed clearly defined ideas or grand strategies on how Canada might augment power. See: Adam Chapnick, *The Middle Power Project: Canada and the Founding of the United Nations* (Vancouver: UBC Press, 2007).

<sup>266</sup> George Grant, *Lament for a Nation* (Montréal & Kingston: McGill-Queen's University Press, 1965).

<sup>267</sup> Brian Buckley, *Canada's Early Nuclear Policy*, 68.

<sup>268</sup> William Epstein, 'Canada,' In: Jozef Goldblat (ed.), *Non-Proliferation: The Why and the Wherefore* (London: Taylor & Francis), 171.

As Prime Minister, Louis St-Laurent reversed the isolationist policies of his predecessor. His Gray Lecture set out an ambitious, new internationalist role for Canada.<sup>269</sup> Yet, according to a former AECL nuclear scientist, ‘There was no Canadian policy to enter into the nuclear-weapons race as there was in France, the United Kingdom, and the United States.’<sup>270</sup> That Canada showed no interest in embarking on an independent nuclear weapons program suggests that Canada did not see nuclear weapons as a highly coveted instrument of military security nor desired such a symbol of status and prestige. Perhaps, more accurately, the Canadians did not see nuclear weapons as necessary to the kind of power they aspired.

The security model of Canada’s nuclear restraint argues that Canada eschewed nuclear weapons because it was secure under the American nuclear umbrella. It starts with the assumption that Canada opted to entrust its security to the nuclear patronage of the U.S. over pursuing an independent nuclear weapons program. The notion that Canada had a choice in the matter is taken for granted. Geography meant that Canada, which would necessarily be caught in the crossfire of any nuclear exchange between the two superpowers, was a vital U.S. security interest. Ernie Regehr attests that it would have been very difficult for Canada to resist or refuse to cooperate with the U.S.<sup>271</sup> Thus while Canada had little choice but to cooperate with the U.S. on continental security, it was determined to establish a rules-based order that could secure it a voice. Accordingly, Canada entered into and promoted international and collective defence organizations, such as NATO and North American Aerospace Defense Command (NORAD). Ottawa frequently worried about U.S. encroachment of Canada’s sovereignty. As one document reveals, Canadian officials had

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<sup>269</sup> Louis St-Laurent, ‘The Foundations of Canadian Policy in World Affairs,’ John and Duncan Gray Memorial Lecture. Convocation Hall, The University of Toronto, January 13, 1947.

<sup>270</sup> D.G. Hurst, ‘Overview of Nuclear Research and Development,’ 5.

<sup>271</sup> Ernie Regehr, ‘Canada and the U.S. Nuclear Arsenal,’ 102.

concerns that the U.S. might take unilateral action and even violate Canadian sovereignty, if Canada failed to secure its northwest.<sup>272</sup>

The twin concerns that motivated Canada's security and defence policy were how to protect Canadian sovereignty and prevent escalation between the U.S. and the USSR. Throughout the Cold War, Canadian officials worried about taking any actions that might make Canada an independent target of a Soviet attack. In other words, while nuclear weapons are often seen as the ultimate security guarantor, Canada felt that the opposite was the case. Marcel Cadieux, a civilian servant in external affairs who became secretary to the Advisory Panel on Atomic Energy, argued that in the current environment, Canada should leave the actual production of nuclear weapons to the United States so as not to invite future retaliation by the USSR. Indeed, Cadieux opined that nuclear weapons would make Canada less – not more – secure.<sup>273</sup> That Canada's security needs were determined to be best met by contributing to the U.S. and British nuclear programs suggests that there was no ambition, at least not among the majority of decision-makers, for Canada to become a great superpower.

Other officials, such as Heenev, also held the view that nuclear arms should be left to the great powers, and that while Canada should support its allies, its interests could best be advanced in international and multilateral fora. That Canada eschewed nuclear weapons and focused on arms control has been attributed to multilateralist norms and to intrinsically Canadian values. Much of the literature on Canada's abstention subscribes to notions of 'middle powerhood,' and so holds that the production of nuclear weapons would have overturned quintessential Canadian values such as peacekeeping, multilateralism, and honest-

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<sup>272</sup> R.J. Diubaldo and S.J. Scheinberg, 'A Study of Canadian-American Defence Policy (1945-1975) – Northern Issues and Strategic Resources,' Department of National Defence Operational Research and Analysis Establishment, Paper No. 6. (Ottawa, 1978).

<sup>273</sup> Brian Buckley, *Canada's Early Nuclear Policy*, 130-1.

brokering. There are two problems with this argument, however. First, it is anachronistic. Canada did not step into this identity until 1957 – years after the government forwent weapons.<sup>274</sup> Second, it conflates the practice of institutionalism – something that developed as part of a broader, deliberate 'middle power' project – with benign altruism.<sup>275</sup> Canada inherited the latter identity because of the international recognition that it received after Pearson was awarded the Nobel Peace Prize for his role in ending hostilities in Suez. And what happened then was the function of happenstance – not activist policies or an idealist national character.<sup>276</sup> Canada's policy in Suez was about preserving the outward appearance of harmony between its allies, Britain, France, and the U.S., so that the Soviet Union would not intervene or claim a moral victory. Strengthening a revered institution and peacekeeping were epiphenomenal, if not accidental.

Yet, rosy assessments of Canadian foreign policy in the post-war period dominate not only the scholarship on Canadian diplomatic history and foreign policy but also impair a sober reading of Canada's nuclear policy in this period. In the late 1940s to 1950s, Canada had an inflated global position as a result of the slow post-war recovery of the European powers. Though some officials, notably Hume Wrong, Norman Robertson, and even St-Laurent, were aware that post-war conditions were favourable in permitting Canada to play a greater role in

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<sup>274</sup> Canada may have initiated the so-called Middle Project at the end of the Second World War. However, the popular identity of Canada as a quintessential broker did not develop until the year Pearson was awarded the Nobel Peace prize for the peacekeeping mission that ended the Suez Crisis.

<sup>275</sup> Adam Chapnick, 'The Canadian Middle Power Myth,' *International Journal* Vol. 55, No. 2 (2000): 188-206.

<sup>276</sup> It was not Pearson, but Henry Cabot Lodge Jr., the U.S. ambassador to the United Nations, who conceived of the idea for a United Nations Emergency Force. The impetus was as much about brokering a ceasefire as it was about saving the British and French from undue embarrassment. However, he worried that it would be rejected if the proposal came from an American. Cabot Lodge was about to hand the draft proposal to the Brazilian representative just as Pearson fortuitously walked by. In his memoirs, Henry Cabot Lodge explains that he was contemplating whether to give the proposal to Brazil's Joao Carlos Muniz or to Canada's Pearson when he only, 'by the merest chance bumped into Pearson.' Henry Cabot Lodge, *The Storm Has Many Eyes: A Personal Narrative* (New York, NY: W.W. Norton & Company Inc., 1973), 132. See also: Michael K. Carroll, *Pearson's Peacekeepers: Canada and the United Nations Emergency Force, 1956-67* (Vancouver: UBC Press, 2009), 31.

international politics than it previously could, Canadian foreign policy interests remained more or less the same. Canada continued to play a supporting role to its great power allies just as it had done throughout the Second World War. Canadian officials looked to international organizations, such as the UN, as the best way of ensuring stability, largely because such multilateral entities could augment Canada's relevance, sovereignty, and freedom of action. They also looked to the patronage of its allies, the United States and Britain.<sup>277</sup>

Canada's principal interest after the War ended was maintaining stability amongst its allies and peace between the great powers. The Canadians had no grand power ambitions nor desire to alter the status quo by developing a nuclear arsenal. Canada's efforts to place the atom under international control should be understood in this context. They were not the function of ideals and norms.

## **5 Indecision on Nuclear Weapons**

Though Canada opted not develop its own nuclear arsenal, it eventually came to accept nuclear weapons under dual key arrangements. In 1963, Canada accepted W-40 nuclear warheads from the Americans and stationed them on its territory with the provision that the weapons remain under 'dual key' control.<sup>278</sup> What accounts for this change? Did Canada come to regret its earlier decision to forgo weapons and snatch the next opportunity to join the nuclear club? The Canadians – firmly shielded by the U.S. nuclear umbrella – had been content to leave the production and possession of nuclear weapons and continental security to the U.S. However, by the late 1940s, the wartime alliance between the U.S., Britain, and the USSR had shattered, and so too had the American nuclear monopoly. In 1949, the Soviet Union exploded its first

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<sup>277</sup> Brian Buckley, *Canada's Early Nuclear Policy*, 135.

<sup>278</sup> Dual key control requires the authorization of two separate parties before the weapons can be launched. In this case, the U.S. and Canada.

nuclear device, and within three years, Britain followed suit. These changes sparked a period of reassessment in which many states were forced to re-evaluate their strategic priorities.

In spite of the drastically altered security environment, which provoked a strategic rethinking of nuclear weapons among its allies, Canada's attitude toward nuclear weapons appeared to be as ambivalent as ever. Indeed, in the six-year period from 1957 to 1963, the Progressive Conservative government of John G. Diefenbaker never presented a coherent policy. Instead, it went back and forth on support for nuclear weapons, dithered on negotiations to acquire them from the United States, and then suddenly spurned them in the 1963 election.<sup>279</sup> Why did Canada pledge to, and then back away from the commitment to acquire nuclear weapons? What factors or concerns caused some high-level decision-makers to question such a nuclear role for Canada? Did calculations or beliefs about the danger of nuclear weapons, the threat environment, and deterrence lead officials to argue against the acquisition of nuclear weapons? This section evaluates Canada's nuclear decision-making on the question of acquiring U.S. nuclear warheads. It will demonstrate that electoral aspirations – not national security, values, institutional, or even alliance obligations – shaped nuclear decision-making in this period.

In studying Canada's nuclear policy in this period, one is tempted to attribute Diefenbaker's indecisive handling of the nuclear dossier to his lack of foreign policy experience or inability to understand the worrying security environment. After all, his successor went on to accept the American request to host nuclear warheads. Did Pearson, who had considerable

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<sup>279</sup> I adopt a literal definition of 'acquisition.' Acquisition here refers to taking possession or custody of, or hosting nuclear weapons such as states might under NATO nuclear weapons sharing arrangements. Such a definition would include countries like Ukraine, Belarus and Kazakhstan, which inherited nuclear weapons from the USSR, despite the fact that they never maintained operational control. For a discussion of the classifications of nuclear exploration, program, and acquisition, see: Sonali Singh and Christopher R. Way, 'The Correlates of Nuclear Proliferation: A Quantitative Test,' *Journal of Conflict Resolution* Vol. 48, No. 6 (2004): 859–885.

foreign policy experience, simply have a better appreciation of the strategic necessity of nuclear weapons to balance the growing Soviet threat? On matters of defence and foreign affairs, Diefenbaker was no doubt inexperienced. He was not much assisted by his Cabinet ministers either. His two choices for the post of external affairs, Sidney Smith and Howard Green, were thought unsuitable for the high-status portfolio.<sup>280</sup> Of course, this was what Diefenbaker had intended. For the first three months, he refused to fill the position and retained full control of the portfolio himself.<sup>281</sup> The Conservative prime minister was a deeply paranoid leader, sensitive to offence and usurpers.<sup>282</sup> He was particularly suspicious of the civilian servants that staffed the Department of External Affairs – which he not so affectionately dubbed ‘the Pearsonalities’ – and of Pearson, the Liberal leader, who had enjoyed a long career in that department.<sup>283</sup> Adding to this paranoia was an obsession with maintaining broad popularity.

Though it was not his milieu, Diefenbaker was not uninformed in international affairs. By 1957, the Soviet Union had tested an intercontinental ballistic missile (ICBM), capable of delivering nuclear weapons.<sup>284</sup> That year, U.S. president Dwight Eisenhower briefed him on growing Soviet aggression and invited him to participate in continental security arrangements, which included Bomarc missile defence. The Bomarcs were designed to detect, track, and intercept enemy bombers, and this particular variant was to be nuclear-armed. Appreciating that the fallout might affect Canadian cities if the Bomarcs were fired from the northern

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<sup>280</sup> John F. Hilliker, ‘The Politicians and the ‘Pearsonalities’: The Diefenbaker Government and the Conduct of Canadian External Relations,’ *Historical Papers/Communications historiques* Vol. 19, No. 1 (1984): 155-157.

<sup>281</sup> Robert Duffy, ‘Canada’s Foreign Policy in Transition,’ *International Journal* Vol. 14, No.4 (1959): 296-304.

<sup>282</sup> For more on the Diefenbaker years and his style of government, see: Peter C. Newman, *Renegade in Power: The Diefenbaker Years* (Montréal & Kingston: McGill-Queen’s Press, 1973); Denis Smith, *Rogue Tory: The Life and Legend of John G. Diefenbaker* (Toronto: McClelland & Stewart, 2013); and Peter Stursberg, *Diefenbaker: Leadership Gained, 1956-62. Vol. 1* (Toronto: University of Toronto Press, 1975).

<sup>283</sup> For more on Diefenbaker’s strained relationship with Department of External Affairs officials, see: Hilliker, ‘The Politicians and the ‘Pearsonalities,’ 151-167.

<sup>284</sup> The development of ICBMs called into question the utility of the Avro Arrow as the sole platform for air defence before full production was complete.

United States, the Canadian government suggested that they be based in northern Canada instead.<sup>285</sup> Canada understood the threat environment and the role that nuclear weapons played in deterring a possible Soviet attack on North America, though its dithering actions would suggest otherwise.<sup>286</sup>

Ambivalence is to be a recurring feature in Canada's decision-making on the nuclear dossier. The question of whether Canada would accept custody of U.S. nuclear warheads is illustrative of this tendency. In the late 1950s, the Canadian government considered a proposition to hold U.S. nuclear warheads on Canadian soil.<sup>287</sup> For instance, both R.B. Bryce, the clerk of the privy council, and Norman Robertson, undersecretary for external affairs, advocated for the Bomarc.<sup>288</sup> Meanwhile, the ministers and their advisors cared primarily about the economic costs associated with the procurements over security concerns.<sup>289</sup>

Diefenbaker had contradictory feelings about nuclear weapons. On the one hand, he believed that nuclear weapons could help deter an attack against Canada. He once remarked that, 'People do not want to believe there is going to be atomic bombing of Canada. The thought disturbs our equanimity. We like to look at the situation as though we were protected

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<sup>285</sup> Robert Bothwell, *Alliance and Illusion: Canada and the World, 1945-1984* (Vancouver: UBC Press, 2007), 161-162.

<sup>286</sup> A reader with great familiarity with Canadian foreign policy might wonder whether the decision to scrap the Avro Arrow represents yet another instance of Diefenbaker acting contrary to Canadian security interests. Canadian historians and political scientists have long blamed Diefenbaker for dashing all prospects of Canada ever developing a significant defence and aerospace industry with his supposedly erratic and ill-conceived decision to cancel the Avro Arrow jet-fighter interceptor. However, recent scholarship on the subject has defended the decision, showing that the industry was untenable. In addition to the high production costs, there were no buyers as the Americans had produced a more effective and affordable option. Regardless of which government was in power, the Arrow had to be cancelled. That Diefenbaker argued for less expensive substitute with the purchase of the American-made Bomarc anti-aircraft missiles shows that he was aware of the security environment and the needs of the Canadian military. He neglected, however, that the Bomarc were designed for use with nuclear warheads. For more on the unsustainability of the Avro Arrow project, see, for example: Donald C. Story and Russell Isinger, 'The Origins of the Cancellation of Canada's Avro CF-105 Arrow Fighter Program: A failure of strategy,' *The Journal of Strategic Studies* Vol. 30, No. 6 (2007): 1025-1050.

<sup>287</sup> Howard H. Lentner, 'Foreign Policy Decision Making: The Case of Canada and Nuclear Weapons,' *World Politics* Vol. 29, No. 1 (1976): 29-66.

<sup>288</sup> Robert Bothwell, *Alliance and Illusion*, 162.

<sup>289</sup> Robert Bothwell, *Alliance and Illusion*, 162

and insulated by many thousands of miles of sea and a northern ice cap. It is going to require an educational campaign to make the people realize the danger in which we find ourselves.<sup>290</sup> On taking office, Diefenbaker agreed, without much cabinet discussion, to carry on with earlier Liberal plans to join the United States in NORAD without evidently understanding what such a commitment might entail.<sup>291</sup> Indeed, Patricia McMahon explains, 'No one considered that joining NORAD might require Canada to acquire nuclear weapons for its armed forces, nor did anyone seem to care about this possibility.'<sup>292</sup> (Nor were they tipped off when the Americans asked permission to station nuclear weapons at Goose Bay, Newfoundland and Labrador in the midst of the NORAD negotiations.) Thus, in 1958, Canada and the United States finally concluded an agreement to establish NORAD, an integrated structure to defend North America from airborne threats.<sup>293</sup> But ambivalence would come to haunt Diefenbaker, who would spend the next five years grappling with whether Canada should acquire nuclear weapons for the Canadian military.

It would be a year before the American proposal was given any real consideration. Though the Prime Minister signalled support to Eisenhower, the issue was not given priority by his government, which in 1957 was in the middle of preparing for a federal election. Diefenbaker, who held a minority government, was hoping to secure a majority. Throughout his tenure, foreign and defence policy would be beholden to the domestic pulse. In 1958, secure with a substantial majority, a cabinet defence committee was established to consider the

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<sup>290</sup> John G. Diefenbaker, House of Commons, May 24, 1953.

<sup>291</sup> Hilliker believes that Diefenbaker's decision to join NORAD without seeking consultation or approval from intergovernmental agreement may have been a consequence of 'inexperience.' See: John F. Hilliker, 'The Politicians and the 'Pearsonalities,' 154.

<sup>292</sup> Patricia McMahon, *Essence of Indecision: Diefenbaker's Nuclear Policy, 1957-1963* (Montréal & Kingston: McGill-Queen's University Press, 2009), 33.

<sup>293</sup> The agreement also stipulated guidelines on how command would be organized and exercised: a US general serves as commander and a Canadian general serves as deputy commander, and they would be, at least in principle, equally responsible to both the American and Canadian governments.

American request that Canada accept custody of US nuclear warheads for Canadian use. The government finally seemed prepared to host nuclear weapons from the Americans. Accordingly, the government undertook a commitment to obtain five nuclear-capable weapons systems and associated warheads under NATO in Europe and under NORAD in Canada, and negotiations with Washington began in the spring of 1959.<sup>294</sup>

Despite the Cold War and mounting U.S. pressure, Diefenbaker remained principally concerned with maintaining his whopping majority. Of course, this is not in itself surprising for a politician. But public opinion, at the time, appeared to favour nuclear weapons on Canadian soil.<sup>295</sup> This led the prime minister to initially come out in support of the proposal. In the late 1950s, there was little public opposition to nuclear weapons. As Patricia McMahon notes, 'Nowhere was there concern about nuclear weapons in Canada.'<sup>296</sup> Still, the Prime Minister remained tentative. He worried that public support was malleable, and he became increasingly reluctant to commit to a position. Thus, when it came to formulating foreign and defence policy, Diefenbaker was motivated not by a fear of the Soviet Union but rather by an often unsubstantiated fear of a loss of public favour.

After the cancellation of the costly Avro Arrow in 1959, the Canadian government decided to install Bomarc anti-bomber missiles at military bases in Ontario and Quebec.<sup>297</sup> That the missiles had to be armed with nuclear warheads was apparently lost on the government. Though it was technically possible to arm the Bomarcs with conventional

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<sup>294</sup> These included the Bomarc missiles; the CF-101 air defence interceptors; the CF-104s deployed in Europe under NATO; the Lacrosse atomic missiles in Europe; and nuclear depth charges and torpedoes for the navy forces. See Erika Simpson, 'New Ways of Thinking about Nuclear Weapons and Canada's Defence Policy,' in D.C. Story and R. Bruce Shepard (eds.), *Diefenbaker's Legacy*, (Regina: Canadian Plains Research Centre, 1998), 27-28.

<sup>295</sup> See: Patricia I. McMahon, 'The Politics of Canada's Nuclear Policy, 1957-1963,' (PhD Thesis, University of Toronto, 1999), 57

<sup>296</sup> See: Patricia I. McMahon, 'The Politics of Canada's Nuclear Policy, 1957-1963,' 65.

<sup>297</sup> North Bay, Ontario, and La Macaza, Quebec

warheads, U.S. defence strategists argued that conventional weapons would be ineffective and that nuclear weapons were required to 'hit to kill' incoming bombers or missiles.<sup>298</sup> Canadian military planners agreed. There was no point installing missiles unless they were equipped with warheads. Diefenbaker's mind was elsewhere. He had interests quite apart from defence. His decision to cancel the contracts for the Avro jet earned him a hurricane of public backlash and a beating in the *Globe and Mail* and other media. Consequently, Diefenbaker became obsessed with restoring his image and maintaining power.<sup>299</sup> Diefenbaker, unwilling to incur another possible loss in public favour, hesitated during the nuclear negotiations with the United States in 1960. At home, the deliberations focused on the issue of how to make the acquisition of nuclear weapons from the Americans politically palatable rather than on the question of whether Canada needed or ought to host nuclear weapons.

The dithering is somewhat puzzling because, prior to 1962, the Conservative government still enjoyed a healthy majority in parliament even if it did not stand on quite as solid a footing as it had prior to the cancelation of the Avro. To be fair to Diefenbaker, he was being lobbied by a small group of women, nuclear abolitionists, who wrote him thousands of letters demanding that Canada refuse to proliferate nuclear weapons.<sup>300</sup> The stack of angry letters on his desk represented a vocal minority, however.<sup>301</sup> Sensitive to public opinion, Diefenbaker feared that the Liberals would rally the nascent anti-nuclear lobby and win the next election. Indeed, later polls showed that the majority of Canadians believed that the

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<sup>298</sup> Don Munton, 'Going Fission: Tales and Truths About Canada's Nuclear Weapons,' *International Journal* Vol. 51 No. 3 (1996): 506-528.

<sup>299</sup> Allan Levine, *Scrum Wars: The Prime Ministers and the Media* (Toronto: Dundurn Press, 1996), 221.

<sup>300</sup> Canadian Broadcasting Corporation, '1962: Voice of Women protests nuclear testing,' CBC Digital Archives. 3 November 2014. Available at: [www.cbc.ca/archives/categories/war-conflict/defence/defence-general/voice-of-women-protest-nuclear-testing.html](http://www.cbc.ca/archives/categories/war-conflict/defence/defence-general/voice-of-women-protest-nuclear-testing.html)

<sup>301</sup> Given that Canada had already declared that it would not manufacture nuclear weapons, it was reasoned that it would be unlikely that Canada would ever have cause to act alone to trigger a nuclear weapon. See: Douglas G. Anglin, 'Canada's Role in Nuclear Arms,' *The Globe and Mail*, February 15, 1960, 6.

Canadian forces should accept nuclear weapons, with support as high as 70 per cent and 58 per cent in Ontario and Québec, respectively.<sup>302</sup> In December 1961, a Gallup poll suggested over 60 percent of Canadians approved of equipping the Canadian military with nuclear weapons.<sup>303</sup> Diefenbaker paid too much attention to criticism. According to journalist, Patrick Nicholson, the Prime Minister was 'extremely sensitive to even the most trivial criticism by the most immature commentator in the most insignificant newspaper.'<sup>304</sup>

Public opinion was a chief consideration; the government was aware of dwindling support after 1959.<sup>305</sup> Robert Bothwell explains, 'In the summer of 1960 the opposition Liberals passed the Conservatives in the public opinion polls and remained ahead thereafter. Diefenbaker faced an uphill fight, and, not surprisingly, he adopted a defensive political strategy. He decided to take no chances, and, as a consequence, he avoided decisions that might prove unpopular.'<sup>306</sup> This resulted in a nuclear policy that was ambiguous, ambivalent, and equivocal. Diefenbaker was not alone. His government was also deeply conflicted on the acquisition question.

Disagreement divided the Cabinet. At one end was Howard Green, Secretary of State for External Affairs, who was 'horrified at the prospect of nuclear war' and at the other stood Douglas Harkness, the Minister of National Defence, who believed that Canada should agree to the American request to station U.S. nuclear warheads. Diefenbaker continued to dither. At a meeting in Ottawa in May 1961, Diefenbaker provided assurances to President John F. Kennedy that Canadian support for U.S. requests was forthcoming. Relations between

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<sup>302</sup> Robert Bothwell, *Alliance and Illusion*, 172.

<sup>303</sup> Chantal Allan, *Bomb Canada: And Other Unkind Remarks in the American Media* (Edmonton: Athabasca University Press, 2009), 37.

<sup>304</sup> Allan Levine, *Scrum Wars*, 218

<sup>305</sup> Diefenbaker's own memoirs reveal little about his personal thoughts beyond that he was often at odds with members of his own party. See: John Diefenbaker, *One Canada, Memoirs of the Right Honourable John G. Diefenbaker: Vol. 2: The Years of Achievement, 1957-1962* (Toronto: Macmillan Press, 1976).

<sup>306</sup> Robert Bothwell, *Alliance and Illusion*, 162-163.

Diefenbaker and Kennedy continued to worsen.<sup>307</sup> At the height of the Berlin Crisis on August 3, Kennedy wrote Diefenbaker a confidential letter, reminding him of his commitment to NATO.<sup>308</sup> Diefenbaker responded in a way so as to give the impression that action was certain.<sup>309</sup> Meanwhile, in the House of Commons, Green raised objections to nuclear testing. He argued that: 'we must continue our idealistic approach to world affairs. Because the situation is serious is no excuse for Canadians to abandon the idealistic approach they have had down through their history...this is what is expected of us by all nations.'<sup>310</sup> He added that the 'Canadian government is opposed to nuclear tests of any kind... We see no reason for Canada to change that policy... Canada on this problem will endeavour to further an agreement banning tests.'<sup>311</sup>

In response to Green's comments on nuclear testing, Paul Martin Sr., a member of the opposition Liberal Party, probed the government to confirm whether it would acquire nuclear weapons from the United States. The cancellation of the Avro Arrow made the acceptance of the warheads appear imminent. After all, the government had purchased the delivery systems required for carrying them, and the Liberals and the New Democrats – which had both adopted anti-nuclear platforms – pushed the government to reveal whether it would acquire nuclear weapons. Martin stated: 'No indication was given of the position of the Canadian government with regard to nuclear weapons in Canada. Our position as stated by the Leader

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<sup>307</sup> Historians and political scientists have made much of the mutual disdain that characterized uneasy relationship between Diefenbaker and JFK. See, in particular: Knowlton Nash, *Kennedy and Diefenbaker: Fear and Loathing Across the Undefended Border* (Toronto: McClelland & Stewart, Inc., 1990).

<sup>308</sup> The Berlin Crisis was a deliberate provocation by Soviet leader Nikita Khrushchev, who demanded that the West recognize East Germany. He aimed to force the three NATO occupying states in West Berlin, Britain, France, and the United States, to retreat. Prior to taking action, he confessed: 'Berlin is the testicle of the West. Every time I want to make the West scream I squeeze on Berlin.' Quoted in Robert Bothwell, *Alliance and Illusion*, 163.

<sup>309</sup> The following month, the exchange between the two heads of state were leaked to Newsweek magazine, and the story was picked up by Canadian media. See: Allan Levine, *Scrum Wars*, 230.

<sup>310</sup> The House in Committee of Supply, 24th Parliament, 4th Session. Vol. 8 (Sept. 1961), 8061. Accessed at: [http://parl.canadiana.ca/view/oop.debates\\_HOC2404\\_08/11?r=0&s=1](http://parl.canadiana.ca/view/oop.debates_HOC2404_08/11?r=0&s=1).

<sup>311</sup> The House in Committee of Supply, 8062.

of the Opposition is clear. At the present time we do not believe this country should accept nuclear weapons in Canada. What the situation in the future will be will have to be determined by events. It is not because we do not want to see our forces in Canada equipped in the most efficient manner, but because we realize the danger of the diffusion of nuclear weapons.<sup>312</sup>

Unlike the government, whose Cabinet was split on the issue, the Liberals were almost unanimous in their opposition to nuclear weapons.<sup>313</sup> During the Policy Committee at the convention of the Liberal Party in January 1961, Liberal delegates agreed on the following resolution:

Canadian defence policy must be based on the fundamental truth that in the nuclear age, the only protection is the establishment and maintenance of a creative peace... The main lines of Liberal policy would be: Any extension of the possession of nuclear weapons under national control will greatly increase the danger of accidental outbreak of nuclear war and also the difficulty of achieving disarmament. Membership in the nuclear club therefore should not be extended beyond the four countries, which now possess such weapons [U.S., USSR, UK, and France]. The objective should be not the extension of ownership of such weapons but their abolition before they destroy the world. Canada cannot deny nuclear weapons to other nations and at the same time arm her own forces with them. A new Liberal government therefore should not acquire, manufacture, or use such weapons either under separate Canadian control or under joint U.S.-Canadian control.<sup>314</sup>

The following year, Pearson, as the Opposition Leader, asserted that Canada's defence policy should rely on conventional weapons, not nuclear weapons. In an interview with the Canadian Broadcasting Corporation, Pearson stated: 'I believe that we should have a defence policy which will not require Canada to become a nuclear power in the sense of making, or using, or securing nuclear weapons for her forces and which would be under national control.'<sup>315</sup> He also

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<sup>312</sup> The House in Committee of Supply, 8072.

<sup>313</sup> In 1961, a subcommittee of Liberals renounced nuclear weapons in a majority vote and some went even further to suggest that Canada withdraw from NORAD. See: 'Liberal Group Wants Canada to Renounce All Nuclear Weapons,' *The Globe and Mail*, January 10, 1961, 13.

<sup>314</sup> Quoted in Walter Gordon, 'The Liberal Leadership and Nuclear Weapons,' in Ernie Regehr and Simon Rosenblum (eds.), *Canada and the Nuclear Arms Race* (Toronto: James Lorimer & Company, Publisher, 1983), 200.

<sup>315</sup> 'Pearson Urges Canada Defense Be Non-Nuclear,' The Ottawa Bureau of The Globe and Mail, *The Globe and Mail*, March 29, 1962, 25.

expressed opposition to the Tory plans to acquire nuclear weapons and to station them on Canadian territory, stating that ‘We should not have a policy that requires us to be a nuclear power by having our soil used as a nuclear base under the national control of any other country.’<sup>316</sup> (As will be discussed later, this decision was reversed during the campaign of 1963.) While the Liberals articulated a strong anti-nuclear policy, they were, in reality, condemning the government for an activity that it was not engaged in.

Diefenbaker continued to stall a decision. By 1962, Washington had doubled its pressure on the Prime Minister. But it was an election year, and Diefenbaker did not trust that the Canadian public would support nuclear weapons despite the fact that the polls showed otherwise. Diefenbaker was sceptical of public opinion surveys, saying that ‘polls are for dogs.’<sup>317</sup> At one point, it seemed as though the government was prepared to agree to the proposal to station U.S. nuclear weapons. Following a meeting of NATO ministers in May 1962, Diefenbaker said: ‘Should NATO reaffirm for Canada a role involving nuclear weapons, Canada will equip her NATO forces to discharge her obligation.’<sup>318</sup> Such haziness allowed him to test the proverbial waters for domestic support. For instance, he acknowledged that the Bomarc missiles and Voodoo aircraft in Canada’s possession could be used for nuclear arms in such an ambiguous manner that it was impossible to determine where he stood on the acceptance of the warheads. Canada’s position toward nuclear weapons was often so inscrutable that some observers began describing it as ‘a riddle wrapped in a mystery inside an enigma.’<sup>319</sup>

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<sup>316</sup> ‘Pearson Urges Canada Defense Be Non-Nuclear,’ 25.

<sup>317</sup> Brian Bow, ‘Defence Dilemmas: Continental Defence Cooperation, From Bomarc to BMD,’ *Canadian Foreign Policy Journal* Vol. 15, No. 1 (2009), 42.

<sup>318</sup> George Bain, ‘The Mysteries Of Nuclear Policy’ *The Globe and Mail*, Jan 31, 1963, 7.

<sup>319</sup> Winston Churchill made this quote famous when, in a BBC broadcast in 1939, he observed that: ‘I cannot forecast to you the action of Russia. It is a riddle wrapped in a mystery inside an enigma.’ George Bain used the quote to describe Diefenbaker’s position on nuclear weapons. See: George Bain, ‘The Mysteries Of Nuclear Policy’ *The Globe and Mail*, Jan 31, 1963, 7.

In contrast, there was little doubt where the defence minister stood. The divide between the defence minister and military officials and the prime minister grew. In a debate in the House of Commons, Harkness stated: 'It is only prudent to obtain the weapons systems now so that they will be available and our forces trained to use them.'<sup>320</sup> He and Pierre Sévigny, his Associate Minister of Defence, revealed plans for the construction of nuclear warhead depots in North Bay and La Macaza.<sup>321</sup> The CAF also conducted two exercises that simulated a nuclear attack on the territory. These actions caused critics to accuse the Tory government of deliberately trying to instill fear and hysteria about a nuclear attack in order to bolster support for nuclear armament. For example, Liberal MP Paul Hellyer charged: 'Now we are being prepared for the introduction of atomic arms into Canada. The campaign to wear down the resistance in this House and in the country has begun. Speeches are being made by the Prime Minister and the Minister of Defence which lead us to believe that the introduction of these weapons is inevitable.'<sup>322</sup> The NDP also reiterated its opposition to the presence of American nuclear weapons.

The Soviet Union also sensed that the Canadian government was preparing to acquire nuclear weapons from the United States. While Diefenbaker had not decided on nuclear weapons, he deliberately evoked the Soviet threat in order to promote his anti-Soviet image. Given Diefenbaker's anti-Soviet rhetoric, the Soviets grew increasingly concerned that Canada might succumb to U.S. pressure to acquire nuclear weapons, perceiving Canada's decision to procure nuclear weapons as a provocation and threat to their security. In a letter to Ottawa, the Soviet ambassador, Amasap Aroutanian protested the government's apparently imminent

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<sup>320</sup> 'Text of Soviet Statement Protesting Canada's Nuclear Weapons Policy,' *The Globe and Mail*, Jun 15, 1962, 3.

<sup>321</sup> 'Text of Soviet Statement Protesting Canada's Nuclear Weapons Policy,' 3.

