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Beyond Delusions of Grand Strategy:
A Centrifugal National Security Strategy for Canada

by

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Abstract

Canadian ‘grand strategy’ is a dangerous illusion. Just as even the brightest headlights have limited utility on a winding road, the common model of grand strategy is more myth than magic. Advocacy for the common linear conception of grand strategy as the solution to a complex contemporary security environment is misguided. This ‘Newtonian’ form of grand strategy has little utility for Canada. Traditional perceptions of grand strategy must be modified to account for a Canadian condition in which the ability to achieve adaptive advantage at the periphery supplants a central vision. The challenge for the forward looking national security policymaker is not how to impose a particular grand strategic objective on an uncontrollable environment, but to continually adapt and co-evolve with that environment in a manner that best satisfies specific interests. This work explores the utility of the grand strategy within a Canadian context. Intended to have resonance for contemporary policymaking, the behavioural phenomenon of grand strategy is examined with respect to its utility for real-time policy and strategy making in Canada. The assumption that the common concept of grand strategy has utility for Canada will be challenged on the grounds that it fails to account for the complexity of the Canadian policymaking environment. It will be shown that Canada has a more natural form of national security strategy that, rather than being based on a central vision, relies upon the optimization of emergent behaviour within a complex adaptive system. This unique form of national security strategy is characterized as being centrifugal rather than centripetal. Identification of this model illustrates fatal flaws in the common conceptions of Canadian grand strategy and provides greater utility for real-time Canadian policymaking in the contemporary national security environment.
Preface

This thesis evolved from a moment of quiet reflection while perched on a barren rocky outcrop overlooking Kandahar City in 2009. My mind had drifted towards thoughts of what my grandfather, a private with A-Company of the Royal Hamilton Light Infantry, might have been thinking as he and his surviving comrades were extracted from the bloodstained beaches of Dieppe on 19 August 1942. My experience of war could not have been more different. Mine was a boutique war complete with internet access and Tim Horton’s coffee. Casualties came at a slow trickle in comparison to the 907 Canadians killed at Dieppe in a morning. Yet, I perceived that my thoughts might somehow be similar in the sense of questioning what exactly it was all for. A narrative for the role of the Dieppe Raid has since been entered into the historical record. What exactly my Afghan war was about remained a mystery at the time. As I looked down upon the multifaceted complexity of Kandahar City, I perceived only that I knew relatively little about this alien environment despite co-existing within it for months. The optimistic tone from senior commanders and superficial ‘sound bite’ objectives from government officials merely provided a semblance of artificial order to the chaos. Even though I temporarily occupied a front row seat with privileged access to the brainstem of Canada’s Kandahar deployment, exactly what we were trying to achieve in Afghanistan was never clearly apparent. Since even those of us cycling through deployments on the ground appeared to lack sufficient understanding of this complex environment to perceive a coherent path beyond kinetic whack-a-mole, it was equally hard to appreciate how some magic grand strategy could have trickling down from the political heavens. This work is part of my ongoing search for an explanation for why this was the case.
Acknowledgements

This undertaking would not have been feasible without the steadfast support of my family. Mere words cannot express my eternal gratitude for this unwavering support. I am indebted to Dr. David Bercuson for his ongoing guidance and for providing the initial encouragement to pursue this exercise. I must also acknowledge Centre for Military, Security and Strategic Studies staff and faculty for their patience and understanding in allowing me to pursue this program while balancing full time employment, military commitments, and a growing family.
Dedication

