

The curious tale of the dog that did not bark

*Explaining Canada's non-acquisition of an independent nuclear arsenal,
1945-1957*

Michael Crawford Urban
University of Oxford / Foreign Affairs and International Trade Canada
urban.michael@gmail.com

Paper prepared for the Canadian Political Science Association Annual Meeting
University of Victoria
Victoria, British Columbia, Canada
4-6 June, 2013

Comments most welcome but please do not cite without permission

Introduction

At the close of the Second World War, Canada bulked larger than ever before in the arena of international politics. Not only did Canada number among the victors in the Second World War, it also emerged from this conflict as one of only three 'atomic powers' – that is, states that had contributed to building the atomic bomb. Yet despite this advanced technical expertise, its relatively sound economic position, and the material power and preeminent status that beckoned, Canada never sought an independent nuclear capability.

Canada's non-acquisition of an independent strategic nuclear arsenal (hereafter, nuclear weapons) presents a particularly intriguing enigma for scholars of International Relations (IR), a group who have heretofore neglected this puzzle. This is because in foregoing acquisition Canada abstained from exploiting an unprecedented opportunity to ameliorate the massive imbalance in military power that existed between it and the USA. Realist theories of IR would suggest that any rational state endowed with Canada's capabilities and facing such a situation ought to have leapt at the opportunity that acquisition presented to reduce this imbalance. Yet, not only did acquisition not occur, it seems that it was never even considered by Canada's primary decision-makers. Below I argue that this result can best be accounted for through the recognition of the role played by trust in the Canada-USA relationship.

This paper has five parts. I begin by outlining a new conceptual framework for understanding trust in the context of international politics. In so doing, I theorize trust's origins, how it is generated, and how it influences agents' decision-making. Second, I outline a research design which operationalizes this conceptualization and provides a procedure for evaluating whether trust was an influential factor in a particular decision. Third, I describe Canada's nuclear decision-making in the immediate post-war era (1945-1957),¹ thereby elucidating this paper's *explanandum*. Fourth, I analyze alternative explanations for this decision-making and show how they either fail to add up or leave important questions unanswered. Finally, I show not only how an explanation which includes trust not only fills the gaps identified at the theoretical level, but is also supported by evidence from the historical record.

Unfortunately, it is impossible in so short a piece to provide a comprehensive exposition of the trust model I have developed as well as an application thereof in the form of a full case study. What I hope I can do here is sketch the contours of such a project, highlight the key arguments, evidence, and insights, and through this exercise, provide a strong argument in favour of my approach's utility.

Conceptualizing Trust

Trust has long been neglected as a focus of research in IR scholarship.² And while this is changing,³ trust in IR continues to suffer from inadequate conceptualizations and operationalizations. Remedying this

¹ 1945-1957 constitutes the period when Canada's nuclear weapons policy was largely set. In selecting this period I largely follow Andrew Richter (2002) Brian Buckley (2003) and Sean M. Maloney (2007), the definitive works on Canada's early nuclear weapons policy.

² The work of Andrew Kydd (1997, 2000, 2001, and 2005) provides a notable exception.

problem is beyond the scope of this work, but below I outline a model – based on extensive research in philosophy, social and cognitive psychology, behavioral and neuro-economics, and even neurology – which I have developed for this purpose.

I begin by defining trust as follows:

*An agent's (the trustor's) **specific reasonable** belief, held despite **irresolvable uncertainty**, that: (1) she can accurately predict certain of another agent's (the trustee's) intentions; and (2) that the trustee is in some way **obliged** to have these intentions. For trust to exist, (1) and (2) must prevail to the extent that the trustor is willing to make herself **vulnerable to betrayal** by the trustee through reliance on the success of these predictions in the planning and execution of her future actions.⁴*

While this definition comprises numerous important components, the key points are as follows:

- Trust is **specific**, meaning that it always takes the form X trusts Y to do Z. While it may be common to say that X trusts Y, analytically, such a statement is always a form of shorthand which can ultimately be reduced to a set of statements of the X, Y, and Z form.
- Trust occurs in spite of **irresolvable uncertainty**. If uncertainty did not exist, there would be no need for trust. Critically, uncertainty between autonomous agents is always irresolvable because it is impossible to ever know for certain what another is actually thinking.
- Trust is **reasonable**, by which I mean that trust derives from *both rational and arational* sources.⁵
- Trust involves a perception of **obligation**, meaning that the trustor perceives the trustee as being governed by an organizing logic which requires that other to act in a certain way.
- Trust always involves the trustor accepting **vulnerability** to the trustee, a vulnerability which can be **betrayed** as opposed to simply disappointed, as would be the case with a prediction.⁶

I hold that trust has its origins in an interaction between three psychological components, namely an agent's familiarity with another agent, an agent's experience of positive emotion for another agent, and a perception of sharing a salient commonality. Familiarity refers to the confidence an agent builds up in their ability to predict another agent's future actions through observation over time. It is a rational and

³ See Mercer (2005), Hoffman (2006), Booth and Wheeler (2008), Pouliot (2008), Wheeler (2009), Wheeler (2010), Ruzicka and Wheeler (2010a), Ruzicka and Wheeler (2010b), Rathbun (2009), Rathbun (2011), and Michel (2012) for a sample of the recent flowering in trust scholarship.

⁴ For some alternative definitions see Kydd (2005: 3) and Booth and Wheeler (2008: 230). My definition owes much to Hollis (1998).

⁵ Michel (2012); Zak and Kugler (2011: 140); Pouliot (2008: 278-279); Hollis (1998: Chapter 8); Booth and Wheeler (2008: 232); Lascaux (2008: 5); Hoffman (2006: 23); and Freedman (1996: 29-31 and 37) are all supportive of this approach.

⁶ See Michel (2012: 13-15) on the importance of betrayal.

inductively-derived belief.⁷ Positive emotion refers to the feelings that agents develop for other agents as a result of psychological biases such as those which cause us to prefer those things we perceive as being the same as us.⁸ The perception of sharing a salient commonality refers to a recognition by the agents involved that they are similar to one another in a meaningful way. The interaction of these three elements results in a process called collective identification through which an agent's conception of self expands to encompass the other with whom they have identified, thereby producing an 'in-group'.⁹

Creation of an in-group is critical to the establishment of trust because it allows agents to transcend the irresolvable uncertainty mentioned earlier. When collective identification occurs, agents' rational hypotheses about other members of their in-group are transformed into *arational* assumptions fortified by emotion.¹⁰ The result is what we call 'in-group' bias, an assumption that fellow members of an in-group can be relied upon to behave in a manner consistent with membership in the in-group on the basis of their membership thereof.¹¹

Note that the trust which flows from a collective identification is specific and not general. Individuals only trust other members of the in-group insofar as trust is enabled by the substantive content of the identification. This renders the actual substantive content associated with the commonality around which collective identification coalesces very important and helps explain why broad, all-encompassing ideational structures like religions and ideologies serve as much stronger bases for trust than the simple wearing of the same colour t-shirt.

A final important implication of this analysis is that because trust is rooted in membership in an in-group, trust tends to be 'sticky'. What I mean by this is that once trust is established the threshold for revoking trust will be much higher than was the threshold for establishing it in the first place.¹² This is because one of the psychological features of in-group identification is a cognitive bias against interpreting information in a way that undermines said identification.¹³

Operationalizing Trust

With trust clearly conceptualized, I now turn to operationalizing it in a way that enables researchers to collect evidence and evaluate hypotheses concerning its influence on agents' behaviour. Below, I outline the four-step research procedure which I employ in this study.

1. Identify possible instances of trust by identifying voluntary acceptances of vulnerability between agents.

⁷ Cf. Mercer (1995: 249); Luhmann (1979: 19). Costly signalling represents an important example of this type of process.

⁸ Aronson, Wilson, and Akert (2007: 317).

⁹ C.f. Adler and Barnett on 'social learning' (1998b: 43-45).

¹⁰ C.f. Hoffman (2002: 381)

¹¹ Pinker (2011: 490); cf. Ross (2006: 204). This assumption fits into the class of beliefs psychologists call heuristics.

¹² Cf. Goldstein and Keohane (1993: 8). Because agents form their identities through their relations with others, defending these relationships becomes part of agents' defence of their 'ontological security'. Mitzen (2006).

¹³ Mitzen (2006: especially 360-363) argues that in this context disconfirming evidence will often be ignored or interpreted so as to not threaten an agent's identity.

2. Hypothesize what collective identifications would justify these aforementioned acceptances and evaluate whether agents' behaviours are consistent with possession of these identities more generally.
3. Evaluate alternative explanations for agents' behaviours.
4. Evaluate the extent to which the conditions theorized as enabling trust obtained in ways consistent with the aforementioned justification.

The first three steps are fairly straightforward. Step one is important because trust is not directly observable. While not all acceptances of vulnerability occur because of trust, all trusting behaviour contains an acceptance of vulnerability and so identifying them represents a useful first cut at identifying instances of trust.

Step two involves screening these acceptances of vulnerability by investigating their potential justifications. To sustain a hypothesis that trust existed, researchers must be able to articulate a narrative which justifies the acceptance of vulnerability and can also be shown to be consistent with the agent's behaviour in other contexts. If trust is involved, this justification must also include a perception by the trustor that the trustee shares a salient commonality with them and believes that this perception is reciprocal.

The third step is important because it requires researchers to demonstrate the utility of a trust-focused explanation by showing how it improves on alternative explanations. This is especially important for trust-based explanations as any account that features such an unobservable variable must meet a high bar in terms of added value in order to justify its reduced parsimony.