<sup>322</sup> 'Text of Soviet Statement Protesting Canada's Nuclear Weapons Policy,' 3.

decision to acquire nuclear weapons to counter the Soviet threat, accusing Canada of misleading its public on Soviet foreign policy, which was committed to 'the cause of strengthening peace.'<sup>323</sup> Aroutanian also pointed out that the Soviet Union supported proposals on complete disarmament and on the cessation of nuclear tests and that Canada's possession of nuclear weapons would undermine negotiations on disarmament that were taking place at that time in Geneva.<sup>324</sup> However, though Diefenbaker publicly denounced communism, his closest advisors worried that he was allowing his personal dislike of Kennedy to effect anti-American policies.<sup>325</sup>

The warning from Moscow did not impact the 'strategic calculations' of the Canadian government. The Prime Minister was no more or less inclined toward nuclear weapons. While normally Diefenbaker would be angered by such encroachments or affronts to his rule, in this particular case, he saw the Soviet letter as a blessing in bolstering his domestic support. Basil Robinson explains: 'No one knows why the Russians sent [the note] but everyone agrees that it helped the Government. PM was quick to pounce on it and said on the phone that he could not understand it, i.e., his good fortune.'<sup>326</sup> To be sure, in the 1962 election, Diefenbaker boasted that: 'We told the Soviet ambassador to take back his note and do with it what he liked.'<sup>327</sup>

Despite portraying himself and his government as Cold Warriors, the June 1962 election reduced the Tories to a 116-seat minority government. The rest of Diefenbaker's

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<sup>323</sup> 'Text of Soviet Statement Protesting Canada's Nuclear Weapons Policy,' 3.

<sup>324</sup> 'Text of Soviet Statement Protesting Canada's Nuclear Weapons Policy,' 3.

<sup>325</sup> A number of authors explain that Diefenbaker appeared to be, or became anti-American. Kennedy, who shared this worry, feared that Diefenbaker would run the next election on an anti-American and anti-nuclear platform. See: Jocelyn Maynard Ghent, 'Did He Fall or Was He Pushed? The Kennedy Administration and the Collapse of the Diefenbaker Government,' *The International History Review* Vol. 1, No. 2 (1979): 246-270. See also: Erika Simpson, 'New Ways of Thinking about Nuclear Weapons and Canada's Defence Policy,' 27-41.

<sup>326</sup> Basil Robinson, *Diefenbaker's World* (Toronto: Toronto University Press, 1989), 272.

<sup>327</sup> Jamie Glazov, *Canadian Policy Toward Khrushchev's Soviet Union* (Montréal & Kingston: McGill-Queen's University Press, 2003), 134.

tenure would be unstable. The economy was in a horrible state, relations with the United States were abysmal, and the Cabinet was divided. More significantly, by the time the Cuban Missile Crisis happened, the relationship between the Prime Minister and the defence community was so badly estranged that the military went to operational levels during the crisis without his authorization.<sup>328</sup> Meanwhile Diefenbaker's foreign policy, in particular his relations with American president, John F. Kennedy, and his indecision on whether to arm the Bomarc missiles and the five squadrons of Voodoo interceptor jets with nuclear warheads, remained convoluted.

While Diefenbaker manipulated the Soviet letter to show that he was strongly anti-communist, he had skirted the main issue: nuclear weapons. The USSR reproved the government for a decision it had neither taken nor intended to take. Unlike Moscow, the administration in Washington no longer suffered any illusions about Canada's forthcoming commitment. Kennedy had tired of Diefenbaker (a man that he admitted to hating) and his prevarications, circumlocutions, and other tactics.<sup>329</sup> As one American official confessed, 'What drove us nuts was [Diefenbaker's] wishy-washy indecision.'<sup>330</sup>

In October 1962, the United States and the USSR were embroiled in a confrontation over Soviet ballistic missiles in Cuba. By this time though, the relationship between the Prime Minister and Kennedy had become so bad that, despite their mutual defence agreements, Diefenbaker was only informed of Washington's decision to impose a blockade around Cuba

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<sup>328</sup> Peter Haydon writes that 'it is not impossible that some U.S. nuclear weapons had been moved into Canada before the (Cuban missile) crisis under a secret agreement. There is evidence, albeit circumstantial, to indicate that nuclear weapons were present in Canada during the crisis.' Though there is no operational evidence to support Haydon's claim, the charge does underscore the abysmal state of relations between the Diefenbaker government and the Canadian military in this period. See Peter Haydon, *The 1962 Cuban Missile Crisis*, 197.

<sup>329</sup> Diefenbaker, in turn, referred to Kennedy as 'that young fool.' Peter C. Newman, *Renegade in Power: The Diefenbaker Years*, 264. Their mutual dislike is well documented. See also: Knowlton Nash, *Kennedy and Diefenbaker: Fear and Loathing Across the Undefended Border*, 1990.

<sup>330</sup> Robert Bothwell, *Alliance and Illusion*, 169.

hours before he publicly announced the policy. Diefenbaker was furious that he had not been consulted, and, in retaliation, initially refused to approve the Defcon-3 status. He did not realize that Harkness had covertly ordered the high alert status on October 22.<sup>331</sup> However, the real issue was not so much that Diefenbaker allowed his slighted ego to delay the alert, but rather that the Canadian military's Bomarc's and Voodoo jets lacked the necessary warheads that would have made defence possible.

The Cuban Missile Crisis had three immediate effects. First, as a consequence of Soviet action, it persuaded the Prime Minister that Canada's 'security was now gravely endangered.'<sup>332</sup> Still, Diefenbaker was not convinced on the question of the acquisition of nuclear warheads. Second, media coverage of Diefenbaker's clumsiness and petty intransigence in a time of crisis turned the majority of the Canadian public against him. Regardless of differences over nuclear weapons, the public expected Diefenbaker to support Canada's ally. In 1962, that ally was the United States. His indecision especially alienated Conservative voters, who were liable to have particularly strong views on defence and loyalty.<sup>333</sup> Diefenbaker failed to appreciate that most Canadians (as most Western allies) sided with Kennedy.<sup>334</sup> Third, it revealed the extent to which the Canadian and American military had already become so tightly integrated on continental defence. In the weeks after the Cuban Missile Crisis, Diefenbaker faced two non-confidence motions in Parliament.

According to Peter Haydon, Diefenbaker's hesitation in signing an agreement to host US nuclear warheads was influenced by the 'degree of control Canada would exercise over the

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<sup>331</sup> Jocelyn Maynard Ghent, 'Canada, the United States, and the Cuban Missile Crisis,' 167-171. See Peter Haydon, *The 1962 Cuban Missile Crisis*.

<sup>332</sup> Jocelyn Maynard Ghent, 'Canada, the United States, and the Cuban Missile Crisis,' 177.

<sup>333</sup> Robert Bothwell, *Alliance and Illusion*, 169.

<sup>334</sup> Knowlton Nash, *Kennedy and Diefenbaker*, 202-204.

weapons.<sup>335</sup> Indeed, Haydon contends that Canada's decision to host US nuclear weapons can be traced back to 1959 following the cancellation of the Avro Arrow aircraft. Haydon says once Canada acquired the CF-101 interceptors and the Bomarcbs, it also 'agreed to accept the nuclear weapons needed to make those aircraft and missiles effective.'<sup>336</sup> Peter Haydon believes that Diefenbaker's government understood that the Royal Canadian Air Force (RCAF) needed nuclear weapons and that it would 'receive those weapons when necessary.'<sup>337</sup>

At the same time, the American ambassador to Canada, Livingston Merchant, stepped up pressure on Ottawa to take a firm stance. In addition, he began charming the media to help Washington expose the Conservative government's unwillingness to meet its NATO obligations.<sup>338</sup> The Americans were not the only ones who had grown weary of Diefenbaker. The military establishment, in particular, felt that the security environment (i.e., the threat of the Soviet Union) and that Canada's commitment to the defence alliance necessitated the acquisition of nuclear weapons. Led by Wing Commander Bill Lee, a propaganda team set out to influence the Canadian press gallery to write on 'the lunacy of Diefenbaker's nuclear policy.'<sup>339</sup>

In January 1963, a retiring American General named Laurits Norstad visited Ottawa. Norstad had been the Supreme Commander of NATO for most of Diefenbaker's prime ministerialship. At a public conference in Ottawa, Norstad frankly declared that the

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<sup>335</sup> Peter Haydon, *The 1962 Cuban Missile Crisis: Canadian Involvement Reconsidered* (Toronto: The Canadian Institute of Strategic Studies, 1993), 197. Haydon suggests that it was possible that an 'interim agreement on the transfer of nuclear weapons existed.' He says, 'Under such an agreement, the weapons would be under US custody and control on a Canadian air base until a threat existed. At that point, the weapons would be loaded on Canadian aircraft and missiles under US supervision.'

<sup>336</sup> Peter Haydon, *The 1962 Cuban Missile Crisis*, 73.

<sup>337</sup> Peter Haydon, *The 1962 Cuban Missile Crisis*, 197.

<sup>338</sup> Patrick Lennox, *At Home and Abroad: The Canada-US Relationship and Canada's Position in the World* (Vancouver: UBC Press, 2009), 62-64.

<sup>339</sup> Patrick Lennox, *At Home and Abroad*, 63.

Canadians were failing to live up to their treaty obligations.<sup>340</sup> The media excoriated Diefenbaker, who, through his own actions and insecurities, had turned most journalists against him. The Liberals took note of the government's vulnerability. Paul Hellyer, Liberal defence critic and soon to be Minister of National Defence, had also informed Pearson of low morale among Canada's NATO troops.<sup>341</sup> Writing in December 1962, Hellyer urged Pearson to acquire nuclear weapons from the U.S. Hellyer argued that hosting U.S. nuclear weapons would not constitute 'proliferation of control...[because] the weapons would still be under the control of the United States and this is logical in view of the fact that they have the ultimate responsibility in any event.'<sup>342</sup>

According to John Clearwater, Paul Hellyer was particularly influential in persuading Pearson to change his position regarding nuclear weapons in Canada. Hellyer highlighted the economic consequences of renegeing on Canada's commitment to take on US nuclear warheads. He says, 'if we don't fulfil our agreements the Americans are almost certain to reduce or terminate their production sharing arrangements with us.'<sup>343</sup> Hellyer concluded by recommending that the 'Liberal Party state categorically that Canada should sign a bi-lateral agreement with the United States and fulfil its commitments forthwith.'<sup>344</sup> Pearson adopted Hellyer's recommendation and in January 1963 the Liberal Party reversed its position and promised to sign an agreement with the U.S. to bring nuclear weapons to Canada.<sup>345</sup> Pearson argued to the public and the Liberal Party that Canada was not acquiring nuclear weapons

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<sup>340</sup> Knowlton Nash, *Kennedy and Diefenbaker*, 223-225. See also: Patrick Lennox, *At Home and Abroad*, 63-55.

<sup>341</sup> Robert Bothwell, *Alliance and Illusion*, 172.

<sup>342</sup> Paul Hellyer, quoted in John Clearwater, *Canadian Nuclear Weapons*, 29.

<sup>343</sup> Paul Hellyer quoted in John Clearwater, *Canadian Nuclear Weapons*, 30.

<sup>344</sup> Paul Hellyer quoted in John Clearwater, *Canadian Nuclear Weapons*, 30.

<sup>345</sup> John Clearwater, *Canadian Nuclear Weapons*, 30.

given that Canada only had access to U.S. nuclear weapons, which would be controlled by the U.S. military.<sup>346</sup>

Was this reversal just political opportunism? In part, it was. Pearson recognized that public opinion supported Canada's acquisition of nuclear weapons and support for U.S. defence policy. For instance, in January 1963, 57.8 percent of Canadians were in favour of Canada having nuclear weapons and an even larger 77.8 percent believed that Canadian defence policy should be in line with the United States.<sup>347</sup> In a well-timed public announcement, Pearson then announced that the CAF should be provided with nuclear weapons both at home and abroad.<sup>348</sup> Pearson had previously been strident in his opposition to nuclear weapons acquisition. (His wife was a member of the anti-nuclear group, Voice of Women, that so troubled Diefenbaker.) Tommy Douglas, the leader of the New Democratic Party, charged that Liberal policy had changed on a whim – a view that was echoed by both the Conservatives and the Social Credit Party.<sup>349</sup>

Meanwhile, Diefenbaker's Cabinet remained divided between the supporters of Green and Harkness. A few days after the Liberals unveiled their new position on the nuclear issue, Diefenbaker was called to elucidate his position in the House of Commons. On January 25, Diefenbaker gave a speech so cloudy that each side took from it what they wanted and others were left confused. According to Donald Fleming, the Minister of Justice (who had earlier contested the Conservative Party leadership and had lost to Diefenbaker), exclaimed; "This was without exception the most equivocal speech I had ever heard in the House of Commons. It

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<sup>346</sup> John Clearwater, *Canadian Nuclear Weapons*, 31. It should be noted that the 1963 Agreement with the US made it clear that the nuclear warheads would not be Canadian and would always be in the exclusive custody of the US.

<sup>347</sup> Sean Maloney, *Learning to Love the Bomb*, 297.

<sup>348</sup> 'A Mounting Debate on Nuclear Policy Sparked by Pearson,' *The Globe and Mail*, January 19, 1963, 9.

<sup>349</sup> 'A Mounting Debate on Nuclear Policy Sparked by Pearson,' 9.

surpassed Mackenzie King at his best period. It confused even his own cabinet colleagues.<sup>350</sup> The media were less kind.<sup>351</sup> Harkness, who had been under the impression that support for nuclear warheads was forthcoming, announced publicly that his government would acquire the weapons. Diefenbaker, of course, resented unilateral action. Harkness, in turn, demanded that Diefenbaker clarify. When Diefenbaker continued to dodge the issue, Harkness informed him that he would resign if nuclear weapons were not accepted.<sup>352</sup>

The U.S. State Department was incensed at Diefenbaker's speech to the House of Commons in which he recounted that, at a recent meeting in Nassau, Kennedy and British Prime Minister Harold Macmillan wanted to move away from nuclear weapons.<sup>353</sup> The Prime Minister was not circumspect. The meeting and the negotiations had been secret. On January 30, the State Department crafted a harshly worded press release implying that the Prime Minister had been dishonest. The American public repudiation caused a diplomatic row. Diefenbaker was furious, and became convinced that the Americans were plotting his demise. (He happened to be right.) Neither the public nor government officials shared his anger. Though many Canadians felt that the interference had been distasteful, they believed that it was well intentioned or at the very least understandable in light of Diefenbaker's muddled policies.<sup>354</sup> Several cabinet members resigned. Harkness tendered his resignation on 4 February 1963. Those of Sévigny and Trade Minister, George Hees followed. Other Tories chose not to run for personal reasons. Pearson called for a third no-confidence motion, and the government fell.

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<sup>350</sup> Denis Smith, *Rogue Tory*, 472.

<sup>351</sup> Allan Levine, *Scrum Wars*.

<sup>352</sup> Denis Smith, *Rogue Tory*, 471-472

<sup>353</sup> Jamie Glazov, *Canadian Policy Toward Khrushchev's Soviet Union*, 163.

<sup>354</sup> Patricia McMahon, *Essence of Indecision*, 166.

## 5.1 Explaining Canada's Nuclear Ambivalence

What explains Diefenbaker's decision (or apparent indecision)? Structural realism does not provide an explanation of Canada's decision-making under Diefenbaker. The Soviet Union posed a threat to Canada and its Western allies. The Cuban Missile Crisis in particular demonstrated (even to the Prime Minister) the very real possibility of a nuclear war between the United States and the Soviet Union. Given Canada's geographical location, next to the United States, the government could certainly recognize that Canadians and Canadian territory would not be spared. However, security concerns were not a sufficient motivator.

Some realists use concepts such as 'alliance commitments' and 'bandwagoning' to explain Diefenbaker's policies. Bandwagoning is a strategy employed by weak states that align with a stronger power. Because the United States could act unilaterally with nuclear weapons, it could be reasoned that the Canadians had little means of resistance, and that they decided that their interests could be better served by participating in continental defence pacts. Despite joining NATO and other security communities, Diefenbaker did not go along. For instance, he did not immediately agree to the American request that it put its military on high alert during the Cuban Missile Crisis (although, as noted, the CAF put itself on alert).<sup>355</sup> Others argue that Canada's geographical position and membership in the alliance meant that it enjoyed superpower patronage. Thus, the government likely calculated that geography necessarily meant that Canada could rely on the American nuclear arsenal for protection. After all, most major American cities are in close proximity to the Canadian border, which lends a high degree of credibility to U.S. extended deterrence.

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<sup>355</sup> Neither did any other NATO ally, including even Britain and France.

Realism is not entirely unsatisfactory. At the time, the Canadians viewed themselves as a 'very much more junior partner than most people realize.'<sup>356</sup> Some officials preferred to contribute to the American military nuclear program, and to leave the security of the continent to the Americans. This would also allow Canada to pour its resources into ensuring the robustness of the civilian nuclear industry. The Prime Minister, however, based his actions on two considerations. First, Diefenbaker, who had previously criticized the St-Laurent government for turning its back on Mother Britain during the Suez Crisis, had carved out an anti-American identity for his party. He believed that Canadians would positively respond to his refusal to kowtow to American power. His personal dislike for Kennedy was secondary.<sup>357</sup>

Second, there were economic considerations. In order to fulfil its commitment to NORAD, Canada would need to make significant investments to upgrade its military equipment and technology. When the Avro Arrow was abandoned, the government decided to embark on a defence arrangement with the United States that required sharing of the Bomarc and other systems. While Harkness realized that the Bomarc needed to be fitted with nuclear warheads, the Prime Minister could not come to terms with the fact that the Bomarc, which were originally designed to carry either conventional or nuclear warheads, were determined to be useless without them. Diefenbaker did, however, appreciate the possible benefits of defence production sharing with the United States.<sup>358</sup> At the same time, after the cancellation of the Avro project, which was partly the result of a disinterested American market, he worried about the public backlash that would ensue if he purchased fighters and other munitions from the United States. According to Robinson, Diefenbaker's

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<sup>356</sup> Brian Buckley, *Canada's Early Nuclear Policy*, 70.

<sup>357</sup> Diefenbaker had a great deal of admiration and respect for President Dwight Eisenhower. However, even Eisenhower accused Diefenbaker of stoking anti-American policies. At the UN Conference on Disarmament in 1960, Canada advanced a proposal that was widely seen (even by neutral countries) as favourable to the USSR.

<sup>358</sup> John F. Hilliker, "The Politicians and the 'Personalties,'" 165.

impulse to resist pressures to accept the warheads was partly due to his perception that the United States was trying to force him to purchase expensive and ineffective weapons.<sup>359</sup> For a government that necessarily relied on the United States for security, Diefenbaker was not interested in supporting Canada's superpower patron. Rather, Diefenbaker made a habit of undermining the Kennedy administration.

Other explanations of an institutionalist and constructivist variety emphasize Canada's commitment to the United Nations and its multilateral identity. Both Brian Bow and Duane Bratt believe that strategic defence cooperation with the United States was a real dilemma for the Canadian government, which wanted to be seen as leader of the global disarmament campaign while, at the same time, understood that it needed to fulfil its obligations to NORAD and NATO.<sup>360</sup> Bow writes,

Diefenbaker wanted to preserve Canada's non-nuclear status, to maintain its international credibility as a leading advocate of nuclear disarmament. Canadian officials therefore pressed for the negotiation of some kind of 'missing-part' scheme, in which the nuclear warheads for the Bomarc would be stored on the US side of the border, to be rushed to Canadian bases and installed during a crisis. The fact that American negotiators were prepared to entertain proposals like this undoubtedly reinforced Diefenbaker's inclination to delay, but it is important to see that this inclination persisted well after the United States ended the 'missing part' talks. And there were, more importantly, clear signs of Diefenbaker's impulse to delay even before these compromise scenarios came into play. It is therefore probably better to think of the desire to explore 'compromises' as driven by a prior inclination to put off making a decision, rather than the other way around.<sup>361</sup>

Bratt also explains that, competing interests often collide in making Canadian nuclear policy, Canada suffers from 'nuclear schizophrenia.'<sup>362</sup>

Deliberations on whether Canada should acquire weapons systems with nuclear capabilities were undertaken when Sidney Smith was the secretary for external affairs. While

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<sup>359</sup> Basil H. Robinson, *Diefenbaker's World*.

<sup>360</sup> Brian Bow 'Defence Dilemmas: Continental Defence Cooperation, From Bomarc to BMD,' *Canadian Foreign Policy Journal* Vol. 15, No. 1 (2009): 40-59.

<sup>361</sup> Brian Bow, 'Defence Dilemmas,' 47.

<sup>362</sup> Duane Bratt, 'Canada's Nuclear Schizophrenia,' 44-50.

Smith eventually believed that Canada should acquire the systems for its military, his successor was a strong proponent of disarmament. Howard Green's views were especially influenced by his participation in a UNGA discussion about the dangers associated with nuclear tests.<sup>363</sup> Diefenbaker, too, expressed strong support for complete disarmament. However, the prime minister did not believe such a goal was achievable. At the same time, he understood that Canada's NORAD and NATO obligations meant that Canadian missiles and jets needed to carry nuclear warheads. Hilliker reveals that Diefenbaker's 'convictions, as expressed privately at the time, seem to have inclined towards the nuclear side.'<sup>364</sup> Yet, he balked. Why?

The dominant theories of nuclear policy decision-making overlook domestic sources of state behaviour. In the case of Canada's decision-making on acquiring U.S. nuclear weapons, individual leaders and electoral politics played a foremost role. Before delving any further into the analysis, it should be established that, as Prime Minister, Diefenbaker wielded absolute control over Canada's foreign policy. Diefenbaker did not appoint anyone to the Ministry of External Affairs for several months into his government, choosing to assume those duties himself. Eventually, he selected a man who was far too inexperienced to carry out the job, Sidney Smith. Smith, who left his position as the President of the University of Toronto, was intelligent, enterprising, and popular in academic circles. However, he was not well known outside of academia. As revealed by Basil Robinson, one of Diefenbaker's closest advisors, Smith had little impact on decision-making.<sup>365</sup> When Smith suddenly passed away in 1959, Diefenbaker promoted another relative unknown, Howard Green. This selection allowed the prime minister to retain full control of foreign policy. While Diefenbaker largely

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<sup>363</sup> John F. Hilliker, 'The Politicians and the 'Personalties,' 157.

<sup>364</sup> John F. Hilliker, 'The Politicians and the 'Personalties,' 165.

<sup>365</sup> See: Erika Simpson, *NATO and the Bomb: Canadian Defenders Confront Critics* (Montréal & Kingston: McGill-Queen's Press, 2001), 279.

deferred to the 'guidance of officials' on the technical issues of External Affairs, he maintained full control over major issues.<sup>366</sup>

Decision-making on the question of whether to accept nuclear warheads was not motivated by strategic concerns, but by domestic ones. In 1961, the first Voodoo squadrons were deployed and the Bomarc bases were installed. Even with the weapons systems in place and millions of dollars spent, Diefenbaker was reluctant to accept the nuclear warheads required to allow them to do what they were intended to do. Indeed, both George Pearkes, Minister of the Department of National Defence (DND) from 1957-1960, and his successor, Douglass Harkness hoped to reach an agreement with the United States that would supply Canada with nuclear equipment for the new weapons systems.<sup>367</sup> For Diefenbaker, a crippling fear of a loss of public favour and of political machinations meant that he vacillated on the decision. As it turned out, his two great fears were not baseless.

Kennedy had hoped that if elected the Liberals would adopt a policy more favourable to the Americans than had the Conservatives. To this end, he actively – albeit secretly – contributed to the Liberal Party campaign. He sent his clever public opinion analyst, Lou Harris (who adopted the pseudonym, Lou Smith) to work for Pearson. Indeed, few were informed of his activities.<sup>368</sup> Harris conducted considerable polling of Canadian public opinion and voting preferences.<sup>369</sup>

In any case, Diefenbaker believed strategic necessity to be at odds with political survival, and when faced with that choice, he chose the latter. Yet, Diefenbaker would not be the only one to base foreign policy on domestic calculations. The subsequent government's

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<sup>366</sup> John F. Hilliker, 'The Politicians and the 'Pearsonalities,' 153-154.

<sup>367</sup> John F. Hilliker, 'The Politicians and the 'Pearsonalities,' 165.

<sup>368</sup> Peter C. Newman, *Renegade in Power*, 267.

<sup>369</sup> Knowlton Nash, *Kennedy and Diefenbaker*, 167.

decision to accept the nuclear weapons also had little to do with grand strategy. The Liberals, though, had arrived at the view that the electorate would support the acceptance of nuclear weapons, and they were not wrong. After the Cuban Missile Crisis, Canadians came to see nuclear weapons as necessary for Canadian security and defence, and viewed the Liberal leader approvingly for doing what Diefenbaker apparently would not. Domestic politics, primarily the political aspirations of two leaders – and not national security, as it commonly assumed – shaped Canada’s nuclear policy.

In a surprise policy reversal, the Liberals campaigned for acquiring nuclear weapons for the Canadian military.<sup>370</sup> At the polls, the Canadian electorate seemed to side with Pearson, and Diefenbaker and the Tories were defeated in the election. The Liberal government signed the agreement to obtain nuclear-armed Bomarc’s, and the first of these were delivered on December 31, 1963. Having accepted U.S. nuclear warheads on Canadian soil – a proposition whose very consideration by the Diefenbaker government he had aggressively opposed, Pearson explained his nuclear policy. In a national address, Pearson said: ‘I can assure you we will not accept a nuclear role which would make Canada a nuclear power in the fact that she would manufacture or have national control over nuclear weapons.’<sup>371</sup> Pearson added: ‘The role of Canada in the future will not require any enlargement, but would require a diminution of any kind of nuclear arms and equipment.’<sup>372</sup> His solution was that Canada should accept the Bomarc’s and F-101s that the government had requested and later negotiate a way to get

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<sup>370</sup> The election was largely fought on foreign policy, which dominated the government from 1960 to 1963. The perception that the government was unable to manage defence coupled with Diefenbaker’s unwillingness to broker a deal with the opposition Social Credit or New Democratic parties to save his government from a no-confidence motion led to the election. Pearson ran on the platform of assuming nuclear weapons for the Canadian military while Diefenbaker ran on a campaign on sovereignty and the role of American interference. Secondary issues concerned the economy, including Canada’s fledging industries (e.g., the Avro Arrow) and trade relations with Britain. See: Robert Bothwell, *Alliance and Illusion*, 172-178. Michael Carroll echoes that the question of nuclear weapons and Canada-US relations dominated the election. See also: Michael K. Carroll, *Pearson’s Peacekeepers*, 71.

<sup>371</sup> ‘Nuclear Role of Canada,’ *The Washington Post*, Times Herald, Jan. 7, 1964, A10.

<sup>372</sup> ‘Nuclear Role of Canada,’ *The Washington Post*, A10.

rid of them (which is exactly what happened). Canada would not have an independent nuclear role, but would participate in continental defence in a way similar to its role in extended in Europe. In Pearson's own words, 'A U.S. finger would be on the trigger but a Canadian finger would be on the safety catch.'<sup>373</sup> Pearson thus tried to have it both ways by maintaining that though he was still opposed to nuclear weapons Canadian should abide by its agreements.

In the election, Pearson argued that Canada should take on U.S. nuclear weapons only if the U.S. were willing to give control of the weapons to the NATO council. This allowed Pearson to publicly square the acquisition of nuclear weapons with Canada's multilateral and defence responsibilities.<sup>374</sup> Yet, the Liberal government's about-face confounded disarmament advocates both in Canada and abroad.<sup>375</sup> Critics questioned why Canada would participate in nuclear weaponry just when the international community was trying to negotiate alternatives to nuclear proliferation. Such external factors had little influence. However, factors such as the Cuban Missile Crisis – and in particular, the Canadian public's perception of the threat and apparent acceptance of nuclear weapons – and pressure from the U.S. government (which played a significant, if not interventionist, role in the 1963 election) persuaded Pearson to support the acquisition of nuclear warheads.

Others have argued that superpower pressure did not have any relevance on Canada's decision.<sup>376</sup> Lentner, for example, claims that the actions taken by:

Pearson alone, and in conformity with his basic values... The events that helped to shape the decision were both external and internal. United States intervention had little to do with the decision, but had a great deal to do with mobilization of the Canadian population... Finally, the context and boundaries of the decision were fixed by a situation that had been shaped by the interactions of the Canadian Government and the governments of its allies.<sup>377</sup>

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<sup>373</sup> Robert Bothwell, *Alliance and Illusion*, 173.

<sup>374</sup> Howard H. Lentner, 'Foreign Policy Decision Making,' 43.

<sup>375</sup> H.R. Whiteley, 'Canada and Nuclear Arms,' *The Globe and Mail*, (February 1, 1963), 6

<sup>376</sup> Howard H. Lentner, 'Foreign Policy Decision Making,' 62.

<sup>377</sup> Howard H. Lentner, 'Foreign Policy Decision Making,' 42.

This is not entirely accurate given the role that the Americans played. German Chancellor Konrad Adenauer called it a ‘hatchet job’ and one U.S. ambassador remarked that ‘the outcome holds salutary lessons which will not be overlooked by future aspirants to [Canadian] political office.’<sup>378</sup>

In any case, the Americans were pleased to be dealing with a new government in Ottawa. In the summer of 1963, Pearson reassured Kennedy that his government would acquire nuclear warheads and that Ottawa had already drafted an agreement based on an American proposal from the fall of 1962.<sup>379</sup> Pearson explained that some changes had to be made but that these were ‘largely a matter of wording for domestic political reasons.’<sup>380</sup> By August, Canada and the U.S. had reached and signed an agreement for the transfer of U.S. nuclear weapons to Canada under dual-key control.

## 6 Conclusion

Canada’s early nuclear period is characterized primarily by ambivalence and vacillation. Though Canada entered the nuclear age in support of its military allies, Britain and the U.S., once the War ended, such strategic imperatives no longer influenced Canada’s decision-making in the nuclear field. It was not bothered when the Americans ceased to involve Canada in their weapons program. It had almost reflexively decided by then to turn its attention to civilian energy, including scientific research and development. It was not naiveté that accounts

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<sup>378</sup> C. Bourque and Joe Martin, ‘How John F. Kennedy helped Diefenbaker lose an election,’ *The Globe and Mail*, 8 April 2013. Accessed at: [www.theglobeandmail.com/news/politics/how-john-f-kennedy-helped-diefenbaker-lose-an-election/article10844078/](http://www.theglobeandmail.com/news/politics/how-john-f-kennedy-helped-diefenbaker-lose-an-election/article10844078/).

<sup>379</sup> The 1963 Agreement was made public in the early 1980s even though it was considered privileged information and never presented to Parliament. According to the agreement, the locations of the nuclear weapons were to be determined by the Allied Commanders and approved by Canadian and US military authorities. The costs associated with the weapons, including construction, administration, and maintenance of the storage sites, were to be borne by Canada. The custody of the nuclear warheads would be provided by the US.

<sup>380</sup> Patricia McMahon, *Essence of Indecision*, 172.

for this apparent reaction (or rather lack thereof). The Canadians, much like the rest of the world, had witnessed the enormous destructive capabilities of nuclear weapons, and were certainly aware that nuclear technology was something prestigious. Yet, Canada did not covet them for such reasons. Officials like Howe were far more attracted to money than military power. The decision then to develop an industrial nuclear capacity was motivated by an interest, chiefly by top-level officials who had been involved at the outset, in sustaining what had already been starting and by the belief that nuclear technology and materials could be widely profitable.

Developing nuclear weapons was not a possibility that Canadian officials even entertained. I argue that this is because Canada does not match the level of ambition of its more conventionally powerful allies. It is not a coincidence that most contemporary great powers have sought nuclear weapons. Canada was never quite as influential as it was in the period after WWII. Decision-makers at the time were hardly accustomed to a country that wielded so much influence, and so did not think in terms of aggrandizing Canada's power, at least not in a way appreciated by realists. Rather, Canadian officials thought that their moment was fleeting, and that Canada would be wise to construct a liberal, rules-based international system whereby it could secure enduring influence. Yet, the decision not to pursue nuclear weapons, or more precisely the failure to imagine a nuclear-armed Canada, has reinforced the sense of romanticism in Canadian foreign policy during this period. For example, scholars claim that King refused to pursue nuclear weapons for moral reasons.<sup>381</sup> Such flattering assessments of Canadian foreign policy are also common in explaining Canada's subsequent opposition to the question of accepting custody of U.S. nuclear warheads. It is supposed that Pearson opposed the acquisition of nuclear weapons on the grounds that such a move would

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<sup>381</sup> Sean M. Maloney, *Learning to Love the Bomb*, 2.

undermine global disarmament negotiations that were underway by 1961 – a contention that neglects that Pearson, as prime minister, later reversed the stance for political expedience.<sup>382</sup>

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<sup>382</sup> Ernie Regehr, 'Canada and the U.S. Nuclear Arsenal,' In: Ernie Regehr and Simon Rosenblum (eds.), *Canada and the Nuclear Arms Race* (Toronto: James Lorimer & Company, Publisher, 1983), 109.

## CHAPTER THREE

### Fuelling a South Asian Rivalry

There is a tendency to adopt a realist approach when explaining the nuclear behaviour of states, including decisions surrounding nuclear supply. Supply side studies, much like demand side studies, assume states are motivated by strategic gains in the classical military sense.<sup>383</sup> The dominant theory on the matter contends that states provide nuclear assistance to other actors to strengthen their allies and weaken their adversaries.<sup>384</sup> On reflection, one finds this theory is more suited to explaining the nuclear calculus of power-projecting states than that of non-power projecting states.<sup>385</sup> A rivalling theory emphasizes economic factors that encourage or otherwise enable nuclear trade.<sup>386</sup> Perhaps because it originated to assess the risk of illicit nuclear transfers posed by those developing states that had inherited Soviet nuclear weapons,

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<sup>383</sup> It should be clarified here that Fuhrmann and Kroenig emphasize different independent variables – that common adversaries and power-projection affect the likelihood of giving nuclear assistance, respectively. See: Matthew Fuhrmann. *Atomic Assistance: How 'Atoms for Peace' Programs Cause Nuclear Insecurity*. (Ithaca, NY: Cornell University Press, 2012) and Matthew Kroenig, *Exporting the Bomb: Technology Transfer and the Spread of Nuclear Weapons*. (Ithaca, NY: Cornell University Press, 2010).