To the memory of Master Corporal Erin Melvin Doyle, killed in action 11 August 2008, age 32, Police Sub-Station Haji Beach, Panjwai, Afghanistan. Although but one name amongst the thousands that have sacrificed their futures in service to Canada, Erin’s legacy exemplifies the sacred trust that our nation’s leaders and policymakers hold within their hands. In the highest illustration of participative citizenship, Erin steadfastly upheld his unlimited liability contract on behalf of those distant decision makers that placed him and his comrades in harm’s way. His contract remained conditional on only one sacrosanct expectation: that any sacrifice must serve a higher purpose and therefore there must be a realistic plan in place to ensure such purpose was indeed achieved, regardless of the encountered friction. Having had the privilege of benefiting from Erin’s rough-around-the-edges competence and not-so-subtle ways of questioning ‘the plan’, I will remain eternally grateful for his uncanny ability to offer forthright guidance ‘from the ranks’. Erin’s presence unquestionably produced more effective plans to achieve our given missions while securing our own survival. While it is highly unlikely that Erin would have had the slightest interest in actually reading this dissertation, I am certain he would have had candid insights to contribute. Out of respect for Erin’s sacrifice, we have a responsibility to continually question ‘the plan for Canada.’
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<td>ASIC</td>
<td>All Source Intelligence Centre</td>
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<tr>
<td>BMI</td>
<td>Business Model Innovation</td>
<td></td>
</tr>
<tr>
<td>CAF</td>
<td>Canadian Armed Forces</td>
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<tr>
<td>CAS</td>
<td>Complex Adaptive System</td>
<td></td>
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<tr>
<td>CDS</td>
<td>Chief of Defence Staff</td>
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<tr>
<td>CF</td>
<td>Canadian Forces</td>
<td></td>
</tr>
<tr>
<td>CF FEPP</td>
<td>Canadian Forces Force Employment Planning Process</td>
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<tr>
<td>CFJP</td>
<td>Canadian Forces Joint Publication</td>
<td></td>
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<tr>
<td>CNSS</td>
<td>Center for National Security Studies</td>
<td></td>
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<tr>
<td>COIN</td>
<td>Counter Insurgency</td>
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<tr>
<td>CONPLAN</td>
<td>Contingency Plan</td>
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<tr>
<td>CSIS</td>
<td>Canadian Security Intelligence Service</td>
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<tr>
<td>DEA</td>
<td>Department of External Affairs</td>
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<tr>
<td>DM</td>
<td>Deputy Minister</td>
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<tr>
<td>DND</td>
<td>Department of National Defence</td>
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<tr>
<td>DRB</td>
<td>Defence Research Board</td>
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<tr>
<td>FLQ</td>
<td>Front de libération du Québec</td>
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<tr>
<td>FPIC</td>
<td>Free Prior Informed Consent</td>
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<tr>
<td>GIC</td>
<td>Governor In Council</td>
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<tr>
<td>GoC</td>
<td>Government of Canada</td>
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<tr>
<td>HRT</td>
<td>High Risk Traveler</td>
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<tr>
<td>HUMINT</td>
<td>Human Intelligence</td>
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<td>ICS</td>
<td>Industrial Control Systems</td>
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<tr>
<td>ICSI</td>
<td>Interdepartmental Committee on Security and Intelligence</td>
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<td>IED</td>
<td>Improvised Explosive Device</td>
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<td>ILO</td>
<td>Intelligence Led Operations</td>
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<tr>
<td>INSET</td>
<td>Integrated National Security Enforcement Team</td>
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<tr>
<td>IO</td>
<td>Information Operations</td>
<td></td>
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<tr>
<td>IOLA</td>
<td>Intelligence and Operations Look Ahead</td>
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<tr>
<td>ISAF</td>
<td>International Security Assistance Force</td>
<td></td>
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<tr>
<td>IT</td>
<td>Information Technology</td>
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<td>ITAC</td>
<td>Integrated Terrorism Assessment Centre</td>
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<tr>
<td>ITAC</td>
<td>Integrated Threat Assessment Centre</td>
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<tr>
<td>JCSP</td>
<td>Joint Command and Staff Programme</td>
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<td>JTF</td>
<td>Joint Task Force</td>
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<td>JP</td>
<td>Joint Publication</td>
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<tr>
<td>KVA</td>
<td>Key Villages Approach</td>
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<tr>
<td>LAC</td>
<td>Library and Archives of Canada</td>
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<tr>
<td>LNG</td>
<td>Liquefied Natural Gas</td>
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<td>MAD</td>
<td>Mutually Assured Destruction</td>
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<tr>
<td>MJITF</td>
<td>Multinational Joint Integrated Task Force</td>
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<tr>
<td>MN</td>
<td>Multinational</td>
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<tr>
<td>NATO</td>
<td>North Atlantic Treaty Organization</td>
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<tr>
<td>Abbreviation</td>
<td>Description</td>
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<tr>
<td>NDA</td>
<td>National Defence Act</td>
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<td>NMR</td>
<td>Nuclear Magnetic Resonance</td>
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<tr>
<td>NORAD</td>
<td>North American Aerospace Defense Command</td>
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<tr>
<td>NSC</td>
<td>National Security Council</td>
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<tr>
<td>NSP</td>
<td>National Security Policy</td>
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<tr>
<td>OODA</td>
<td>Observe Orient Decide Act</td>
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<tr>
<td>PCO</td>
<td>Privy Council Office</td>
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<td>PRO</td>
<td>The National Archives of the UK: Public Record Office</td>
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<td>PRT</td>
<td>Provincial Reconstruction Team</td>
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<td>PSC</td>
<td>Public Safety Canada</td>
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<td>QST</td>
<td>Quetta Shura Taliban</td>
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<tr>
<td>SEATO</td>
<td>Southeast Asia Treaty Organization</td>
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<td>SIRC</td>
<td>Security Intelligence Review Committee</td>
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<tr>
<td>SLO</td>
<td>Social Licence to Operate</td>
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<tr>
<td>SO</td>
<td>Strategic Outlook</td>
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<tr>
<td>SOA</td>
<td>Security Offences Act</td>
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<tr>
<td>SOD</td>
<td>Standing Operational Doctrine</td>
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<tr>
<td>SOPG</td>
<td>Strategic Outlook Planning Group</td>
<td></td>
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<tr>
<td>SSN</td>
<td>Nuclear-powered general-purpose attack submarine</td>
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<td>TF</td>
<td>Task Force</td>
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<td>TNA</td>
<td>The National Archives of the UK</td>
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<tr>
<td>TTP</td>
<td>Tactics Techniques and Procedures</td>
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<td>USJCS</td>
<td>United States Joint Chiefs of Staff</td>
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<td>WO</td>
<td>War Office</td>
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Epigraph