While the purpose of the third step is to provide negative evidence supporting a trust explanation, the fourth step involves generating positive evidence. This is accomplished by demonstrating that those factors theorized as enabling trust obtained as a trust-based explanation would predict. Based on the psychological model outlined earlier I have developed a set of five psychological mechanisms which, if operating, can be expected to produce the familiarity and positive emotion which, if combined with a perceived salient commonality, can generate collective identification and trust.

- **Interactivity** refers to how interactions between agents generate familiarity through increased opportunities to observe others and produce positive emotion through psychological processes such as the 'mere exposure' effect.¹⁴ Quantitatively, I measure interactivity between states by comparing a state's interactions (e.g. trade, investment, migration) with another state against the universe of the domestic interactions which constitute the state. This novel approach is useful because it provides a basis for comparisons across relationships by establishing a relatively constant denominator. Qualitatively, it is also useful to consult primary and secondary sources for descriptions of how the key decision-makers interacted with one another.

¹⁴ Pierce et al. (1996). The related propinquity effect is, for our purposes, subsumed under the 'mere exposure' effect. Aronson, Wilson, and Akert (2007: 307-308); Zak and Kugler (2011: 144); Pinker (2011: 579-580).

- **Homogeneity** refers to how the perception of sameness between agents licenses greater confidence in agents' predictions and triggers psychological biases which favour things perceived as similar.¹⁵ I use quantitative measures such as Gross Domestic Product (GDP) per capita, percentages of a state's population born in the other state, and Polity 4 scores to establish 'objective' levels of homogeneity. Qualitatively I look to indicators such as whether the two states possess a common language, religion, and legal system, and to whether or not contemporary discourse suggested that the two societies perceived themselves as similar.
- **Common interests** refers to the way that perceptions of common enemies, a common fate, and a need to work together to achieve a common goal tend to result in positive emotion and an increased sense of familiarity.¹⁶ I use only qualitative indicators to measure agents' perceptions of common fate and rely mainly on primary and secondary sources.
- **Shared experiences** refers to the extent to which agents perceive themselves and other agents as having experienced the past together.¹⁷ Shared experiences are important because they provide agents with a sense of familiarity and trigger positive psychological biases towards those with whom they have shared the experience. I measure the operation of this mechanism with qualitative indicators derived from primary and secondary sources.
- **Altercasting** refers to when one agent acts in a way that communicates that they possess a specific understanding of the other to that other. The result is that the other is more likely to behave in a manner consistent with how they were 'altercast' than they otherwise would.¹⁸ This can generate familiarity (by communicating to me what you think of me, I come to understand you better) but most of all, positive emotion (if I treat you as trustworthy, this tends to elicit a positive emotional reaction). I rely on primary and secondary sources to measure the operation of this mechanism.

As this is a fairly intricate research design, it is useful to stop and summarize before continuing. Basically, I proceed as follows: I begin by identifying an instance when one state voluntarily accepts vulnerability to another state – in this case, Canada's non-acquisition of nuclear weapons between 1945 and 1957. I then hypothesize the justification that enabled this acceptance of vulnerability – namely that Canada eschewed acquisition because Canadian decision-makers trusted their US counterparts to act like liberals and resolve any future disputes with Canada non-violently. Then, I review alternative explanations derived from Realist, Rationalist, and Constructivist approaches and show that they cannot adequately explain Canada's non-acquisition. Finally, I present an explanation which includes trust and provide evidence by demonstrating that all five of the trust-enabling mechanisms were operating in the lead-up to and during the period in question. And while this does not provide definitive proof of trust's

¹⁵ Wendt (1999: 353-357); Wendt (2003: 523-524); Zak and Kugler (2011), 144; Aronson, Wilson, and Akert (2007: 310-312); Dovidio et al. (1997: 404)

¹⁶ Wendt (1999: 349-353); Dovidio et al. (1997: 402-404); Tajfel and Turner (1979: 33).

¹⁷ Aronson, Wilson, and Akert (2007: 312-313); Strayer (1966).

¹⁸ Glaeser et al. (2000, 830); Aronson, Wilson, and Akert (2007: 312); Cf. Wendt (1992: 421).

presence, significant consilience across all four steps in the research procedure does provide a high level of evidentiary support. Thus, I conclude that Canada's non-acquisition of nuclear weapons is best accounted for by an explanation that includes Canadian decision-makers trusting US decision-makers on the basis of a sense of shared adherence to liberalism.

Canada's non-acquisition of nuclear weapons and its historical context

Canada was one of the three states directly involved in the creation of nuclear weapons during the Second World War.¹⁹ Although limited, Canada's contribution to the Manhattan Project was significant.²⁰ Canada was an important supplier of uranium and heavy water to the USA and hosted a combined Anglo-Canadian research team, initially at a facility in Montréal.²¹ Just after the end of the war ZEEP (Zero Energy Experimental Pile), the world's first nuclear reactor outside of the USA, went critical on 5 September 1945 at the Chalk River Laboratories near Ottawa. ZEEP was followed in 1947 by NRX (National Research – Experimental) which was for a time the world's most powerful reactor. Throughout the 1950s, NRX produced significant quantities of plutonium for the US nuclear weapons programme.²²

By 1945, Canadian scientists had already overcome all of the theoretical and many of the technical obstacles standing in the way of producing a nuclear weapon.²³ Given sufficient time and resources, there is no reason to believe that Canada would have been unable to overcome these problems. In sum, Buckley argues that it would be difficult to describe Canada in this period as anything other than a "threshold nuclear state."²⁴

Despite this capacity, however, the Canadian government seems to have never actively considered acquisition of nuclear weapons.²⁵ Indeed, I have found no evidence that there was ever any actual cabinet-level discussion in which the costs and benefits of acquisition were weighed.²⁶ The closest that decision-makers seem to have come was in late 1945 when a report entitled "The Atomic Bomb: Effect

¹⁹ Thompson and Randall (2008: 167).

²⁰ Holmes (1979: 202). Richter (2002: 19)

²¹ James Eayrs notes that "[t]he maiming of Hiroshima and Nagasaki was a by-product of Canadian uranium." Quoted in Nash (1991:144).

²² In fact, uranium becoming Canada's leading mineral export by the end of the 1950s. Buckley (2000: 87, 95 and 125).

²³ Buckley (2000: 69).

²⁴ Buckley (2000: 9-10); Maloney (2007: 78).

²⁵ Two incidences have been interpreted as indicating that a cabinet level decision had been taken to not acquire nuclear weapons, notably (1) a cabinet meeting on 17 November, 1945 and (2) Minister of Munitions and Supply, C.D. Howe's response to a question in the House of Commons on 5 December, 1945. Buckley (2000: 48-50) describes how both have been misinterpreted. Maloney (2007: 2 and 68) notes that there may have been some low-level discussion in the Department of External Affairs and the military, but agrees that in neither case did this discussion reach high levels.

²⁶ Buckley (2003: 43 and 137) states: "[n]one of the primary and secondary material that I have reviewed, which includes archival material pertaining to Abbott [Minister of Defence at the end of the war] and the proceedings of the cabinet Defence Committee and full cabinet, contains any direct or indirect evidence that the military case for the acquisition of an independent atomic arsenal was ever seriously debated, publicly or privately, in any of the major policy-making mechanisms of government". This assessment is supported by the recollections of John Holmes (1979: 219). Richter also agrees (2002: 20)

of its Discovery on Canadian Army Strategic Planning – Preliminary Considerations” was commissioned by the Deputy Chief of the Canadian General Staff and forwarded to the Chief of the Canadian General Staff (CGS) with the following notation:

If the U.S. should remain neutral in some future war in which we were engaged... we would be under the necessity of providing adequate defence against the hostile use of an AB [atomic bomb] as undoubtedly other nations will in due course possess the secret of its manufacture... This seems to lend emphasis to the urgent necessity... of ensuring that the secret of the manufacture of the AB itself is known to us or to the UK so that we may have the advantage of the use of this super-powerful explosive in the event that we may be required to engage in war without the assistance of the US.”²⁷

The CGS apparently forwarded the report to Minister of National Defence with the recommendation that a high level committee be formed to consider it.²⁸ However, this committee does not appear to have been struck.

Interestingly, this lack of interest in acquisition did not spill over into related areas. Despite its vigorous support for the creation of an international regime for the purposes of controlling nuclear weapons between 1945 and 1947, Canada began assisting Britain in its quest for the bomb in 1947. Moreover, as early as fall 1947, powerful Canadian decision-makers were advocating participation in a trilateral weapons production system involving the USA and Britain.²⁹ While not pursued immediately, this idea was given new life by the advent of the Soviet bomb in 1949 which catalyzed a temporary push on the part of the three western ‘atomic powers’³⁰ to cooperate more fully in the production and development of more, and more advanced, weapons.³¹

Strikingly, Canada appears to have even refused an offer which would have seen the USA provide Canada with nuclear weapons. In 1951, an US official suggested to the head of Canada’s Defence Research Board that Canada might welcome some US nuclear bombs for its own control and use. “As regards the possibility of bombs being stored in Canada, Dr Solandt reported that Mr Arneson had thrown out a suggestion which he might or might not have meant to be taken seriously, that the Canadian government might wish to have bombs stored in Canada for its own use.”³² Even if this offer was not serious, and whatever the details would have been, that it was apparently never explored is striking and suggests a genuine lack of interest.³³

While Canadian decision-makers avoided acquiring their own nuclear weapons, they participated in a Western alliance system that relied heavily on them. They even allowed US Strategic Air Command to

²⁷ Buckley (2000: 42-43)

²⁸ Buckley (2000: 43)

²⁹ Buckley (2000: 70-71)

³⁰ Holmes (1979: 196).