<sup>384</sup> Examples of strategic theories of nuclear assistance include: Matthew Fuhrmann. 'Spreading Temptation: Proliferation and Peaceful Nuclear Cooperation Agreements.' *International Security* Vol. 34, No 1 (2009a): 7-41; Matthew Fuhrmann. 'Taking a Walk on the Supply Side the Determinants of Civilian Nuclear Cooperation.' *Journal of Conflict Resolution* Vol. 53, No. 2 (2009b): 181-208; Matthew Fuhrmann. *Atomic Assistance: How 'Atoms for Peace' Programs Cause Nuclear Insecurity*. (Ithaca, NY: Cornell University Press, 2012); Matthew Kroenig, *Exporting the Bomb: Technology Transfer and the Spread of Nuclear Weapons*. (Ithaca, NY: Cornell University Press, 2010); Matthew Kroenig. 'Exporting the Bomb: Why States Provide Sensitive Nuclear Assistance.' *American Political Science Review* Vol. 103, No. 1 (2009a): 113-133; Matthew Kroenig. 'Importing the Bomb: Sensitive Nuclear Assistance and Nuclear Proliferation.' *Journal of Conflict Resolution* Vol. 5 No. 2 (2009b): 161-180; and Julian Schofield. *Strategic Nuclear Sharing*. (New York, NY: Palgrave Macmillan, 2014).

<sup>385</sup> For example, Kroenig, who advances a strategic explanation, largely confines his study to relatively powerful states and/or those with a tendency to play great power politics (e.g., China, France, the USSR). He argues a state may provide sensitive nuclear assistance when it cannot project conventional military power over the recipient and will refrain from providing nuclear assistance when doing so would limit its ability to project conventional military power over the recipient. See: Matthew Kroenig, *Exporting the Bomb: Technology Transfer and the Spread of Nuclear Weapons* (Ithaca, NY: Cornell University Press, 2010).

<sup>386</sup> Economic-focused explanations have taken various forms, such as: Jennifer Hunt Morstein and Wayne D. Perry. 'Commercial Nuclear Trading Networks as Indicators of Nuclear Weapons Intentions.' *The Nonproliferation Review* Vol. 7, No. 3 (2000): 75-91; William C. Potter, 'Nuclear Exports from the Former Soviet Union: What's New, What's True.' *Arms Control Today* Vol. 22, No. 1 (1993): 3-10; and Duane Bratt, *The Politics of CANDU Exports* (Toronto: University of Toronto Press, 2006).

it offers little insight as to what induces rich developed countries to export nuclear commodities. Yet, most nuclear suppliers are rich industrialized countries. The majority of nuclear suppliers are also not conventionally powerful (e.g., Australia, Canada, Sweden, etc.). Are such states motivated by economic necessity, or a strategic calculus that allows them to keep their allies strengthened and their enemies enfeebled? Existing theories do not explain the supply decisions of this collection of states.

As demonstrated in the previous chapter, Canada did not exhibit great power aspirations when it eschewed the option for nuclear weapons despite being one of the first countries with the wherewithal to do so. Given that Canada defied popular demand expectations, it is worth considering whether Canada behaves 'strategically' where it concerns nuclear supply. This chapter starts to probe that question. It examines Canada's decision to extend nuclear assistance to India and Pakistan; two countries that rebuffed the non-proliferation standards that were taking shape at the time (and that, to date, remain outside the regime). It also reveals that Canada embarked on nuclear trade with primarily self-interested intentions. These interests, though not strategic in the military sense, were ultimately pragmatic, and were closely tied to the project of building a national identity. Canada was a small but rich country. Due to the special circumstances of the WWII, it amassed an expertise in an area that bestowed international acclaim as well as diplomatic advantages. The early agreements with India and Pakistan helped showcase Canada's nuclear prowess on the international stage but more importantly, Canada's identity in sharp contrast to the Americans who crassly divided the world into spheres of alliances and to the British who were slow to let go of their colonial manners.

The two cases are selected for several reasons. One consideration is that they do not seem to have been made on the basis of strategic gains. Strategic theory contends that states

will sometimes provide nuclear assistance to another to spite a shared enemy. Canada had cordial relations with both South Asian countries. What strategic gains could Canada have won from providing nuclear assistance concurrently to two sworn adversaries like India and Pakistan? An additional consideration in choosing these cases is their historic significance for non-proliferation. India used Canadian-supplied nuclear technology provided in this period to develop its first nuclear weapon.<sup>387</sup> Was Canada aware of the dangers of civilian nuclear transfers at the time, and were they a point of concern when it determined those agreements? The two cases hold promise of providing insight into Canada's early decision-making concerning nuclear transfer.

## 2 Alternative Explanations

Strategic theories claim that countries offer nuclear assistance to strengthen their allies or counter the influence of their adversaries, and that they may be inclined to behave dangerously from a proliferation standpoint to advance aforementioned interests. Some strategic theories claim that countries might extend nuclear assistance to recipients that are not military allies under certain circumstances, such as if the supplier and the recipient are both democracies, or if the supplier and the recipient share a common rival.<sup>388</sup> Matthew Fuhrmann explains that nuclear transfers may take place if a donor aims to strengthen a recipient's democracy (provided, of course, that both are democracies).<sup>389</sup> According to Fuhrmann, this was the case in Canadian-Indian nuclear cooperation.<sup>390</sup> It is rather puzzling then that Canada provided nuclear assistance to Pakistan in the same period despite the rapid disintegration of democracy

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<sup>387</sup> We know that non-proliferation became a factor after the Indian nuclear explosion. After India conducted the nuclear test, Canada attached stringent safeguards to its nuclear cooperation agreements to reduce the risk that its materials would be used for weapons production.

<sup>388</sup> Matthew Kroenig, *Exporting the Bomb*. For a hypothesis on democratic nuclear cooperation, see: Fuhrmann, *Atomic Assistance*. See also: Schofield, *Strategic Nuclear Sharing*, 128.

<sup>389</sup> For a hypothesis on democratic nuclear cooperation, see: Fuhrmann, *Atomic Assistance*.

<sup>390</sup> Matthew Fuhrmann, *Atomic Assistance*, 79

there, and even as Pakistan succumbed to military rule in 1958. Support for democratic brethren thus seems epiphenomenal. If democratic regime type matters, then why did Canada later offer deals to Argentina, China, or Romania and court other undemocratic buyers?

Regime-based theories are also commonly advanced to explain the occurrence of nuclear trade. These hold that the non-proliferation regime establishes a norm, or an obligation to share nuclear materials and technologies with nuclear have-nots. Although discussions on arms controls were underway in the two-decade period covered by this chapter, the non-proliferation regime, which comprises the NPT and the IAEA, did not exist when Canada first began exporting nuclear commodities.<sup>391</sup> As such regime explanations cannot account for early cases.

### **3 India, 1956 – 1977**

After the end of WWII, Canada boasted the world's second largest nuclear infrastructure. Forgoing the nuclear weapons option, Canada turned its efforts towards developing a civilian nuclear energy sector. This industry quickly emerged as one of the most innovative to appear on global markets. Consider that, at present, 47 CANDU (Canada Deuterium Uranium) reactors or their derivatives are operating across the world, 60 percent of which are abroad. Canada's very first export was to India under the Colombo Plan's foreign aid package.<sup>392</sup> The two countries signed a nuclear cooperation agreement, called the Colombo Plan Reactor Project, on April 28, 1956.<sup>393</sup>

Under the terms of the agreement, Canada agreed to provide India with a 40 megawatt (MW) Canada-India Reactor (CIR), half of the initial uranium fuel required for its operation,

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<sup>391</sup> It is worth noting that the idea behind the IAEA was circulating at this time.

<sup>392</sup> First export beyond Manhattan Project partners, U.S. and Britain.

<sup>393</sup> BFSP 162:845. CDEA 1956. Sims, p. 193. India Bilaterals.

and the foreign exchange costs associated with the construction, estimated at \$14 million.<sup>394</sup> Modeled on the Chalk River National Research Experimental (NRX) reactor – which at the time of its construction was the world’s most powerful research reactor – CIR was a true testament of Canadian technological prowess and a symbol of Canadian independence.<sup>395</sup> The U.S. also joined the agreement, agreeing to supply 21 tons of heavy water to the reactor, resulting in the new name, CIRUS. India pledged to the U.S. that the plutonium produced in CIRUS would be used for peaceful purposes, and made the same promise to Canada in a secret annex to the NCA. Still, there were no formal safeguards. Despite India’s assurances, the plutonium reprocessed from CIRUS’s spent fuel was later used to test India’s nuclear device.

Why did Canada provide nuclear assistance to India? Given that the Canadian government largely subsidized the agreement, it seems unlikely that the NCA was motivated by purely economic interests. Were there strategic reasons at play? Such was the case of Indo-U.S. cooperation. For example, the U.S. State Department, faced with intelligence estimates of an imminent Chinese nuclear weapon, considered whether ‘it would be desirable if a friendly Asian power beat Communist China to the punch.’<sup>396</sup>

By contrast, Canada had no grand strategic objective. It had, however, committed to providing India aid through the Colombo Plan, and had come to consider developing

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<sup>394</sup> The reactor’s actual cost was \$24 million.

<sup>395</sup> Canada’s nuclear program used heavy-water (deuterium) natural uranium as a moderator instead of graphite, making it an efficient producer of plutonium. Natural uranium was less expensive, as it did not require the construction of expensive uranium enrichment facilities and thus avoided reliance on American plants. See: G. Bruce Doern, Arsalan Dorman, Robert W. Morrison, *Canadian Nuclear Energy Policy: Changing Ideas, Institutions, and Interests* (Toronto: University of Toronto Press, 2001).

<sup>396</sup> That the world’s leading superpower sought to encourage nuclear weapons proliferation undercuts the agreement presented by Kroenig, which holds that those states that are incapable of projecting conventional power over a recipient resort to such drastic ways of imposing costs on their adversaries. See also: Undersecretary of State for Political Affairs George McGhee to Assistant Secretary of State for Public Affairs Robert Manning, ‘Program to Influence World Opinion with Respect to a Chicom Nuclear Detonation,’ 24 September 1962; decision memorandum by Secretary of State Rusk attached, dated 20 September 1962, Secret Source: RG 59, Central Decimal Files, 1960-63, 793.5611/9-2462.

influence with rapidly decolonizing Commonwealth countries as important. It was also hoped that economic and technical aid could keep developing countries from being wooed by communism. Such was the notion underpinning the Colombo Plan. The idea for a Canadian reactor linked to foreign aid came from Nik Cavell, the administrator of the Colombo Plan, who proposed India as a possible recipient to vice president of AECL, W. Bennett Lewis.<sup>397</sup> Cavell's motives were curiously unrelated to the looming Cold War or other global developments. Rather, Cavell thought that nuclear energy – which was near the peak of its popularity since Eisenhower's speech – would strike a chord with a Canadian population that was economically conservative and chary towards expenditure in foreign lands.

The St-Laurent government agreed that cooperation with the developing world, including in the sensitive field of atomic energy, could be a public-relations win for Canada and also for the West.<sup>398</sup> More importantly, a reactor abroad would generate support for Canadian foreign aid on the domestic level and international publicity for Canada's nuclear industry on the international level. 'This would be concrete evidence that Canada was willing to share her resources and experience with less fortunate people in the world,' echoed C.D. Howe.<sup>399</sup> Indeed, officials reasoned that early bilateral cooperation would advance Canada's 'position for constructing various types of atomic units in Canada or abroad in later years.'<sup>400</sup>

India was an obvious choice. For one, India shared a common history with Canada, as ex-British colonies and members in the Commonwealth of Nations (hereafter the Commonwealth). Second, although poor and energy starved, India was among one of the first countries in the developing world to show a serious interest in having atomic energy. In 1948,

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<sup>397</sup> Robert Bothwell, *Nucleus: The History of Atomic Energy of Canada Limited* (Toronto: University of Toronto Press, 1988), 352.

<sup>398</sup> Bothwell, *Nucleus*, 209, 350.

<sup>399</sup> Bothwell, *Nucleus*, 209.

<sup>400</sup> Cited in Ryan M. Touhey, *Conflicting Visions: Canada and India in the Cold War World, 1946-76*. Vancouver: UBC Press, 2015, 98.

India established an institute, the Atomic Energy Commission (AEC), to look after atomic activities, and Prime Minister Jawaharlal Nehru afforded industrialization the highest priority.<sup>401</sup> Third, the Canadians thought that they could play a useful role in bridging the gap between east and west and the north and south, especially as it had something tangible to offer the Indians.

During this time, however, India was ostentatiously neutral in the Cold War divide. The great powers, Britain and the U.S., found this irksome. The Americans mostly saw India as capricious, whereas the British took insult. India had been the crown jewel in the British imperial crown for two centuries, and the British had expected that having accelerated India's independence would have earned them loyalty in return. (In actuality, the political elite in India was very much imbued with British values and customs. This was understandably difficult to glean in the paranoia that characterized the early days of the Cold War, especially as the Indians would flirt with communism to bait competition between the Soviets and the West when it came to providing India with technical and economic aid.<sup>402</sup>) Even more troubling, the Soviets were courting India, which India opportunely welcomed to garner Soviet recognition of its claim to Kashmir, and to obtain a Soviet veto over any UN resolutions concerning the contested territory.<sup>403</sup>

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<sup>401</sup> Even before President Dwight Eisenhower unveiled the Atoms for Peace program, which held out the potential of peaceful nuclear sharing, Nehru had made India's eagerness publicly known. In October 1952, Nehru stated: 'We are interested in atomic energy for social purposes. Atomic energy represents a tremendous power. If this power can be utilized as we use hydroelectric power, it will be a tremendous boon to mankind, because it is likely to be more available and cheaper than the building of huge hydroelectric works. Therefore, we are interested in the development from the social point of view.' See: Shyam Bhatia, *India's Nuclear Bomb* (Ghaziabad: Vikas, 1979): 89-90. Perhaps surprisingly, Nehru did not react positively to Eisenhower's Atoms for Peace plan a few years later. Nonetheless, India did later take advantage of U.S. training and access to declassified reports, including those on plutonium reprocessing. See: Roberta Wohlstetter, *The Buddha Smiles: Absent-Minded Peaceful Aid and the Indian Bomb* (Los Angeles: Pan Heuristics, 1977), 30.

<sup>402</sup> L.B. Pearson, *Mike: The Memoirs of the Rt. Hon. L.B. Pearson*, Vol 2. (Toronto, 1973), chapter 5.

<sup>403</sup> Feroz Hassan Khan, *Eating Grass: The Making of the Pakistani Bomb*, (Stanford, CA: Stanford University Press, 2012), 23.

Canadian officials, such as Prime Minister Louis St-Laurent, Secretary of External Affairs Lester B. Pearson among others, were less obtuse about the post-WWII climate than their American and British counterparts. The developing world was a crucial battleground in which the Soviet Union and the West competed for hearts and minds. Those in the Department of External Affairs viewed India as a leader among the Neutral and Non-Aligned States (NNA), recognizing that Nehru's eloquent speeches resonated among the councils of the developing world.<sup>404</sup> Personal relations between the leaders of two countries were also strong. Prime Minister Nehru earned the respect of the Canadians for his statesmanship and he, in turn, appreciated St-Laurent and his foreign minister's willingness to treat India with equality. Relations between Canada and India were close in this period. As Dale C. Thomson, a former private secretary to St-Laurent, recalled, 'During the first years of India's independence, relations between India and Canada were so close and cordial that political observers spoke of an Indo-Canadian entente, and even of an Indo-Canadian "love affair."<sup>405</sup> Throughout the decade, the two governments converged on important political issues, such as the Suez Crisis, and Ottawa viewed India as a like-minded nation.

Perhaps no one was more empathetic than Escott Reid, who had been the Canadian high commissioner in New Delhi since 1952. Reid actively advocated for increased Canadian aid to India and closer bilateral relations.<sup>406</sup> These men saw India as a stable and democratic government whose amity was desirable not least because they understood that a large Asian country like India mattered for the unity of the Commonwealth.<sup>407</sup> (Canada was, in a way, responsible for India's retention in the Commonwealth as it had a hand in transforming the

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<sup>404</sup> Dale C. Thomson, 'India and Canada: A Decade of Co-operation 1947-1957,' *International Studies* Vol. 9, No. 4 (1967), 404.

<sup>405</sup> Dale C. Thomson, 'India and Canada,' 404.

<sup>406</sup> Ryan Touhey, *Conflicting Visions*, 77.

<sup>407</sup> Escott Reid, *Envoy to Nehru* (Delhi, 1981): 10. See also: John Holmes, *The Shaping of Peace: Canada and the Search for World Order*, vol. 2 (Toronto, 1982): 201-202.

organization of 'white' dominions into a multiracial and multinational entity.) However, Thomson notes that: 'This respect for India's right to determine its own policies was not purely altruistic.'<sup>408</sup> Assisting India was consistent with Canada's emerging vision of itself in the world as a middle power. The government thus decided that a gesture in the form of a peaceful reactor to India would help achieve many of their goals. Once the domestic funding was secured, the Indians were informed of Canada's interest in providing them with a gift of an NRX reactor.<sup>409</sup>

Much to Ottawa's surprise, India declined this offer.<sup>410</sup> Pearson, who was then secretary of external affairs, lobbied St-Laurent and fellow cabinet members, Howe and Walter Harris, stressing that there 'are very strong political and commercial reasons for making a more definite and more liberal proposal to the Indian government.'<sup>411</sup> Pearson also proposed that cabinet approve an additional \$7 million in order to make the original offer more attractive to the Indians.

Nehru consulted with Homi Bhabha, a distinguished nuclear physicist, entrusted with running the AEC. Bhabha wanted to hold out for more sophisticated reactor like the unfinished National Research Universal (NRU) reactor that the AECL was developing, and suggested shopping the Canadian proposal around in London or Washington for a better offer. (India had begun the construction of the 1-MW Apsara research reactor, with British assistance and fuel that year, and already had exchanges in place with the Americans.<sup>412</sup>) India responded

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<sup>408</sup> Dale C. Thomson, 'India and Canada,' 417.

<sup>409</sup> PCO Records, cabinet conclusions, 30 March 1955.

<sup>410</sup> India had previously sought out Canadian assistance. Bhabha had asked his former Cambridge schoolmate, W. Bennett Lewis, when British reluctance to supply India with heavy water threatened to halt his project. Itty Abraham, *The Making of the Indian Atomic Bomb* (London: Zed Books, 1998): 84.

<sup>411</sup> Ryan Touhey, *Conflicting Visions*, 98. However, Touhey does not cite the original.

<sup>412</sup> The British also supplied fuel consisting of 80 percent enriched uranium. *Apsara, went critical on 4 August 1956*. See: Apsara Research Reactor, NTI, Accessed at: <http://www.nti.org/learn/facilities/818/>.

that it would assume the difference in costs between the two models.<sup>413</sup> Pearson presented the Indian counterproposal to Lewis. A British born and educated nuclear scientist, Lewis had studied alongside Bhabha at Cambridge, and the two men had a good professional and personal relationship.<sup>414</sup> Though sympathetic to his fellow scientist, Lewis bristled at the notion of providing India with a more advanced reactor.<sup>415</sup> The unfinished NRU required a highly trained cadre of scientists and engineers to operate, and he reasoned that the NRX would be more than adequate to train Indian scientists, just as it had for Canadian scientists. Lewis also added that much of the NRU-related information remained classified under an agreement with Britain and the U.S. Howe agreed with Lewis, and authorized the sharing of information exclusively related to the NRX.

The Canadian heavy-water reactor ultimately appealed to India's preference for a home-grown capability. The NRX reactor, unlike others on the market such as the American PWRs, was less costly to operate since it did not require India to construct enrichment plants or to rely on others for enrichment. Besides, the Canadian offer had been the most attractive thus far. It had no restrictions. The Indians notified the Canadians of their acceptance of the offer, just as the Geneva conference commenced to discuss how best Eisenhower's atoms for peace could be actualized.<sup>416</sup> (The reader should be reminded here that Eisenhower's speech referred to the creation of an atomic energy bank of sorts under the auspices of the UN.)

One might wonder whether senior Canadian officials had any concerns about proliferation, particularly given that their reactor relied on heavy-water. It was known that the

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<sup>413</sup> Nehru to St. Laurent, 31 July 1955, in DCER Volume 21: 1955. Accessed at : <http://epe.lac-bac.gc.ca/100/206/301/faitc-aecic/history/2013-05-03/www.international.gc.ca/departement/history-histoire/dcer/1955/menu-en.asp>.

<sup>414</sup> Ruth Fawcett, *Nuclear Pursuits: The Scientific Biography of Wilfrid Bennett Lewis*, (Montreal & Kingston: McGill-Queen's University Press, 1994).

<sup>415</sup> Ryan Touhey, *Conflicting Visions*, 99; Bothwell, *Nucleus*, 356.

<sup>416</sup> In the summer of 1955, the Geneva conference as convened, bringing together scientists, bureaucrats, and political leaders from across the globe to initiate discussions on the future of atomic energy.

reactor produced weapons-grade plutonium.<sup>417</sup> Jules Léger, undersecretary for external affairs, mused: ‘There might also be some problems regarding control over the plutonium produced by any reactor which we might supply, but this could be surmounted, especially if we assume that a country like India will acquire a reactor from some source (friendly or otherwise) and will be producing this material.’<sup>418</sup> Though heavy-water reactors were recognized to be more proliferation friendly, the Canadians highlighted this feature as an advantage over American and British reactors. However, it seems that the Canadians trusted the Indians with the technology, or at least, gave little thought to the possibility of the underdeveloped nation developing nuclear weapons. In fairness, India’s nuclear intentions were never easy to read.<sup>419</sup> India exhibited ambivalence towards nuclear weapons. For instance, as early as in 1948, Nehru stated that, ‘We must develop this atomic energy quite apart from war – indeed I think we must develop it for the purpose of using it for peaceful purposes... Of course, if we are compelled as a nation to use it for other purposes, possibly no pious sentiments of any of us will stop the nation from using it that way.’<sup>420</sup> It is unfortunate that there was no international agency surrounding the export of nuclear technology at the time. In the absence of a safeguards regime, competition between the nuclear suppliers, as it were, was the name of the emerging game.

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<sup>417</sup> Reliance on natural uranium in its metal form means irradiating the fuel for a short time before removal. This process, known as ‘low burn up,’ produces significant quantities of weapons-grade plutonium, however. See: D.G. Hurst (ed), *Canada Enters the Nuclear Age: A Technical History of the Atomic Energy of Canada Limited*. (Montréal-Kingston: McGill-Queen’s University Press, 1997). 5.

<sup>418</sup> Robert Bothwell, *Nucleus*, 353.

<sup>419</sup> Research has debated whether India had planned on nuclear weapons from the outset. It was clear that India was determined to establish a sophisticated nuclear program on par with those of developed countries and that this determination encouraged it to seek nuclear assistance from Britain, Canada, the Soviet Union, and the United States. See: Scott D. Sagan, *The Causes of Nuclear Weapons Proliferation*, *Annual Review of Political Science*, Vol 14 (June 2011), 231. See also: George Perkovich, *India’s Nuclear Bomb: The Impact on Global Proliferation*, (University of California Press, 1999); Abraham, *The Making of the Indian Atomic Bomb*.

<sup>420</sup> Raj Chengappa, *Weapons of Peace: Secret Story of India’s Quest to Be a Nuclear Power*, (Harper Collins Publishing Ltd. 2000), 79.

Ottawa muted proliferation concerns due to the fear of missing lucrative contracts.<sup>421</sup> According to Ron Finch, 'Vested interests were fearful that their growth and profits would be threatened by serious international control mechanisms.'<sup>422</sup> To be sure, the AECL was not particularly thrilled by the prospect of arms controls. Unlike Britain and the U.S., atomic activities in Canada were almost entirely directed towards energy technology, and so the stakes for Canadian industry were considerable. The economic benefits of nuclear cooperation were also not insignificant. For example, by 1950, Canada had collected \$1.5 billion in uranium sales to the U.S. alone.<sup>423</sup> Though the deal with India was heavily subsidized by Ottawa, it was partially intended to test the export waters with the hope of paving the way for future commercial sales.<sup>424</sup> It may well have been an economic marketing strategy, known as the loss leader, whereby a commodity - in this case, a nuclear reactor - is sold below market value in order to lure clients into future purchases or related goods and services (e.g. after care) over a longer horizon. The loss leader strategy is a very common practice when companies first enter the market. Given that the AECL was new, and the deal to India was the first (notwithstanding agreements with Britain and the U.S.), this seems to be the most compelling reason for why Canadian decision-makers approved of the transfer of an unsafeguarded and subsidized nuclear reactor to India. They wanted to break into the nuclear marketplace. One would be right to ask why Canada should have been a vanguard for non-proliferation. From a non-proliferation standard, the Canadian agreement was not any more or less risk acceptant than the one the

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<sup>421</sup> Ron Finch, *Exporting Danger: A History of the Canadian Nuclear Energy Export Programme* (Montréal: Black Rose Books, 1986). See also: Matthew Fuhrmann, *Atomic Assistance*; Duane Bratt, *The Politics of CANDU Exports*.

<sup>422</sup> Ron Finch, *Exporting Danger*, 77. See also: Doern, Dorman and Morrison, *Canadian Nuclear Energy Policy*.

<sup>423</sup> Ron Finch, *Exporting Danger*, 77.

<sup>424</sup> See: Duane Bratt, *The Politics of CANDU Exports*; Robert Bothwell, *Nucleus*; Ron Finch, *Exporting Danger*; and Constance D. Hunt, 'Canadian Policy and the Export of Nuclear Energy,' *The University of Toronto Law Journal*, Vol. 27, No. 1 (Winter, 1977): 69-10.

Americans struck with India. Weak and nebulous safeguards were not unusual for the time. Given that the Americans – with arguably greater power and responsibility – did not indicate safeguards, it is unreasonable to expect Canada to have behaved otherwise.

It should also be noted that when the agreement with India was struck, the possibility that an atomic energy agency would be established was rated low. That projection quickly changed. By the end of the summer, what had seemed incredible just a few months earlier was imminent, and it forced the Canadians to face the implications of their unrestricted gift to India.<sup>425</sup> Canada expected India to voluntarily accept safeguards on CIR. This was naive. India vocalized opposition to controls and safeguards throughout the Geneva conference, and later teamed with the Soviets to avoid any meaningful inspection role for the nascent agency, the soon-to-be IAEA. Those in the DEA were disenchanted – a sentiment not shared by the AECL, which rather cogently observed that, ‘If the Indians did not get their reactor from Canada they would get it somewhere else.’<sup>426</sup>

CIRUS meanwhile moved forward. After all, the reasons that had encouraged Canada to make such an offer in the first place had not altered. A delay in the international negotiations on arms control in December 1955 also meant that cabinet proceeded in reviewing the NCA in isolation of safeguards considerations. CIRUS was thus concluded before any international policies were established to regulate nuclear transfers, though Ottawa continued to press India for assurances that the reactor not be employed for military ends. India gave its word, but there was nothing in the form of verifications. And so, construction went ahead and was completed in July 1960.<sup>427</sup>

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<sup>425</sup> See: DEA file 502-19-AC-40. Léger to Pearson, 1 December 1955, enclosing draft memorandum for cabinet, ‘Proposed International Atomic Agency.’

<sup>426</sup> Robert Bothwell, *Nucleus*, 356.

<sup>427</sup> However, an exchange of letters concerning safeguards on Canadian fuel was signed on February 6, 1960. See: BFSP 162:845. CDEA 1956. Sims, p. 193. India Bilaterals. See also: Robert Bothwell, *Nucleus*, 357.

### 3.1 RAPP-I and RAPP-II

The CIRUS project was not yet complete when India requested Canada's help in building it another nuclear reactor, a CANDU. Although Indian intransigence on safeguards had frustrated some in the DEA, India remained an important partner in the developing world. This time, safeguards were ranked higher, not least because Canada helped establish the 'Ottawa Group' to support IAEA safeguards.<sup>428</sup> Canada had also signed onto the IAEA and in doing so, agreed to place safeguards on exports of reactors over 100 megawatts. Conversely, India's chief nuclear negotiator, Bhabha, had left little doubt as to where India stood on the matter of safeguards. In a series of heated discussions at the IAEA, the Indians made it plain that they thought safeguards was a ploy aimed to retain the nuclear nations' oligarchic hold on nuclear technology and to shut out newcomers.

India would be opposed to any conditions that they might wish to attach to the reactor – of that the Canadians were certain. However, they were less confident as to whether the new rules concerning nuclear exports would be observed by other suppliers. Thus, the Canadians decided that it would be unwise to allow such restrictions to fetter negotiations with the Indians. There was an additional element of shrewdness to the decision, quite apart from Canada's lack of good faith in other suppliers. Rather, the Canadians thought that a better strategy would be to put the matter of safeguards aside in order to get the Indians committed to another Canadian reactor.<sup>429</sup> Negotiations proceeded without any direct talk of safeguards.

There were other factors to consider. These primarily related to the sustainment and expansion of the nuclear industry. A second deal with India would be a conspicuous

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<sup>428</sup> The group included Australia, Britain, the United States, and South Africa.

<sup>429</sup> Robert Bothwell, *Nucleus*, 360-361.

endorsement of Canadian nuclear technology; Bhabha was renowned in his field, and surely others would take notice of his choice of the CANDU.

Although some officials argued that Canada ought to use the opportunity to compel India to implement safeguards on the prior CIRUS agreement, ‘the Canadian domestic nuclear industry, and its allies in the Department of Industry, Trade, and Commerce (ITC) prevented renegotiations of the CIRUS deal.’<sup>430</sup> As one official recalled: ‘We knew that [CIRUS] was naked. Here was the chance to do something about it. But the commercial people kept saying that if we didn’t give the Indians what they wanted, they’d get it elsewhere.’<sup>431</sup> Indeed, in my interviews, it was acknowledged that even today industries continue to lobby the government.<sup>432</sup> One senior official at Global Affairs Canada remarked: ‘There is no question about [industrial pressures]. I would expect industries to lobby the government hard: If we don’t do this we will lose market shares. Non-proliferation arguments are countered because our partners are doing it anyway.’<sup>433</sup> This supports Finch’s claim that, ‘the Canadians were fully aware of the hazards involved in the continued development of the Indian nuclear program but considered the hazards of not selling to be greater.’<sup>434</sup>

Canada and India finally concluded an agreement on December 16, 1963 for the construction of the 100 MW Rajasthan Atomic Power Plant (RAPP-I). Under the terms, Canada agreed to provide India with uranium fuel for nuclear power. In contrast to the CIRUS agreement, it included an explicit ‘peaceful purposes only’ clause and access for

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<sup>430</sup> Duane Bratt, *The Politics of CANDU Exports*, 98.

<sup>431</sup> Peter Pringle and James Spigelman, *The Nuclear Barons* (New York, NY: Holt, Rinehart and Winston, 1981), 377.

<sup>432</sup> Author interview with Ernie Regehr, Former Expert Advisor to Government of Canada. Ottawa, Canada. 26 June 2014.

<sup>433</sup> Author interview with Senior Official at Department of Foreign Affairs, Trade, and Development (DTATD, now called GAC). Gatineau, Canada. 19 June 2014.

<sup>434</sup> Ron Finch, *Exporting Danger*, 80.

Canadian inspectors.<sup>435</sup> The Agency was not mentioned, as the IAEA had yet to establish safeguards procedures.

Just as construction for RAPP-I began in the spring of 1964, the Indians made a request for RAPP-II only to find the Canadian position less flexible than in the past. External Affairs Minister Paul Martin Sr. was strident in the government's insistence on safeguards. The AECL made its usual lamentations, stating that 'It would be a great pity if Canadian industry were denied the opportunity to participate in this work by reason of the application of a political decision on safeguards of doubtful merit.'<sup>436</sup> The DEA agreed that Canada should not be hamstrung by a rigid insistence on safeguards.

Ottawa had toughened its stance on safeguards. This was, in part, motivated by security concerns about the horizontal spread of nuclear weapons. The threat of nuclear proliferation was indisputable once China conducted a successful nuclear test in 1964. It also happened to force an agreement between the two superpowers, the U.S. and the USSR, on the desirability of an organization that could slow the pace of proliferation. So, what would eventually become the NPT was in the works when India requested RAPP-II, and Canada strongly endorsed the cause.

Another reason for this more serious position on safeguards was motivated by the desire to preserve Canada's image of an honest broker. Canada had worked hard to project an international image distinguished from the perceived bluster, machinations, and insincerity of its more powerful allies. This image was threatened when Canada was accused of applying a double standard to its nuclear exports. The charge was true: Canada had indeed differentiated between its old Manhattan Project partners and the rest of the world, requiring only the latter

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<sup>435</sup> Department of External Affairs, Doc; RG25 Box 380 14001-2-6-pt8 (24 May 1961).

<sup>436</sup> Duane Bratt, *The Politics of CANDU Exports*, 107.

to accept a non-military clause on exports. The insinuation was troublesome enough to lead cabinet to decide on a non-weaponization limitation on all recipients of Canadian uranium supplies in 1965.<sup>437</sup> After all, Ottawa could not very well claim to be a friend to developing nations if it were seen in such negative light.

With non-proliferation increasing in importance, Ottawa sought to amend the safeguard conditions on the RAPP-I agreement during the negotiations for RAPP-II. The Indians resisted Canadian efforts to upgrade the existing safeguards and to accept full-scope safeguards on Canadian sourced nuclear material. India refused, ostensibly because it realized that the adoption of the full-scope safeguards would place the whole of its nuclear program under IAEA regulations and inspections. The Canadians expected that obtaining Indian acceptance would be difficult, but continued to press India to accept safeguards beyond bilateral inspections even when India threatened to purchase future reactors from France. This time, however, External Affairs was inflexible on the condition for IAEA inspectors and sanctions for non-compliance on RAPP-II.<sup>438</sup>

With the tragic death of India's toughest negotiator, Bhabha, in a plane crash, India eventually accepted a compromise brokered by the AECL. This nuclear agreement placed more rigorous safeguards on the new reactor than had been on the RAPP-I. They included provisions to allow IAEA inspectors to verify that the reactor was not used for weapons purposes.<sup>439</sup> Three years later, on December 16, 1966, negotiations were finalized. Under the terms, Canada agreed to build a second reactor in Rajasthan, the 200 MW power reactor, which went critical in August 1972.