Let’s talk about complexity science. So how do you solve a really complex – the world’s full of complicated problems – how do you solve a really complicated problem? For example, you try to make a jet engine. There are lots and lots of different variables, the operating temperature, the materials, all the different dimensions, the shape. You can’t solve that kind of problem all in one go, it’s too hard. So what do you do? Well, one thing you can do is try to solve it step-by-step. So you have some kind of prototype and you tweak it, you test it, you improve it. You tweak it, you test it, you improve it. Now, this idea of marginal gains will eventually get you a good jet engine. And it’s been quite widely implemented in the world. So you’ll hear about it, for example, in high performance cycling, web designers will talk about trying to optimize their web pages, they’re looking for these step-by-step gains. That’s a good way to solve a complicated problem.

But you know what would make it a better way? A dash of mess. You add randomness, early on in the process, you make crazy moves, you try stupid things that shouldn’t work, and that will tend to make the problem-solving work better. And the reason for that is the trouble with the step-by-step process, the marginal gains, is they can walk you gradually down a dead end. And if you start with the randomness, that becomes less likely, and your problem-solving becomes more robust…¹

INTRODUCTION: EMERGING FROM A GRAND DELUSION

A grand strategy is a vision for the future and a precise plan for the fulfillment of that vision.¹

Canadian ‘grand strategy’ is a dangerous illusion. Broadly defined as a complex form of planning towards fulfillment of a state’s long-term objectives,² the conduct of grand strategy is commonly understood as the art and science of developing the military, economic, and political instruments of national power and coordinating their utilization to achieve national security objectives.³ In light of a “grand strategic deficit” that is perceived to have contributed to failed interventions in Afghanistan and Iraq, the utility of grand strategy has garnered renewed attention in academic and political discourse.⁴ American advocates have come to see it as the answer to the untidy difficulties of the post-September 11th era; a “panacea that will wipe away the complexity of world affairs.”⁵ Yet others have dismissed grand strategy as being simply a “chimera” or an “elusive holy grail.”⁶