³¹ Maloney (2007: 9)

³² Donaghy (1996: 1523)

³³ Buckley (2000: 88)

operate out of Goose Bay in Labrador.³⁴ Between the North Atlantic Treaty Organization (NATO) summit in Lisbon in February 1952 and the Paris meeting of 1954, NATO altered its strategic doctrine to include a much increased reliance on tactical nuclear arms.³⁵ As of December 1956, this dependence became even more complete with the acceptance of the US offer to put stockpiles of nuclear arms at NATO's disposal in Europe.³⁶ And in December 1957, Canada's new Prime Minister, John Diefenbaker, endorsed a plan that "implied his acceptance of American nuclear weapons for Canadian air and land forces in Europe."³⁷ Canada was now in a position such that its forces in Europe could be called upon by the US commander of NATO to employ tactical nuclear arms in the case of a war with the Soviets.³⁸

Alternative Explanations

While Canada's historic neglect of its defences can be ascribed to, initially, Britain's guarantee of its security and, subsequently, the impossibility of defending its enormous territory against its only likely opponent, the USA, its decision to forego acquisition of nuclear weapons, and the acceptance of vulnerability that this entailed, is more difficult to explain. This is because acquisition represented an unprecedented opportunity that offered, almost at a stroke, the possibility of meaningfully reducing the imbalance in capabilities between Canada and the USA at a reasonable economic cost. Because of this, this decision poses problems for some of IR's most influential theories, such as Realist theories, but also Constructivist theories postulating a Hobbesian or Lockean culture of anarchy. All these theories share the argument that a rational state in Canada's situation ought to take those steps available to it to remedy the imbalance in its capabilities *vis-à-vis* the USA.³⁹ Non-acquisition also goes against states' overwhelming tendency to adopt more effective military technologies as they appear.⁴⁰ Consequently, Canada's voluntary nuclear abstention calls out for additional explanation.⁴¹

Despite IR scholarship's relative neglect of this question, three classic categories of explanation offer themselves fairly readily: (1) Canada's lack of foreign and security policy autonomy;⁴² (2) the poor cost-effectiveness of acquisition; and (3) the normative distaste for nuclear weapons felt by many powerful Canadian decision-makers. I review these explanations below, and, while the second and third contain elements of a coherent explanation, even combined they cannot account for Canada's non-acquisition unless a recognition that *Canadian decision-makers trusted US decision-makers to not use force as a means of resolving disputes with Canada*, is also added.

³⁴ Maloney (2007:1)

³⁵ Levitt (1993:69); Richter (2002: 80-81)

³⁶ Levitt (1993: 28)

³⁷ Lennox (2009: 59); Nash (1991: 78)

³⁸ Thompson and Randall (2008: 209-210); Buckley (2000: 129) and Levitt (1993: 69). While Canada did accept nuclear weapons for its forces in Europe, as well US nuclear warheads for the BOMARC missile system, these were all tactical or defensive weapons systems and thus do not represent an independent strategic nuclear capability.

³⁹ Lennox (2009: 57); Buckley (2000: 6)

⁴⁰ Price (1995: 73-74)

⁴¹ Lennox (2009: 57-58)

⁴² Richter (2002: 5 and 7)

Before I begin my evaluation, however, it is important to explain why I focus on the particular agents – namely Canadian decision-makers – that I do. This is because nuclear policy in this era was almost completely the province of decision-makers within the cabinet and the upper reaches of the bureaucracy. Holmes states that “Parliament accepted that atomic matters had to be left in the hands of the prime minister with little protest” and that there “has rarely been such evidence of the docility of the Canadian public as during the period on atomic questions.”⁴³ Thus I restrict my focus to the Canadian cabinet, especially the Prime Ministers, Ministers of Defence and External Affairs, and the upper echelons of the Canadian military and Department of External Affairs.

The argument that Canada eschewed acquisition because it lacked foreign and security policy autonomy suffers from two flaws. First, while not wholly inaccurate, the implications of this argument are overdrawn. Canadian Minister of External Affairs Lester Pearson captured it precisely when he opined that “no country can have complete independence today in its foreign policy, because no country can guarantee its own security by its own actions” while simultaneously arguing that “that doesn’t mean we have to be subservient to every aspect of United States policy.”⁴⁴ And indeed, Canada’s willingness to defy the USA in costly ways surfaces regularly, even in matters of high security such as during the Cuban missile crisis. Second, Buckley argues that he found “no evidence at all that... the United States... ever sought to discourage Canada from pursuing the nuclear option.”⁴⁵

The second, cost-effectiveness, explanation is driven by two main arguments. First, following the Second World War, the Canadian government was keen to cut military spending in favour of popular social programmes.⁴⁶ Second, the USA was committed to protecting Canadian territory. Thus, Canadian decision-makers had little incentive to expend resources developing an expensive *and redundant* capability.⁴⁷

While this is true, this explanation is still flawed in three important ways. First, while Canada’s military budget was under pressure in 1945, this was only because Canadian decision-makers perceived no immediate threat to Canada’s security,⁴⁸ a perception that is itself in need of explanation given the high level of insecurity experienced by Canada relative to the USA. Second, the empirical record does not support the cost-effectiveness argument. Cost-effectiveness models are based on a rational-actor model in which agents weigh possible costs and benefits and seek to maximize their utility. As discussed earlier, I have found no evidence that any serious weighing of this sort ever occurred. The explanation is further attenuated when one considers the resources that Canada expended in re-arming for the Korean War.⁴⁹ Finally, the Canadian government’s failure to explore the USA’s apparent 1951 offer also undermines this argument as this offer could have presented a cost-effective means of acquisition.

⁴³ Holmes (1979: 222-224)

⁴⁴ Levitt (1993: 64)

⁴⁵ Buckley (2000: 130)

⁴⁶ Buckley (2000: 134)

⁴⁷ Lennox (2009: 58)

⁴⁸ Richter (2002: 20)

⁴⁹ Buckley (2000: 9-10 and 136). Canada spent two-and-a-half times what the USA spent on the Manhattan project rearming for the Korean War.

A third possible explanation holds that decision-makers felt a strong moral revulsion for nuclear weapons, or at least expected the public to feel one, thereby creating a chill which inhibited even the consideration of acquisition.⁵⁰ There is some support for this third ‘moral distaste’ explanation. For instance, it was well known that Prime Minister Mackenzie King considered the atomic bomb to be a “Frankenstein” that could destroy civilization.⁵¹ Given this, it is understandable that others who might have favoured acquisition did not press their case while King was Prime Minister. Lester Pearson, who was probably the individual with the most influence over Canadian nuclear weapons policy once King retired in 1948 held broadly similar views.⁵²

But while it is clear that this moral distaste influenced Canadian decision-makers’, it is also clear that this influence was not definitive. Despite working towards nuclear disarmament, Canada simultaneously played a crucial supporting role in the expanding US nuclear programme,⁵³ assisted Britain in its acquisition, planned to participate in a fully tri-lateralized weapons production system, and agreed to arm those of its forces under NATO command with tactical nuclear arms. Thus Canada’s anti-nuclear stance must be understood as somewhat ambiguous, if not completely disingenuous:⁵⁴ if decision-makers viewed nuclear weapons as evil, they seemed happy enough to view them as a necessary evil so long as they were in Western hands.⁵⁵

The best explanation is one that includes elements of both the cost-effectiveness and moral distaste explanations. Canadian decision-makers were cost-sensitive and not interested in acquisition unless they perceived a compelling need; this disinclination was reinforced by a basic, but not categorical, distaste for these weapons. Thus, while acquisition was not ruled out *ex ante*, a compelling argument would need to be made for even a discussion of acquisition to be worthwhile. Since no such argument was made, acquisition did not occur. Of course, what I argue is that Canada’s vulnerability to the USA ought to have provided just such a compelling argument and ought to have at least forced a discussion. No such discussion seems to have occurred, leaving a significant hole in even this combined explanation.

A trust-focused analysis

Arguing that Canada should have considered equipping itself with nuclear weapons to defend against a possible threat from the USA may sound a little absurd. But, from an abstract Realist perspective, such an argument is quite obvious. Naturally, expectations that agents will adopt such an Olympian perspective are perhaps unrealistic and decision-makers will inevitably be influenced by their social

⁵⁰ See Tanenwald (2005); Lennox (2009: 57)

⁵¹ This is the explanation Buckley (2000: 139-140) favours.

⁵² Buckley (2000: 53 and 139-140) Under Prime Minister Louis St-Laurent (1948-1957) Pearson’s influence on Canada’s diplomacy was enormous as he enjoyed St-Laurent’s almost complete support during a period when his Liberal party was at the height of its postwar power. Levitt (1993: 43, 67 and 70). Maloney (2007: 1) agrees, but would add General Foulkes to this list. Foulkes adopted a similar position to Pearson (34).

⁵³ Lennox concurs (2009: 57). Between 1947 and 1962 \$1.37 billion worth of uranium was exported from Canada to the USA for the purposes of producing US nuclear weapons. Nash (1991: 144)

⁵⁴ Richter (2002: 21-22)

⁵⁵ Nash (1991: 144)

context. But this is not an excuse to ignore the need to explain what it is about this social context which makes this 'obvious' option seem absurd.

I maintain that the best way to fill the gaps identified in the preceding section is to argue that Canadian decision-makers trusted US decision-makers to act like liberals and to not use force to resolve disputes with Canada. If I am correct, then we can hypothesize that decision-makers' rational calculation that the USA did not threaten Canada was converted into an arational assumption through a process of collective identification, thereby removing any imperative to even consider acquiring nuclear weapons. Such an answer has the virtue of being compatible with the cost-effectiveness and moral distaste explanations, while solving the problem on which both founder. However, in order to show that there is also positive empirical evidence supporting this explanation, I need to show that those factors theorized earlier as capable of generating familiarity and positive emotion were present prior to and during this period. Thus, the next step in my analysis is to employ the four-step research procedure outlined earlier.