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<sup>437</sup> 'Canada's historical role in developing nuclear weapons,' Fact Sheets, Canadian Nuclear Safety Commission (28 May 2012). Accessed at: [nuclearsafety.gc.ca/eng/resources/fact-sheets/Canadas-contribution-to-nuclear-weapons-development.cfm](http://nuclearsafety.gc.ca/eng/resources/fact-sheets/Canadas-contribution-to-nuclear-weapons-development.cfm). This was a precursor to the non-military use proscription on other Canadian exports.

<sup>438</sup> Robert Bothwell, *Nucleus*, 368.

<sup>439</sup> George Perkovich, *India's Nuclear Bomb*, 130-31.

Two years later, on May 18, 1974, India successfully conducted a nuclear test, Pokhran-1 (also referred to by its codename, Smiling Buddha).<sup>440</sup> The Canadian government was caught flatfooted. Ottawa accused India of violating the terms of the agreement. Pierre E. Trudeau, who was at the time prime minister, was furious. India's denotation happened to coincide with a federal election campaign.<sup>441</sup> The Liberals had to account to the electorate. The government denied having had any prior knowledge of Indian intentions and froze aid to India, and threatened to retaliate by cancelling cooperation on a previously established deal to provide nuclear energy assistance. By then, the threat was amounted to little more than a 'gesture.'<sup>442</sup> Not all countries reacted like Canada. France, for example, sent India a congratulatory message in 1974.<sup>443</sup> In the aftermath of this public fiasco, Canada significantly tightened its nuclear export policy.

A former high-ranking bureaucrat recalled, to the author, that: 'After the 1974 explosion, nuclear exports to India and Pakistan were temporarily halted. By the end of 1976, when neither India nor Pakistan would accept Canada's new policy requirements, Canada had terminated all bilateral nuclear cooperation with both countries.'<sup>444</sup> (The same official acknowledged, 'Certain forms of nuclear safety assistance were subsequently permitted for Pakistan and in recent years a new bilateral nuclear cooperation agreement has been concluded with India.'<sup>445</sup>) However, India was no longer fully reliant on Canadian nuclear technology and material assistance, and while nuclear suppliers customarily provide turnkey assistance (that is, they essentially build the facility for the recipient without offering training in the

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<sup>440</sup> India described it as the explosion of 'peaceful nuclear device.'

<sup>441</sup> Robert Bothwell, *Alliance and Illusion: Canada and the World 1945-1984* (Vancouver, University of British Columbia Press, 2007), 299.

<sup>442</sup> Gordon Edwards, 'Canada's Nuclear Industry and the Myth of the Peaceful Atom,' In: Ernie Regehr and Simon Rosenblum (eds.) *Canada and the Nuclear Arms Race* (Toronto: James Lorimer, 1983), 132.

<sup>443</sup> They later retracted the telegram.

<sup>444</sup> Author interview with Anonymous, Retired High Ranking Bureaucrat, Ottawa, 17 June 2014.

<sup>445</sup> Author interview with Anonymous, Retired High Ranking Bureaucrat, Ottawa, 17 June 2014.

technical know-how), Canada had already supplied Indian nuclear physicists with blueprints and designs. Still, Canada's decision to refuse future nuclear assistance retarded India's progress even if there were other suppliers willing to fill the void.<sup>446</sup>

Though the incident is regarded as a watershed moment for Canada's nuclear export and non-proliferation policy, it is perhaps not well known that the Canadian government continued to hold clandestine nuclear negotiations with India even after the 'Smiling Buddha' test. George Perkovich reveals that in August 1974, three months after the nuclear test, Canada conducted secret talks on a deal to restore a reactor in Rajasthan.<sup>447</sup> Two years later, in 1976, senior officials from both countries submitted a proposal to reopen nuclear cooperation to Cabinet.<sup>448</sup> It was only after this agreement was rejected by Cabinet that the government enacted the moratorium on nuclear trade with India, which remained intact until 2012.

#### **4 Explaining Indo-Canadian Nuclear Cooperation**

The case of Indo-Canadian nuclear cooperation does not fit the existing theories of supply. Economics was not a key driver, considering that Canada, in the post-war period, was one of the wealthiest countries in the world. It was not hard-pressed for foreign currency. The Canadian government subsidized the agreements. Although subsidies are typical of reactor sales, Canada sold India a reactor at a loss – an offer it hoped India would accept. The most plausible explanation is that Canada was pursuing an economic and political marketing strategy. Commercially, it was subscribing to the loss leader business strategy. The AECL was fairly new. It needed clients if it was to survive in the nuclear market. At the same time, officials

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<sup>446</sup> Other countries also continued to provide assistance. For example, the United States continued to supply enriched uranium to the Tarapur reactor during this period.

<sup>447</sup> George Perkovich, *India's Nuclear Bomb*.

<sup>448</sup> George Perkovich, *India's Nuclear Bomb*.

realized that they were sitting on an impressive technology that was in high demand. If Canada could enter the nuclear market by way of India, then it would achieve both economic and political objectives: the AECL could, in time, collect on its initial investment while the world would have to recognize that Canada, however small, could make an imprint too.

Strategic imperatives, conventionally defined, also did not motivate Canada to provide nuclear assistance to India. Some scholars, such as Fuhrmann and Bratt, have argued that India's geostrategic position between the West and the communist Eastern bloc encouraged Canada to trade with it. This is true to the extent that Canada believed that developing countries were susceptible to the allure of communism and that aid to such countries could help them in resisting the Soviets. Apart from that, there was no strategic considerations. Canada was not seeking to enhance India's military strength at the expense of a common Indo-Canadian enemy. That Canada denied India's request for sensitive nuclear materials during the Sino-Indian War even though China was, by the Cold War considerations, a communist adversary further demonstrates that Canada was not playing great power politics.<sup>449</sup>

Canada was playing middle power politics. Though technically independent since the passing of the Statute of Westminster in 1931 and the responsible government act in 1933, Canada was widely regarded as a British dominion. It did not help perceptions that Ottawa continued to defer to diplomats in Whitehall on most matters of foreign affairs. By the end of the brutal Second War, Canada occupied an inflated international position due to the devastation of the European powers. Some Canadian officials recognized that this was a vacuum that Canada filled, but only temporarily, and that an attempt should be made to retain

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<sup>449</sup> India and China were bitter rivals. India was left powerless to respond to China's massive attack during the Sino-Indian War in October 1962. While it usually looked towards the Soviet Union to balance the Chinese, the Soviets, who were engaged in a showdown with the Americans in Cuba, chose to come to the aid of their communist brethren. This provided another motivation for India's possible acquisition of a nuclear weapon. India also resented that China, a country with a similar size, population, and state of development, was granted a seat on the Security Council.

a modicum of future influence. Thus, Canada embarked on a project to remake itself as a middle power – not quite a major power, but neither a trifle.<sup>450</sup>

Once Louis St-Laurent became prime minister in 1948, he sought to transform Canada from an isolationist former colony to an active middle power. Under his direction, the Canadian government focused on the task of carving its own foreign policy and forging a national identity – one that would distinguish Canada as a state in its own right rather than an outpost of Great Britain. Canada would no longer idle on sidelines until called into action by Britain, but would assume the part of an active, independent, and responsible global actor. Under St-Laurent, Canada became a strong proponent of the UN and NATO.<sup>451</sup> For the makeover to work, Canada would have to develop and expand diplomatic relations. This would not be easy. The Canadian public was wary of foreign entanglements, and then there were linguistic and regional cleavages to consider. It was thought that these might be overcome if outreach began within the Commonwealth and the *Organisation internationale de la Francophonie* (OIF; hereafter, la Francophonie), whose members were perceived to share values with Britain and France.

Canada's decision to provide India with nuclear assistance was not intended to help a strategic ally. There is no evidence to support that Canada intended to provoke India to proliferation, or was in any way amenable to proliferation in that country. This contrasts with perspectives in the U.S. State Department, where the potential strategic advantage of facilitating proliferation in India was debated.<sup>452</sup> Nor was the deal intended to generate

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<sup>450</sup> Adam Chapnick, *The Middle Power Project: Canada and the Founding of the United Nations*, (Vancouver: University of British Columbia Press, 2005).

<sup>451</sup> Before succeeding Mackenzie King as prime minister, St-Laurent had been the Secretary of State for External Affairs – a portfolio that King had typically retained himself, and under his tenure, the Canadian delegation made a significant contribution to the founding of the UN. See: Adam Chapnick, *The Middle Power Project*.

<sup>452</sup> It is worth noting here that, at the time, the Americans assessed that Nehru would need serious convincing to develop nuclear weapons.

economic profits – though it was considered as important for future trade.<sup>453</sup> Rather, the decision was part and parcel of a far more modest and cautious foreign policy objective – to foster a uniquely Canadian global identity.

Cooperation with India on nuclear matters was intended to win Canada international recognition and influence. Reactors abroad promised both. They were a tangible and undeniable measure of Canada's impressive technological expertise. And they held cachet. States were impressed by the new technology, and after Atoms for Peace paved the way for nuclear sharing, states were clamouring for it. Canadian officials recognized that reactors gave Canada a certain edge. Reactors thus became an important instrument of statecraft. They helped advance Canada's new foreign policy agenda, proving that Canada, no matter how small, could compete with Britain and the U.S. for the sale of nuclear technology.<sup>454</sup>

In contrast to its great powers, Canada did not seriously worry about the proliferation. American and British intelligence reported, as early as in the 1960s, that India might weaponize using Canadian technology.<sup>455</sup> Why did Canada neglect indications of India's ambitions, if not for some higher strategic imperative? Ralph Lysyshyn, a former Director in the Arms Control and Disarmament Division of (the then) Department of Foreign Affairs and International Trade (DFAIT), admitted to the author, that the Canadians were 'probably naïve at first.'<sup>456</sup> Perhaps it was naiveté. Perhaps it was difficult for the Canadians to conceive that India would succeed. In any case, this perception fueled India's quest. As the former weapons program leader, Raj Ramanna, put it: 'For us it was a matter of prestige that would justify our

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<sup>453</sup> Author interview with Ernie Regehr, Former Expert Advisor to Government of Canada. Ottawa, Canada. 26 June 2014.

<sup>454</sup> Robert Bothwell, *Nucleus*, 358.

<sup>455</sup> J.G. Hadwen, 'A Foreign Service Officer and Canada's Nuclear Policies,' In: David Reece, (ed.) *Special Trust and Confidence: Envoy Essays In Canadian Diplomacy*. (Ottawa, Carleton University Press, 1996): 161.

<sup>456</sup> Author interview with Ralph Lysyshyn, Former Director, Arms Control and Disarmament Division – Foreign Affairs and International Trade and former Ambassador to Russia. Ottawa, Canada. 3 July 2014.

ancient past. The question of deterrence came much later. Also, as Indian scientists we were keen to show our Western counterparts, who thought little of us those days, that we too could do it.<sup>457</sup>

However, it also seems plausible that the Canadians were willing to accept the consequences in the event that the Indians did betray them. Canadian officials like Jules Léger and others raised the issue of weapons proliferation so the possibility was, at least, acknowledged. In those days, there were no arms control regimes and therefore no constraints, strategic or otherwise, to consider besides the possibility of losing the sale to a less scrupulous supplier. The Canadians had no reason to hold their bilateral nuclear agreements to a higher standard than that which was observed by other nuclear suppliers.

The Canadian government claimed that it was blindsided when India tested its nuclear device. Yet, a recently declassified conversation between External Affairs Minister Mitchell Sharp and his American counterpart, Secretary of State Henry Kissinger casts doubt on that claim:

Mr. Sharp: We had written a note to them in 1971 warning them against [weaponization]. Mrs. Gandhi had said, 'It's all hypothetical.'

Mr. Edgar Ritchie, the Undersecretary of State for External Affairs, who was also present, interjected: The question is also about protecting the Non-Proliferation Treaty. Not India, but the others.

Mr. Sharp: How would I justify it to Canadians to send them hundreds of millions in economic benefit if they are putting hundreds of millions into peaceful nuclear explosions?

Dr. Kissinger: They are also spending billions on defence.

Mr. Sharp: They say it is for industrial development.

Dr. Kissinger: That is total nonsense.<sup>458</sup>

Certainly, Kissinger was incredulous.

India's actions had caused Canada embarrassment. And that was a 'threat' that Canada

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<sup>457</sup> Raj Chengappa, *Weapons of Peace*, 82

<sup>458</sup> 'Indian Nuclear Explosion; World Food Conference; Pacific Coast Tankers; NATO Declaration; Middle East; Trade Bill,' Memorandum of Conversation. 18 June 1974. The White House, Washington, DC.

would take seriously. The Liberal government unveiled changes to Canada's nuclear export policy with an announcement that: 'We wish to avoid contributing to the proliferation of nuclear weapons while at the same time satisfying the legitimate requirement for uranium and technology of countries which demonstrate the intention of restricting Canadian assistance only to peaceful non-explosive purposes.'<sup>459</sup> By the 1970s, Canada was no longer seen as a British lackey but as an honest and committed multilateralist by both its own citizens and by other actors in the international system.

That India had used Canadian-supplied material to violate the non-proliferation norm reflected badly on Canada's commitment to non-proliferation regimes. Consider, for instance, that the NPT did not have a discernible effect on constraining Canada's decision to export to non-signatories. Even after the NPT came into force in 1970, Canada continued to supply nuclear technologies and materials to non-NPT states (e.g., Argentina, which will be discussed in the next chapter).<sup>460</sup> This suggests that institutional commitments and concerns about non-proliferation were not highly prioritized at the time. It was not until Canada's involvement in India's nuclear test became widely known that the government vowed to provide assistance to only those states that have signed the NPT. Indeed, after 1974, Canada suddenly became 'very conscious of dangers of selling to regimes that who may be willing to weaponize.'<sup>461</sup>

## **5 Pakistan, 1959 - 1977**

Canada and Pakistan signed a nuclear cooperation agreement on the peaceful uses of atomic energy on May 14, 1959. Pakistan was interested in the CANDU heavy water-type nuclear reactor that Canada had supplied the Indians. However, the Pakistanis could ill-afford the \$7-

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<sup>459</sup> House of Commons Debate, 30th Parliament, 2nd Session: Vol. 3, 2255.

<sup>460</sup> Gordon Edwards, 'Canada's Nuclear Industry and the Myth of the Peaceful Atom,' 143.

<sup>461</sup> Author interview with Ralph Lysyshyn, Former Director, Arms Control and Disarmament Division – Foreign Affairs and International Trade and former Ambassador to Russia. Ottawa, Canada. 3 July 2014.

million reactor.<sup>462</sup> Extensive negotiations ensued until another agreement was reached between the Canadian General Electric Company (CGE) and Pakistan to build a 137 MW CANDU nuclear reactor near Karachi.<sup>463</sup> The agreement for the construction of the Karachi nuclear power station, known as KANUPP, was signed on December 24, 1965. Like India, Pakistan received approximately \$51 million in concessional financing in order to purchase KANUPP.

In contrast to RAPP-II, the agreement was for a turnkey project, meaning that the Canadians would complete the construction of the plant and turn the finished product over to the Pakistanis. This seems to have been a precaution. Pakistan also agreed to allow Canadian inspectors onsite access, though it protested that no such safeguards were placed on the CIRUS given to India.<sup>464</sup> Agha Shahi, who negotiated the agreement, recalled that: ‘When the Indians got this CIRUS reactor, 40 MW with no restrictions, then we became concerned. I tried to get the same terms for our CANDU reactor, but the Canadians insisted on stringent measures. I was arguing that we couldn’t accept discriminatory terms. But in those days, our economic and finance ministers were so strong, and they were always looking for foreign aid... other people higher up in the ministries overruled me...so we signed on the dotted line, but under very stringent safeguards.’<sup>465</sup> In any case, the Pakistanis were not yet interested in developing nuclear weapons. They were, however, attuned to the debate on non-proliferation norms that was starting to take place, and so they accepted Canadian terms, knowing that the alternative meant that they would have to seek fuel from a third party in an increasingly restricted environment.

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<sup>462</sup> Feroz Hassan Khan, *Eating Grass*, 30

<sup>463</sup> As explained in the House of Commons, ‘The role of Atomic Energy of Canada in this matter is to act as adviser, but the negotiator, the contractor who will manufacture, deliver and guarantee the apparatus will not be the Atomic Energy of Canada; it will be Canadian General Electric.’ CGE removed itself from the nuclear industry in 1968. See: House of Commons Debates, 26th Parliament, 2nd Session: Vol 9, 9766.

<sup>464</sup> Duane Bratt, *The Politics of CANDU Exports*, 102.

<sup>465</sup> Feroz Hassan Khan, *Eating Grass*, 55.

Pakistan was India's adversary, formed in 1947 through a partition of the old British India. It was both smaller and less developed than India, however. Whereas India was unabashedly neutral but democratic; Pakistan clung determinedly to the Western camp and quickly degenerated into autocratic military rule. Pakistan did not join NAM.<sup>466</sup> Instead, it belonged to several U.S.-led alliances. In 1954, it joined the U.S.-sponsored alliance, the South-East Asia Treaty Organization (SEATO), and the following year, Pakistan, alongside Iran and Turkey, formed the U.S.-backed military alliance, the Central Treaty Organization (CENTO, formerly, the Baghdad Pact).

During the cold war, autocracies were tolerated (and often rewarded) so long as they did not display communist tendencies. For this reason, the U.S. favoured Pakistan to the capricious India. Secretary of State John Foster Dulles described it as 'one country with a moral courage to do its part in resisting communism.'<sup>467</sup> Pakistan was a country for '[he] would do anything,' then Vice President Richard Nixon exclaimed. (He was not so enamoured with India, remarking that he found Prime Minister Nehru to be 'the least friendly leader he had met in Asia.'<sup>468</sup>) This affection did little to reduce Pakistan's insecurity vis-à-vis India, and over time, the Pakistanis found the relationship to be more burdensome than beneficial.<sup>469</sup>

In the 1950s, the Pakistani program lagged behind that of India. The British had supported the creation of the Indian Council for Scientific and Industrial Research (ICSIR) in

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<sup>466</sup> It joined officially in 1979.

<sup>467</sup> Feroz Hassan Khan, *Eating Grass*, 21-22.

<sup>468</sup> Feroz Hassan Khan, *Eating Grass*, 22

<sup>469</sup> While Pakistani leadership appreciated the promise of defence in the event of Soviet aggression, they also wanted U.S. protection from India. Washington, however, wanted to avoid inserting itself in India-Pakistan disputes, and stipulated any military aid supplied to the Pakistani Army was not to be misused for aggression. In addition, Pakistan's alliance with the United States risked Soviet enmity. For instance, Pakistan leased the U.S. military a base in Peshawar in exchange for conventional arms transfers – something that raised the ire of the Soviets. Nikita Khrushchev issued a stern warning to Pakistan: 'If any American plane is allowed to use Peshawar as a base of operations against the Soviet Union, we will retaliate immediately.' Ayub Khan, in response, told the Soviets that Peshawar would no longer serve as a base for American offensive weapons. See: Feroz Hassan Khan, *Eating Grass*, 37, 43.

1942 in what was then British India. After partition, all of the scientific laboratories were found on the Indian side. To redress this, in 1951, Pakistan opened the Pakistan Council for Scientific and Industrial Research (PCSIR). Pakistan's founder Muhammad Ali Jinnah hoped to develop nuclear energy in the country, but his ambitions were curtailed by the lack of trained physicists and engineers. Reassurance was soon to be found in the newly launched Atoms for Peace program, through which the U.S. provided training opportunities to foreign nuclear scientists and engineers at the Argonne National Laboratory, near Chicago. The Pakistanis actively participated. By 1956, the government created the Pakistan Atomic Energy Commission (PAEC) in order to facilitate the development of atomic energy research and infrastructure. Pakistan still required external support, and so Pakistani foreign minister Zafarullah Khan asked Washington for assistance while reassuring the Americans that Pakistan was not after nuclear weapons.<sup>470</sup>

In August 1957, Pakistan signed an NCA with the U.S.<sup>471</sup> According to Feroz Khan, 'Under the agreement the United States would supply a research reactor to Pakistan and help with the design, construction, and operation of power reactors, so long as the total assistance did not exceed \$350,000. This small dollar amount meant that Pakistan could afford only a swimming pool-type reactor, a design suitable for research and training but not power generation.'<sup>472</sup> The PAEC was displeased as it wanted a heavy water reactor like the CP-5, but the U.S. had refused.

The following year, in 1958, Ayub Khan, a former Army Chief General, seized the Pakistani presidency through the 'October Revolution.' A self-possessed man with a cautious

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<sup>470</sup> Dennis Kux, *The United States and Pakistan, 1947-2000: Disenchanted Allies*, (Washington DC: Woodrow Wilson Center Press, 2001): 63.

<sup>471</sup> Dennis Kux, *The United States and Pakistan, 1947-2000*, 63.

<sup>472</sup> Feroz Hassan Khan, *Eating Grass*, 29-30.

temperament, Khan wanted to focus on the peaceful uses of nuclear energy – a course of action that was frequently at odds with his hawkish foreign minister, Zulfikar Ali Bhutto. Bhutto believed that nuclear weapons were a matter of strategic necessity and that Pakistan should work to rapidly acquire them.<sup>473</sup> Khan rebuffed proposals by Pakistani officials to pursue nuclear weapons in the 1960s.<sup>474</sup> He prioritized other objectives, such as building up Pakistan's conventional forces and strengthening the U.S.-Pakistani alliance. To this end, he tried, with little success, to impress on his American interlocutors of the Indian threat. Despite the fact that Pakistan was a strategic partner in the cold war, the U.S. strove to be impartial when it concerned the feud with India.<sup>475</sup>

If Canada was to have relations with both India and Pakistan, it too would have to be delicate. There were a few points of consideration. The enmity between India and Pakistan worsened after the war of independence.<sup>476</sup> Canada had to take care to have a balance approach, one that did not come at the expense of relations with the other. Relations with India were generally better, however; a detail somewhat secreted given India's recurrent denigrations of the policies pursued by Canada's Western allies. Like India, Pakistan was part of the Commonwealth, an institution that would become a mainstay of Canadian foreign policy. But more importantly, Pakistan was firmly in the Western camp and it was important that it remain there.

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<sup>473</sup> Feroz Hassan Khan, *Eating Grass*, 36, 61-62.

<sup>474</sup> Ashok Kapur, 'A Nuclearizing Pakistan: Some Hypotheses,' 501.

<sup>475</sup> Dennis Kux, *The United States and Pakistan*.

<sup>476</sup> Since gaining independence, the two South Asian countries fought four wars – the Indo-Pakistani War of 1947–1948; the Indo-Pakistani War of 1965; the Indo-Pakistani War of 1971; the Indo-Pakistani War of 1999 – largely over competing claims to Kashmir and Jammu and have had countless border skirmishes and low-level military conflicts. The third war was a decisive defeat for Pakistan, costing it the eastern province of Bengal (now Bangladesh).

Canada already had two contracts with India and had established the Pickering power plant when the PAEC turned to Canada for help in 1961.<sup>477</sup> That India had already obtained a reactor from Canada strengthened its determination to get one as well, even though, like India, Pakistan had yet to make the political decision to pursue nuclear weapons. Though it had embarked on a civilian nuclear program without weaponization plans, the Pakistanis were split on nuclear weapons.

The question of weapons was openly debated after China went nuclear in 1964. Dr. Ishrat Hussain Usmani, chairman of the PAEC, revealed fears of an imminent nuclear India, stating that, 'If there will be a sixth nuclear weapon state, then there will be a seventh one.'<sup>478</sup> The next year, in 1965, Usmani successfully secured a contract with Canada for the construction of a CANDU nuclear reactor in Karachi. Construction of KANUPP began within two years, and was finally completed in 1971.<sup>479</sup>

Was Canada concerned that Pakistan might proliferate? Pakistan seemed to meet the criteria of the security model of proliferation, in that it was seeking to redress its imbalance vis-à-vis a more powerful rival.<sup>480</sup> In 1965, Pakistan and India went to war again, leading the U.S. to freeze military and economic assistance to both belligerents.<sup>481</sup> (However, since the U.S. had been its principal arms dealer, Pakistan more acutely felt the effects of the embargo.) This was the context in which Canada was negotiating nuclear assistance, and is perhaps why some scholars contend that Canada overlooked indications of Pakistan's nuclear weapons aspirations.<sup>482</sup> For instance, Bratt charges that 'proliferation concerns were not particularly

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<sup>477</sup> Robert Bothwell, *Nucleus*, 383.

<sup>478</sup> Feroz Hassan Khan, *Eating Grass*, 50.

<sup>479</sup> Feroz Hassan Khan, *Eating Grass*, 55.

<sup>480</sup> Scott D. Sagan, 'Who Do States Build Nuclear Weapons?: Three Models in Search of a Bomb,' *International Security*, Vol. 21, No. 3 (Winter 1996-1997): 54-86.

<sup>481</sup> Feroz Hassan Khan, *Eating Grass*, 44.

<sup>482</sup> Duane Bratt, *The Politics of CANDU Exports*, 103; Finch, *Exporting Danger*, 80.

influential in the decision to export to a nuclear reactor to Pakistan.<sup>483</sup> He fails to offer a justification as to why Canada should have given such primacy to non-proliferation goals when the NPT was not yet in existence.

In mid-sixties, Pakistan's nuclear program remained peaceful.<sup>484</sup> Pakistan framed its nuclear program around energy needs.<sup>485</sup> Some officials, like Bhutto and Usmani, favoured the rapid advancement of Pakistan's nuclear program.<sup>486</sup> Bhutto was a prominent figure who would later succeed Khan, and an ardent proponent of a nuclear deterrent for Pakistan.<sup>487</sup> In 1966, as Foreign Minister, Bhutto famously uttered that should India produce a nuclear weapon, 'Pakistan would follow suit, even if the population had to eat grass to do so.'<sup>488</sup> He came to power in the aftermath of Pakistan's definitive military defeat and dismemberment from having lost East Pakistan (Bangladesh) in December 1971.<sup>489</sup> It was thought then that Pakistan would acquire nuclear weapons and would spare no time in doing so, especially once KANUPP became operational the next year in 1972.<sup>490</sup> But it seems that Pakistan did not redirect its nuclear activities to develop weapons until India tested its nuclear weapon.<sup>491</sup>

Even then, it seems that Pakistan was not rushed to proclaim itself nuclear. It was nuclear capable for a long time before it tested five nuclear explosive devices in Chagai Hills

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<sup>483</sup> Duane Bratt, *The Politics of CANDU Exports*, 104.

<sup>484</sup> Ashok Kapur, *Pakistan's Nuclear Development* (London: Croom Helm, 1987), 19.

<sup>485</sup> Zalmay Khalilzad, 'Pakistan: The Making of a Nuclear Power,' *Asian Survey* Vol. 16, No. 6 (1976), 581-582. (580-592)

<sup>486</sup> Duane Bratt, *The Politics of CANDU Exports*, 104. It should be noted that Usmani was vocal in his criticism of Bhutto's plans to develop a nuclear deterrent. The relationship between Usmani, who was the chairman of PAEC and Bhutto deteriorated by 1972. Usmani came out in support of the emerging NPT, and Bhutto had him replaced.

<sup>487</sup> Bhutto resigned his position as the Minister of Foreign Affairs in 1967 in order to establish the Pakistan People's Party. In later years, he served as president and prime minister of Pakistan.

<sup>488</sup> Zalmay Khalilzad, 'Pakistan and the Bomb,' *Survival* Vol. 21, No. 6 (1979), 246 (244-250).

<sup>489</sup> Zalmay Khalilzad, 'Will Pakistan join the Nuclear Club in 1980?' *The Bulletin of Atomic Scientists* (January 1980): 11-16.

<sup>490</sup> Feroz Hassan Khan, 'Nuclear Proliferation Motivations: Lessons From Pakistan,' *Nonproliferation Review* Vol. 13, No. 3 (2006): 501-517.

<sup>491</sup> Zalmay Khalilzad, 'Pakistan: The Making of a Nuclear Power,' 590.

on May 28, 1998.<sup>492</sup> Ashok Kapur explains that an overemphasis on Pakistan's regional rivalry with India has resulted in a misreading of the factors that shaped its decision, and that domestic politics and individual actors played a much larger role than widely acknowledged.<sup>493</sup> Zalmay Khalilzad agrees, writing that, 'The main reason for interpreting Pakistan's move in a nuclear field as pointing toward a weapon capacity is its relations with India...[and that] Pakistan's search for a nuclear reactor followed India's purchase of a nuclear reactor from Canada.'<sup>494</sup> In any case, Pakistan's eventual acquisition of the bomb had no repercussions for Canada. After the Indian explosion in 1974, Canada had revised its safeguards and non-proliferation policies so as to avoid implicating Canada in any future proliferation cases. The government laboured to renegotiate the terms of the KANUPP contract, and was disappointed when Bhutto visited Canada in 1976 only to declare that Pakistan would be unwilling to accept further safeguards. Ottawa had hoped to use the occasion to obtain a binding commitment from Pakistan that it would not use plutonium from the KANUPP for a nuclear device.

Canada was still reeling from the public embarrassment caused by India's nuclear test. The U.S., which had chided Canada for its involvement in India's program, also goaded it to take a strong stance.<sup>495</sup> It was also still dealing with the political reverberations. Domestic pressures were the major factor, not least in forcing the government to adopt strict safeguards in the immediate period following India's nuclear tests. As a response to India's 1974 detonation, both the Conservatives and the NDP lambasted the government for not doing

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<sup>492</sup> Feroz Hassan Khan, *Eating Grass: The Making of the Pakistani Bomb*, (Stanford, CA: Stanford University Press, 2012), 1.

<sup>493</sup> Ashok Kapur, 'A Nuclearizing Pakistan, 497-499.

<sup>494</sup> Zalmay Khalilzad, 'Pakistan: The Making of a Nuclear Power,' 588-589.

<sup>495</sup> Feroz Hassan Khan, 'Nuclear Proliferation Motivations: Lessons From Pakistan,' 507. See also: Ian Macleod, 'Henry Kissinger apologized for rebuking Canada over India's nuclear test,' *Ottawa Citizen*. 24 April 2014. Accessed at: [www.ottawacitizen.com/news/henry-kissinger-apologized-for-rebuking-canada-over-indias-nuclear-test](http://www.ottawacitizen.com/news/henry-kissinger-apologized-for-rebuking-canada-over-indias-nuclear-test).

more to stop nuclear proliferation. NDP MP Tommy Douglas argued that Canada was not taking adequate measures against proliferation with respect to the sale of CANDU reactors. Douglas accused the government of caring only about profits, charging that: ‘The Canadian government...has gone around the world peddling the CANDU reactor whether or not the proposed customer is either reliable or stable. We have made a very heavy investment in producing CANDU reactors and the government is anxious to secure sales so as to get its money back. As a matter of fact, we have gone so far as to lend great sums of money to prospective customers.’<sup>496</sup>

Progressive Conservatives chimed in with suggestions that the government retroactively apply Canada’s new safeguards policy to existing and future sales. MP Jim Balfour said:

As we have seen with India, with a supply of uranium and reprocessing technology that is widely available any country can construct a nuclear bomb with the plutonium from a CANDU reactor... We in this party are particularly concerned about this in view of the minister’s reference to the large number of nuclear transactions under negotiation at this time with countries which have not ratified the nuclear non-proliferation treaty. I think particularly of Pakistan, Japan, India, Argentina, the Republic of Korea, and Italy. We should be putting all possible pressure on these nations to ratify that treaty and to submit to the International Atomic Energy Agency inspection for which it calls.<sup>497</sup>

Two years later, in the midst of Canada’s efforts to win Pakistani acceptance of its new safeguards policy, Progressive Conservative MP James Gillies introduced a bill requiring parliamentary ratification of the export of nuclear equipment and technology.<sup>498</sup> The Liberal government did not support the bill, of course, and countered that stringent safeguards policies in place after the 1974 episode were adequate.<sup>499</sup>

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<sup>496</sup> House of Commons Debate, 30th Parliament, 1st Session: Vol. 12, 12060.

<sup>497</sup> House of Commons Debate, 30th Parliament, 1st Session: Vol. 3, (20 December 1975), 2430.

<sup>498</sup> House of Commons Debate, 30th Parliament, 2nd Session: Vol. 1, (26 October 1976), 2258.

<sup>499</sup> House of Commons Debate, 30th Parliament, 2nd Session: Vol. 1, (26 October 1976), 2258.

However, the Opposition demanded to know how the new safeguards would affect Canada's deal with Pakistan. Progressive Conservative Allen Lawrence asked: 'Where does this leave the Pakistani situation, the supply for the CANDU reactor outside of Karachi? My understanding is that Pakistan has not signed the non-proliferation treaty. If we can believe the president of Pakistan in his public statements, reports by reliable news services and wire services of the world, he has no intention either of accepting anything covered by such an ambiguous statement or accepting international safeguards on their entire nuclear program. Where does this leave the Pakistani supply?'<sup>500</sup>

Domestic considerations – and the fact that Pakistan was intransigent – persuaded Canada to present Pakistan with a stark ultimatum: either accept Canada's stringent nuclear policy safeguards or be prepared to have cooperation cancelled.<sup>501</sup> Pakistan refused to be backed into the corner and Canada, as promised, unilaterally terminated nuclear cooperation in December 1976.<sup>502</sup>

## **6 Explaining Pakistani-Canadian Nuclear Cooperation**

The case of Pakistani-Canadian nuclear cooperation does not conform to extant explanations on nuclear supply. The dominant theory holds that countries provide nuclear assistance when it behooves specific objectives, such as imposing costs on a mutual rival. Kroenig nicely summarized the argument: 'The enemy of my enemy is my customer.' Yet, in the case of Pakistan, its customer's enemy was its friend.

If not strategic interests, what drove Canada's decision to assist Pakistan? Studies that have examined the case predominately advance economic explanations. Finch explains that

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<sup>500</sup> House of Commons Debate, 30th Parliament, 2nd Session: Vol. 3, 2257.

<sup>501</sup> Duane Bratt, *The Politics of CANDU Exports*, 146.

<sup>502</sup> Ron Finch, *Exporting Danger*, 97. This may have inadvertently contributed to Pakistan's perception that Western countries treated it unfairly vis-à-vis its nuclear program because it was a Muslim country. See: Feroz Hassan Khan, 'Nuclear Proliferation Motivations: Lessons From Pakistan,' 504-505.

by the late 1960s, the industry was struggling to compete in the global market, and the industry was ratcheting efforts to find potential recipients for their exports.<sup>503</sup> While the nuclear industry identifies potential markets to the government,<sup>504</sup> it was Pakistan – and not industry – that made the first move.