The rejuvenation of grand strategy in the United States has stimulated a limited discourse questioning whether Canada can do, should do, or has ever done grand strategy, however, possessing or engaging in grand strategy is not necessarily the magic tonic for long term

² Ibid., 299.
Canadian survival and prosperity that it may seem. This work therefore aims to conduct a detailed exploration of the utility of the grand strategy within a Canadian context. Intended to have resonance for contemporary policymaking, the goal is to reconnoiter the behavioural phenomenon of grand strategy with a view to understanding its utility as a tool for real-time policy and strategy making in Canada. This focus on utility is intended to move beyond the stalemate condition of current discourse that fixates on efforts to simply demonstrate whether a ‘Canadian grand strategy’ can or should exist. As there appears to be little consensus in such discourse as to the precise goals Canada should pursue in the world, questioning the utility of the grand strategy construct itself is deemed to be a more fruitful avenue of inquiry.

The assumption that the common concept of grand strategy has utility for Canada will be challenged on the grounds that it fails to account for the complexity of the Canadian policymaking environment. The order that is perceived in historical studies as a single grand strategic vision is arguably the result of a much more complex nonlinear co-evolution process, which the common national interest approach does not acknowledge. This work will advance an alternate approach based upon the idea that Canadian grand strategy is better understood as an emergent behavior of an aggregate agent within a complex adaptive system. Just as ‘wetness’ is not simply a summation of properties of component molecules and ‘consciousness’ cannot be defined from the interactions of brain cells, within a complex adaptive system, the system’s future is unpredictable and order emerges as opposed to being predetermined by some formula.7 It will show that Canada has a more natural form of national security strategy that, rather than

being based on a central vision, relies upon the optimization of emergent behaviour within a complex adaptive system. This unique form of national security strategy is characterized as being centrifugal rather than centripetal. This centrifugal framework offers greater utility for real-time Canadian policymaking in relation to the contemporary national security environment.

Although a convenient précis model for providing retrospective insights into the intricate decision-making dynamics of high politics, an “iron and blood” grand strategy offers little utility as a roadmap for Canadian policymakers confronting “the great questions of the day.”

Grand strategy is much more complex than simply corresponding means and ends to impose some particular vision upon the world. Executing grand strategy in real-time is something entirely different from retrospectively characterizing bygone behaviours as having being guided by some coherent grand strategy.

The common conception of grand strategy is at odds with the reality of how human beings actually solve complex problems. Truly complicated problems cannot be solved “all in one go” as the common grand strategy conception would suggest. Real world problems are complex in that they “have a human dimension, a local dimension, and are likely to change as circumstances change.” Complexity is customarily addressed through a “marginal gains” approach. A prototype (i.e., policy and associated strategy) is developed, tested, tweaked, re-

---

8 This is an oblique reference to Prussian Prime Minister Otto von Bismarck’s September 1862 comments to the budget commission of the Prussian Parliament: “Germany is not looking to Prussia’s liberalism, but to its power; Bavaria, Württemberg, Baden may indulge liberalism, and yet no one will assign them Prussia’s role; Prussia has to coalesce and concentrate its power for the opportune moment, which has already been missed several times; Prussia's borders according to the Vienna Treaties [of 1814-15] are not favorable for a healthy, vital state; the great questions of the day will not be settled by means of speeches and majority decisions – that was the great mistake of 1848 and 1849 – but by iron and blood.” See Otto von Bismarck, Reden 1847-1869 [Speeches, 1847-1869], ed., Wilhelm Schüßler, vol. 10, Bismarck: Die gesammelten Werke [Bismarck: Collected Works], ed. Hermann von Petersdorff (Berlin: Otto Stolberg, 1924-35), 139-40.