By selecting Canada's non-acquisition of nuclear weapons as the focus for my analysis I have already completed the first step, that is identifying an instance of a state voluntarily accepting vulnerability to another. The second step is to articulate a narrative that justifies this acceptance of vulnerability, provide evidence of adherence to this narrative by the trustor, and provide evidence of mutual perceptions of this adherence between agents. In this case, I argue that justification flowed from the collective identification by Canada and the USA around liberalism, a narrative which enables adherents to trust each other to resolve disputes non-violently. There exists significant evidence that by 1945, both Canada and the USA self-consciously embraced the key tenets of liberalism. Economically, both states embraced a series of measures designed to create a liberal international economic system in the postwar period in the form of the Bretton Woods institutions and the General Agreement on Tariffs and Trade. In terms of more political measures of liberalism both Canada and the USA receive Polity 4 scores of 10 from at least 1921 onward.

There is also significant evidence that both states recognized each other's adherence to liberalism. As is discussed below, this recognition became widespread after the First World War and hegemonic by the end of the 1920s. More specifically, all major Canadian decision-makers like Prime Ministers Mackenzie King (1921-1926, 1926-1930, and 1935-1948) and Louis St.-Laurent (1948-1957), Minister of National Defence Brooke Claxton (1946-1954) and Minister of External Affairs Lester Pearson (1948-1957) saw Canada and the US as being partners in the larger 'free world' whose relations were naturally based on a common Western liberal heritage.⁵⁶

Having already reviewed alternative explanations, the final step in my research procedure involves providing evidence that the five trust-enabling mechanisms identified earlier were active in the run-up to and during the decisions in question. As this is the most involved step, I devote most of the rest of this paper to providing this evidence, first in quantitative and then in qualitative form. This evidence provides strong support for the argument that sometime between the end of the First World War and

⁵⁶ Roussel (2004: 198 and 210); Thompson and Randall (2008: 188-190). For more detailed analyses of King and his political philosophy please see Neatby (1969); for Louis St. Laurent, see Thomson (1969); for Lester Pearson, English (1989 and 1992); for Brooke Claxton, see Bercuson (1993)

the beginning of the Great Depression, collective identification around liberalism became the norm among Canadian and US decision-makers. This trust survived the challenges of the Great Depression and was reinforced by the events of the Second World War and the early Cold War with the result that throughout the period under consideration here, Canadian decision-makers assumed that the USA posed no military threat to Canada, and thus they had no reason to even consider acquiring nuclear weapons.

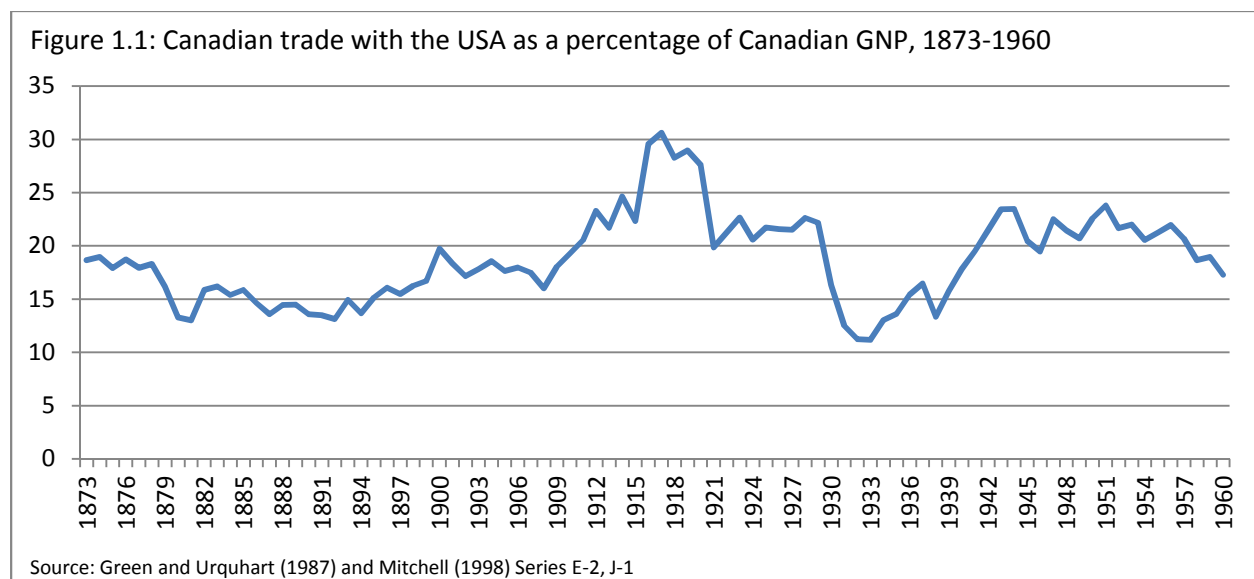
Quantitative Evidence

Quantitative data are important for advancing the study of trust because the development of quantitative indicators that are comparable across cases is necessary for advancing a rigorous research agenda on trust. My research in this area is still tentative, but it is showing some promise. In this section I review six indicators which I use to measure interactivity and homogeneity between polities.

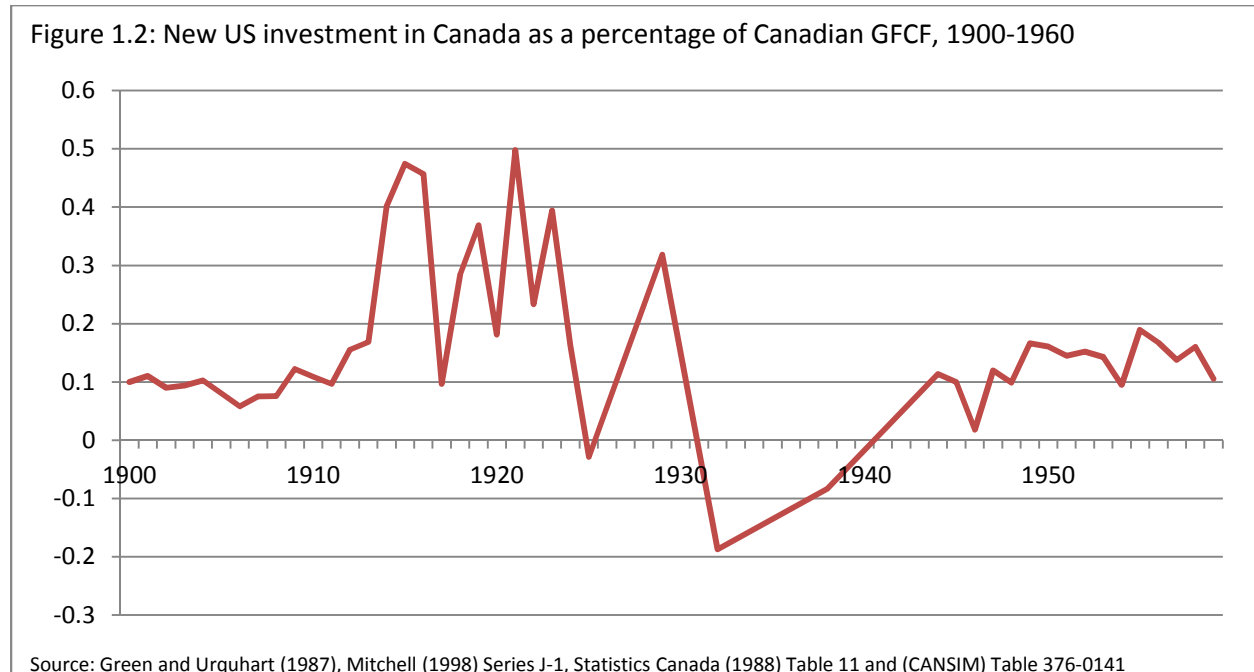
Interactivity

I employ three quantitative indicators of interactivity, all of which exhibit significant increases between the two states in the first half of the 20th century: the percentage of Canadian economic activity represented by trade with the USA (Figure 1.1); the percentage of investment in Canada (as measured by Gross Fixed Capital Formation [GFCF]) that had US origins (Figure 1.2); and the migration between the two states (Figure 1.3).