In contrast to the origins of Indo-Canadian nuclear cooperation that started with a Canadian idea to donate a reactor to India, it was the Pakistanis that solicited Canada's help. The Pakistanis wanted what the Indians had been offered, and naturally they wanted the same terms. They reasoned that they too were entitled to Colombo Plan perks. Canada could not refuse without appearing to take sides between the two South Asian rivals, and besides it could not risk alienating Pakistan.

There were two reasons for Canada's decision to assist Pakistan's nuclear development. The first concerns international considerations. Pakistan was a dutiful disciple of the West. Indeed, in the 1960s, Pakistan clung to the U.S.-led Western camp, and Canada, which in this period tended to move lockstep with the U.S. on cold war matters, knew it could play a role in preserving Pakistan's position in the Western orbit. While this consideration influenced how the Canadians dealt with the Pakistanis through the negotiations, it did not determine Canada's decision to provide Pakistan with the reactor in the first place.

The second – and main – reason for assisting Pakistan was Canada's own self-interest in burnishing its image as a middle power. After all, many of the factors that influenced Canada to provide assistance to India were just as present when the Pakistanis requested nuclear assistance. Nuclear technology was still highly coveted, and so its utility as a tool in Canada's diplomatic arsenal was unquestioned. But nearly a decade had passed since CIRUS,

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<sup>503</sup> Ron Finch, *Exporting Danger*, 44, 46.

<sup>504</sup> Author interview with Ralph Lysyshyn, Former Director, Arms Control and Disarmament Division – Foreign Affairs and International Trade and former Ambassador to Russia. Ottawa, Canada. 3 July 2014.

and by then the Canadians knew better than to give another unrestricted gift. Yet, Pakistan needed to be rewarded for its loyalty to West, especially given that India, who touted non-alignment and mocked Western policies, appeared to have been. That meant that the transaction needed to be handled such that it did not give the impression of preferential treatment of India.

At the same time, Ottawa was of the view that trade and aid were tools that could achieve multiple favourable outcomes. It could help developing countries with their socioeconomic development and help prevent them from succumbing to communism. It could also help promote Canada as a progressive country of some influence. Like the United States, Canada emerged from World War II with a thriving economy and a global agenda. They made financial contributions to help rebuild Britain as well as Western Europe (e.g., the Marshall Plan) and helped remake the international financial system (e.g., Bretton Woods) through new regimes and programs. At the same time, from a Canadian perspective, there was concern about the fate of the former British colonies, as British India's independence threatened to dissolve the old Commonwealth. In the midst of the sterling crisis, there was hardly anything the British could do to entice developing nations to stick with the West. For that, American security patronage and dollars (either American or Canadian) were needed. In order to preserve the familiar structure, Canada worked hard through partition and the ensuing civil war between India and Pakistan to reimagine the organization as the Commonwealth. A corollary of which was the Colombo Plan. At the core of the Colombo Plan lay the idea that raising underdeveloped countries out of poverty would keep them from seeking out communism. But how was this to be achieved?

The Canadian answer was pragmatic, if cynical. Aid itself was insufficient to pull South Asia out of poverty. Rather, those countries would have to take actions towards

socioeconomic development themselves, and Canada could, at best, supply them with ‘missing components’ – which was quickly understood to mean technology.<sup>505</sup> This was the spirit in which nuclear transfers to India and then later Pakistan took place. Developing nations were keen to explore nuclear energy. It was fortuitous that Canada had something enticing to offer, and even better that it could benefit from aid.

Of course, there were other elements to this. Canada wanted its nuclear industry to compete with those in other supplier countries, Britain and the U.S., and later France. It surely was not lost on Canada that it would be unable to sustain the future of its nuclear industry if it failed to secure nuclear clients or turned away potential buyers. It seems that the general view was that transferring nuclear reactors to countries like Pakistan and India would be a boon, politically in the short-term and perhaps economically in the long-term. But this goal of maintaining the survival of the industry did not just come down to simple economics, as others suggest.<sup>506</sup> The Canadian government financed approximately 75 percent of the cost for the KANUPP.<sup>507</sup> Unless it was intended as a loss leader, the economic benefits of the transaction were therefore relatively minimal. Ottawa reasoned that nuclear cooperation with these poor South Asian countries would provide scientists there with a valuable learning opportunity, and that its apparent willingness to do so would score points not just with the Commonwealth but with the developing world, writ large. Nuclear cooperation with Pakistan

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<sup>505</sup> Canada was pessimistic about the prospect of aid. See: DFAIT, vol. 16- 659, 2 May 1950, Instructions for the Canadian Delegation to the Meeting of the Commonwealth Consultative Committee on South and Southeast Asia, to be held at Sydney, Australia, the 15th of May, 1950.

<sup>506</sup> Ron Finch, *Exporting Danger*, 80; Duane Bratt, *The Politics of CANDU Exports*, 106; Ashok Kapur, ‘A Nuclearizing Pakistan,’ 511.

<sup>507</sup> According to the 1982 Nuclear Policy Review the financial terms were as follows: Between 1966 and 1978 a total of \$12.4 million was provided in export credits, and \$29.4 million was loaned through the EAO/CIDA account. (Grants of about \$1.5 million, which covered supervision, training and the financing of spare parts, were also extended by CIDA). The EAO/CIDA loan was concessionary. Its terms included a 10-year period of grace followed by a 50-year repayment schedule with no interest charges. See: Energy, Mines and Resources, Canada. *Nuclear Policy Review: Problems and Prospects, 1981-2000* (Ottawa: EMR, 1982), 312.

was thus entirely consistent with Canada's foreign policy objectives to engage developing countries.

## 7 Conclusion

Canada's motivation in entering into nuclear cooperation with India and Pakistan primarily relates to its own foreign policy objectives. Canada had a technology that was a massive source of national pride, and recognized that sharing the technology, particularly with developing countries, could not only launch its nuclear industry but also its international image as a middle power of some influence.

Others who have examined these cases have pointed out that Canada was not particularly committed to non-proliferation. This assessment is true, but not exceptional. Few countries, apart from the great powers, worried about losing their nuclear superiority. The non-proliferation regime, as we know it today, did not exist when Canada negotiated either deal. Canada required the standard IAEA safeguards.<sup>508</sup> It did not, however, require that its recipients sign onto the NPT.

From 1945 to 1974, the Canadian government was not seriously concerned with imposing adequate safeguards on the sale of nuclear reactors. It was far more interested in giving a boost to its nuclear industry, not least because reactors abroad conferred status and recognition.<sup>509</sup> Public opinion among the Canadian population in the 1950s to 1960s on Canada's nuclear industry and its policies ranged from ignorance, to pride, and apathy.<sup>510</sup> Bruce Doern says, 'While there has always been a strong concern about nuclear weapons, the

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<sup>508</sup> Ron Finch, *Exporting Danger*, 80.

<sup>509</sup> Robert W. Morrison and Edward F. Wonder, 'Canada's Nuclear Export Policy,' in Bruce Doern and Robert W. Morrison (eds.), *Canadian Nuclear Policies* (Montréal: The Institute for Research on Public Policy, 1980), 111.

<sup>510</sup> Lawrence S. Wittner, *The Struggle Against the Bomb Volume 3: A History of the World Nuclear Disarmament Movement, 1971 to the Present*, (Stanford, CA: Stanford University Press, 2003).

domestic power and research program operated largely in an environment of benevolent deference to scientific authority and expertise.<sup>511</sup> However, public opinion swiftly changed in the 1970s and peaked after the Indian explosion. It was not until the consequences of its involvement in India's nuclear weapons program were felt for Canada to take non-proliferation seriously.

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<sup>511</sup> Bruce Doern, *Government Intervention in the Canadian Nuclear Industry*, 39.

## CHAPTER FOUR

### Business Is Business, Juntas and Tyrants

The dominant theory in the literature holds that states provide nuclear assistance to other states as a means of advancing strategic objectives. A subset of this literature claims that democratic suppliers are especially likely to provide nuclear assistance to democratic allies, and are disinclined to provide nuclear assistance to non-democratic states.<sup>512</sup> A competing theory contends that economic considerations push states to contemplate nuclear transfers.<sup>513</sup> Yet, a third school of thought supposes that the presence of strong norms concerning the non-proliferation regime (or the equivalent in terms of values and identities) drives nuclear decision-making.<sup>514</sup> As such, it purports that states which uphold non-proliferation norms or revere multilateral institutions will refrain from providing nuclear assistance to recipients that are perceived to harbour nuclear ambitions or are otherwise deemed unreliable.

In the 1970s, Canada extended NCAs to Argentina and Romania. Argentina and Romania were not the sorts of countries with which Canada traditionally conducted extensive

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<sup>512</sup> Matthew Fuhrmann, *Atomic Assistance: How 'Atoms for Peace' Programs Cause Nuclear Insecurity* (Ithaca, NY: Cornell University Press, 2012). See also: Julian Schofield, *Strategic Nuclear Sharing* (New York, NY: Palgrave Macmillan, 2014).

<sup>513</sup> See: William Lowrance, 'Nuclear Futures for Sale: To Brazil from West Germany, 1975,' *International Security* Vol. 1, No. 2, (1976): 147-166; Robert Boardman and James Keeley (eds.), *Nuclear Exports and World Politics* (New York, NY: St. Martins, 1983); William C. Potter (ed.), *International Nuclear Trade and Nonproliferation* (Lexington, MA: Lexington Books, 1990); and Jean-Francois Rioux (ed.), *Limiting the Proliferation of Weapons: The Role of Supply Side Strategies* (Ottawa: Carleton University Press, 1992).

<sup>514</sup> Etel Solingen, 'The Political Economy of Nuclear Restraint,' *International Security* Vol. 19, No. 2 (1994): 126-169; Nina Tannenwald, 'The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-Use,' *International Organization* Vol. 53, No. 3 (1999): 433-468; and Maria R. Rublee, *Nonproliferation Norms: Why States Choose Nuclear Restraint* (Athens, GA: University of Georgia Press, 2009). See also: Jacques E. C. Hymans, *The Psychology of Nuclear Proliferation: Identity, Emotions and Foreign Policy* (New York, NY: Cambridge University Press, 2006); Etel Solingen, *Nuclear Logics: Contrasting Paths in East Asia and the Middle East* (Princeton, NJ: Princeton University Press, 2007); and T.V. Paul, *The Tradition of Non-Use of Nuclear Weapons* (Stanford, CA: Stanford University Press, 2009).

diplomatic and economic relations.<sup>515</sup> Neither were allies in the traditional military sense. Indeed, one was a member of an opposing alliance. Further, they were both authoritarian states with questionable human rights records. The Canadian government was more accustomed to dealing with like-minded countries (or those perceived to be like-minded) that were either industrialized liberal democracies or developing states with which it had common ground through associations in the Commonwealth or *la Francophonie*. Argentina was a developing country in Latin America – a region with which Canada had, until then, not engaged. Romania was an even odder choice to receive Canadian nuclear technology. Besides being a dictatorship, it was a Warsaw Pact state – a fact that did not escape the attention of government critics and the media. Why did Canada choose to extend nuclear cooperation agreements to these countries?

The cases of Canadian nuclear assistance to Argentina and Romania are of interest for several reasons. One consideration is that they represent cases that do not, at least appear to, fit the definition of ‘strategic’ decision-making. Another consideration in choosing the case of Canadian nuclear assistance to Romania is its significance in economic terms. At first glance, it does not seem that the Canadian government was motivated by financial gains. After all, Canada negotiated a loan to enable the economically troubled Romania to purchase a CANDU reactor. The Argentine case is of similar interest in testing extant theories. Argentina was a suspected proliferant, believed to harbour aspirations to become the regional power. Indeed, both countries were widely regarded to have seriously considered the nuclear option, and the former embarked on a sustained exploration of the bomb.<sup>516</sup> These cases have not

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<sup>515</sup> Argentina and Romania were considered authoritarian regimes. From 1973 to 1976, Argentine politics was marred by factionalism. For one of the authoritative coding works on regime types, see: Monty G. Marshall and Ted Robert Gurr, 'Polity IV Individual Country Regime Trends, 1946-2013,' The Center for Systemic Peace. Accessed at: [www.systemicpeace.org/polity/polity4.htm](http://www.systemicpeace.org/polity/polity4.htm)

<sup>516</sup> Sonali Singh and Christopher R. Way. 'The Correlates of Nuclear Proliferation: A Quantitative Test,' *Journal of Conflict Resolution* Vol. 48, No. 6 (2004): 872, 874.

received adequate treatment by the existing scholarship. Their selection also allows us to assess whether strategic or economic variables were determinants of Canada's nuclear export policy, or whether other factors influenced the outcome.

The aim of this chapter is to show that Canada's nuclear export policies in the 1970s were not motivated by purely economic interests nor by military-strategic ones. Rather, there were multiple domestic and international factors that shaped Canada's nuclear export and non-proliferation policies. First, Canadian decision-makers faced industrial and domestic pressure to find nuclear export markets. Supporting the struggling domestic nuclear reactor industry encouraged the initial decision to offer nuclear agreements to both Argentina and Romania. The Canadian nuclear industry was in trouble. The AECL assessed that it required, at least, two CANDU reactor sales per year in order to stay afloat, and it was far from meeting its minimum orders.

Second, the decisions were equally motivated by a sense that Canada's economic and global status were vulnerable. The NCAs were part and parcel of a new direction in Canada's foreign policy, one which aimed to increase Canada's influence by cultivating commercial, trade, and cultural relations with the developing world. Third, the government responded to changes in the world economy and the concomitant shift in the policies of the U.S., and aimed to pre-empt the adverse economic and political effects of a closing American market by searching for new partners elsewhere. These factors coalesced in this period, resulting in a deliberate shift in foreign policy intended to carve a distinct role for Canada.

Thus, this period was largely determined by a new direction in Canadian foreign policy, which was spurred by the end of the so-called 'special relationship' that existed between

Canada and the U.S.<sup>517</sup> Although it did not abandon the multilateralist spirit of its precursors, the new Liberal government led by the charismatic Pierre Elliot Trudeau was unconcerned with maintaining the affections of the U.S.<sup>518</sup> Trudeau began to tilt Canada's trade and foreign policies away from its traditional partners, especially as protectionist instincts in the U.S. grew. This became known as the Third Option. But the Third Option concerned more than the diversification of trade partners. Trudeau had his own set of beliefs about the world and perceptions of Canada's identity, and what interests the country should represent. This chapter demonstrates that Canada's nuclear export and non-proliferation policies in this period were the part of a new direction in Canadian foreign policy, one designed not only to diversify Canada's diplomatic and trade partners but also to distinguish Canada's identity from others, chiefly the U.S., in the international system.

## **2 Alternative Explanations**

Existing theories of nuclear supply do not explain the cases of Canadian nuclear assistance to Argentina and Romania. Three explanations are generally advanced to account for the occurrence of nuclear trade: regime theory, strategic theory, and economic theory. None of these, on its own, explains Canada's nuclear decision-making in this period.

Regime explanations contend that the non-proliferation regime influences nuclear exports since they hold suppliers and recipients to certain standards. The non-proliferation regime permits and encourages civilian nuclear trade while minimizing the risks, such as proliferation and re-transfers, and limiting the transfer of sensitive items (e.g., such as those

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<sup>517</sup> Bruce Muirhead, 'From Special Relationship to Third Option: Canada, the U.S., and the Nixon Shock,' *American Review of Canadian Studies*, Vol 34, No. 3 (2004): 439-462. See also: Gordon Mace and Gérard Hervouet, 'Canada's Third Option: A Complete Failure?,' *Canadian Public Policy / Analyse de Politiques*, Vol. 15, No. 4 (Dec., 1989): 387-404.

<sup>518</sup> Canada earned this special status, and had been referred to as a linchpin, by Churchill, for having served as an intermediary between Britain and the U.S. during the Second World War.

found on Trigger List).<sup>519</sup> It does not, however, have any discernable influence on the actual decision to supply. Nor are regimes involved in securing buyers for a state's nuclear technology and commodities. Regime theory can help illuminate how a nuclear agreement unfolds once a potential buyer for nuclear goods has been found, and might help account for why a particular candidate for nuclear goods was rejected. It simply cannot explain why a recipient is chosen, or other determinants of supply decisions.

However, in light of Canada's contributions to the establishment of various arms control and non-proliferation agreements, one would expect Canada to demonstrate a serious commitment to the non-proliferation galaxy. A retired high-ranking employee of CNSC stated that such institutions matter for Canada, remarking that: 'From the beginning of the nuclear industry in Canada there has been a fundamental willingness by Canada to share its nuclear expertise and resources with other states for peaceful uses. But in sharing its nuclear technology and materials, Canada has tried to minimize the risks of nuclear proliferation through a combination of its nuclear export policy and bilateral and multilateral arrangements.'<sup>520</sup> This does not seem to have been the case from the beginning. Canada did not previously require that recipients of its nuclear materials be party to the NPT, for example. As illustrated in the previous chapter, until 1974, Canada grappled to reconcile its middle power impulse to play an active role in shaping arms control institutions and with its domestic interest in seeing that its burgeoning nuclear industry succeed.

Economic theories also fall flat when applied to the case of Canadian nuclear assistance to Romania. The Canadian government financed Romania's purchase of CANDU nuclear

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<sup>519</sup> 'Guidelines for Nuclear Transfers,' *Nuclear Suppliers Group*, NSG Part 1 (2013) Accessed at: [www.nuclearsuppliersgroup.org/images/Files/Updated\\_control\\_lists/Prague\\_2013/NSG\\_Part\\_1\\_Rev.12\\_clean.pdf](http://www.nuclearsuppliersgroup.org/images/Files/Updated_control_lists/Prague_2013/NSG_Part_1_Rev.12_clean.pdf).

<sup>520</sup> Author interview with Anonymous, Retired High Ranking Bureaucrat, Ottawa, 17 June 2014.

reactors. While it is not exceptional for suppliers to provide financing to recipients of their nuclear commodities,<sup>521</sup> the entire transaction with Romania was so fraught with financial risk that Canada's export credit agency unilaterally decided to cancel payments to Romania (a decision that, as will be discussed, was later reversed by the federal government).

Strategic explanations are similarly unhelpful in offering an account of what might have encouraged Canada to provide nuclear assistance to Argentina and Romania. Strategic explanations hold that supplier countries provide nuclear assistance to strengthen their allies and their alliances or to constrain their enemies. Argentina and Romania were neither. On the contrary, the latter's membership in the Warsaw Pact meant that it was a potential military adversary of Canada and its NATO allies.

Further, Argentina and Romania were led by autocratic personalities. That Canada would share nuclear technology with these states is puzzling for a number of theoretical and practical reasons. Both IR scholars and practitioners recognize that a state's regime type has implications for global affairs and security. For instance, the democratic peace thesis holds that democracies do not fight wars with their democratic brethren (though they still go to war with others).<sup>522</sup> Because of this, we might expect democratic suppliers to avoid providing nuclear assistance to non-democratic countries, and to generally refrain from any act that might inadvertently enhance their capacity to develop nuclear weapons. Matthew Fuhrmann observes that democratic supplier countries are more likely to provide nuclear assistance to other democracies than to non-democracies.<sup>523</sup> Canada's decision to transfer nuclear materials

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<sup>521</sup> B.J. Csik, 'The Challenge of Financing Nuclear Power Plants,' *International Atomic Energy Agency*, IAEA-SM-353/9 (Vienna): 75-83. Accessed at: [www.iaea.org/inis/collection/NCLCollectionStore/\\_Public/31/007/31007028.pdf](http://www.iaea.org/inis/collection/NCLCollectionStore/_Public/31/007/31007028.pdf).

<sup>522</sup> Bruce Russett, *Grasping the Democratic Peace: Principles of a Post-Cold War World* (Princeton, N.J.: Princeton University Press, 1993).

<sup>523</sup> Matthew Fuhrmann, *Atomic Assistance: How 'Atoms for Peace' Programs Cause Nuclear Insecurity* (Ithaca, NY: Cornell University Press, 2012), 41-43.

and technology to autocratic regimes thus departs from what we think we know about the decision-making calculus of democratic nuclear suppliers.

By now, the reader might question the validity of regime type arguments given that democratic countries readily provide conventional military assistance to non-democratic states. The strategic literature on nuclear transfers adds the following caveat: democratic suppliers will turn a blind eye to a stable ally's autocratic ways if, for example, the two share common security interests that it believes transfers will further.<sup>524</sup> There yet exist cases where democracies transferred military equipment or other militarily sensitive materials to authoritarian regimes in the absence of any apparent security arrangement. To cite a recent example of conventional military transfers, Canada concluded a \$15-billion sale for light-armoured vehicles and other arms to Saudi Arabia, an absolute monarchy with an egregious human rights record.<sup>525</sup> Though the Saudi Kingdom has long been an important strategic partner of the U.S., Canadian-Saudi relations have been primarily limited to commerce. The incentives seemed, in this case, to have been economic.

Doing business with tyrants is not merely risky because of the capricious and fair-weather nature of democratic-autocratic alliances, but also because of the optics. Democratic audiences are generally not supportive of such engagements.<sup>526</sup> To return to the aforementioned case, the public and media took Ottawa to task for dealing with a notorious

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<sup>524</sup> Autocratic regimes are seen to be stable (until they are toppled) because they are resilient to political unrest and upheaval. See: Jennifer Gandhi and Adam Przeworski, 'Authoritarian Institutions and the Survival of Autocrats,' *Comparative Political Studies* Vol. 40, No. 11 (2007): 1279-1301; Andrew J. Nathan, 'Authoritarian Resilience,' *Journal of Democracy* Vol. 14, No. 1 (2003): 6-17; and Steven Levitsky and Lucan A. Way, *Competitive Authoritarianism: Hybrid Regimes After the Cold War* (Cambridge: Cambridge University Press, 2010).

<sup>525</sup> *Global Affairs Canada*, 'Memorandum for action: Export of light armoured vehicles and weapons systems to Saudi Arabia,' 21 March 2016. Accessed at: <http://www.theglobeandmail.com/static/politics/saudi/saudi-memo.pdf>.

<sup>526</sup> On audience costs, see: Michael Tomz, 'Domestic Audience Costs in International Relations: An Experimental Approach,' *International Organization* Vol. 61, No. 4 (2001).

autocracy and for violating its own arms-trading rules.<sup>527</sup> This was not the first time the Canadian government was confronted for its shady transactions with unsavoury regimes.<sup>528</sup> A similar scandal erupted in the mid-1970s when AECL salespersons were found bribing officials in South Korea and Argentina.<sup>529</sup> Even the agreement with Romania, a communist country with questionable domestic policies, raised public ire once some of the financial details leaked.

Still, nuclear exports are distinct from many other forms of trade, not least because of the potential for nuclear proliferation but also because nuclear cooperation agreements, such as those for the construction of nuclear facilities and reactors, bind the supplier and recipient to a long-term relationship. As one senior official at the Department of Foreign Affairs, Trade, and Development (DFATD, now Global Affairs Canada) dryly remarked, 'You can't give half a reactor.'<sup>530</sup>

What drove the Canadian government to extend nuclear cooperation agreements to the authoritarian governments in Argentina and Romania – two countries whose cultural and political norms, security situations, and foreign policies were so dissimilar from those of Canada's? Domestic and economic considerations had a lot to do with it. In the 1970s,

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<sup>527</sup> The Conservative government of Stephen Harper refused to elucidate whether the agreement violated Canada's own rules regarding the export of military commodities to countries 'whose governments have a persistent record of serious violations of the human rights of their citizens.' The government explained that the agreement was lawful since Saudi Arabia was found not to pose a 'reasonable risk' of using the arms against its civilian population and that the prohibition only applied to those countries which might do so. Despite Ottawa's stated confidence in Saudi restraint, Riyadh has resorted to using military force against dissidents, particularly its Iranian-backed Shi'a Muslim minority. Relatedly, the agreement could undermine stability in the region. Saudi Arabia and Iran are currently engaged in a proxy war in Syria, Iraq, Bahrain, and Yemen, and this situation could possibly escalate into a direct military confrontation. It should be pointed out that many of Canada's European NATO allies, such as Germany and the United Kingdom, have denied exports to Riyadh. For these reasons, and in response to public pressure, the current government of Justin Trudeau has indicated that it will review the sales. See: Steven Chase. 'Ottawa aims to keep lid on details of Saudi arms deal' *The Globe and Mail*, 27 May 2015. Accessed at: [www.theglobeandmail.com/news/politics/ottawa-wont-release-asesment-of-arms-deal-with-saudi-arabia/article24634202/](http://www.theglobeandmail.com/news/politics/ottawa-wont-release-asesment-of-arms-deal-with-saudi-arabia/article24634202/).

<sup>528</sup> Craig Forcese, 'Canada's shady nuclear deals,' *Multinational Monitor*, Vol. 16, No. 9 (September 1995): 1-17.

<sup>529</sup> Duane Bratt, *The Politics of CANDU Exports*, (Toronto: University of Toronto Press, 2006), 3.

<sup>530</sup> Author Interview with Anonymous, Senior Official at the Department of Foreign Affairs, Trade and Development (DTAFD), Ottawa, Canada. June 19, 2014.

Canada struggled to find markets amongst its traditional allies. Western European countries were more interested in purchasing the American-manufactured light-water reactors than the Canadian-invented CANDU model. The CANDU nuclear reactor is a pressurized deuterium-oxide (heavy-water, or PHWR) moderator that uses natural uranium fuel. Light-water reactors involve less maintenance, making them a more attractive option.<sup>531</sup> By the end of the 1970s, American-produced light-water reactors dominated the atomic market in the U.S. and in Europe.<sup>532</sup> Failing to find buyers in Western Europe for its heavy-water design, the AECL began to court sales in developing countries such as China, Indonesia, Venezuela, and Yugoslavia.

Meanwhile, external factors – and indeed, the perception of officials and decision-makers that Canada had lost its special status as America’s trade partner – made the government far more amenable to considering non-traditional partners, including the military junta in Argentina and the communist Romania.

### **3 Argentina**

In 1950, Argentine President Juan Perón established the *Comision Nacional de Energia Atomica* (CNEA) with the declared intention of developing a domestic nuclear program for energy purposes.<sup>533</sup> According to T.V. Paul, Perón initiated the program in order to ‘bring back grandeur to Argentina by acquiring the ‘cutting edge’ technology of the times – nuclear

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<sup>531</sup> Unlike the CANDU, light-water reactor uses enriched uranium. Canada contends that LWR reactors pose a higher proliferation risk than heavy-water models. Heavy-water reactors like the CANDU have a reduced need for enriched uranium – an ingredient that is excellent for the production of nuclear weapons and so Canada touts its nuclear reactors as non-proliferation friendly. Conversely, because it is moderated with heavy water, the CANDU design produces more plutonium than LWR types. It also poses a challenge to the accountancy of spent-fuel since the CANDU is capable of ‘online refuelling,’ meaning that spent fuel can be extracted from the reactor even while the reactor is fully operational. This remains a contested issue. Israel, for example, maintains that the CANDU is a significant proliferation risk.

<sup>532</sup> Light-water reactors are currently the most common reactor. Of the world’s 392 reactors, 250 are PWRs. See: ‘Types of Reactors,’ Canadian Nuclear Association, (2015) Accessed at:

<https://cna.ca/technology/energy/types-of-reactors/>

<sup>533</sup> Ron Finch, *Exporting Danger*, 49.

technology.’<sup>534</sup> Perón also fanned suspicions of broader nuclear ambitions, hinting that Argentina could build an atomic weapon. Indeed, Argentina was on all of the ‘lists’ of suspected proliferants at the time.<sup>535</sup> In September 1955, after nearly a decade in power, Perón was removed by a military coup d’état and succeeded by successive dictatorships.

Argentina continued to aggressively invest in nuclear development, constructing an unsafeguarded uranium enrichment facility.<sup>536</sup> Given the enormous costs of establishing and maintaining nuclear power programs, particularly for developing countries that lack capital and infrastructure, and that it sat on vast gas reserves, Argentina’s claims that it was pursuing nuclear energy were not entirely believable.<sup>537</sup>

In the 1970s, the Argentine government opened bidding for a second power reactor expressing interest to use ‘peaceful nuclear explosions’ for research and development.<sup>538</sup> The AECL seized the opportunity to sell a nuclear reactor to Argentina.<sup>539</sup> The AECL, along with the Italian firm Italmimpianti, submitted a bid in June 1972.<sup>540</sup> The contract between the CNEA, AECL, and Italmimpianti was signed 20 December 1973. In support of the agreement, Canada’s Export Development Corporation (EDC, now Export Development Canada) agreed to provide \$130-million in financing.<sup>541</sup> The 1973 contract also included a clause requiring the

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<sup>534</sup> T.V. Paul, *Power versus Prudence: Why Nations Forgo Nuclear Weapons* (Montreal and Kingston: McGill-Queen’s University Press, 2000), 103-104.

<sup>535</sup> The list of countries at risk of going nuclear included Brazil, India, Iraq, North Korea, and Pakistan. See: John R. Redick, Julio C. Carasales and Paulo S. Wrobel. ‘Nuclear rapprochement: Argentina, Brazil, and the nonproliferation regime,’ *The Washington Quarterly* Vol. 18 No. 1 (1995), 107-122. See also: Moeed Yusuf, ‘Predicting Proliferation: The History of the Future of Nuclear Weapons,’ *Brookings Foreign Policy Paper Series*, Number 11, (January 2009): 1-88. Accessed at: [https://www.brookings.edu/wp-content/uploads/2016/06/01\\_nuclear\\_proliferation\\_yusuf.pdf](https://www.brookings.edu/wp-content/uploads/2016/06/01_nuclear_proliferation_yusuf.pdf).

<sup>536</sup> ‘Argentina,’ Country Profile, Nuclear Threat Initiative. (April 2015). Accessed at: [www.nti.org/learn/countries/argentina/](http://www.nti.org/learn/countries/argentina/).

<sup>537</sup> Iran had also initiated a nuclear program in the late 1950s. Flags were often raised in view of that country’s enormous oil deposits. In contrast to Argentina though, Iran was a staunch U.S. ally and firmly allied with the West, and supplier countries vigorously competed over nuclear contracts in the same period.

<sup>538</sup> The first nuclear plant, Juan Domingo Perón (Atucha I), was named after Perón.

<sup>539</sup> Jacques E. C. Hymans, *The Psychology of Nuclear Proliferation*, 143.

<sup>540</sup> Ron Finch, *Exporting Danger*, 51.

<sup>541</sup> EDC is a state-owned export credit agency, wholly owned by the Canadian government.

completion of a safeguards framework agreement between Argentina and AECL.<sup>542</sup> Although the agreement contained nuclear safeguards, there remained concerns about regime stability and regional conflict. Argentina was under military rule. It was involved in a perilous situation with Chile (and later the U.K.) and in engaged in a tense rivalry with Brazil – a country that shared its interest in atomic energy and who was also identified as a possible proliferant.<sup>543</sup>

At the time, Argentina appeared to have strong incentives to weaponize. Contemporary studies contest that Argentina ever desired nuclear weapons. Jacques Hymans, for example, argues that Argentina did not necessarily intend to acquire nuclear weapons.<sup>544</sup> Hymans writes, ‘Argentina’s policies were not motivated by nuclear weapons ambitions. Indeed, it is hard to find any significant actor in the Argentine political landscape who was motivated by such a desire.’<sup>545</sup> Hymans attributes Buenos Aires’ refusal to sign onto the NPT to its desire for an independent nuclear industry, rather than proof of any nefarious intent.<sup>546</sup> Paul states that ‘nuclear autonomy [for Argentina] was part and parcel of a larger inward-looking, autarkic development strategy.’<sup>547</sup> He acknowledges that Argentina sent out mixed signals however. Paul writes, ‘Although Argentina never went far enough to build a bomb, it refused to sign the NPT and failed to ratify the Tlatelolco Treaty. Its declared policy was always to reject any plans to build a bomb.’<sup>548</sup>

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<sup>542</sup> External Affairs Canada, ‘Canada’s Nuclear Non-Proliferation Policy,’ Government of Canada, May 1982. Accessed at: [http://www.iaea.org/inis/collection/NCLCollectionStore/\\_Public/14/762/14762384.pdf](http://www.iaea.org/inis/collection/NCLCollectionStore/_Public/14/762/14762384.pdf).

<sup>543</sup> John R. Redick, Julio C. Carasales and Paulo S. Wrobel, ‘Nuclear rapprochement: Argentina, Brazil, and the nonproliferation regime,’ *The Washington Quarterly* Vol. 18 No. 1 (1995), 107-122

<sup>544</sup> Jacques E. C. Hymans, *The Psychology of Nuclear Proliferation: Identity, Emotions, and Foreign Policy* (Cambridge: Cambridge University Press, 2006), 141.

<sup>545</sup> Jacques E.C. Hymans, *The Psychology of Nuclear Proliferation*, 141.

<sup>546</sup> Jacques E.C. Hymans, *The Psychology of Nuclear Proliferation*, 145.

<sup>547</sup> T.V. Paul, *Power versus Prudence: Why Nations Forgo Nuclear Weapons* (Montréal & Kingston: McGill-Queen’s University Press, 2000), 103-104.

<sup>548</sup> Paul, *Power versus Prudence*, 105. Paul also argues that the Falklands/Malvinas conflict with Britain increased Argentina’s desire for nuclear weapons, but the emergence of civilian rule in Argentina diminished the likelihood of this outcome.

Argentina's ambiguity vis-à-vis nuclear proliferation made ascertaining its true objectives difficult. All available evidence at the time supported the conclusion that the Argentines were not so disinterested in nuclear weapons, and that, at the very least, they desired to maintain the option by keeping the path open for weapons development in the future. Such was the reading of the Canadian government at the time, which questioned whether Argentina was after nuclear weapons.<sup>549</sup> Argentina's aversion to arms control reinforced this perception. It not only shunned the NPT, but it also refused to support a Latin America nuclear-weapons-free zone. Given its rivalry with Brazil at the time, which was in the midst of negotiating a nuclear agreement with the Germans, officials in Ottawa expressed unease about the prudence of an agreement with Argentina.<sup>550</sup> It was also held that Brazil wanted to develop nuclear weapons.<sup>551</sup> It was thus widely believed the two rivaling countries would embark on a nuclear race until the two agreed to a nuclear rapprochement under the auspices of the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (ABACC) in 1990 and their eventual accession to the Treaty of Tlatelolco in 1994.<sup>552</sup>

What explains the government's decision to proceed with nuclear assistance in the face of – what were at the time – legitimate concerns that Argentina would proliferate? Moreover, why was Canada willing to enter into business with a repressive military dictatorship in a potentially unstable region?