9 Brands, What Good is Grand Strategy? 190.

tested, re-tweaked, and so on. Improvements evolve from this ongoing step-by-step process and the final outcome can look quite different from what was envisioned in the prototype stage.\textsuperscript{11} The holistic behaviour that has been characterized as grand strategy is arguably much more consistent with this marginal gains approach than the grossly oversimplified conception of a “vision for the future and a precise plan for the fulfillment of that vision,”\textsuperscript{12} but even this marginal gains approach “can walk you gradually down a dead end.”\textsuperscript{13}

A superior complicated problem-solving technique may in fact be to embrace “a dash of mess” in an “adaptive, experimental approach.” As Tim Harford notes:

We face a difficult challenge: the more complex and elusive our problems are, the more effective trial and error becomes, relative to the alternatives. Yet it is an approach that runs counter to our instincts, and the way in which traditional organizations work.\textsuperscript{14}

This approach calls for better problem-solving by adding randomness early on in the process, making bold moves, and testing seemingly unsound hypotheses.\textsuperscript{15} Rather than trying to fit a predefined prototype into a preconceived notion of the environment, signals are sent out, response signals are interpreted, and an understanding of the environment is created in order to adapt in the most advantageous way. An analogous process in science is evident in Nuclear Magnetic Resonance (NMR) spectroscopy, in which an external magnetic field (i.e., signal) is applied to a system to induce relative response signals that can be interpreted holistically to determine molecular relationships.

\textsuperscript{11} Tim Harford, “How frustration can make us more creative” (paper presented at TED Global, London, 29 September 2015).
\textsuperscript{12} Sibii, 299.
\textsuperscript{13} Harford, “How frustration can make us more creative.”
\textsuperscript{14} Harford, Adapt, 35.
\textsuperscript{15} Ibid.
Complex problem-solving processes can be seen in counterinsurgency warfare, in which the intelligence mission (i.e., adaption to environmental signals) often is the mission. As Raymond Odierno states, “Intelligence is an operation. You have to fight for Intelligence.” The intelligence mission facilitates decision-making rather than supporting decisions already made; however, this approach has its limitations. Adherents of adaptive processes also need to heed the ‘Palchinsky principles’: “first, seek out new ideas and try new things [variation]; second, when trying something new, do it on a scale where failure is survivable [survivability]; third, seek out feedback and learn from your mistakes along the way [selection].” The effectiveness of feedback mechanisms is crucial for such adaptive processes. Such an approach seemingly contradicts the notion of grand strategy as a simplified formula for solving complicated problems in the affairs of state.

This should not be surprising to those familiar with foundational texts of Western European military strategic thought. As Hugh Smith has observed

[t]hose who seek a simple formula for success in strategy in On War will…be disappointed….Strategists may learn the importance of careful analysis from Clausewitz’s methodological mix and gain a sense of the complexity of strategy but they will not learn what decisions to make. Strategy and grand strategy have an undeniable element of Potter Stewart’s “I know it when I see it.” Strategy is easier to perceive in retrospect, most often through ex post facto examinations

17 Harford named these principles after Peter Palchinsky, a Russian engineer who became an influential economic advisor to the Tsar and the Soviet government. Harford, Adapt, 25.
19 In his concurring opinion in Jacobellis v. Ohio, 378 U.S. 184 (1964) in relation to pornography, Associate Justice of the Supreme Court of the United States Potter Stewart stated: “I shall not today attempt further to define the kinds of material I understand to be embraced within that shorthand description; and perhaps I could never succeed in intelligibly doing so. But I know it when I see it, and the motion picture involved in this case is not that.”
seeking an illuminating “beacon” that seemingly guided historical decision-making. But it is crucial to recognize that such a beacon, a strategy or grand strategy, may not in fact have been visible to those decision makers at the time. As Williamson Murray councils:

…grand strategy is easier to recognize after the fact, when events have clarified the landscape, uncertainties have disappeared, and only historians remain to pick over the bones. The balancing act that statesmen confront between the means available and the ends desired disappears, and only its results drive the conventional wisdom of historians. What appeared difficult and complex when statesmen were charting an intelligent course in a complex and uncertain environment now appears simple and obvious in the aftermath of events. Herein lies the great danger in historical analysis: …to paraphrase Clausewitz, grand strategy may appear to be a simple matter, but given the enormous uncertainties within which it must work and the prevailing forces that work on it, its execution is exceedingly difficult.