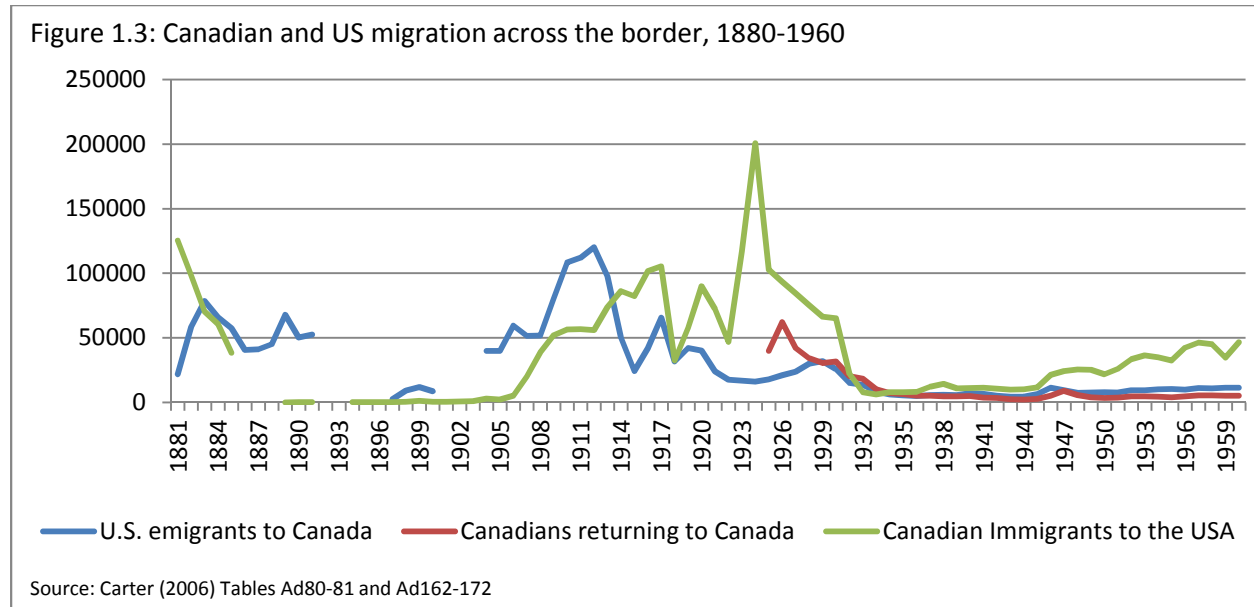
In Figure 1.1 note that from about 1910 until the onset of the Depression, trade with the USA represented a historical high of over twenty percent of Canada's economic activity with this measure reaching thirty percent for the much of the First World War period. This is important because it indicates that for twenty years between one fifth and one third of all of Canada's economic activity, by value, involved a US counterparty implying a significantly level of interactivity with the USA even when compared to interactivity between Canadians.



In Figure 1.2 the data are less complete for the pre-1945 period, with a much more volatile picture emerging as a result. Nevertheless, we again see a similar surge in interactivity in the years between 1910 and 1930.



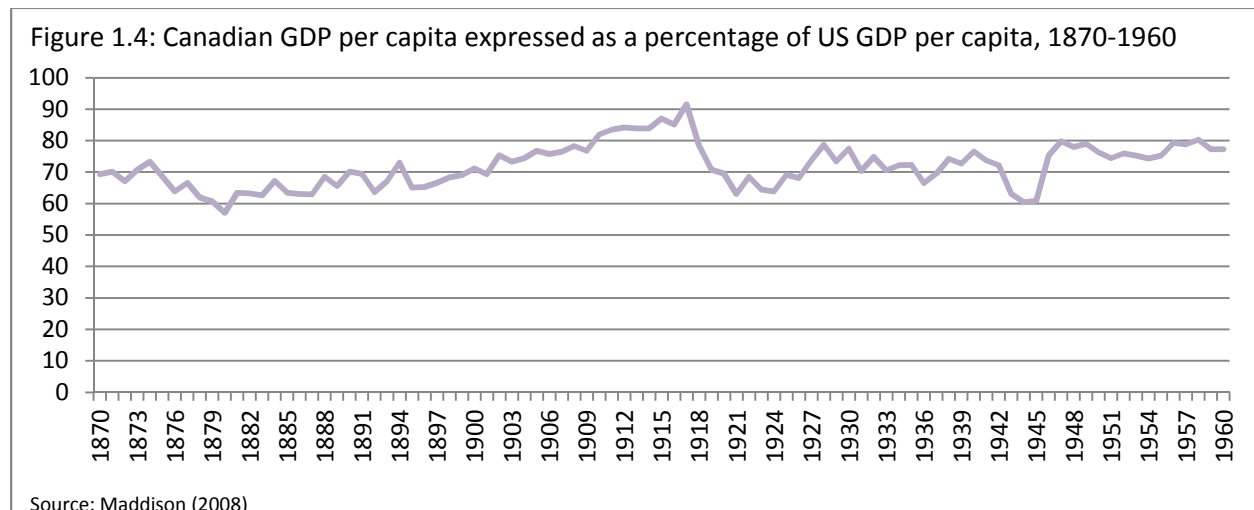
In Figure 1.3 the key features are the relatively high levels of US emigration to Canada from roughly 1910 to 1930, and the relatively high levels of Canadian migration the USA from 1905 to 1920. The relatively high number of Canadians returning to Canada from 1926 until the early 1930s is also suggestive, though caution must be exercised due to the limited nature of this dataset. Note that in 1912 the population of Canada was only 7,389,000, meaning that immigrants arriving from the USA that year represented 1.6 percent of the population. In 1925 the population of Canada was only 9,294,000 meaning that over two percent of the Canadian population immigrated to the USA that year. This relatively large churn implies a high level of interactivity between the two polities.



Homogeneity

There are also some significant increases during this period in those aspects of homogeneity that can be measured with quantitative data. Below I present a comparison of Canadian and US gross domestic product (GDP) per capita (Figure 1.4 with Canadian GDP per capita expressed as a percentage of US GDP per capita); the percentage of the two states populations born in the other state (Figure 1.5) and the two states Polity 4 scores (Figure 1.6). While certainly not comprehensive, these three indicators map nicely onto the economic, social, and political aspects respectively of the two polities.

Figure 1.4 shows historically high levels of parity between Canadian and US GDP per capita – which I define as Canadian values above seventy per cent of US values – between 1904 and 1922 and again for all but four of the years between 1930 and 1957. Note especially the peak of convergence between 1912 and 1920.



In Figure 1.5 there are two bulges which begin at similar times. In Canada, this surge peaks in 1921 at about 4.25%. In the USA the peak is earlier (1900) but is somewhat more stable and remains relatively elevated until the 1930s. For our purposes, the number of Canadian born in the USA is not important for its impact on the USA, but for the way that the mixing homogenizes and connects the two polities.

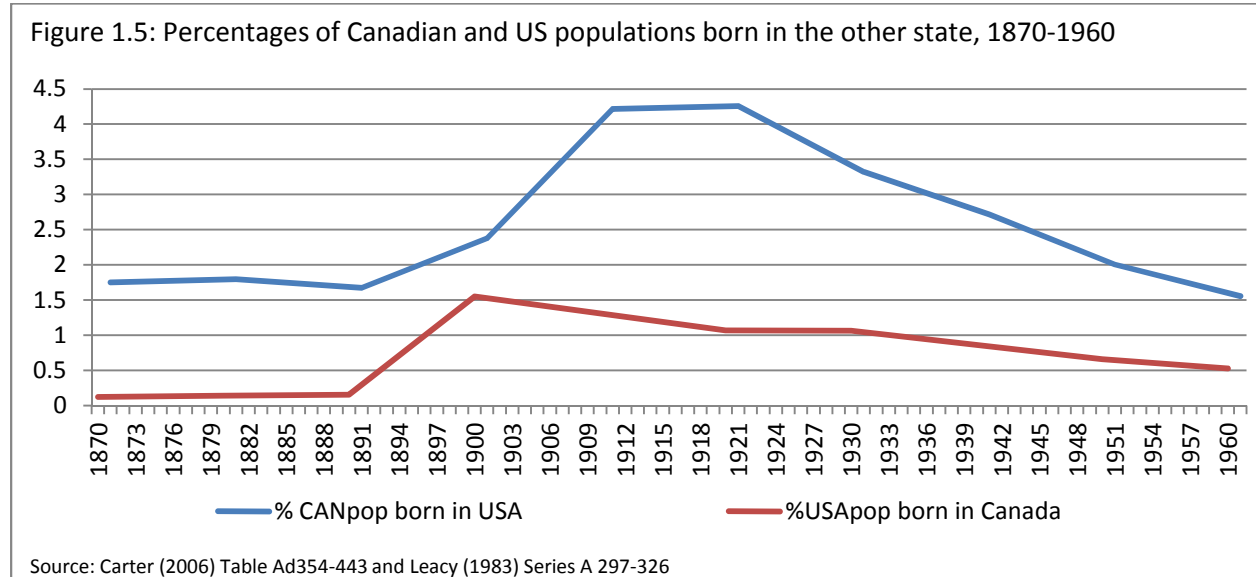
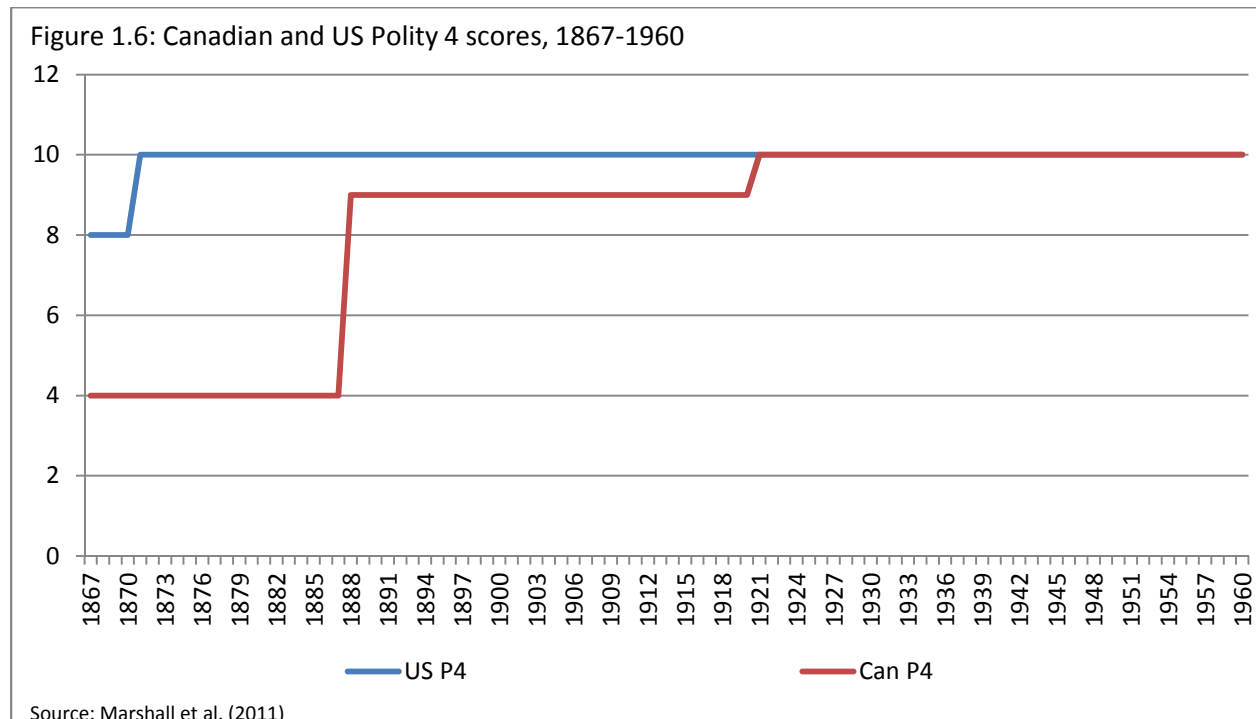


Figure 1.6 shows the Polity 4 scores of both states.⁵⁷ Note that convergence at 10 (the highest possible value) occurs quite early and remains there for the rest of the period.