Strategic explanations claim that supplier countries will override proliferation concerns

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<sup>549</sup> Michael Reiss, *Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities*. (Washington DC: Woodrow Wilson Center Press, 1995): 45-88.

<sup>550</sup> Duane Bratt, 'Is Business Booming? Canada's Nuclear Reactor Export Policy,' 492.

<sup>551</sup> Barletta examines the development of, and the rollback of Brazil's nuclear program, arguing that domestic politics and discursive interpretations were more important than international factors such as external pressure or opposition or even the security environment. See: Michael Barletta, 'The Military Nuclear Program in Brazil.' *Centre for International Security and Arms Control*. Stanford University, (1997): 13-14.

<sup>552</sup> Julio C. Carasales, 'The Argentina-Brazilian Nuclear Rapprochement,' *The Nonproliferation Review*, Spring-Summer (1995): 39-48.

and even, in some instances, regime type for strategic gains. It follows that supplier countries will provide atomic assistance to traditional, military allies or those with which they share a common adversary in order to help strengthen them. Argentina was neither. Argentina and Canada did not share a common rival that Canada wanted to constrain. (Argentina's rival was Brazil.) Canadian officials had no meaningful interest in the region, apart from perhaps contributing to the U.S. policy of containment aimed at preventing Latin America from falling into the Soviet orbit. In that sense, Canada did not much differentiate between Argentina and Brazil. Ottawa assessed both to be susceptible to the allure of communism because of their lack of development and rampant socio-economic disparities, but otherwise paid them (as the rest of Latin America) little heed. It certainly did not see in Argentina a prospective strategic ally or military partner. The decision to provide nuclear assistance to Argentina was not the product of strategic calculations designed to attract or enhance the standing of an ally. The strategic explanation therefore provides little insight as to why Canada sought nuclear cooperation with Argentina.

Bratt argues that economic considerations motivated the Canadian government's sale of the Embalse CANDU to Argentina in 1973.<sup>553</sup> According to Bratt, economic interests were the most significant driver of the decision, and 'outweighed any of Ottawa's international principles.'<sup>554</sup> He explains that Canadian officials feared that the failure to secure reactor sales would signal the collapse of the nuclear industry.<sup>555</sup> Finch echoes that 'a reactor contract was desperately needed.'<sup>556</sup>

The economic explanation is compelling. According to AECL President Lorne Gray,

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<sup>553</sup> Duane Bratt, *The Politics of CANDU Exports*, 112.

<sup>554</sup> Duane Bratt 'CANDU or CANDON'T,' 7.

<sup>555</sup> Duane Bratt 'CANDU or CANDON'T,' 4.

<sup>556</sup> Ron Finch, *Exporting Danger*, 52.

the nuclear industry was on the brink of economic collapse due to lack of business. Gray stated that the AECL was ‘concerned about the future of the Canadian nuclear power programme if [it] did not get something.’<sup>557</sup> To be sure, economic considerations were at play. At the time, the Liberal government faced an enormous amount of domestic pressure both from the nuclear industry and their interest groups and from the Tories over the failure to sell nuclear plants.<sup>558</sup> To help ensure the successful conclusion of the sale between the AECL and Argentina, the government offered a generous financial package.

The need for sales encouraged the search for markets in Latin America and other parts of the developing world, but sales there almost always require a government subsidy. Economic theories neglect that the nuclear sector is distinct from commercial activities, not least because trade is subject to other interests at the domestic and international level, and is constrained by non-proliferation norms and other obligations (e.g., commitments to allies and alliances), budgetary limits, and popular expectations. They also seem too narrowly focused on financial reward when it is clear that Ottawa bases decisions on present-day interests and pressures than on the potential of future pay-offs. Indeed, a recipient’s ability to pay does not appear to be important given that financing is often done through EDC, which, as a former high-ranking bureaucrat disclosed, has a very close relationship with the Canadian nuclear industry.<sup>559</sup> The need to maintain the domestic nuclear industry led the Canadian government to sanction and support trade with Argentina. Faced with the choice of advancing its domestic interests and contributing to global stability, Ottawa chose the former. The possible risk that an NCA with Argentina could contribute to weapons proliferation or an arms race was

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<sup>557</sup> Lorne Gray quoted in Robert W. Morrison and Edward F. Wonder, *Canada’s Nuclear Export Policy* (Ottawa: Norman Paterson School of International Affairs, 1978), 20.

<sup>558</sup> Duane Bratt, *The Politics of CANDU Exports*, 112.

<sup>559</sup> Author interview with Ralph Lysyshyn.

insufficient to overcome economic imperatives.

### 3.1 Embalse Reactor

The decision reflected a deliberate shift in Canadian foreign policy intended both to distinguish Canada from, and to limit its dependence on the United States. Such was the thinking that inspired the Third Option.<sup>560</sup> External Affairs Minister Mitchell Sharp released the Third Option in 1972 – a year after the U.S. introduced tariffs on Canadian imports.<sup>561</sup>

The Third Option proposed a reduction in trade between Canada and the U.S. and an increase in bilateral trade agreements with new partners. In some sense, the proposal was a rejection of close bilateral relations, though it was equally a response to antagonistic personal relations between Trudeau and his American counterpart, President Richard M. Nixon.<sup>562</sup> As a result, Canada sought to forge relationships with developing countries, focusing especially on those outside of Canada's traditional spheres of influence and associations.

Nuclear cooperation with Argentina was one of the many outcomes of the new direction in Canada's foreign policy. (Though the Third Option never succeeded in 'replacing' the U.S., it did result in a boon to Canadian exports in general.) Under the Liberal government, Canada began to consider Latin American markets. In 1968, Ottawa sent delegations to visit nine states, including Argentina, Brazil, Chile, Colombia, Costa Rica, Guatemala, Mexico, Peru, and Venezuela, to assess the possible advantages of improved

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<sup>560</sup> On the Third Option, see: Muirhead, 'From Special Relationship to Third Option,' Gordon Mace and Gérard Hervouet, 'Canada's Third Option: A Complete Failure,' *Canadian Public Policy* Vol. 15, No. 4 (Dec., 1989): 387-404; Jeremy Kinsman, 'Who is my neighbour? Trudeau and foreign policy,' *International Journal*, Vol. 57, No. 1 (Winter 2001-2002): 57-77; Harold von Riekhoff, 'The impact of Prime Minister Trudeau on foreign policy,' *International Journal* Vol. 33, no. 2 (Spring 1978): 267-286; and, J. Alex Murray and Lawrence Leduc, 'Public Opinion and Foreign Policy Options in Canada,' *Public Opinion Quarterly*, Vol 40, No 4 (Jan. 1976): 488-496.

<sup>561</sup> Mitchell Sharp. *Which Reminds Me...A Memoir*. (Toronto: University of Toronto Press, 1995).

<sup>562</sup> When the Nixon tapes revealed that the U.S. President had called him 'an asshole,' Trudeau quipped: 'I've been called worse things by better people.'

relations with the region.<sup>563</sup>

Until the Third Option, Canadian foreign policy had focused on cultivating trade and cooperative relations with like-minded countries that shared Canada's values of democracy, institutionalism, and the rule of law. The historic bonds that linked Canada and India in the Commonwealth, along with the perception that democracies could be trusted allies, largely motivated nuclear assistance to India in this same period. In the case of India, Canadian officials reasoned that the Indians could be trusted not to violate the agreement because of shared ties between them (and they were wrong). In contrast, Argentina was not a democratic state or a traditional ally. It was, however, notorious for human rights violations against its citizens. How was a regime with such brutal disregard for its own people to be trusted with Canadian nuclear technology or to uphold its international commitments? Even more, Argentina was hardly a stable regime in the early 1970s. Since Perón's first ouster (he returned to power again in 1973 until his death the following year), coup d'états were standard.

Few objected when the nuclear agreement was announced in December 1973. After all, officials were aware that there were no prospective buyers of Canadian nuclear products among industrialized Western countries. Speaking to the House of Commons, Donald S. Macdonald, the Minister of Energy, Mines, and Resources (renamed Natural Resources Canada in 1995), praised the sale of a CANDU reactor to Argentina.<sup>564</sup> Canada's primary concern was the growth of its nuclear industry and the related domestic and economic benefits.<sup>565</sup> Attitudes changed the following year after India deliberately misused a Canadian-supplied nuclear reactor to detonate a nuclear device that spring. As a result, the Canadian

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<sup>563</sup> Stevenson, Brian J.R. 'Canada, Latin America, and the New Internationalism: A Foreign Policy Analysis, 1968-1990.' (Montréal & Kingston: McGill-Queen's University Press, 2000) 114-116.

<sup>564</sup> House of Commons Debate, 29th Parliament, 1st Session: Vol. 8 (7 December 1973).

<sup>565</sup> Duane Bratt 'CANDU or CANDON'T,' 8.

government came under pressure from the international community to revisit its nuclear export and non-proliferation policies as well as from the Canadian public, which was horrified to learn of its government's involvement.

To be sure, India's detonation of a nuclear device in May 1974 was an international and domestic embarrassment for the minority Liberal government, which was facing an upcoming election in July. Although the main concern for the Canadian public at the ballot box was the issue of spiraling inflation, the Trudeau government also worried about the possible electoral reverberations of Indian nuclear proliferation. To make matters worse, the United States blamed India's proliferation on Canadian negligence. U.S. Secretary of State, Henry Kissinger, publicly told reporters that, 'The Indian nuclear explosion occurred with material that was diverted not from an American reactor under American safeguards, but from a Canadian reactor that did not have appropriate safeguards.'<sup>566</sup> The charge was untrue, not least because Canadian safeguards were standard for the day and consistent with those in place by other suppliers including the U.S. but also because safeguards were effectively non-existent.<sup>567</sup> Still, the charge was damning particularly in an election year, forcing the Trudeau government to adopt a damage control policy to validate its commitment to non-proliferation.

Canada immediately suspended – before eventually terminating – all nuclear assistance to India. To further protect itself from future such embarrassment, Ottawa sought to renegotiate robust safeguards on existing nuclear agreements such as those with Argentina, Pakistan, and the Republic of Korea (South Korea).<sup>568</sup> The government was so determined to

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<sup>566</sup> Ian Macleod, 'Henry Kissinger apologized for rebuking Canada over India's nuclear test,' *Ottawa Citizen* 24 April 2014. Accessed at: [www.ottawacitizen.com/news/henry-kissinger-apologized-for-rebuking-canada-over-indias-nuclear-test](http://www.ottawacitizen.com/news/henry-kissinger-apologized-for-rebuking-canada-over-indias-nuclear-test).

<sup>567</sup> The Indians had used U.S.-supplied heavy water in the Canadian reactor.

<sup>568</sup> Canada had also sold an NRX-type research reactor to Taiwan (i.e., the Republic of China) in 1969. This was not subject to the new non-proliferation policy because shortly after the agreement, the Canadian government recognized 'mainland China' (i.e., the People's Republic of China) and severed diplomatic ties

remedy the view that it had been indifferent or negligent about nuclear proliferation that it went as far as temporarily halting nuclear cooperation with allied countries, such as Japan and Euratom (also known as the European Atomic Energy Community or EAEC). Canada adopted the most 'stringent nuclear safeguards.'<sup>569</sup> The political implications of the government's new non-proliferation policy, however, would conflict with the interests of the AECL and nuclear industry.

In keeping with the new non-proliferation policy, the Canadian government set out to obtain additional reassurances from the Argentine government. The contract between AECL and Argentina for the Embalse CANDU reactor had come into effect in April, just weeks before the Indian nuclear explosion. The only safeguard in place stipulated that Argentina 'would sign an acceptable agreement with the IAEA.'<sup>570</sup> In the exchange of notes between Canada and Argentina, issued on 10 September 1974, Canada announced that: 'Under the Non-Proliferation Treaty, it is Canadian export policy that all material, nuclear material, equipment, facilities and technology supplied from or by Canada will be used only for peaceful purposes and will not in particular be used for the development or manufacture of any nuclear explosive device.'<sup>571</sup> Argentina's Minister of Foreign Affairs, Alberto J. Vignes, pledged that no Canadian-supplied material would ever be used for anything other than peaceful energy. Vignes wrote:

I am pleased to confirm to Your Excellency, in the name of the Argentine Government, that all material, nuclear material, equipment, facilities and technology supplied by or from Canada pursuant to the above contracts, as well as any nuclear material produced in said plant or by said plant, and all subsequent generations of nuclear material produced in or by the use of such nuclear materials, will be used for peaceful purposes

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with Taiwan. From an arms control perspective, Canada was remiss to Taiwan, as it was later discovered to have been surreptitiously conducting research into plutonium separation.

<sup>569</sup> Duane Bratt, 'Is Business Booming? Canada's Nuclear Reactor Export Policy,' *International Journal* Vol. 51, No. 3 (1996), 491.

<sup>570</sup> Duane Bratt, *The Politics of CANDU Exports*, 131.

<sup>571</sup> Canada Treaty Series, 'Exchange of Notes Between Canada and the Republic of Argentina,' Government of Canada, No. 33. (Buenos Aires, September 12, 1974), Article I.

only and, in particular, will not be used for the development or manufacture of any nuclear explosive device.<sup>572</sup>

Yet, this measure was not enough to quiet the opposition parties.

In November 1974, NDP MP John Rodriguez raised concerns about selling to an unstable regime and about the effectiveness of Canada's nuclear safeguards.<sup>573</sup> Noting that the government was strengthening safeguards, Prime Minister Trudeau charged that: 'To take the attitude of the hon. member would mean that Canada would sit on this very advanced technology and not be willing to share its benefits with some of the countries of the world that do not have our advantages.'<sup>574</sup> This was a rather curious argument. It was true that Canada had an obligation to share nuclear technology under the NPT, but this was predicated on the good standing of members, and Argentina was not a party to the NPT. Nonetheless, that the Prime Minister couched the defence of the NCA in institutionalist language demonstrates that such appeals resonate with Canadians.

For two years, from 1974-76, Canadian officials endeavoured to bring the NCA with Argentina in line with the conditions of the new non-proliferation policy. Suddenly in the midst of safeguard negotiations in 1975, Argentina's Ambassador to Canada announced that the nuclear weapons option was a prerogative of the Argentine people. He declared that 'All nations should have the same rights, including the possibility of producing nuclear weapons... This right is a treasure to be shared by everyone.'<sup>575</sup> In light of his controversial statement (and Canada's recent experience with India), the Canadian government's decision to proceed with the agreement is surprising.

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<sup>572</sup> Canada Treaty Series, 'Exchange of Notes Between Canada and the Republic of Argentina,' Government of Canada, No. 33. (Buenos Aires, September 12, 1974), Article II.

<sup>573</sup> House of Commons Debate, 30th Parliament, 1st Session: Vol. 2 (28 November 1974).

<sup>574</sup> House of Commons Debate, 30th Parliament, 1st Session: Vol. 2 (28 November 1974).

<sup>575</sup> Quoted in House of Common Debates, 30th Parliament, 1st Session: Vol. 7 (12 June 1975).

This is all the more surprising given the volatile political environment that threatened and eventually overthrew the Argentine government. Argentina was on the brink of a civil war. As historian Richard Thornton explains, ‘increasing violence brought Argentine daily life to a standstill.’<sup>576</sup> After Perón’s death in 1974, his wife, Isabel Martínez de Perón, succeeded him as president. Though she attempted to suppress the Communist-led insurgency, her rule ultimately proved weak.<sup>577</sup> Thornton writes, ‘Perón’s government had been unable to contend with the insurgency, and law and order had collapsed.’<sup>578</sup> Shortly thereafter a right-wing military junta seized power from Perón. The United States and Britain, Canada’s main allies, both worried about the implications of regime change on Argentina’s nuclear program. Yet, Canada overlooked the instability of the Argentine government and continued to fulfill its nuclear agreement to build a CANDU reactor for Argentina.

In the House of Commons, decision-makers asked whether resuming business with the unstable dictatorship was sensible. Tommy Douglas asked: ‘If final negotiations have been completed with the government of Argentina regarding a nuclear reactor and if, in considering this matter of selling nuclear reactors to South Korea and Argentina, the government gives careful attention to the stability of those countries and the inherent danger providing them with nuclear potential may have in provoking their neighbouring countries into also seeking to have a nuclear capacity?’<sup>579</sup> Douglas boldly added: ‘I am asking the minister if we are interested primarily in promoting peace rather than selling nuclear reactors?’<sup>580</sup> Allan J. MacEachen, Deputy Prime Minister (the first to hold that title, presumably as reward for his staunch loyalty to Trudeau), responded that: ‘We are primarily interested in both, and that is

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<sup>576</sup> Richard C. Thornton, *The Falklands Sting: Reagan, Thatcher, and Argentina’s Bomb* (Washington: Brassey’s, 1998), 3.

<sup>577</sup> Richard C. Thornton, *The Falklands Sting*, 3.

<sup>578</sup> Richard C. Thornton, *The Falklands Sting*, 3.

<sup>579</sup> House of Commons Debate, 30th Parliament, 1st Session: Vol. 7 (10 June 1975).

<sup>580</sup> House of Commons Debate, 30th Parliament, 1st Session: Vol. 7 (10 June 1975).

why we, in undertaking these sales, go to very great lengths and take great pains to establish the most adequate safeguard system available. With regard to the specific question dealing with Argentina, we have not yet completed our bilateral negotiations as there are still a number of points outstanding about the safeguards themselves. We are pursuing these at the present time.<sup>581</sup>

An agreement was finally concluded in Buenos Aires on 30 January 1976. Under the renegotiated terms, Argentina agreed not use the CANDU or any other Canadian-originated materials or technology for the production of a nuclear device or for any military applications. The final safeguards agreement also allowed for IAEA or equivalent inspections and for Canada to veto high-level enrichment, reprocessing, or the re-transfer nuclear material and technology.<sup>582</sup> Canada also retained the right to ‘suspend co-operation’ and obligated it to terminate its use of the material and technologies received from Canada in the event that Argentina failed to comply with the agreement.<sup>583</sup>

Ottawa announced the conclusion of the nuclear cooperation deal with Argentina as a non-proliferation achievement. MacEachen stated:

items supplied or items produced with these, including subsequent generations, will not be diverted to any non-peaceful or explosive purpose; second, that these guarantees are verified through inspection mechanisms of the International Atomic Energy Agency; third, that the retransfer of items supplied and items produced with these including subsequent generations of nuclear material only be done with the consent of the Government of Canada; fourth, that the enrichment and reprocessing of nuclear material supplied, or nuclear material produced with those supplied, only be done with the consent of the government of Canada; fifth, that IAEA safeguards and other mechanisms of bilateral verification for aspects of guarantees, where the IAEA supplied item or for items susceptible for these guarantees produced from these items; and sixth, that adequate measures for the physical security of materials be in place to protect the supplied items from the threat of subnational diversion.<sup>584</sup>

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<sup>581</sup> House of Commons Debate, 30th Parliament, 1st Session: Vol. 7 (10 June 1975).

<sup>582</sup> Canada Treaty Series, ‘Agreement between Canada and Argentina,’ Government of Canada, No. 33. (Buenos Aires, January 30, 1976), Article I, Article III, Article V.

<sup>583</sup> Canada Treaty Series, ‘Agreement between Canada and Argentina,’ Government of Canada, No. 33. (Buenos Aires, January 30, 1976), Article V.

<sup>584</sup> House of Common Debates, 30th Parliament, 1st Session: Vol. 10 (30 January 1976).

Despite the rhetoric about non-proliferation, the government had not managed to persuade the Argentines to agree to either the NPT or the Treaty of Tlatelolco. Argentina, in fact, continued to renounce the former as unacceptable and discriminatory – a view not uncommon among developing nations.<sup>585</sup> Canada did not require Argentina to sign and ratify the NPT as a condition of renewal.<sup>586</sup>

That question was asked of Sharp in parliament. Sharp explained: ‘The signing of the NPT is not an essential requirement. The Argentine government has undertaken not to use Canadian supplies for any explosive purposes, and the Argentine authorities have reaffirmed their general dedication to the exclusively peaceful use of nuclear energy.’<sup>587</sup> The agreement was an important victory for the nuclear industry. As the *Globe and Mail* revealed in November 1977, the AECL and its Italian counterpart had acted in secret, offering a \$5-million payment to secure the sale of the CANDU to Argentina.<sup>588</sup>

### **3.2 Atucha II**

In 1979, the AECL missed a second possible sale to Argentina, known as Atucha II, when its bid lost out to a Swiss-West Germany company with softer safeguard requirements. Argentina felt that Canadian safeguards were onerous. The Argentines, unhappy with what they perceived to be excessive conditions placed on the Embalse reactor, opted to purchase from West Germany, whose safeguards requirements were less stringent.<sup>589</sup> The incoming

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<sup>585</sup> Two countries that did not join the NPT were India and Pakistan; rival countries that harboured nuclear weapons aspirations and later went on to build and test nuclear weapons. India had been particularly vociferous in opposing the NPT. Most countries, especially those without nuclear weapons ambitions, signed onto the Treaty regardless of its built-in inequalities, however. One would expect that after its experience with India, Canada would have been more careful in its nuclear dealings.

<sup>586</sup> Duane Bratt, *The Politics of CANDU Exports*, 133.

<sup>587</sup> House of Common Debates, 30th Parliament, 1st Session: Vol. 7 (12 June 1975).

<sup>588</sup> ‘From the Archives,’ *Globe and Mail*, 20 November 2012. Accessed at: [www.theglobeandmail.com/news/national/from-the-archives/article22397976/](http://www.theglobeandmail.com/news/national/from-the-archives/article22397976/).

<sup>589</sup> Duane Bratt, *The Politics of CANDU Exports*, 155-56.

Conservative government of Joe Clark had been divided on whether to sell a second reactor to Argentina. His minister for external affairs, Flora MacDonald, was strongly opposed to the sale. MacDonald's personal views were in line with the small but vociferous anti-nuclear movement, and she actively championed disarmament.<sup>590</sup> MacDonald and other opponents believed that Argentina would pursue nuclear weapons and that Canada should avoid complicity. She demanded that Argentina sign and ratify the NPT before Canada would consider further nuclear cooperation. At the United Nations, she delivered an ill-timed speech condemning Argentina's human rights record, which helped encouraged the Argentines to accept the more expensive German-Swiss deal over the Canadian one. Even so, MacDonald was careful not to criticize Canada's prized nuclear sector too harshly.

In contrast, proponents emphasized the economic benefits of the Atucha II and argued that Canada needed to continue to promote the CANDU in order to save the technology and industry from collapse. Those who supported the sale included Minister of Industry, Trade and Commerce Robert de Côtret, and International Trade Minister, Michael Wilson. In the end, the proponents succeeded; the Canadian government put forward a bid but with the stipulation that Argentina adopt full-scope safeguards.<sup>591</sup> This insistence led Argentina to favour the West German offer. Wilson lamented that the failed bid for Atucha II represented a loss of about \$800 million and thousands of jobs.<sup>592</sup>

In the House of Commons, de Côtret tried to expound on the rejection. He noted that Argentina was unhappy with Canada's performance in building and completing the Embalse reactor. He stated, 'the reactor sold several years ago involved several delays in

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<sup>590</sup> Yet, even MacDonald was careful not to criticize Canada's prized nuclear sector too harshly. She stated that, 'Canada should be proud of the contributions made by its scientists in developing cobalt treatment for cancer and tracers isotopes.' See: Donna Gabeline, 'Flora Warns of Nuclear Dangers,' *The Montreal Gazette*, May 22 1976.

<sup>591</sup> Duane Bratt, *The Politics of CANDU Exports*, 162.

<sup>592</sup> House of Commons Debate, 31st Parliament, 1st Session; Vol. 1 (10 October 1979).

bringing it on line, and also significant cost overruns. That is certainly something that must have been considered in arriving at their final decision.<sup>593</sup> He also offered that Argentina did not want to have all its nuclear energy provided by a single source. Finally, he conceded that it was ultimately Canada's insistence on full scope safeguards that spoiled the deal. De Côtret says, 'We insisted time and time again that we would require full scope safeguards with the Argentinians. I am sure you will agree that that was, essentially, the position of the prior government. We wanted to ensure that those safeguards were met. I do not think there was any misunderstanding on the part of the Argentinians on that account. I think all of these considerations bore on their final decision.'<sup>594</sup>

#### **4 Explaining Argentine-Canadian Nuclear Cooperation**

The 1970s was a difficult period for the Canadian nuclear industry, forcing AECL salesmen to expand their efforts in search of international buyers for the CANDU. In the first half of the decade, overtures were made to a number of countries including, Australia, Denmark, Greece, Italy, and Mexico. Empty-handed but not discouraged, the AECL also courted potential buyers among Britain, China, Indonesia, Ireland, Japan, Venezuela, Yugoslavia, among others from 1975 onwards. The aggressive marketing effort resulted in two nuclear export contracts to Argentina in 1973 and Romania in 1978. The domestic interest (i.e., sustaining an industry of significance) behind these agreements, coupled with the perceived economic returns that they promised, competed with Canada's identity as a champion of international institutions, particularly the non-proliferation and disarmament regime.

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<sup>593</sup> House of Commons Debate, 31st Parliament, 1st Session: Vol. 1 (10 October 1979).

<sup>594</sup> House of Commons Debate, 31st Parliament, 1st Session: Vol. 1 (10 October 1979).

Why, then, given Canada's declared commitment to non-proliferation did it pursue nuclear cooperation with Argentina? The fact that the Canadian government extended a NCA to Argentina – a country that was neither democratic nor a military ally – suggests that strategic interests were not the motivating factor in Canada's nuclear decision-making. Canada was not concerned about the effects of a regional arms race on its influence or on its other interests. Economic explanations are also incomplete. To extract concessions on safeguards from Argentina on the original reactor sale, Canada sweetened the financing terms to it. Canada was thus more interested in maintaining an internationalist image than profits. Domestic interests also encouraged the agreement. The annual report of AECL revealed a deficit of \$180-million the following year. During a parliamentary debate on the subject, Alastair Gillespie, the Minister of Energy, Mines, and Resources, explained that 'the objective has been to seek the broadest possible markets, thereby staking out a preferred position for future sales to maintain a continuing workload for large, highly technical design and engineering staffs.'<sup>595</sup>

Liberalism, with its emphasis on the domestic and the international contexts provide the best explanation for Canada's decision-making. At the domestic level, the Canadian government faced a crisis regarding the sustainability of its nuclear industry. The AECL and other allied industries pushed Ottawa to support and negotiate nuclear sales. At the same time, the government came under attack by the opposition parties for failing the nuclear industry. Though it later faced criticism for the Argentina deal, the government prioritized the domestic and economic interests of the deal over questions of human rights and regime stability and over the risk that the sale might contribute to proliferation in Argentina or might ignite a regional arms race. Indeed, Canada proceeded with the transaction even as Argentina's internal

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<sup>595</sup> House of Commons Debates, 30th Parliament, 2nd Session: Vol. 8 (7 July 1977).

situation destabilized, human rights deteriorated, and a new regime with a provocative stance towards nuclear proliferation took rule.

After the 1974 election, the Liberals enjoyed a strong majority, which effectively allowed them to ignore critics that questioned the government's commitment to non-proliferation. Some Canadians were displeased with the new direction in Canada's foreign policy, and unprepared to accept their country doing business with regimes with poor human rights records. They certainly did not think that Canada should be offering sensitive nuclear technology to a brutal regime that scoffed at international treaties designed to limit nuclear proliferation. Such concerns led to the creation of a grass-roots organization, 'No CANDU for Argentina Committee,' which was comprised of nuclear abolitionists, church and civil rights groups, human rights activists, environmentalists.<sup>596</sup> This group worked to persuade the government to terminate nuclear transfers to Argentina.

The Trudeau government continued its re-orientation of Canada's foreign policy towards the developing world. This was partly motivated by practical considerations, especially the political and economic panic that followed the Nixon Shocks. Yet, there was an ideational dimension to the shift. The Prime Minister was personally motivated by the desire to strike an independent foreign and economic policy identity for Canada – one that was not simply dependent on Washington. Trudeau and his cabinet, notably Sharp, wanted to display Canada's autonomy, not only in terms of demonstrating that Canada could weather changes in the U.S. market but also in terms of demonstrating that Canadian foreign policy behaviour was distinct. In his famous speech in Washington, Trudeau said: 'Americans should never underestimate the constant pressure on Canada which the mere presence of the United States

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<sup>596</sup> For a history on the efforts of nuclear abolitionists, see: Lawrence S. Wittner, *The Struggle Against the Bomb Volume 3: A History of the World Nuclear Disarmament Movement, 1971 to the Present*, (Stanford, CA: Stanford University Press, 2003).

has produced. *We're different people from you and we're different people because of you.* Living next to you is in some ways like sleeping with an elephant. No matter how friendly and even-tempered is the beast, if I can call it that, one is effected by every twitch and grunt. *It should not therefore be expected that this kind of nation, this Canada, should project itself as a mirror image of the United States'* [emphasis added].<sup>597</sup> It is hardly surprising then that the Trudeau government claimed that the NCA demonstrated care for the welfare of developing states rather than for playing the 'great power' game.

Thus, the Canadian government had clear domestic and economic interests in maintaining the deal with Argentina. First, the deal with Argentina was consistent with the priorities outlined in Third Option, which designated expanding cultural and trade relations with countries in Latin America as a top objective. In this way, an NCA with Argentina helped to advance the government's foreign policy objective of making economic and cooperative inroads into the region. Second, without a renegotiated contract, the AECL stood to lose over \$200-million.<sup>598</sup> Such considerations pressured Canada to agree a nuclear deal despite the threat of nuclear proliferation.

The international context also influenced Canada's decision-making. The main reason behind Canada's inability or unwillingness to impose the NPT on Argentina during the safeguards negotiations seems to have been the fear of losing the contract. As Ross Campbell, the head of the AECL, put it: 'Business is business and human rights are human rights, and in any event, if Canada pulled out of the deal the sale would only go to West Germany.'<sup>599</sup> The government echoed this sentiment, understanding that international competition in the

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<sup>597</sup> Pierre Elliott Trudeau, address to the National Press Club, Washington D.C., March 25 1969.

<sup>598</sup> Ron Finch, *Exporting Danger*, 52. See also: Duane Bratt, *The Politics of CANDU Exports*, 134.

<sup>599</sup> George Vair. 'No Hot Cargo for Argentina,' Hatheway Labour Exhibit Centre, (2012). Accessed at: [www.wfhathewaylabourexcitcentre.ca/labour-history/no-hot-cargo-for-argentina/](http://www.wfhathewaylabourexcitcentre.ca/labour-history/no-hot-cargo-for-argentina/).

nuclear marketplace meant that it could not afford to miss out on potential sales by being excessively strident on non-proliferation or overly concerned about human rights. While officials emphasized Canada's commitment to non-proliferation values, pointing out that Argentina had been advised that no nuclear cooperation would take place until it fully complied with Canada's non-proliferation requirements, Canada continued to discharge its obligations under the original 1973 agreement, and a few years later, was trying to woo the Argentines to purchase a second nuclear reactor.<sup>600</sup> Despite insisting on more stringent safeguards on the second sale, Canada was not significantly more committed to non-proliferation than other nuclear suppliers, such as West Germany, Switzerland, and France, at the time.

## **5 Romania**

Canada did not have a historic or significant relationship with Romania prior to the time that the two concluded an NCA. From 1947 to 1967 interactions between the two states were limited and occurred predominantly in multilateral settings and through international organizations such as, the United Nations. In the early to mid 1960s, Canadian and Romanian officials began to hold discussions on the prospect of establishing high-level bilateral relations. Bilateral relations were formally established on April 3, 1967, and Romania opened an embassy in Ottawa in 1970.<sup>601</sup>

At the time, the Canadian government was reluctant to cement ties with Romania due to the latter's socialist ideology even as the two discussed nuclear technology sales.<sup>602</sup> By the

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<sup>600</sup> External Affairs Canada, 'Canada's Nuclear Non-Proliferation Policy.'

<sup>601</sup> Mihai Sandu, 'The Outlook of Romanian-Canadian Diplomatic Relations Through International Organizations,' *Valahian Journal of Historical Studies* Issue 11 (2009): 175-187.

<sup>602</sup> Mihai Sandu, 'The Outlook of Romanian-Canadian Diplomatic Relations Through International Organizations,' 181.

late 1960s, however, it was well-known that Romania's "alliance" status in the Warsaw Pact was being rethought in Bucharest.

The negotiations for a bilateral nuclear agreement started as early as 1967 when Romanian officials visited Canada to survey Canadian nuclear facilities.<sup>603</sup> After several years of negotiations, Canada signed a nuclear cooperation agreement with Romania in 1977. On December 16, 1978, Canada and Romania concluded three related nuclear agreements that permitted the latter to purchase a CANDU nuclear reactor.<sup>604</sup> The first of these was a licensing agreement to allow Romania to build one to four CANDU reactors with 'a significant amount of components and services being provided by Canadian industry.'<sup>605</sup> The second was an engineering services agreement that called for the AECL to provide Romania with design specifications for a modified CANDU to fit Romania's electrical grid. The final agreement outlined the role of the AECL as the agent responsible for procuring components for Romania's CANDU reactor.<sup>606</sup>

Less than three years later, in July 1981, the two countries signed another NCA for the sale for a second nuclear reactor. The agreement intended to boost economic exchange and ties between the two countries. It called on both governments to 'assist in the conclusion of mutually beneficial agreements between firms, enterprises and economic organizations' and one of the areas identified for increased cooperation and development was nuclear energy.<sup>607</sup> Since Romania lacked the capital to actually purchase nuclear commodities, the agreement

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<sup>603</sup> Thad McIlroy, 'Canada, Romania and CANDU: Promise of 20 CANDU sales became two Romania bargained hard for reactors and got what it wanted.'

<sup>604</sup> Department of Supply and Services, 'Atomic Energy: Agreement Between Canada and the Socialist Republic of Romania,' Government of Canada. Treaty Series 1978 No. 10. 24 October 1977.

<sup>605</sup> Duane Bratt, *Politics of CANDU Exports*, 151.

<sup>606</sup> Duane Bratt, *Politics of CANDU Exports*, 151.