The précised case study approach upon which much of the discourse on strategy and grand strategy is founded is roughly equivalent to black-box analysis utilized in science and engineering, in which inputs and outputs are the anchors of analysis. The inner workings of the system forgo full characterization due to their inherent complexity. Within such a model, strategy becomes the bridge bringing a coherent linkage between the stimulus and the observed response. This bridge often becomes a retrospective hybrid construct of the interaction between


20 Daryl Copeland suggests “Grand strategy is especially useful during times – not unlike the present – of heightened danger and instability, when it serves as a primary navigational beacon which helps policy-makers chart the way forward. In a turbulent operating environment, and especially in moments of uncertainty or doubt, that beacon should be glowing in the mind’s eye, inspiring purposeful decisions and directed action.” Daryl Copeland, “Coming up short: No sign of a grand strategy in Canada’s ‘secret’ foreign policy plan,” www.guerrilladiplomacy.com, 23 November 2012. See also Daryl Copeland, Guerilla Diplomacy: Rethinking International Relations (Boulder, CO: Lynne Rienner Publishers, 2009).


22 The origins of ‘black-box’ analysis can be traced to German mathematician and scientist Wilhelm Cauer’s 1926 work on circuit analysis. It was developed as a theory in the 1960s whereby a ‘black box’ is used as a fictional representation of a set of concrete systems into which stimuli impinge and reactions emerge. Purely external and phenomenological, the constitution and structure of the box are altogether irrelevant as only the behavior of the system is accounted. Mario Bunge, “A General Black Box Theory,” Philosophy of Science 30.4 (October 1963): 346.
the decision maker’s initial “strategic concept” and the actual friction encountered during its attempted execution. Strategy in this sense provides a simplified surrogate narrative, adding linear coherence between apparent or implied threats to interests and observed reactive behavior without need to detail the complex interactions that occurred within the black-box itself.

Indivisible with strategic theory designed for warfare, most of what is characterized as grand strategy in historical studies is akin to warfare by other means – pursuit of national security objectives with the entire array of instruments of state employed to augment the use or threat of force – and transcends the actual hostilities. Black-box analysis works well in this military-centric problem domain where the stimuli and responses are rather simple and intuitive: kill or be killed; force or be forced; overthrow or be overthrown; occupy or be occupied. Such analysis can be appropriately extended to the traditional grand strategic problem of how to apply augmented force to combat a short-term or protracted existential threat to the nation – to flourish or to fade as a nation. Précised historical case studies of military and grand strategy arguably tend towards this type of analysis as observable behaviours or personal memoires are projected back towards the stimulus problem to build a rational narrative for the actions observed. Strategy (or grand strategy) provides a conceptual bridge to explain the observed behavior and causation in relation to the problem. The constructed strategic narrative often acts as a surrogate in place of a full examination of the inner working of the black box.

Nigel Hamilton’s reexamination of the military direction of the Second World War is a prudent example of the limits of black-box type analysis. Hamilton’s two volumes focusing on

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23 ‘Strategic concept’ is defined in Canadian military doctrine as: “[t]he course of action accepted as a result of the estimate of the strategic situation. It is a statement of what is to be done in broad terms sufficiently flexible to permit its use in framing the military, diplomatic, economic, and psychological and other measures, which stem from it.” Department of National Defence, Canadian Forces Joint Publications 01: Canadian Military Doctrine (Ottawa: Joint Doctrine Branch, 2009), Glossary.
President Franklin Delano Roosevelt (FDR) as U.S. Commander in Chief provide novel insight into the inner workings of the allied black-box. Hamilton argues that the story of how allied strategy came into being is “almost the polar opposite of what we have been led, for the most part to believe.” He offers a correction to the common narrative of Churchill’s influence on Allied strategy by portraying previously overlooked interactions within the Allied back-box, such as the War Department’s antagonism towards FDR’s insistence on gaining battle and amphibious operational experience prior to a cross-Channel invasion. Hamilton demonstrates WWII grand strategy as emerging from a multifaceted marginal-gain process rather than some fixed vision.

For someone attempting to steer a path through the complexity and uncertainty of world events in real-time, insight into the inner workings of the black-box – knowledge of the signals, boundary conditions, and agent-to-agent interactions occurring or anticipated to occur – are perhaps more important than the strategic narrative construct itself. While black-box type analysis allows for a retrospective presentation of complex interactions through a concise strategic narrative, it often has little utility for the complex decision problem under conditions of uncertainty that represents real-time strategy and policymaking.