⁵⁷ Polity 4 is a standard metric for measuring the liberal democratic character of a state.

Taken together, these six indicators clearly demonstrate high levels of interactivity and homogeneity between the years of 1910 and 1930. This suggests that this twenty year period would precede the time when conditions were the most conducive to the formation of a generalized disposition to trust between the two polities, a conclusion that is supported by the qualitative evidence presented below. And while some of these indicators drop off after 1930, because of trust's stickiness, it should not be surprising if, once established, this disposition persisted despite the transitory retrenchment of the Great Depression.

Qualitative Evidence

While important for the reasons outlined earlier, quantitative indicators are necessarily blunt instruments, especially in cases such as this where their effect must be transmitted second-hand through the perceptions and decisions of the limited number of decision-makers involved in the decisions in question. Thus, I now turn to qualitative indicators which provide the bulk of the evidence supportive of my argument.

Interactivity

As the quantitative data have revealed, significant interaction between the Canadian and US publics existed prior to and during the critical 1910-1930 period. It should come as no surprise then that this period was also marked by the establishment of several significant joint bodies, bodies which represented the first permanent institutionalization of the relationship.⁵⁸ The International Joint Commission (IJC), the oldest and most important of these was established in 1909 as a recognition of the transnational character of the problems faced by the two countries in the area of boundary water management, and the corresponding need to work together to solve them. This was followed over the next thirty years by a number of other similar organizations along a similar pattern. And with the coming of the war, this pattern was replicated in organizations like the Permanent Joint Board on Defence (PJBD) and five joint economic commissions which were set up overcome challenges arising from wartime cooperation.

During the Second World War, this interactivity between bureaucrats and decision makers intensified. The connections which Canadian CGS Foulkes formed with US officials provides a good illustration of the types of relationships and interactions that developed. During the war, Foulkes became close friends with US General Walter Bedell Smith, the US Director of Central Intelligence (1950-1953) as well as Alfred M. Gruenther, Supreme Allied Commander, Europe (1953-1956).⁵⁹ These relationships persisted into the Cold War. In addition to these personal connections, Canadian and US officials were constantly meeting to coordinate policies and operations. For example during his term as the Chairman of the US Joint Chiefs of Staff (1953-1957), Admiral Arthur Radford met with Foulkes more than any other allied

⁵⁸ Though it should be noted that these organization marked a progression from earlier temporary and more rudimentary commissions used during the 19th century by the two states to solve specific problems. Willoughby (1979: 6-7).

⁵⁹ Maloney (2007: 15)

military leader.⁶⁰ Similar relationships existed between important decision-makers on the civilian side as well, such as the strong relationships that developed between Hume Wrong and Dean Acheson (whose parents were Canadian), Lester Pearson and Acheson, and Mackenzie King and President Franklin Roosevelt.

These sorts of connections reached new heights during the Cold War, especially in the relationships between the air forces⁶¹ and were encouraged by a number of agreements and institutional changes. An important step in this direction was the signing in 1947 of an agreement on equipment standardization and officer exchanges. The agreements which produced NATO and the North American Air Defence Command (NORAD) soon followed. Agreements like this drew the two states respective militaries' together by creating institutional structures which required constant interaction between them. As a result, shared experiences proliferated, resulting in the formation of tightly knit trans-governmental networks defined by collective identities.⁶² Similar patterns are observable on the civilian side as well. Canadian and US officials cooperated intensely in their efforts to revive Europe and construct a new international system centered on the United Nations (UN), and eventually against the Soviet's in international *fora*.

Homogeneity

It is clear that Canada and the USA represent two of the most homogeneous societies in the world. While the political community that would eventually become Canada began as a predominantly French-speaking one, ever since the British conquest of Québec, the percentage of the population who had English as their mother tongue increased continually. While exact figures are difficult to come by, by around 1850 the population of Upper Canada (mainly English-speaking) exceeded that of Lower Canada (mainly French-speaking) for the first time. By 1931, 57% of the population were Anglophones, compared to 27% Francophones, signalling a decisive shift toward homogeneity with the predominantly English-speaking USA.⁶³

Individuals' language also tends to correlate with a larger package of additional cultural assumptions. Thus, as Canada became more English-speaking, not only were the two countries speaking more similarly, they were also thinking more similarly. This is certainly the case with the legal systems and ideas which governed the two countries, as the legal systems of English Canada and the USA were both largely inherited from English common law and thus shared important fundamental assumptions about how society should be organized. This idea can be expanded to include the basic liberal premises that underpin both societies, an intellectual identity again inherited largely from 18th century Britain.⁶⁴ And while many Canadians were suspicious of US forms of republican democracy, which they identified with

⁶⁰ Maloney (2007: 26).

⁶¹ Roussel (2004: 206 and 210-212); Thompson and Randall (2008: 199)

⁶² Roussel (2004: 212). These agreements represent more limited examples of trust in-and-of-themselves, and as such can be understood as examples of altercasting. On transnational coalitions see Bow (2009).

⁶³ Leacy (1983) Series A185-237.

⁶⁴ Roussel (2004: 139) argues that this shared conception of the place of the law played a key role in encouraging the bureaucratic interactivity which resulted in the strong record of cooperation on border disputes and arms control.

mob rule, by 1945 Canadians generally saw the USA as standing for the same political, economic, and moral values as themselves.⁶⁵

Common Interests

One can also discern a trend toward an increasingly common definition of interests between these two states. Prior to Confederation, Canadian interests were largely defined by British interests. Even after Confederation, control of Canada's defence and foreign policies remained the preserve of Whitehall until 1931. Nevertheless, once Confederation occurred, Canadian governments began increasingly to formulate a set of interests of their own. For much of this period, these interests can be summarized as a need to keep relations between Britain and the USA good. And since US interests during much of the pre-First World War period were best served by a gradual rapprochement with Britain, Canadian and US interests came to align increasingly. This reached an apogee with the USA's entry into the war in 1917. And while Canada joined the League of Nations and the USA did not, as in the USA there was a strong current of isolationism in the Canada which manifested itself in what might be termed very 'American' behaviour at the league.⁶⁶

The experience of the Second World War pushed this common definition of interests even further. Reflecting on their experience of cooperation during the war two Canadian officials concluded that: "In short, the United States trusted us, liked us, understood us, had no reason to fear us, and shared with us the common objective of defeating the enemy."⁶⁷ This common definition of interests is most strikingly demonstrated by the high level of cooperation in the extremely sensitive area of intelligence. During the war, a high level of cooperation developed between the states of the so-called 'Anglosphere'; namely the USA, UK, Canada, Australia, and New Zealand. The fact that William Stephenson, a Canadian, headed the British intelligence operation in the USA during the war and was integral to the creation of the US Office of Strategic Services – the forerunner of the Central Intelligence Agency (CIA) – and trained many future directors of the CIA at a camp in Whitby, Ontario, is indicative of the highly integrated, and trusting, character of the early intelligence community.⁶⁸

This cooperation continued during the post-war period with the signing of the UKUSA agreement – also known as the 'Secret Treaty' – which divided signals intelligence collection duties for the entire world between these states on the understanding that this intelligence would be shared.⁶⁹ Among other things, the "UKUSA Agreement also provides that the participating agencies... 'standardize their terminology, codewords, intercept-handling procedures, and indoctrination oaths, for efficiency as well as security.'"⁷⁰ Indeed, Richelson and Ball describe the relationship that has developed between these states as "a truly multinational community, with its numerous organizations and agencies bound

⁶⁵ Holmes (1979: 162)

⁶⁶ Roussel (2004: 198)

⁶⁷ Holmes (1979: 167)

⁶⁸ Stafford (1987)

⁶⁹ Richelson and Ball (1985: 4-5 and 135)

⁷⁰ Richelson and Ball (1985: 143)

together by an extraordinary network of written and unwritten agreements, working practices and personal relationships.”⁷¹

The onset of the Cold War played an important role in increasing the two states common definition of interests and led Pearson, then Minister of External Affairs, to argue that the defence of North America could only be undertaken in partnership with the USA. In fact, the 1949 Defence White Paper in which Minister of National Defence Claxton outlined Canada’s national defence strategy for the post-war era, explicitly stated that “the only kind of war which would involve Canada would be a war in which Communism was seeking to dominate the free nations...” and that the government “assumes that our armed forces will be used in association with those of friendly powers”.⁷²

Andrew Richter suggests that this White Paper “revealed that Canada viewed its security as indivisible from that of its allies...”.⁷³ Indeed, confronting this new enemy produced a new level of intimacy between these two states that even the war against Fascism had never demanded, as can be seen in the effort to trilateralize weapons production in the late 1940s, in the creation of NORAD, and in military and diplomatic cooperation more generally.⁷⁴ These perceptions of common fate were greatly catalyzed by a series of dramatic events including the First Berlin Crisis (1948-1949), the detonation of the first Soviet bomb (29 August, 1949), the USSR’s first thermonuclear explosion on (12 August, 1953), and the launch of Sputnik (4 October, 1957).