<sup>607</sup> Government of Canada, 'Long Term Agreement between Canada and the Socialist Republic of Romania.' 19 May 1981. Treaty Series 1982 No. 16. Accessed at: <http://dfait-aecl.canadiana.ca/view/ooe.b2330969/1?r=0&s=1>.

included provisions for a loan from EDC for up to four reactors, which was signed on April 30, 1979. The total loan amounted to 1-billion USD.<sup>608</sup> The portion from the EDC came to 680-million USD with the remaining 320-million USD to be provided by a consortium of banks headed by the Bank of Montreal.<sup>609</sup>

Very few works have examined the case of Canadian nuclear assistance to Romania. Renata Wielgosz, in a rare but comprehensive study on the subject, evaluates the decisions surrounding EDC loan disbursements to Romania for the construction of CANDU reactors. In March 1982, the EDC suspended payments under the loan agreement due to growing worries about Romania's worsening economy – a decision that the federal government approved the following month.<sup>610</sup> In July 1983, however, the Canadian government chose to reverse the moratorium issued by the EDC on loans to Romania. Wielgosz's research specifically concerns the decision-making process involving multiple inter-departmental bureaucracies that began following the suspension of disbursements by the EDC to the 1983 reversal.<sup>611</sup> Applying a bureaucratic decision-making model, she contends that despite the apparent risks associated with nuclear assistance to Romania, Canadian bureaucrats and decision-makers perceived it to be 'a politically stable country.'<sup>612</sup>

Why did the Canadian government have this perception? Was this definition of 'politically stable' concocted to suit the objective to secure a buyer for its nuclear reactor? The Canadian government was certainly not unaware that Romania's economy might present

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<sup>608</sup> Thad McIlroy, 'Canada, Romania and CANDU: Promise of 20 CANDU sales became two Romania bargained hard for reactors and got what it wanted.'

<sup>609</sup> Renata Elisabeth Wielgosz, *Foreign Policy Decision-Making and the Canadian Bureaucracy: Financing the CANDU in Romania*, (York University: UMI Dissertations Publishing, 1985) 13.

<sup>610</sup> Renata Wielgosz, *Foreign Policy Decision-Making and the Canadian Bureaucracy*, 14.

<sup>611</sup> Renata Wielgosz, *Foreign Policy Decision-Making and the Canadian Bureaucracy*, 15.

<sup>612</sup> Renata Wielgosz, *Foreign Policy Decision-Making and the Canadian Bureaucracy*, 12

future challenges. To be sure, in 1976, the government carried out a feasibility study for the CANDU system in Romania and proceeded with the nuclear agreement, which was concluded between the AECL and ROMENERGO the following year.<sup>613</sup> Despite Romania's status as a developing country, Eastern Europe was considered a good credit risk relative to other developing countries because command economies (i.e., communist states) could exert control over foreign trade. While Eastern European states were limited in their ability to export, Wielgosz explains that they generally owed smaller sums of debt than other developing countries such as those in Latin America.<sup>614</sup> Eastern European countries also had a reputation of respecting contracts and trade agreements.

However, within four years of agreement, Canada moved to suspend loan disbursements to Romania, effectively halting the construction of the nuclear reactor and related activities. Despite having conducted due diligence with the feasibility study, it had become apparent that Romania would be unable to repay its loans. Due to growing debt problems, the EDC concluded that Romania was no longer a safe risk and unilaterally decided to discontinue loans to Romania. The decision had nothing to do with concerns about the prudence of nuclear cooperation with an adversary, the prospect of nuclear weapons proliferation or third-party transfers of nuclear materials or information, or even the containment of communism. Rather, the threat concerned the likelihood that Romania would default on its repayments.

In 1983, the Canadian government overturned the EDC's decision. It restarted nuclear cooperation with Romania, which also entailed the continuation of loans. In the 15-month period from March 1982 to July 1983, Canadian decision-makers faced a stark decision

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<sup>613</sup> IAEA, 'Romania,' Country Nuclear Power Profiles 2012 Edition. [http://www-pub.iaea.org/MTCD/Publications/PDF/CNPP2012\\_CD/countryprofiles/Romania/Romania.htm](http://www-pub.iaea.org/MTCD/Publications/PDF/CNPP2012_CD/countryprofiles/Romania/Romania.htm)

<sup>614</sup> Renata Wielgosz, *Foreign Policy Decision-Making and the Canadian Bureaucracy*, 11.

involving two sub-optimal choices. They could either risk incurring potentially greater losses by continuing to provide financial assistance through debt rescheduling or they could accept the sunk costs. In the end, Ottawa chose the former, hedging that continued loans would facilitate Romania's economic recovery so that recoupment would eventually become possible.

Alternately, Canada could have decided to accept an immediate financial loss by cancelling the project for the construction of the CANDU in Romania altogether. However, Canadian bureaucrats disregarded the opinion of EDC creditors and proceeded with the sale. Wielgosz notes, 'While the EDC continued in its role as a prudent banker and was reluctant to change its March 1982 position, other departments and government agencies had vested interests in seeing that the Canadian-Romanian deal did not fall through.'<sup>615</sup> What were these vested interests? Whose interests were being served by the Romania deal? Though detailed and insightful, the work does not provide answers to the aforementioned questions nor explain why the decision to provide Romania with an NCA was made in the first place.

Other studies have also examined the case of Canadian-Romanian nuclear cooperation, though they have been far less detailed than Wielgosz's. Bratt argues that Canada's decision to support Romania in completing the reactor deal was guided by a number of economic interests including showcasing increased Canadian content in the reactor, AECL operation of the reactor for the first 18 months, and a commitment from Romania to buy heavy water from Canada.<sup>616</sup> Though he advances a primarily economic argument, he concludes that the agreement with Romania ultimately proved to be a 'fiasco' due to the financial issues, design flaws, and delays in construction.<sup>617</sup> Conversely, Matthew Fuhrmann rejects that the decision was driven by economic considerations. In keeping with his main

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<sup>615</sup> Renata Wielgosz, *Foreign Policy Decision-Making and the Canadian Bureaucracy*, 15.

<sup>616</sup> Duane Bratt, *Politics of CANDU Exports*, 180.

<sup>617</sup> Duane Bratt, *Politics of CANDU Exports*, 179.

thesis of strategic nuclear assistance, Fuhrmann argues that Canada endeavoured to gain favour with Romania, which was 'consistent with the Western strategy of limiting Moscow's influence.'<sup>618</sup> Romania, though domestically repressive, did show some signs of relative independence from the Soviets, particularly on foreign policy. Fuhrmann also adds that Canada's strategic imperative to provide assistance to Romania was so strong that it willfully ignored the proliferation risks. This is a damning accusation given Canada's professed commitment to nuclear non-proliferation institutions and given that only three years had passed since India conducted a nuclear weapons test using a Canadian-supplied reactor. If true, then one might reasonably ask why other NATO suppliers were not similarly motivated.

The economic explanation, as advanced by Bratt, neglects that Canada pursued nuclear cooperation with a developing country that did not have the ability to pay. Romania, like much of Eastern Europe, faced economic difficulties. Like Fuhrmann, Bratt claims that the Canadian government relegated concerns about proliferation. Curiously, he claims that such concerns reinforced the government's willingness to carry on with the NCA even after it became apparent that Romania would default on its debt repayments. Fusing regime explanations with his economic argument, Bratt explains: 'If Canada withdrew its support, Romania would be left with the blueprints for Canadian nuclear technology at a time when the former Soviet Union was in no position to ensure that Romania would use its nuclear power only for peaceful purposes. By placing Canadian officials in charge...the Canadian government would be in a position to take over the role played in the past by the Soviet Union.'<sup>619</sup> According to this view, the ability of the non-proliferation regime to detect cheating and verify Romania's commitments encouraged the agreement to move forward.

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<sup>618</sup> Matthew Fuhrmann, *Atomic Assistance*, 116.

<sup>619</sup> Duane Bratt, *Politics of CANDU Exports*, 180.

Fuhrmann argues that the Canadian government hoped that nuclear cooperation with Romania would facilitate closer ties, and would draw it out of the Soviet orbit, and that these strategic considerations contributed to the government's decision to extend a nuclear cooperation agreement to Romania. Bratt also contends that political interests cemented the Cernavoda deal. These explanations are not entirely off the mark. Indeed, the Liberal government justified the sale to the repressive regime of Ceaușescu on political grounds. Though Romania was an ally of the Soviet Union, Fuhrmann maintains that it was a country that Canada (or at least, Canada's chief ally, the United States) wanted to befriend.

He also argues that the Canadians downplayed the threat of proliferation in order to advance the greater strategic imperative of building good relations with the East European state. One would think that having recently been burned by its experience with India, the Canadian government would have prioritized concerns about the possible risk of nuclear proliferation. At the very least, the Canadian government should have worried about the implications of technology transfers to a communist-aligned country and the possibility that the Romanians might share Canadian nuclear technology with other Eastern bloc countries. That Canada proceeded with such a sale so soon after India used a Canadian nuclear reactor to produce plutonium for its nuclear tests undermines its supposed commitment to non-proliferation.

## **6 Explaining Romanian-Canadian Nuclear Cooperation**

The Canadian government's decision was largely the consequence of the industry pressures to export nuclear materials. The export of CANDU reactors has the potential to be quite profitable – that is, if the customer actually pays – as each reactor export can boost the balance

of payments by \$1.6-billion.<sup>620</sup> As was the case with Argentina, the government expended an enormous sum to ensure that the deal went through. Of course, this bilateral NCA was more than economic transaction between two actors. First, because of the ongoing Cold War and Romania's position as a Soviet ally, the agreement had unavoidable political dimensions. Second, that the government faced the loss of its investment suggests that economic gains were not the sole objective in the mind of Canadian decision-makers when they decided to extend an NCA to Romania. Indeed, Ottawa's decision to reinstate loan disbursements to the developing communist country demonstrate just how desperately sales (or at least their appearance) were needed. This decision, too, was shaped by the belief that the cancelation of the agreement would inflict more damage on the domestic nuclear industry than would the prospect of Romania failing to repay the loans.

What factors and considerations encouraged the Canadian government's decision to provide nuclear assistance to Romania? Romania was not an ally. As mentioned, it was a poor communist country lacking the financial wherewithal to purchase the nuclear reactors it had ordered, and it was apparent that it would be unable to repay the loans it had borrowed from the Canadian government to help finance them. Still, states are not profit-maximizing entities. They make and sometimes lose money on deals, and so immediate profits are not necessarily what drives states to trade with others. As a senior official in the non-proliferation division at GAC told me, 'nuclear exports can lead to other business opportunities for Canada and industries that need support.'<sup>621</sup>

In trying to make sense of Canada's behaviour, scholars, such as Wielgosz and Bratt, have emphasized the potential for economic gains while others, such as Fuhrmann, have

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<sup>620</sup> Matthew Fuhrmann, *Atomic Assistance*, 116.

<sup>621</sup> Author interview with Senior Official at DFATD, 2 July 2014.

emphasized the potential for strategic gains. Yet, neither economic nor strategic accounts provide a wholly satisfactory explanation of Canada's decision-making in the case of Romania. While economic and political (more so than strategic, as typically defined in the supply-side literature) interests pushed the Canadian government to sign a nuclear deal with Romania, domestic actors and interests – chiefly those of the uranium and reactor industries – played a central role. The government was so determined to keep the Canadian nuclear reactor industry alive that it concluded what was, by both economic and strategic measures, a bad deal. In the case of Romania, broader domestic political as well as related commercial interests pushed the Canadian government to continue its support for the reactor industry.

In the early 1970s, the AECL searched European markets for export opportunities for the CANDU nuclear reactor. The scope of the search was limited to cultivating a trade relationship with Canada's NATO allies such as, Denmark, Greece, and Italy. An External Affairs publication from 1970 had identified atomic energy as a possible area of cooperation between Canada and Europe. The report reads:

Areas of particular Canadian competence, such as atomic energy, communications technology, earth sciences, metallurgy and oceanography, might provide additional possibilities for fruitful co-operation between Canada and Europe. Given the possibilities, the Government must determine whether deliberate pursuit of such associations with Europe would contribute significantly toward the major Canadian objectives of maintaining independence and a distinct identity. It is clear that in the absence of conscious effort most scientific and technological activities in Canada will remain largely oriented toward the United States.<sup>622</sup>

The preference for Western European buyers reflected the perception that Canada had latched too much of its economic livelihood and political autonomy on the United States, and that this dependence had become a vulnerability. Indeed, fears turned to reality in 1971, with the launch of the 'Nixon shocks' that implemented a 10% tariff on all imports. In response, the

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<sup>622</sup> Government of Canada, 'Europe: Foreign Policy for Canadians,' Ministry of External Affairs (Ottawa, 1970), 26-27.

Trudeau government enacted the aforementioned Third Option policies that aimed to diversify Canada's trade the following year.<sup>623</sup>

Because of increased competition and saturated markets in the United States and Western Europe, the Romania deal represented a triumph for the AECL. As the *Globe and Mail* (rather unenthusiastically) reported, the agreement to sell CANDU reactors to Romania was 'the first sale of nuclear reactors to a foreign country in three years.'<sup>624</sup> Apart from its symbolism, there was little to celebrate. It would not be until 1996 – 18 years after Romania first placed an order for a nuclear reactor – for the project to be complete and online. The second reactor, ordered in 1982, was completed in 2007.

The Liberal government of Trudeau was heavily criticized both for its decision to export nuclear technology and materials and for its generous financial assistance to the poor communist country. For example, MacDonald, the Progressive Conservative MP for Kingston and the Islands and the opposition's foreign affairs critic, raised the issue of Canada's \$1-billion loan to Romania during question period in 1978. MacDonald asked, 'Can the minister say that the \$1-billion loan made by the Export Development Corporation to Romania for the construction of four CANDU reactors is all the financing that will be made available, in view of the fact that similar financing with Korea by EDC for one nuclear reactor has now escalated to a cost of \$560 million-\$1 billion for four; \$560 million for one? Is this another \$1 billion financial fiasco?'<sup>625</sup> MacDonald was strongly opposed to nuclear cooperation with the likes of countries like Romania and Argentina, making her particularly receptive to the lobbying

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<sup>623</sup> Nixon had also angrily declared that the 'special relationship' between Canada and the United States was over. See: Jack L. Granatstein and Robert Bothwell, *Pirouette: Pierre Trudeau and Canadian Foreign Policy* (Toronto: University of Toronto Press, 1991), 71.

<sup>624</sup> The *Globe and Mail*, 'Romania signs deal to buy 4 CANDU reactors,' *The Globe and Mail*. Toronto. 18 December 1978.

<sup>625</sup> House of Commons Debates, 30<sup>th</sup> Parliament, 4<sup>th</sup> Session: Vol. 2 (18 December 1978).

campaigns of the No Candu for Argentina Committee, the Canadian Labour Congress, Project Ploughshares, the Voice of Women, and other anti-nuclear groups and coalitions.<sup>626</sup>

In the House of Commons, officials also questioned the wisdom of the Liberal government providing nuclear assistance to a communist state, citing the fear that Romania might transfer Canadian-supplied nuclear materials and technologies to other Warsaw Pact states. Alastair Gillespie, the Minister of Energy, Mines and Resources and Minister of State for Science and Technology, was specifically asked whether ‘the licensing agreement will allow ROMANERGO to sell reactors to other countries, or expressly states that reactors will be built solely in Romania?’<sup>627</sup> Opponents worried that the sale might allow for further nuclear proliferation to Soviet satellite states. Gillespie vigorously defended the agreement, stating that: ‘Romania has signed the nuclear non-proliferation treaty and has accepted international safeguards and inspection by the International Atomic Energy Agency. Romania has in every respect observed Canadian safeguards, the toughest in the world.’<sup>628</sup> Indeed, the agreement between Canada and Romania included inspections on Romanian nuclear facilities.<sup>629</sup>

More significantly, Minister Gillespie added: ‘As to the question of additional Canadian benefits which may flow from this transaction, it is quite possible that after the four reactors have been put in place, Romania will want to purchase additional components and engineering services from Canada. That would be to the advantage of Canada. But before they can export any part of that technology to foreign countries there will have to be further

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<sup>626</sup> For more on the different coalitions and advocacy groups opposed to nuclear technology and exports, see: Duane Bratt. *Canada, the Provinces, and the Global Nuclear Revival: Advocacy Coalitions in Action*, (Montréal & Kingston: McGill-Queen’s University Press, 2012).

<sup>627</sup> House of Commons Debates, 30<sup>th</sup> Parliament, 4<sup>th</sup> Session: Vol. 2 (18 December 1978).

<sup>628</sup> House of Commons Debates, 30<sup>th</sup> Parliament, 4<sup>th</sup> Session: Vol. 2 (18 December 1978).

<sup>629</sup> Department of Foreign Affairs, Trade and Development, ‘Atomic energy: agreement between Canada and the Socialist Republic of Romania,’ Government of Canada. 1979. Available at: <http://dfait-aei.canadiana.ca/view/ooe.b2995554/1?r=0&s=1>.

agreement negotiated with Romania with respect to those export opportunities.<sup>630</sup> All indications from 1977 to 1978 showed that Canada stood to make big profits from the sales.

In less than a decade, critics of the Romania nuclear agreement were vindicated. One of the biggest obstacles was Romania's lack of capital. In spite of the 1-billion-dollar line of credit, Romania had yet to order a reactor in 1982. Gordon Edwards explains:

During the intervening years, tortuous trade negotiations took place. In order to earn enough foreign currency to pay for the CANDU, Romania wanted Canada to buy (or find buyers for) Romanian farm machinery and textiles. In June 1981, to keep the negotiations alive, Romanian officials initialled an agreement to purchase a second CANDU -- but still no orders were placed for the first. In the spring of 1982 the Export Development Corporation finally withdrew the Romanian line of credit.<sup>631</sup>

The agreement with Romania was expected to bring about \$1-billion worth of business to Canada. However, by 1986 only \$330-million worth of business had been conducted in Canada.<sup>632</sup> Though the financing through the EDC was intended for the construction of the reactors, allegations that the loan funds had been misappropriated emerged. Romania, in attempting to get out of debt, had essentially forced exports onto the Canadian market. As one newspaper reported, '200,000 tons of Romanian carbon steel plates were dumped in the United States and Canada last year as part of the complex countertrade provisions of the reactor deal.'<sup>633</sup>

Furthermore, although the Trudeau government dismissed proliferation concerns that were raised about the deal, citing Romania's commitment to the non-proliferation regime, it privately held concerns about Romania's nuclear ambitions based on intelligence reports. As early as 1964, U.S. political and intelligence analysts assessed that Romania had the potential

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<sup>630</sup> House of Commons Debates, 30<sup>th</sup> Parliament, 4<sup>th</sup> Session: Vol. 2 (18 December 1978).

<sup>631</sup> Gordon Edwards, 'Canada's Nuclear Industry and the Myth of the Peaceful Atom,' 145.

<sup>632</sup> Thad McIlroy, 'Technology Giveaway: Canada's Questionable Deal to Sell Reactors to Romania.'

<sup>633</sup> Thad McIlroy, 'Technology Giveaway: Canada's Questionable Deal to Sell Reactors to Romania.'

to weaponize.<sup>634</sup> This assessment was overlooked by successive U.S. administrations beginning with Johnson.<sup>635</sup> The Nixon administration held a favourable view of the communist government because of its leader Nicolae Ceaușescu's perceived 'signs of independence' from Moscow.<sup>636</sup>

The relationship between Romania and the USSR was strained, and often tumultuous. Ceaușescu had on a number of occasions voiced objections to Soviet policy.<sup>637</sup> (The Soviet Union indulged Ceaușescu's mild rebelliousness for two reasons: First, Romania was not strategically important and second, Romania expounded hardline communist policies at home.<sup>638</sup>) Like most dictators, Ceaușescu was a cult personality. Though he had gained approval for his defiance of Moscow, Ceaușescu was not much of a moderate. In the 1960s, he reduced Romania's participation in the Warsaw Pact, refusing to participate in the invasion of Czechoslovakia and publicly condemning the intervention.<sup>639</sup> In addition, he permitted the emigration of Jewish citizens, recognized Israel, improved press censorship (though he later exercised full control over the media and clamped down on dissent through his secret police, the *Departmentul Securitatii Statului*), and sought to establish relations with Western governments by presenting himself as a reformist. This all carried favour in Washington,

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<sup>634</sup> Eliza Gheorghe, 'How to Become a Customer: Lessons from the Nuclear Negotiations between the US, Canada and Romania in the 1960s,' Nuclear Proliferation International History Project, Wilson Center. Issue Brief 2, (March 15, 2013): 1-9.

<sup>635</sup> Dean Rusk, Secretary of State under both Kennedy and Johnson, believed that the Romanian leader's brand of communism would bring it closer to the West.

<sup>636</sup> 'Rumanian-American Relations,' Foreign Relations of the United States, 1961-1963 Volume XVI, Eastern Europe; Cyprus; Greece; Turkey, Document 20. Memorandum of Conversation, August 8, 1963. Accessed at: <https://history.state.gov/historicaldocuments/frus1961-63v16/d20#fn-source>. This view was multiple US President, and shared by his predecessor, Lyndon B. Johnson, who, after the Soviet invasion of Czechoslovakia, threatened the Soviets to keep them from doing the same to Romania.

<sup>637</sup> Matthew Fuhrmann, *Atomic Assistance*, 116.

<sup>638</sup> R.C. Longworth, 'Ceaușescu's Romania Was Once A Pet Of U.S.,' Chicago Tribune December 27, 1989. Accessed at: [www.articles.chicagotribune.com/1989-12-27/news/8903200987\\_1\\_nicolae-ceausescu-soviet-diplomat-romania](http://www.articles.chicagotribune.com/1989-12-27/news/8903200987_1_nicolae-ceausescu-soviet-diplomat-romania).

<sup>639</sup> Gilberg, Trond. *Nationalism and Communism in Romania: The Rise and Fall of Ceaușescu's Personal Dictatorship* (Westview Press, 1990).

which latched its hopes of creating a schism in the Warsaw countries on Ceaușescu and exploiting differences between them and the Soviet Union.

Taken in by Ceaușescu's criticisms of the Kremlin, the Nixon administration ordered American diplomats to extol the strength of the Romanian economy in order to funnel loans and investments from U.S. banks and firms.<sup>640</sup> In the end, American investors lost their money and foreign loans ruined the Romanian economy. In order to repay the debts, Romania was forced to export all that it could, including 'strawberry jams,' leaving the Romanian people destitute and famished.<sup>641</sup> The anti-Soviet basis of U.S. foreign policy meant that Washington supported any country that irked the Soviets, however repugnant. Canada took a position that was practically similar even while it claimed to be distinct from the U.S. The negotiations for the nuclear cooperation agreement, which had begun ambitiously with the potential deal for 20 nuclear reactors, ended with a deal for two reactors that were paid for with Romanian goods rather than cash.<sup>642</sup>

The U.S. continued to ignore information about Romania's nuclear intentions, even though Ceaușescu did not mask his nuclear ambitions.<sup>643</sup> Washington – much like Ottawa – expressed confidence about Romania's commitment to the non-proliferation regime. Romania had, to the satisfaction of the United States, signed the Nuclear Test-Ban Treaty in 1963 and was an original signatory of the NPT.<sup>644</sup> In this environment, if Canadian decision-makers had

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<sup>640</sup> Indeed, Nixon described Ceaușescu as 'a tough, hardline Stalinist Marxist who was both straightforward and unbending.' However, this concern was relegated to the broader anti-Soviet foreign policy interest. See: National Archives, Nixon Presidential Materials, NSC Files, Box 702, Country Files—Europe, Romania, Vol. I—8/69 Accessed at: <https://history.state.gov/historicaldocuments/frus1969-76v29/d187>

<sup>641</sup> Author interview with Renata Elisabeth Wielgosz, Ottawa. June 19, 2014.

<sup>642</sup> Thad McIlroy, 'Canada, Romania and CANDU: Promise of 20 CANDU sales became two Romania bargained hard for reactors and got what it wanted,' *The Whig-Standard*. Kingston, Canada. 19 December 1987.

<sup>643</sup> Bratt strongly implies that the Canadians suspected the Romanians might aspire to nuclear weapons. See: Duane Bratt, *The Politics of CANDU Exports*, 113.

<sup>644</sup> The United States overlooked other indications of Romania's strategic preferences, including its ambiguous position on the Mutual and Balanced Force Reduction talks between the United States and the Soviet Union in the mid-to-late 1970s. When asked what he thought of the talks, Ceaușescu replied 'not much.' See: Source:

their own reservations (which they did), they were easy to set aside. With the visit of Secretary of State Henry Kissinger, the United States moved even closer to Romania. American politicians and decision-makers ranked Romania's leader as 'among the world's leading proponents of arms control.'<sup>645</sup> The Canadian government adopted this view, not least because doing so allowed it to advance its broader economic interests.

Besides, Romania was hardly viewed as an adversary by Canadian officials.<sup>646</sup> Were 'strategic' interests so vital to Canada that it was willing to overlook Romania's inability to repay the loans, its dictatorial regime, and suspicions of proliferation? Why did the Canadian government deem Romania a good recipient for nuclear assistance? Did decision-makers in Ottawa share the State Department's view of Ceaușescu as a prospective strategic ally in the Cold War? This does not seem to have been the case. Canadian decision-makers did believe that Romania was a 'more open country' than other Eastern bloc states.<sup>647</sup> However, they remained cautious and guarded in their assessment even after the nuclear agreement had been secured, worrying, for example, about the degree to which inspections could actually take place on Romania's nuclear facilities, and the domestic and political consequences if Romanian reneged on its commitments. One of the primary trepidations regarding the agreement was the possibility that Romania might share nuclear technology with other Warsaw Pact countries.<sup>648</sup>

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Ford Library, National Security Adviser, NSC Staff for Europe, Canada, and Ocean Affairs, Box 20, Country File, Romania 1975 (7) WH. Confidential; Nodis. Drafted by Barnes. The meeting took place on a train en route to Sinaia from Bucharest. Accessed at: <https://history.state.gov/historicaldocuments/frus1969-76ve15p1/d37>.

<sup>645</sup> David Quammen, 'The Bear Slayer,' *The Atlantic*, July/August 2003. Accessed at: [www.theatlantic.com/magazine/archive/2003/07/the-bear-slayer/302768/](http://www.theatlantic.com/magazine/archive/2003/07/the-bear-slayer/302768/).

<sup>646</sup> Renata Wielgosz, *Foreign Policy Decision-Making and the Canadian Bureaucracy*, 42.

<sup>647</sup> Author interview with Renata Elisabeth Wielgosz, Ottawa, June 19, 2014.

<sup>648</sup> Duane Bratt, *Politics of CANDU Exports*, 151.

The Canadian government adopted the U.S. perspective because it permitted a justification for nuclear transfers, not because there was a convergence in their perception of Ceaușescu. After all, if Washington had declared Romania was open for business and cleared it for nuclear trade, then who was Ottawa to disagree?<sup>649</sup> Such was essentially the view of the Canadian ambassador to Bucharest, Bruce Williams. Williams became one of the strongest champions of the agreement for Canada's nuclear technology sales to Romania.<sup>650</sup> Williams repeatedly reproved officials in DEA for being 'unnecessarily rigid' and for 'forfeiting both commercial and diplomatic advantages.'<sup>651</sup> The United States was also in nuclear negotiations with Romania.<sup>652</sup> Canada could not afford to allow its nuclear industry to miss out on the opportunity. In other words, it behaved competitively.

While the United States saw Ceaușescu as a strategic ally, who was a possible inroad into Eastern Europe, what did the Canadian government hope to achieve? First, Canada hoped to secure a market for its nuclear industry. Wielgosz explains, 'Canada's nuclear industry, which very much needed sales abroad, faced the threat of serious and in some instances devastating losses if it lost the Romanian market; the EDC was once again faced with the threat of losing a larger sum if the decision-reversal proved to be unwise in the long run; and so forth.'<sup>653</sup> The NCA with Romania represented the only CANDU export in several years.

Second, the agreement with Romania allowed the Liberal government to have it both

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<sup>649</sup> The sale to Romania needed the approval of Washington through the Coordinating Committee for Multilateral Export Controls (CoCom), which regulated East-West trade.

<sup>650</sup> For example, see just two of Williams' recently declassified telegrams to the Ministry of External Relations. Telegram from the Canadian Ambassador to Belgrade, Bruce Williams, to the Ministry for External Affairs, March 18, 1968, NCA, RG 20, Vol. 1644, 20-68-Ra Pt. 2. 11; and Telegram from the Canadian Ambassador to Belgrade, Bruce Williams, to the Ministry for External Affairs, November 23, 1966, NCA, RG 20, Vol. 1644, 20-68-Ra Pt. 1.

<sup>651</sup> Eliza Gheorghe, 'How to Become a Customer,' 3.

<sup>652</sup> The United States concluded an NCA with Romania in 1978 for the supply of enriched uranium for the TRIGA nuclear reactor. See: US Department of State, *United States Treaties and Other International Agreements*, Volume 29, Part 3, 1976-77 (Washington, DC: US Government Printing Office, 1979), 2961-2965.

<sup>653</sup> Renata Wielgosz, *Foreign Policy Decision-Making and the Canadian Bureaucracy*, 47.

ways: On the one hand, U.S. support of Bucharest allowed Canada to validate the agreement and on the other hand, the agreement with Bucharest allowed Canada to 'claim to' be less dependent on the U.S. Thus, while Ottawa's approach towards Romania was not markedly different from that of the United States, Trudeau used the trade agreement to emphasize Canada's rejection of the dichotomy between East and West, particularly the anti-Soviet U.S. policies that further isolated Eastern bloc countries. The Prime Minister believed that Canadian foreign policies could be best advanced through engagement. Trudeau remarked that, communist countries should be 'encouraged, enticed, or cajoled into becoming full participants in the community of nations.'<sup>654</sup> In contrast to the anti-Soviet basis of the American approach, the Canadian model was one of 'keep talking.'<sup>655</sup> (It was precisely this anti-Soviet U.S. bias that heartened the U.S. rapprochement with Ceaușescu). Accordingly, officials in External Affairs reasoned that atomic assistance to Romania could reduce tensions and perhaps even hasten the end of the Cold War.<sup>656</sup>

Canadian decision-making was not particularly motivated by a desire to be a good strategic partner to the U.S. in the Cold War. On the contrary, the Prime Minister sought to distance Canada from the United States, not least through the diversification of trade and cultural exchanges with the developing world. In contrast to the United States, which gave preferential treatment to Romania while denying other communist states the same, Canada espoused the need to promote diplomatic relations between the East and West in order to reduce Cold War tensions as a matter of a general, foreign policy.<sup>657</sup> (Indeed even President

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<sup>654</sup> Thomas Axworthy, 'To Stand Not So High Perhaps but Always Alone,' In: Thomas Axworthy and Pierre Trudeau (eds.) *Towards a Just Society: The Trudeau Years*, (Markham: Viking, 1990): 44.

<sup>655</sup> Author interview with senior high ranking official at foreign affairs, Ottawa, June 19 2014.

<sup>656</sup> Duane Bratt, 'Is CANDU or CANDON'T: Competing Values Behind Canada's Nuclear Sales,' *Non-Proliferation Review* Vol. 5 No. 3 (Spring-Summer 1998): 8.

<sup>657</sup> For instance, at the time, Hungary adopted reforms and had a relatively liberal domestic policy. However, Hungarian foreign policy converged with Moscow.

Jimmy Carter, who had made much ado about the condition of human rights during his term, turned a blind eye to the regime's atrocities, rolling out the carpet when Ceaușescu and his wife paid a visit to the United States.<sup>658</sup>) Still, Canada was happy to compete for sales so long as the U.S. cleared a country as an acceptable recipient of nuclear technology. This clearance has often been more important than other considerations, including the potential recipient's domestic politics, human rights, alliance involvements, security or stability situation, and even its likelihood to proliferate. At the same time that Canada actively engaged in and renewed nuclear cooperation with Romania, it refused to authorize a loan to Turkey – a stable democratic state and a long-standing ally.<sup>659</sup> Thus, the AECL rescinded its bid due to 'pressure from Western countries which [are] concerned that Turkey may build a nuclear bomb based on CANDU technology.'<sup>660</sup> The U.S. in particular strongly opposed NCAs to Turkey, fearing that technology and materials might be re-transferred to Pakistan.<sup>661</sup>

Ever conscious of the need to mitigate American influence, Trudeau believed that the Cold War had waxed on long enough. Trudeau expressed that, 'In a very real sense we are not so much threatened by the ideologies of Communism or of Fascism or even, I would say, so much threatened by atomic bombs and ICBMs, as we are by the very large sectors of the world – two-thirds of the world's population – that goes to bed hungry every night.'<sup>662</sup> (Ironically, the nuclear agreement with Romania contributed to widespread famine and poverty.) To this

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<sup>658</sup> Jimmy Carter, 'Visit of President Nicolae Ceaușescu of Romania Remarks at the Welcoming Ceremony,' The American Presidency Project. April 12, 1978. Accessed at: [www.presidency.ucsb.edu/ws/?pid=30655](http://www.presidency.ucsb.edu/ws/?pid=30655).

<sup>659</sup> The AECL was invited to build a CANDU reactor in Turkey in 1983. Negotiations continued throughout the following year, as AECL attempted to persuade the Canadian government to offer loans to Turkey.

However, in 1985, the Canadian government denied the loan. For a discussion of Turkey's efforts to attract support for its nuclear program, see: Mustafa Kibaroglu. 'Turkey's Quest for Peaceful Nuclear Power,' *The NonProliferation Review* Vol. 4, No. 3 (1997): 33-36.

<sup>660</sup> 'Canadian Firm Drops Bid to Build Nuclear Plant,' *Nuclear Developments*, 25 February 1988. CNS Nuclear Databases: 39. See also: 'CANDU Sales hit Problems,' *Nuclear Engineering International* (October 1986): 14.

<sup>661</sup> Mustapha Kibaroglu. 'Turkey's Quest for Peaceful Nuclear Power,' 33.