With the rare exception of cases in which it is feasible to conduct an empirical comparison of a formally declared grand strategy to the actual courses of action taken, an attempt to describe too broad a set of past behaviours as grand strategy based on the interpretation of the

problems encountered and corresponding actions and outcomes is fraught with danger. While it is perhaps possible to infer a general intent behind statesmen’s actions towards a complex and uncertain environment, to attempt to trace a connection from outcomes, through consecutive decision waypoints, and towards a single beacon of pre-commitment or intent is bound to induce an artificial degree of granularity. The intangibility of grand strategy has aptly been described by Williamson Murray:

In fact, the best analogy for understanding grand strategy is that of how French peasant soup is made – a mixture of items thrown into the pot over the course of a week and then eaten, for which no recipe can possibly exist. In thinking about the soup of grand strategy, recipes and theoretical principles are equally useless. What works in one case may well not work in another. In various strengths, grand strategy consists of leadership, vision, intuition, process, adaptation, and the impact of a nation’s particular and idiosyncratic development and geographic position, but in no particular order or mixture.26

Black-box grand strategy is akin to crafting a master recipe for a peasant soup that is not in fact reproducible in the sense that the sum of the parts (ingredients) is not a constant. Regardless of the existence of a record of ingredients (recipe), the answer to the query of how the ingredients have generated a culinary synergy is inherently idiosyncratic. It is an “I know it when I see it” construct. Just as gastronomic palates differ greatly, what is perceived as deliberate grand

26 Murray indicates that this is based on an analogy utilized in a different context by General William Eugene Deupuy, one of the principal post-Vietnam reformers of U.S. Army doctrine. Williamson Murray, “Thoughts on grand strategy,” in Murray et al., eds., The Shaping of Grand Strategy, 9. This analogy has also been acknowledged by Holger Herwig and Michael Pearlman. See Holger H. Herwig, “Military Strategy in War and Peace: Some Conclusions,” Journal of Military and Strategic Studies 13.1 (Fall 2010): 130; and Michael D. Pearlman, Warmaking and American Democracy: The Struggle over Military Strategy, 1700 to the Present (Lawrence: The University Press of Kansas, 1999), 2. John Van Eenwyk has provided a similar symbolism as a metaphor used to explain the process of integrating the conscious and unconscious mind. John R Van Eenwyk, Archetypes & strange attractors: The chaotic world of symbols (Toronto: Inner City Books, 1997), 72. Van Eenwyk’s metaphor has been summarized as: “It’s like making pea soup. Consciousness is like the hand that wields the knife, chopping up the carrots and onions, sifting through the peas to pick out the stones, and throwing it all into the pot together. The unconscious is like the pot itself, where everything gets mixed together to produce the soup’s unique flavor. Consequently, consciousness is the differentiator that makes distinctions in the name of definition. The unconscious, on the other hand, synthesizes components into new combinations that are synergetic: they exceed the sum of the parts.” Rose-Marie Bezuidenhout, “Exploring transcendence of the quantum self and consciousness through communication symbols” (Ph.D. diss., University of Johannesburg, 2005), 234.
strategy in hindsight may have in fact been comprehended by the actual participants as crisis management, opportunism, or may have simply been a result of unconscious drifting with the tides and prevailing winds of domestic waterways and global seas.

The most prevalent general recipe for grand strategy is the ‘national interest-risk management approach’ to national security policy planning.\textsuperscript{27} Essentially a higher form of the ‘Estimate’ methodology entrenched in contemporary military planning doctrine, the formula posits that a grand strategy can be designed through a linear process of identifying interests, conducting a threat and risk assessment in relation to those interests, and then applying an ends-ways-means calculus to determine optimal objectives, policies, and plans.\textsuperscript{28} This linear process is evident in the Cohen model of strategy in the 21\textsuperscript{st} Century that incorporates assumptions, a discourse regarding ends-ways-means, an articulation of accepted risks, the setting of priorities, and a theory of victory.\textsuperscript{29} However, such formulas underestimate the impacts of the codependent interactions occurring within the black-box. There is also a propensity to overcome the challenge


of assessing the impact of a wide range of concerns with assumptions favouring a form of “single issue analysis” that becomes “extrapolated to represent the main case to be dealt with.”