Shared Experiences

In terms of shared experiences, the two world wars defined both Canada and the USA’s experiences of the first half of the 20th century, and both brought them closer together. The First World War in particular occasioned a major shift in the relationship. Before the war, many in Canada saw the USA, if not as a potential enemy, then at least as a country against which it had to be on guard. Recall that the last time the USA threatened Canada with a use of force had only been in 1903 when US President Theodore Roosevelt threatened to dispatch troops to ensure that the Alaska boundary dispute was resolved in the USA’s favour.⁷⁵ However, the shared experience of the First World War transformed the USA into a comrade-in-arms, unleashing a considerable rapprochement.⁷⁶ Of particular importance was the ideational shift the war occasioned with many conceiving of the war as a struggle for democracy, something that caused many North Americans to downgrade the importance attached to their intra-liberal differences and élites on both sides recognizing each other as cognate democracies.⁷⁷

It is also at this time that the belief that war between Canada and the USA had become ‘unthinkable’ began to really take hold.⁷⁸ Many elites, especially Liberals in Canada, had felt this way since at least the

⁷¹ Richelson and Ball (1985: 301)

⁷² Richter (2002: 18)

⁷³ Richter (2002: 18)

⁷⁴ Thompson and Randall (2008: 184); Keohane and Nye make a similar argument (1989: 171 and 211).

⁷⁵ Stacey (1977: 97)

⁷⁶ Stacey (1977: 203)

⁷⁷ Roussel (2004: 123, 130-131, and 169); Stacey (1977: 234-235)

⁷⁸ Shore (1998: 335) and Thompson and Randall (2008: 100); c.f. Doran (1984: 29)

beginning of the 20th century,⁷⁹ but the First World War seems to have convinced even most Conservatives.⁸⁰ A 'North American' narrative founded on shared liberal values had begun to gain traction in the first years of the 1900s and was fortified by the war. References to a "North American community" deriving from a homogeneous political, social, racial, cultural, and linguistic heritage proliferated.⁸¹ After the war these ideas gained wide acceptance among the elite and even the general population, and, in so doing, transformed the previously somewhat taken-for-granted peaceful state of affairs into a celebrated institution.⁸²

The Second World War greatly deepened this rapprochement as the two states undertook an unprecedented level of military and economic cooperation, even before the US entered the war.⁸³ Unlike the mainly symbolic cooperation of the First World War,⁸⁴ the patterns of continental integration which were created during the Second were substantive and profoundly influenced the relationship after 1945.⁸⁵ And once the USA entered the war, cooperation intensified, forging links between Canadian and US officials. One of those officials, A.F.W. Plumptre said that "[i]t [negotiations on the IMF and IBRD] was in large measure an American, British, and Canadian affair, but so were a lot of other things in Washington until the end of hostilities..."⁸⁶ Louis Rasminsky one of Canada's negotiators at the Bretton Woods Conference and a future Governor of the Bank of Canada, noted that: "... Countries have become used to working together closely during the war. It will require less psychological adjustment to extend these close wartime relationships for peacetime purposes now than would be required five or ten years after the war has ended."⁸⁷

Altercasting

To really appreciate the altercasting mechanism, it is useful to contrast some of the most visible examples from before the First World War with those that occurred after it. Theodore Roosevelt's threat to use force against Canada implied that the USA did not see Canada as a fellow member of a liberal in-group against whom the use of force was unthinkable. Similarly, Canadians' electorate support for the Conservative Party in the 1911 election – while they campaigned under the slogan "No Truck or Trade with the Yankees" – showed that many Canadians were not interested in engaging in that quintessentially liberal activity, free trade, with the USA. The First World War represented an important opposite instance with the USA siding with the Allies and characterizing the war as a fight for democracy, thereby altercasting Canada as a fellow democracy, a political form closely intertwined with liberalism.

⁷⁹ Stacey (1977: 101)

⁸⁰ Roussel (2008: 128, 152, and 232-233); Shore (1998: 335)

⁸¹ Roussel (2004: 131); Stacey (1977: 153)

⁸² Shore (1998: 335)

⁸³ Doran (1984: 30-31)

⁸⁴ Thompson and Randall (2008: 96)

⁸⁵ Holmes (1979: 169)

⁸⁶ Holmes (1979: 33)

⁸⁷ Holmes (1979: 57)

Prior to the Second World War, this sort of altercasting was repeated even more emphatically by US President Franklin Roosevelt. In a series of speeches, Roosevelt argued that “the United States and Canada, and, indeed all parts of the British Empire, share a democratic form of government which comes to us from common sources. We have adapted these institutions to our own needs, and our special conditions, but fundamentally they are the same.”⁸⁸ Roosevelt went on say that given this commonality, the USA and the British Empire ought to stand together. “The Dominion of Canada is part of the sisterhood of the British Empire. I give to you assurance that the people of the United States will not stand idly by if domination of Canadian soil is threatened by any other empire.”⁸⁹

Conclusions

By foregoing acquisition of nuclear weapons, Canadian decision-makers accepted significant vulnerability *vis-à-vis* the USA and explaining this acceptance of vulnerability requires the inclusion of trust. While an account which combines the cost-effectiveness and moral distaste explanations presented earlier has some merit, such an explanation is at best incomplete as both of these accounts are premised on the assumption that Canadian decision-makers did not perceive the USA as a threat, an assumption which itself requires an explanation. The key contribution of positing trust is that it does just that.

A trust explanation also has the merit of being supported by empirical evidence. Between 1910 and 1930, interactivity and homogeneity between Canada and the USA increased markedly along a number of dimensions. This surge coincided with a number of important qualitative developments occasioned by the First World War. I maintain that it was at this point that a trust derived from a shared liberalism was established between Canadian and US decision-makers. And while the Depression resulted in a retrenchment in the operation of some of the trust-enabling mechanisms, the Second World War largely reversed this retrenchment and produced high levels of operation which, for many of these mechanisms, continued throughout the period examined here. Thus, while in many cases, compelling evidence of the existence of this trust may be difficult to isolate from the various other factors influencing decision-makers, Canada’s non-acquisition of nuclear weapons provides a uniquely clear indication that Canadian decision-makers so trusted the USA to act like liberals that they did not even consider acquiring the most powerful weapon in history, even just as a hedge against the colossal power of the postwar USA, and even when it was offered to them.⁹⁰

⁸⁸ Roussel (2004: 165)

⁸⁹ Stacey (1981: 226) Two days later, King made a reciprocal statement.

⁹⁰ Clearly, a rigorous application of my model requires the development of procedures for reliably and replicably differentiating situations when the mechanisms responsible for enabling trust are operating at a level sufficient for the enabling of trust from situations when they are not. This study should be understood as one component of this larger project which will require researching a number of instances of trust. Thus, while I am confident concluding that there is significant evidence that trust played an important role in Canada’s non-acquisition of nuclear weapons, this conclusion remains tentative.

Works Cited

- Adler, Emmanuel, and Michael Barnett. 1998. A framework for the study of security communities. In *Security Communities*, edited by E. Adler and M. Barnett. Cambridge: Cambridge University Press.
- Aronson, Elliot, Timothy D. Wilson, and Robin M. Akert. 2007. *Social Psychology*. 3rd Canadian ed. Toronto: Pearson Prentice Hall.
- Bercuson, David J. 1993. *True patriot: the life of Brooke Claxton, 1898-1960*. Toronto: University of Toronto Press.
- Booth, Ken, and Nicholas J. Wheeler. 2008. *The security dilemma: fear, cooperation, and trust in world politics*. Basingstoke: Palgrave Macmillan.
- Bow, Brian J. 2009. *The Politics of Linkage: Power, Interdependence, and Ideas in Canada-US Relations*. Vancouver ; Toronto: UBC Press.
- Buckley, Brian. 2000. *Canada's early nuclear policy : fate, chance, and character*. Montreal and Kingston ; London: McGill-Queen's University Press.
- Carter, Susan B., ed. 2006. *Historical statistics of the United States : earliest times to the present*. Millennial ed. New York: Cambridge University Press.
- Donaghy, Greg (ed.) (1996) "Minutes of Meeting of Advisory Panel on Atomic Energy (Document No. 859: pp. 1521-1524)," *Documents on Canadian External Relations* Vol. 16 (1950), Ottawa: Canada Communication Group.
- Doran, Charles F. 1984. *Forgotten partnership : U.S.-Canada relations today*. Baltimore: Johns Hopkins University Press.
- Dovidio, John F., Samuel L. Gaertner, Ana Validzic, Kimberly Matoka, Brenda Johnson, and Stacy Frazier. 1997. Extending the Benefits of Recategorization: Evaluations, Self-Disclosure, and Helping. *Journal of Experimental Social Psychology* 33 (4):401-420.
- English, John. 1989. *Shadow of heaven: the life of Lester Pearson*. Toronto: Lester & Orpen Dennys.
- English, John. 1992. *The Worldly Years: Life of Lester Pearson 1949-1972*: Alfred A. Knopf Canada.
- Freeden, Michael. 1996. *Ideologies and political theory : a conceptual approach*. Oxford: Clarendon Press.
- Glaeser, Edward L., David I. Laibson, Jose A. Scheinkman, and Christine L. Soutter. 2000. Measuring Trust. *The Quarterly Journal of Economics* 115 (3):811-846.
- Goldstein, Judith, and Robert O. Keohane. 1993. Ideas and Foreign Policy: An Analytical Framework. In *Ideas and foreign policy : beliefs, institutions, and political change*, edited by J. Goldstein and R. O. Keohane. Ithaca, N.Y. ; London: Cornell University Press.
- Green, A.G., and M.C. Urquhart. 1987. New Estimates of Output Growth in Canada: Measurement and Interpretation. In *Perspectives on Canadian economic history*, edited by D. McCalla. Toronto: Copp Clark Pitman.
- Hoffman, Aaron M. 2002. A Conceptualization of Trust in International Relations. *European Journal of International Relations* 8 (3):375-401.
- Hoffman, Aaron M. 2006. *Building trust : overcoming suspicion in international conflict, SUNY series in global politics*. Albany: State University of New York Press.
- Hollis, Martin. 1998. *Trust within reason*. Cambridge: Cambridge University Press.
- Holmes, John W. 1979. *The shaping of peace : Canada and the search for world order, 1943-1957*. 2 vols. Vol. 1. Toronto ; Buffalo: Toronto ; Buffalo : University of Toronto Press.
- Holmes, John W. 1982. *The shaping of peace : Canada and the search for world order, 1943-1957*. 2 vols. Vol. 2. Toronto ; Buffalo: University of Toronto Press.
- Keohane, Robert O., and Joseph S. Nye. 1989. *Power and interdependence*. 2nd ed. ed. New York: HarperCollins.