<sup>662</sup> Pierre Elliott Trudeau, 'Question and answer session,' Queen's University, Kingston, Ontario, November 8, 1968.

end, he endeavoured to end Canada's nuclear role, to remove Canadian troops from Europe, and to focus on domestic concerns, such as resuscitating the waning nuclear industry.<sup>663</sup> By 1984, he achieved his goal of removing the last U.S. nuclear weapon from Canadian territory.<sup>664</sup>

Trudeau was not especially interested in helping advance American strategic interests either. Jack Granatstein explains, 'He was scornful of Canada's 'helpful fixer' approach to the world, and he claimed to want to shape Canadian policy from national interests.'<sup>665</sup> Trudeau's independent foreign policy worried Canada's allies so much that the United States, Britain, and NATO allies feared that Canada was moving away from the Western alliance and towards neutrality.<sup>666</sup> Thus there is little evidence that suggests that Canada hoped to augment its influence with the communist government as part of a broader Cold War winning strategy in concert with Washington.

By the early 1980s, it was clear that the Romanian leader was no democrat. Much like the U.S. however, the Canadian government had tried to separate its nuclear cooperation from Romania's human rights abuses.<sup>667</sup> Officials even reasoned that nuclear cooperation with Romania could help improve the economic and humanitarian welfare of the Romanian people, justifying the decision to move forward with the agreement and the EDC loans as humanitarian, and not commercial nor political, in nature.<sup>668</sup>

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<sup>663</sup> J. L. Granatstein, 'Gouzenko to Gorbachev: Canada's Cold War,' *Canadian Military Journal* Vol. 12, No. 1, (Winter 2011), 41-53. Accessed at: [www.journal.forces.gc.ca/vol12/no1/41-granatstein-eng.asp](http://www.journal.forces.gc.ca/vol12/no1/41-granatstein-eng.asp).

<sup>664</sup> John Barrett, 'Canada' In: Regina Cowen Karp (ed.) *Security with Nuclear Weapons? Different Perspectives on National Security*, Volume 1. *Stockholm International Peace Research Institute* (Oxford: Oxford University Press, 1991): 349.

<sup>665</sup> J. L. Granatstein, 'Gouzenko to Gorbachev,' 49.

<sup>666</sup> Trudeau said as much in his Notre Dame speech. See: Prime Minister's Office, Ottawa, Transcript of Remarks at Notre Dame University, 16 May 1982.

<sup>667</sup> Duane Bratt, *Politics of CANDU Exports*, 181.

<sup>668</sup> Author interview with Renata Elisabeth Wielgosz, Ottawa, June 19, 2014.

When the extent of Ceaușescu's gross human rights violations became publicly known, Canada, which was by then under the Progressive Conservative leadership of Brian Mulroney, announced that it would review the permit requirements from External Affairs for all exports to Romania. External Affairs Minister Joe Clark asserted that, 'The horrors being perpetrated by the Romanian authorities are barbaric by any standard and deserve the harshest international condemnation and action.'<sup>669</sup> In 1989, Canada hit Romania with economic sanctions, but left untouched those pertaining to the CANDU nuclear reactors. A DEA spokesman explained that the exemption was a matter of security, as Canadian personnel and officials must guarantee the safety of the nuclear project.<sup>670</sup>

The Canadian public and media were less than impressed. Thad McIlroy, a vocal opponent of the deal, argued that Romania took advantage of Canada. McIlroy wrote that the 'Romanians increased their pressure on AECL, delaying, cajoling and finally threatening, and the result was the Canada got the short end of the stick.'<sup>671</sup> He reported that the financing offered to Romania was the 'second largest financing deal the EDC had ever arranged.'<sup>672</sup> The AECL had either failed to learn lessons from the earlier agreement with Argentina, which cost the federal government and Canadian taxpayers \$140 million, or it ignored them. To be sure, the Romania deal failed to deliver on the promise of economic profitability for Canada.

Critics also condemned Canada's willingness to accept foodstuffs (e.g., frozen strawberries, wine) and merchandise such as shoddily manufactured tractors, shoes, clothes,

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<sup>669</sup> Quoted in: *The Ottawa Citizen*, 'Canada slap sanctions on Romania; CANDU sales not touched by measures,' *The Ottawa Citizen*. Ottawa. 22 December 1989.

<sup>670</sup> Mark Entwhistle qtd. In: *The Ottawa Citizen*, 'Canada slap sanctions on Romania; CANDU sales not touched by measures.'

<sup>671</sup> Thad McIlroy, 'How Romania got Canada's nuclear technology for almost nothing,' *The Whig-Standard*. Kingston, Canada. 13 May 1986.

<sup>672</sup> Thad McIlroy, 'How Romania got Canada's nuclear technology for almost nothing.'

and steel, in exchange for sophisticated nuclear technology and reactor parts.<sup>673</sup> Human rights groups joined in, blaming Ottawa's policies for contributing to food and energy shortages in Romania.<sup>674</sup> Trying to obfuscate responsibility, Clark claimed that the goods were from Romania's 'most productive export sectors: the steel and textile industries.'<sup>675</sup>

The writing was on the wall. To pay the massive external debt that he amassed, Ceaușescu imposed harsh austerity policies that significantly affected the living standards of the ordinary Romanian people. Aurel Braun explains that, 'It was one of the late dictator Nicolae Ceaușescu's several grandiose projects that helped bankrupt Romania...The Romanian people have paid a tremendous price for CANDU. Huge resources were diverted from the consumer sector to the CANDU project with absolutely no return.'<sup>676</sup> Indeed, all Eastern European dictators overcommitted to debt. It is one of the catalysts for the end of the Cold War.

Moreover, after the overthrow of the Communist regime in Romania in December 1989, it was clear that the Canadian government was mistaken in dismissing concerns about Romania's commitment to non-proliferation. An investigation revealed that Ceaușescu regime's 'improperly diverted a supply of Norwegian heavy water to India.'<sup>677</sup> The new Romanian government corroborated the information, furnishing reports showing that a shipment of Norwegian heavy water was sent from Romania to India in 1986.<sup>678</sup> Selling heavy water to India violated Romania's NPT commitments, which banned the sale of nuclear

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<sup>673</sup> Ian Austen, 'Barter deal denounced; Romania swapped food, other goods for reactor part; The CANDU Affair,' *Edmonton Journal*. Edmonton, Canada. 5 January 1990.

<sup>674</sup> Ian Austen, 'Barter deal denounced; Romania swapped food, other goods for reactor part; The CANDU Affair.'

<sup>675</sup> Ian Austen, 'Barter deal denounced.'

<sup>676</sup> Aurel Braun, 'Why continue Romania's CANDU?' *Financial Post*. Toronto. 13 December 1990.

<sup>677</sup> The Gazette, 'Romania says it sent key ingredient for making nuclear weapons to India,' *The Gazette*. Montreal. 30 April 1990.

<sup>678</sup> The Gazette, 'Romania says it sent key ingredient for making nuclear weapons to India.'

products and technologies, including heavy water, to states that have not signed the NPT. This information came to light just as the Canadian government was considering a proposal to supply heavy water to Romania for use in its CANDU reactor.

The revelations unsurprisingly did little to alter the Canadian government's decision-making calculations. (After all, the government did not acknowledge media claims that 'a Romanian spy stole lucrative technological secrets for producing heavy water used in Canadian-designed CANDU reactors 15 years ago.'<sup>679</sup>) In response to the charge that Romania diverted heavy water to India, External Affairs released a statement stating that there is 'no evidence that Romania has abrogated its international commitments.'<sup>680</sup> After Ceaușescu was removed, the new government in Bucharest requested that Canada help to complete Cernavoda I, which after more than a decade was only about 45 percent complete.<sup>681</sup> The Canadian government, eager to resume business, agreed.

However, there were domestic constraints that needed to be managed. The Canadian public was opposed to the government's decision to proceed with nuclear cooperation with Romania, not least because of remaining concerns about the government and the massive expenditures involved. As the *Toronto Star* reported:

Canadians want the voting to take place without the kind of violence that occurred last December when Romanians overthrew the oppressive Communist regime, and executed president Nicolae Ceaușescu along with his wife, Elena. The outcome will also determine the future of a 10-year-old, Canadian-sponsored CANDU reactor complex on the Danube River at Cernavoda. Romania wants to finish the much-delayed project and has asked for a \$300 million loan from the Export Development Corp. The Canadian government, understandably, won't commit the money until it's satisfied that a properly-elected government is in office in Bucharest.<sup>682</sup>

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<sup>679</sup> The Canadian Press, 'Canadian stole nuclear secrets for Romania, ex-spy says,' *Toronto Star*. Toronto. 20 December 1987.

<sup>680</sup> David Owen, 'Ottawa pondering sale of heavy water to Romania,' *Financial Post*. Toronto. 3 July 1989.

<sup>681</sup> Duane Bratt, *Politics of CANDU Exports*, 179.

<sup>682</sup> *Toronto Star*, 'Romania's choice,' *Toronto Star*. Toronto. 19 May 1990.

Ottawa, unwilling to allot any more resources until satisfied that a properly elected and responsible government was in charge in Bucharest, contributed a delegation in order to observe Romania's national elections in 1990. The Canadian government thus determined that once a democratic government was in place, it could justify the completion of the CANDU project to the Canadian taxpayer, not least by claiming that doing so would restore Romania's economy and provide it with a cleaner form of energy than the alternative, coal-fired plants that were operating.

Despite the domestic opposition, the Canadian government was determined to conclude a deal with Romania. The Romanian negotiators must have sensed the desperation on their Canadian counterparts. Valeriu Popa, Romania's Deputy Energy Minister of the day, coyly suggested that it could buy from other countries if AECL did not meet Romania's requests. Popa, however, emphasized that his government preferred to purchase the Canadian technology, stating that: 'We think it [CANDU] is the safest in the world. But we have had to request offers from the French and West Germans and we are waiting to hear from them...I will disclose a small secret. Our neighbors in Bulgaria and in Hungary are looking at CANDU. And others are interested, too.'<sup>683</sup> In negotiating the second reactor sale, Romania requested that the AECL 'supply the nuclear reactor, but Romania wants a complete 'turnkey' plant which requires the participation of other Canadian industries to supply the 'classical,' or non-nuclear, infrastructure.'<sup>684</sup>

What explains the Canadian government's decision to renew nuclear cooperation with Romania? Andrew Cohen asserts that Canada's interest in Romania was simply reactor sales.<sup>685</sup> To be sure, Canada once again felt the pressure of the nuclear industry. Decision-makers

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<sup>683</sup> Andrew Cohen, 'Let's take right path on loans to Romania,' *Financial Post*. Toronto. 21 May 1990

<sup>684</sup> Andrew Cohen, 'Let's take right path on loans to Romania.'

<sup>685</sup> Andrew Cohen, 'Let's take right path on loans to Romania.'

worried that if they did not clear Romania for nuclear commerce then they would risk the sale to other competitors, such as the French and the Germans. The Germans were known to have lax export controls.<sup>686</sup>

Yet, economic interests do not seem to have been the guiding force. Braun, who called it a ‘misguided project,’ argued that the decision to provide Romania with nuclear assistance ‘did not arise out of any rational economic need.’<sup>687</sup> Even if such hopes existed, they certainly were not borne out in the outcome. The Trudeau government, which had signed the original NCA with Romania, continued to increase financing even when it was clear that the trade agreement was not generating profits for the Canadian economy. Successive Canadian governments also upheld the agreement over domestic criticism, particularly concerning the additional loans and financing of the CANDU project.<sup>688</sup> For example, NDP MP Bill Blaikie decried the project as ‘botched’ and ‘beyond redemption’ and called on the government to abandon the NCA.<sup>689</sup> Outside of parliament, critics of the agreement condemned the heavy subsidies given to the AECL to sell the CANDU reactors. Anti-nuclear activist, Dave Martin of the Sierra Club of Canada, declared that: ‘We can’t sell these things [CANDU reactors] without massive, I mean massive, subsidies and the only countries that will buy them have to be bought. After 50 years of financial failure, AECL’s reactor exports should be allowed to sink or swim without government financing.’<sup>690</sup> The Canadian government, however, paid no attention to these criticisms.

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<sup>686</sup> Alexander H. Montgomery, ‘Stop Helping Me: When Nuclear Assistance Impedes Nuclear Programs,’ 197. See also: George Perkovich, *India’s Nuclear Bomb: The Impact on Global Proliferation* (Berkeley, CA: University of California Press, 1999): 242, 250, 271.

<sup>687</sup> Aurel Braun, ‘Why continue Romania’s CANDU?’ *Financial Post*. Toronto. 13 December 1990.

<sup>688</sup> For example, David Walker, a Liberal MP, called on the Conservative government of Brian Mulroney to stop funding the construction of a the CANDU reactor. See: Andrew Cohen, ‘Don’t lend Romania money for CANDU,’ *Financial Post*. Toronto. 3 December 1990.

<sup>689</sup> Toronto Star, ‘Abandon CANDU site in Romania Ottawa urged,’ *Toronto Star*. 15 May 1990.

<sup>690</sup> Quoted in The Canadian Press, ‘Canada backs \$1B deal to finish CANDU Reactor.’

Indeed, in 1991, the EDC loaned an additional \$330 million from its Canada Account to finish the construction of the Cernavoda I reactor.<sup>691</sup> Though the project was finally complete in 1996, Romania had again fallen behind in its repayments.<sup>692</sup> In 1998, the EDC announced that 'the loan to Romania had \$9 million in payments past due, and still had \$293 million outstanding.'<sup>693</sup> Furthermore, the Canadian government's nuclear cooperation agreement circumvented multilateral rules on appropriate trade. The following year, in 1999, it was revealed that the EDC's Canada Account violated the rules of The World Trade Organization (WTO) and the Organization for Economic Co-operation and Development (OECD).<sup>694</sup> As the Canada Account did not abide by agreements outlined by the OECD, the WTO labeled the loans as illegal.<sup>695</sup> This calls into question Canada's reverence for multilateral institutions, as the government was undeterred by the verdict.

By 2003, Romania had repaid its EDC loans for Cernavoda I. However, it still required new financing for the construction of Cernavoda II.<sup>696</sup> Jean Chretien's Liberals committed to providing Romania with \$328 million in loans to complete the construction of the second CANDU reactor. Then Minister of International Trade, Pierre Pettigrew announced that the Liberals would provide the funds through the EDC's cabinet-controlled Canada Account in order to fulfill the agreement between the AECL and Romenergo to build

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<sup>691</sup> The safeguard terms were also amended in 1994. See: Department of External Affairs, 'Nuclear: Exchange of Notes Between the Government of Canada and Government of the Socialist Republic of Romania,' Government of Canada. Treaty Series 1994 No. 23. 12 October 1994.

<sup>692</sup> Duane Bratt, *Politics of CANDU Exports*, 81. Stats are from, Export Development Corporation, Summary of the Report to the Treasury Board on EDC's Canada Account Operations for the Fiscal Year 1997-1998. Available at [www.edc.ca/corpinfo/pubs/1997-1998\\_CanAcctRep\\_e.pdf](http://www.edc.ca/corpinfo/pubs/1997-1998_CanAcctRep_e.pdf).

<sup>693</sup> Statistics are from, Export Development Corporation, Summary of the Report to the Treasury Board on EDC's Canada Account Operations for the Fiscal Year 1997-1998. Available at [www.edc.ca/corpinfo/pubs/1997-1998\\_CanAcctRep\\_e.pdf](http://www.edc.ca/corpinfo/pubs/1997-1998_CanAcctRep_e.pdf)

<sup>694</sup> Anonymous, 'Canada: Nuclear exports threatened,' *Petroleum Economist* Vol. 6, No. 4 (1999): 35.

<sup>695</sup> Anonymous, 'Canada: Nuclear exports threatened.'

<sup>696</sup> Bratt, *Politics of CANDU Exports*, 81. Stats are from, Export Development Corporation, Summary of the Report to the Treasury Board on EDC's Canada Account Operations for the Fiscal Year 1997-1998. Available at [www.edc.ca/corpinfo/pubs/1997-1998\\_CanAcctRep\\_e.pdf](http://www.edc.ca/corpinfo/pubs/1997-1998_CanAcctRep_e.pdf).

Cernavoda II.<sup>697</sup> In response to the government's decision to refinance the second nuclear sale to Romania, 161 MPs signed a statement in protest, expressing their 'deepest concern' over Romania's acquisition of a second nuclear reactor.<sup>698</sup> Others, such as Shawn-Patrick Stensil, the National Coordinator of the Campaign for Nuclear Phaseout (CNS), a leading anti-nuclear group, reacted to the announcement by noting that, 'This is just another example that CANDU exports have been nothing but a dismal failure.'<sup>699</sup>

## 7 Conclusion

When the Liberal government of Pierre E. Trudeau brokered nuclear cooperation agreements with Argentina and Romania, it appeared to mark a departure from the grand strategy in Canadian post-war foreign policy, which since 1947, had been predicated on working alongside Canada's traditional military allies and fostering diplomatic and economic relations with countries that shared Canadian values such as democracy, the rule of law, and respect for international organizations.<sup>700</sup> Until the 1970s, Canada had primarily conducted its foreign and trade relations with traditional allies such as Britain, France, and the United States, and with like-minded democracies such as Australia. It did not have any historical, economic, or military ties with either Argentina or Romania. Neither Argentina nor Romania was democratic, or showed signs of possibly liberalizing or democratizing.

Even more, neither country aligned with the U.S.-led Western bloc of the Cold War. Argentina's Juan Perón was tolerated but his flirtation with radical elements troubled many of

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<sup>697</sup> The Canadian Press, 'Canada backs \$1B deal to finish CANDU Reactor,' Daily Commercial News and Construction Record Vol. 76, No. 4 (2003): 4.

<sup>698</sup> National Post, 'The sale of a second CANDU reactor to Romania has 161 MPs worried; deal with China kept under wraps,' National Post, Toronto, 30 May 2000.

<sup>699</sup> Quoted in The Canadian Press, 'Canada backs \$1B deal to finish CANDU Reactor.'

<sup>700</sup> On the guiding principles of Canadian foreign policy, see: John Kirton, 'The Rule of Law from the Gray Lecture to Global Leadership,' Paper prepared for a conference on 'Louis St. Laurent's Gray Lecture at Sixty,' Bishop's University, Lennoxville, Quebec, January 19-21, 2007.

Canada's intelligence partners who feared that communism might spread in Latin America.<sup>701</sup>

Where Romania stood in the Cold War conflict was unclear. While Romania was a communist country entrenched in the Soviet orbit, its rival status was reconsidered after it denounced the invasion of Czechoslovakia in the summer of 1968.<sup>702</sup> Indeed, nuclear cooperation with these states represented a clear departure from Canadian foreign policy, which traditionally harnessed cooperative relations with countries through multilateral institutions and focused trade efforts with Britain, Western Europe, and the United States.

In both supply cases, the Canadian government subordinated fears of possible nuclear weapons intentions and neglected signs of internal strife in the recipient states primarily because of pressing domestic pressures and interests. Canadian officials prioritized domestic and economic interests of selling a nuclear reactor to Argentina over other considerations such as troubling indications of regime instability and human rights abuses. According to the literature on nuclear assistance, we should expect that Canada would not provide nuclear assistance to non-democratic states, particularly those with vastly different practices and values, or to states that are not military allies and do not offer any strategic advantage. Canada's decision to enter into nuclear cooperation with these countries also seems to contradict the popular narrative of Canada as a responsible middle power as well as Canada's self-identity or foreign policy doctrine, which upholds values such as democracy and the rule of law.

Yet, conventional explanations fail to appreciate Canada's domestic environment, perceptions of identity, and geostrategic location next to the United States. Canada derives its

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<sup>701</sup> It is likely that Perón did not believe in an ideology besides Perónism. Though he was known to be Nazi-sympathizer, that did not keep him from working with communists. He later advocated a 'Third Position' between the West and the Soviet East, and then again changed gears. He embarked on a policy on rapprochement with the U.S., selling himself as a force against communism in South America. Accessed at: <https://history.state.gov/historicaldocuments/frus1952-54v04/d125>.

<sup>702</sup> The West, particularly the United States, viewed Romania auspiciously for its slightly independent streak on foreign policy matters.

foreign policy interests from actors that compete for policy dominance, from perceptions of self-identity, and from the international context, particularly its position in the international system. The decisions to engage in nuclear cooperation with Argentina and Romania seemed to deviate from traditional practices, but these should be understood more broadly within the context of the changed international and domestic political environments. At the international level, a new outlook in the American trade policy, itself a response to the global oil crisis, had severe implications for Canada's export-reliant economy. In order to keep the economy afloat, the Canadian government needed to find new export markets and began eyeing developing countries that it had previously neglected.

At the same time, where nuclear wares were concerned, few buyers existed among Canada's traditional partners. This meant that the nuclear industry particularly the AECL struggled to find buyers for the CANDU reactor that would help lower the overhead costs of domestic energy production among other things. Such domestic actors pushed the government to declare Argentina and Romania open for business, despite their questionable regimes and commitments to non-proliferation. One might point out that the government did attach safeguards to its agreements with both countries. Yet, the safeguards could not in and of themselves ensure that the recipients would not pursue weaponization. As Joseph Stanford, the director of the Legal Advisory Division of the Department of External Affairs, revealed in 1975: 'Safeguards by themselves cannot prevent the proliferation of nuclear weapons. *All they can do is detect breaches* of the safeguards [emphasis added]'<sup>703</sup> The safeguards allowed Ottawa to emphasize its abiding commitment to the NPT. But concerns about proliferation remained. The Canadian government subordinated concerns about the nuclear intentions of Argentina

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<sup>703</sup> Quoted in Gordon Edwards, 'Myth of the Peaceful Atom,' In: Ernie Regehr and Simon Rosenblum (eds.) *Canada and the Nuclear Arms Race* (Toronto: Lorimer, 1983): 139.

and Romania when it decided to extend NCAs to the two countries. It did so partly because of intense competition in the nuclear marketplace, and the potential risk that refusal would result in a loss of a contract to other nuclear suppliers. After all, Canada's other multilateral partners in the non-proliferation regime were playing by the same set of rules so there was no risk that Canada could be accused of violating its commitments, or even worse, of doing anything different from the policies and actions of its friends.

At the domestic political level, there was a new government in office whose view of the Cold War security environment sharply differed from the threat perception of its allies. As several observers have noted, it is not easy to live next door to the world's superpower. Prime Minister Trudeau likened it to 'sleeping with an elephant.' Further explaining the heavy influence of the United States on Canadian foreign policy, Trudeau said that, 'No matter how friendly or temperate the beast, one is affected by every twitch and grunt.' Canada's relationship with the U.S. is important both in economic and security terms, and the Canadian government recognizes that a shift in the preferences, perceptions, and interests of its southern neighbour has unavoidable ramifications for Canada. At the same time, decision-makers try to balance its reliance on the U.S. for security and economic livelihood with its distinct identity. For this reason, foreign policy decision-making may be constrained by the preferences of allies, domestic support and perceptions of identity. In other words, officials must determine the minimum level of commitment required to satisfy the United States so that they can avoid domestic opposition.

Accordingly, the Canadian government aims to preserve Canada's autonomy vis-à-vis the U.S., not least because anti-American sentiment among the Canadian electorate can, at times, be quite strong. Not wanting to be seen as reflexively kowtowing to the stronger U.S., Canadian decision-makers will often stress the autonomous nature of their foreign policy

directions, particularly to their domestic audience that sees Canada as a more thoughtful and less incendiary global player than the United States. Canadians frequently take pleasure in the fact that their country is softer, kinder, and better respected in the international community than the United States. As much as Trudeau disliked the linchpin identity, he disdained the reflexively anti-American attitude held by Canadians. He later remarked that, 'Canadians want to benefit from the American nuclear umbrella,' he argued, 'but they don't want to hold on to the umbrella's handle. To that extent, the knee-jerk anti-Americanism of some Canadians verges on hypocrisy.'<sup>704</sup>

The agreements with Argentina and Romania were thus broadly justified by the new direction in Canada's foreign and economic policies that was the consequence of domestic and global realities. The Liberal government had unveiled a doctrine that aimed to cultivate cultural, political, and economic relationships with developing countries because of changes in Canada's relationship with the U.S. and the need to remain economically strong and independent. The decision to provide nuclear assistance to Argentina and to a lesser degree, Romania, was primarily about keeping the nuclear industry alive. That such trade could also achieve broader political and economic objectives was useful.

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<sup>704</sup> Pierre Elliott Trudeau. 'Open letter to all Canadians.' Statements and speeches, Department of External Affairs, Vol. 83, No. 8 (May 9, 1983).

## CONCLUSION

The export of nuclear materials and technologies is shown to be one of the major causes or mechanisms of nuclear proliferation. Despite its significance however, the issue has historically received scant treatment in the academic literature. The bulk of the scholarship on nuclear proliferation has been devoted to the so-called ‘demand side’ of the equation, which examines why states want nuclear weapons, why they abandon them, and why some have failed in their efforts to acquire them. Apart from a brief venture into niche areas such as illicit networks and smuggling, few studies took interest in answering equally crucial questions about supply such as, why do states provide nuclear assistance, what kinds of assistance do they provide, or to whom do they provide assistance and with what goals in mind.

This has fortunately changed. In the last decade, there have been a number of serious studies on the subject of nuclear supply. Recent scholarship has taken a familiar path. Like the demand scholarship, burgeoning studies have drawn on realist theories about state behaviour in order to account for why states provide nuclear assistance to others. The strategic camp, as it come to be known, contends that states provide nuclear assistance for strategic reasons such as empowering an ally. States are also thought to be more likely to supply to recipients with which they share a common rival. Yet, such explanations with their emphasis on *realpolitik* tend to take for granted that not all states in the international system conceive of power and interest in the same way.<sup>705</sup> Indeed, it bears reminding that realist theories were never constructed to explain foreign policy decision-making but rather they were there to point out parsimonious truths about international politics.

Further, extant explanations assume that states view nuclear assistance as somehow

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<sup>705</sup> Hans J. Morgenthau, *Politics Among Nations: The Struggle for Power and Peace*, Fifth Edition, Revised, (New York, NY: Knopf, 1978).

distinct from other kinds of trade, specifically that that they think about their consequences for power and that they have certain predetermined notions about what makes a recipient suitable or not. This is true to the extent that states recognize that nuclear cooperation can contribute to the horizontal spread of nuclear weapons. But such theories suspend the consideration of economic, individual, and commercial actors that have a stake in the promotion of the nuclear industry. Though much of the literature on nuclear behaviour considers domestic politics and norms to be secondary, such interests have been shown to influence how states construct foreign policy, and ultimately how, in view of managing public impressions, they execute those policies. By examining the political and cultural context, it becomes evident that externally derived interests are not singularly responsible for foreign policy.

The dissertation presented here takes issue with the common tendency, not least because such theories have been unable to account for much of Canada's nuclear decision-making. Canada's nuclear export and non-proliferation policies are far from fitting either strategic expectations or predictable narratives. Rather, Canada has often behaved in ways that are puzzling, inconsistent, and has displayed more ambivalent than certainty or continuity. Thus, the dissertation looked towards domestic politics explanations of nuclear behaviour – plentiful in the nuclear demand side of the literature – for clues.

In his inspiring article on nuclear ambivalence, Abraham argues that, 'Without a careful appreciation of the political and historical context within which decisions are made to develop nuclear programs, it is not possible to get closer to understanding the desire for, likelihood of potential use of, and possibility of international control of nuclear weapons.'<sup>706</sup> In this dissertation, I have taken a close look at the political and historical context in which

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<sup>706</sup> Itty Abraham, 'The Ambivalence of Nuclear Histories,' *Osiris* Vol. 21 (2006): 51.

Canada has made decisions in the nuclear field.

The focus of the dissertation has been on Canada's nuclear decision-making since it entered the nuclear field during the Manhattan Project. I devote time to explaining Canada's decision-making as it relates to questions of nuclear demand, including acquisition and possession, as well as to less commonly studied questions of nuclear supply from the beginning of the nuclear industry in the 1950s to the late 1970s.

I offer three findings. First, Canada does not make decisions that fit a military-strategic calculus. Second, Canada is often ambivalent in the nuclear field. I argue that Canada can afford to be ambivalent because constraints on its decision-making do not stem primarily from security concerns or existential threats but from beliefs as to what Canada should do and should be in global affairs. Finally, Canada's nuclear export and non-proliferation policies have been defined primarily by its place – both real and imagined – in the world as a middle power. My contention is that middle powers, like Canada, are rarely influenced by military-strategic interests, but that they, nonetheless, act according to their own particular self-interests when determining whether or not to export nuclear materials and technology.

Drawing on insights drawn from liberal IR theory as well as domestic politics explanations of nuclear behaviour, I have shown that Canada's decision-making has been influenced by domestically held beliefs and perceptions of its identity – that is, where Canada ranks on the figurative power spectrum and what values it professes in relation to other actors in the international system.

This study has demonstrated that interests related to the preservation of Canada's status or middle power identity have predominately influenced Canada's nuclear export and non-proliferation policies, or perhaps more accurately that such 'interests' have been claimed to justify what have often been economic imperatives. The Canadian government had a strong

interest in preserving Canada's nuclear industry. That industry made Canada relevant, particularly to developing countries who eagerly wanted to explore nuclear technology. Canada might not have been a mighty country like its southern neighbour, but it compensated for that with impressive technological prowess.

In the early days, Canada was keen to promote its industry abroad and to experience the status it offered. Fundamentally, however, it treated the transfer of nuclear technology as a means of advancing several domestic and international goals at once. In the case of India and Pakistan, the main interest was in expanding its diplomatic footprint beyond the Anglo-Saxon world, and in cultivating an image for Canada as rather distinct from Britain – not just in terms of power and influence, but also in terms of behaviour and image. Two decades later, however, Canada pursued much the same policy but this time it emphasized its distinctness from the U.S. In other words, Canada pursues its self-interest – whatever that may be at the time – but manages and manipulates its image as necessary in order to do so.

Further, I have found that not only have strategic interests been secondary to domestic-level factors in Canada, but that Canadian officials have not often had well-developed ideas or fixed interests in the nuclear field. Like many other less conventionally powerful states, Canada's nuclear history reveals a recurring ambivalent thread, which has resulted in policies that seem puzzling or discordant. There has been no grand strategy in Canada's nuclear decision-making. Indeed, states do not always behave in ways that the literature might deem strategic. Canada's nuclear abstinence, for example, demonstrates that the Canadians preferred to rely on their alliances for security. The adversarial threat posed by the Soviet nuclear arsenal was not missed by Canadian officials,<sup>707</sup> but did not push them to acquire the bomb.

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<sup>707</sup> The 'decision' to shun nuclear weapons development was made after the Gouzenko Affair - an event that is thought to have set off the start of the Cold War – revealed the extent of the Soviet threat evident. Igor Gouzenko was a cipher clerk for the Soviet Embassy in Ottawa, who defected in September 1945 with

The India agreement discussed in the Introduction was exceptional, only from the perspective that it marked a change. That change was heavily influenced by a number of domestic actors, including the nuclear industries, lobbyists, and an active India-oriented business community that were interested in promoting closer Indo-Canadian economic ties. The deal itself was just one of many that the Canadian government concluded in recent years. In the past few years, Canada has signed an unprecedented volume of bilateral NCAs with several countries, including Chile, China, Colombia, Israel, Kazakhstan, Mexico, Peru, Thailand, and the United Arab Emirates, and in announcing nearly each of these cases, the Canadian government referred to the importance of the nuclear industry.<sup>708</sup> Though the relationship between trade and industry may seem rather obvious, the nuclear literature has not taken seriously the influence of domestic actors and interests on a state's nuclear export policies. Rather, nuclear exports have been treated as a unique phenomenon within the context of strategic studies.

By ignoring domestic politics in particular, the supply-side literature has hitherto neglected to consider whether, and the degree to which, societal actors (e.g., industries and firms) influence a state's decision to export nuclear materials and technologies. After all, even though states typically offer financing on the sale of reactors, nuclear exports are still a business. What role then do industry, commerce, and interest groups play in determining nuclear export sales? In the Canadian case, the AECL was unable to get the government to help underwrite much of its exports – a not uncommon practice in the reactor export business. However, it is reasonable to assume that there is a network of actors who benefit from nuclear commerce and

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documents that evidenced Soviet espionage activities in Canada and in the West. Documents also exposed Soviet efforts to steal nuclear secrets. See: Government of Canada, 'The Defection of Igor Gouzenko: Report of the Canadian Royal Commission' (Intelligence Series, Vol. 3, No. 6), Aegean Park, 1996.

<sup>708</sup> 'Canada and Kazakhstan Sign Nuclear Cooperation Agreement,' News Release, *Foreign Affairs, Trade and Development Canada*, 13 November 2013. Accessed at: [www.international.gc.ca/media/aff/news-communicues/2013/11/13b.aspx?lang=eng](http://www.international.gc.ca/media/aff/news-communicues/2013/11/13b.aspx?lang=eng).

that these actors pressure states to remove barriers that inhibit nuclear trade. This merits further investigation. While the literature on conventional arms acknowledges the role played by domestic manufacturers and special interest groups, the supply-side literature has not. Future research should consider the role of domestic actors like lobbyists and interest groups.

## APPENDIX

### Selected Interviews

<b>NAME</b>	<b>TITLE</b>	<b>ORGANIZATION</b>	<b>LOCATION</b>	<b>DATE</b>
Ernie Regehr	NGO representative and expert advisor to Government of Canada	Project Ploughshares	Ottawa, Ontario	26 June 2014
Name withheld	Senior Official	Department of Foreign Affairs Trade and Development (Now, GAC)	Gatineau, Québec	19 June 2014
Name Withheld	Retired High Ranking Bureaucrat	Canadian Nuclear Safety Commission	Ottawa, Ontario	17 June 2014
Ralph Lysyshyn	Former Director, Arms Control and Disarmament Division, and former Ambassador to Russia	Department of Foreign Affairs Trade and Development	Ottawa, Ontario	3 July 2014
Gordon Edwards	President	Canadian Coalition for Nuclear Responsibility	Ottawa, Ontario	4 July 2014
Raoul Awad	Director General	Canadian Nuclear Safety Commission	Ottawa, Ontario	18 July 2014
John Barrett	President and Chief Executive Officer	Canadian Nuclear Association	Ottawa, Ontario	16 June 2014, and 16 July 2014
Duck Kim	Senior Nuclear Coordinator	Environment Canada	Toronto, Ontario	31 July 2014
Name Withheld	Intelligence Assessment Secretariat	Privy Council Office	Ottawa, Ontario	20 June 2014
Paul Meyer	Former Director General for International Security, Ambassador for Disarmament in Geneva	Department of Foreign Affairs and International Trade	Ottawa, Ontario	4 July 2014

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