- Kydd, Andrew. 1997. Sheep in Sheep's clothing: Why security seekers do not fight each other. *Security Studies* 7.
- Kydd, Andrew. 2000. Trust, Reassurance, and Cooperation. *International Organization* 54 (2):325-357.
- Kydd, Andrew. 2001. Trust Building, Trust Breaking: The Dilemma of NATO Enlargement. *International Organization* 55 (4):801-828.
- Kydd, Andrew H. 2005. *Trust and mistrust in international relations*. Princeton, N.J. ; Oxford: Princeton University Press.
- Lascaux, Alexander. 2008. Trust and uncertainty: a critical re-assessment. *International Review of Sociology: Revue Internationale de Sociologie* 18 (1):1 - 18.
- Leacy, F. H., ed. 1983. *Historical statistics of Canada*. 2nd ed. Ottawa: Statistics Canada Social Science Federation of Canada.
- Lennox, Patrick. 2009. *At Home and Abroad: The Canada US Relationship and Canada's Place in the World*: University of British Columbia Press.
- Levitt, Joseph. 1993. *Pearson and Canada's role in nuclear disarmament and arms control negotiations, 1945-1957*. Montreal & Kingston ; London: McGill-Queen's University Press.
- Luhmann, Niklas. 1979. *Trust and power : two works*. Chichester: Wiley.
- Maddison, Angus. 2008. Historical Statistics of the World Economy: 1-2008 AD. University of Groningen: available at <http://www.ggdc.net/maddison/Maddison.htm>
- Maloney, Sean M. 2007. *Learning to Love the Bomb: Canada's Nuclear Weapons During the Cold War*. Washington, D.C.: Potomac Books.
- Marshall, Monty G., Keith Jagers, and Ted Robert Gurr. 2011. Political Regime Characteristics and Transitions, 1800-2011. Polity 4 Project: available at <http://www.systemicpeace.org/polity/polity4.htm>
- Mercer, Jonathan. 1995. Anarchy and identity. *International Organization* 49 (2):229.
- Mercer, Jonathan. 2005. Rationality and Psychology in International Politics. *International Organization* 59 (01):77-106.
- Michel, Torsten. 2012. Time to get Emotional. Phronetic Reflections on the Concept of Trust in International Relations. *European Journal of International Relations*.
- Mitchell, Brian R. 1998. *International historical statistics: the Americas, 1750-2000*. 4th ed. Basingstoke ; New York : Macmillan Reference
- Mitzen, Jennifer. 2006. Ontological Security in World Politics: State Identity and the Security Dilemma. *European Journal of International Relations* 12 (3):341-370.
- Nash, Knowlton. 1991. *Kennedy and Diefenbaker : the feud that helped topple a government*. Toronto: McClelland & Stewart.
- Neatby, H. Blair. 1969. The Political Ideas of William Lyon Mackenzie King. In *The political ideas of the Prime Ministers of Canada*. Edited by Marcel Hamelin. Ottawa: Éditions de l'Université d'Ottawa.
- Pierce, Charles A., Donn Byrne, and Herman Agunis. 1996. Attraction in organizations: a model of workplace romance. *Journal of Organizational Behaviour* 17:5-32.
- Pinker, Steven. 2011. *The Better Angels of Our Nature: The Decline of Violence in History and its Causes*. London: Allen Lane.
- Pouliot, Vincent. 2008. The Logic of Practicality: A Theory of Practice of Security Communities. *International Organization* 62 (02):257-288.
- Price, Richard. 1995. A genealogy of the chemical weapons taboo. *International Organization* 49 (01):73-103.
- Rathbun, Brian C. 2009. It takes all types: social psychology, trust, and the international relations paradigm in our minds. *International Theory* 1 (03):345-380.
- Rathbun, Brian C. 2011. Before Hegemony: Generalized Trust and the Creation and Design of International Security Organizations. *International Organization* 65 (02):243-273.

- Richelson, Jeffrey T., and Desmond Ball. 1985. *The ties that bind : intelligence cooperation between the UKUSA countries - the United Kingdom, the United States of America, Canada, Australia and New Zealand*. Boston; London: Allen & Unwin.
- Richter, Andrew. 2002. *Avoiding Armageddon: Canadian Military Strategy and Nuclear Weapons, 1950-1963*. Vancouver and Toronto: UBC Press.
- Ross, Andrew A. G. 2006. Coming in from the Cold: Constructivism and Emotions. *European Journal of International Relations* 12 (2):197-222.
- Roussel, Stéphane. 2004. *The North American democratic peace: absence of war and security institution-building in Canada-US relations, 1867-1958*. Montreal & Kingston: McGill-Queen's University Press.
- Ruzicka, Jan, and Nicholas J. Wheeler. 2010a. Decisions to trust. *The RUSI Journal* 155 (2):20-25.
- Ruzicka, Jan, and Nicholas J. Wheeler. 2010b. The puzzle of trusting relationships in the Nuclear Non-Proliferation Treaty. *International Affairs* 86 (1):69-85.
- Shore, Sean M. 1998. No fences make good neighbors: the development of the US-Canadian security community, 1871-1940. In *Security Communities*, edited by E. Adler and M. Barnett. Cambridge: Cambridge University Press.
- Stacey, Charles P. 1977. *Canada and the age of conflict : a history of Canadian external policies*. 2 vols. Vol. 1. Toronto: Toronto : Macmillan of Canada.
- Stacey, Charles P. 1981. *Canada and the age of conflict : a history of Canadian external policies*. 1 vols. Vol. 2. Toronto: Macmillan of Canada
- Stafford, David. 1987. *Camp X*. Toronto: Lester & Orpen Dennys.
- Statistics Canada. 1988. *National income and expenditure and expenditure accounts: annual estimates 1926-1986*. Ottawa, Supply and Services Canada.
- Statistics Canada. CANSIM. Available at <http://www5.statcan.gc.ca/cansim/home-accueil?lang=eng>
- Strayer, Joseph R. 1966. The Historical Experience of Nation-building in Europe. In *Nation-building*. Edited by K. W. Deutsch and W. J. Foltz. New York: Atherton Press.
- Tajfel, Henri, and J.C. Turner. 1979. An integrative theory of intergroup conflict. In *The social psychology of intergroup relations*, edited by W. G. Austin and S. Worchel. Monterey, CA: Brooks/Cole.
- Tannenwald, Nina. 2005. Stigmatizing the Bomb: Origins of the Nuclear Taboo. *International Security* 29 (4):5-49.
- Thompson, John Herd, and Stephen J. Randall. 2008. *Canada and the United States : ambivalent allies*. 4th ed.. ed, *United States and the Americas*. Athens ; London: University of Georgia Press.
- Thomson, Dale. 1969. The Political Ideas of Louis St. Laurent. In *The political ideas of the Prime Ministers of Canada*. Edited by Marcel Hamelin. Ottawa: Éditions de l'Université d'Ottawa.
- Wendt, Alexander. 1992. Anarchy is what States Make of it: The Social Construction of Power Politics. *International Organization* 46 (2):391-425.
- Wendt, Alexander. 1999. *Social theory of international politics*. Cambridge: Cambridge University Press.
- Wendt, Alexander. 2003. Why a World State is Inevitable. *European Journal of International Relations* 9 (4):491-542.
- Wheeler, Nicholas J. 2009. Beyond Waltz's Nuclear World: More Trust May be Better. *International Relations* 23 (3):428-445.
- Wheeler, Nicholas J. 2010. "I Had Gone to Lahore With a Message of Goodwill But in Return We Got Kargil" : The Promise and Perils of "Leaps of Trust" in India-Pakistan Relations. *India Review* 9 (3):319-344.
- Willoughby, William R. 1979. *The Joint Organizations of Canada and the United States*. Toronto, Buffalo, London: University of Toronto Press.
- Zak, Paul J., and Jacek Kugler. 2011. Neuroeconomics and International Studies: A New Understanding of Trust. *International Studies Perspectives* 12 (2):136-152.