While logically coherent, the national interest approach is arguably too sterile when applied in the absence of a finite problem such as the concentrating lens of a tangible existential threat – a lens that confines the scope of codependent interactions. The standard formula favours a form of “historical permanence” doctrine whereby national interests remain relatively static in relation to circumstances. The précised case study approach tends to fix interests in a specific time and space – commonly in terms of intuitive survival interests in response to some problem of existential magnitude for the states involved. The resultant grand strategy narratives are therefore aided by the ability to define an interconnected beginning (stimulus), middle (strategy), and end (resultant). The interests involved are either declared or implied from the objectives pursued, and thus the strategy – “the art of choice that binds means with objectives” – comes to characterize the middle narrative in the form of an elucidation of prioritization, sequencing, and the apparent “theory of victory” pursued to solve the presented problem.

Application of black-box type analysis is wholly unsuitable to the less focused problems of contemporary national security. Absent the concentrating lens of a tangible existential threat, the quantity and complexity of stimuli or signals and the corresponding demand for diversity within policy responses creates a situation in which any particular middle narrative (grand strategy) is inherently inadequate as a holistic solution for guiding prioritization, sequencing, and

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31 Eliot Cohen describes the “doctrine of historical permanence” as “blanket appeals to historical certainties” and belief that “some things just don’t change.” Eliot A. Cohen, “The Historical Mind and Military Strategy,” Orbis 49.4 (Fall 2005): 582.
32 Cohen, “What’s Obama’s counterinsurgency strategy?”
a “theory of victory” to a matrix of complex interdependent problems. In effect, the central problem changes from a tangible one of how to apply augmented force to compel an adversary to do one’s will, to a vague protracted process of adaption and co-evolution in which the adversary element of the problem remains undefined, uncertain, and under constant dynamic change.

Real-time policy and strategy making is increasingly a domain in which rhizomatic-like security challenges are seemingly served up in an unmoderated and random rodízio-style, rather than the a more deliberate and predictable à la carte-style characteristic of periods of perceptible existential threat or the self-indulgent buffet-style of the “democratic enlargement” era. Without a particular adversary to focus specific objectives upon, there is no corresponding understanding of what exactly one’s interests are until presented with a specific stimulus. Although force-based grand strategy appears to be a logical extension of military strategy that resonates with those educated by means of the classics on the art of war, the traditional centrality of force within the grand strategy conception should be challenged. Grand strategy has effectively been demilitarized without a corresponding adjustment to its formulation.

It is significant that the contemporary utility of force differs fundamentally from that understood by the classical military theorists. Two World Wars and the nuclear reality of Mutually Assured Destruction (MAD) have upended the traditional core of strategy. The Clausewitzian policy objectives of overthrow or occupy to compel an enemy to do your bidding

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33 Rhizomatic plants, such as grasses, nettles, and brambles, propagate themselves through their roots even if the root is served from the parent body. Rupert Smith has utilized this analogy to the type of nervous system employed by insurgent and terrorist organizations. General Rupert Smith, The Utility of Force: The Art of War in the Modern World (New York: Vintage Books, 2008), 332.
34 Rodízio refers to the style of service common in Brazilian restaurants where an endless procession of courses is served directly from the cooking spit at the table until the customer signals servers otherwise.
35 “Engagement and enlargement” and “democratic enlargement” are associated with the Clinton Administration’s post-Cold War policies in which Western powers dabbled in various forms of nation building. James D. Boys, Clinton’s Grand Strategy: US Foreign Policy in a Post-Cold War World (New York: Bloomsbury Academic, 2015), 85.
are no longer accepted as lawful outside very limited *jus ad bellum* parameters. As ardent political pragmatist Helmut Schmidt has observed:

Since 1945, international law, in the shape of the *United Nations Charter*, has forbidden any external interference in a state’s affairs by means of force; only the Security Council may decide upon exceptions to this basic rule. It appears urgently necessary to me today to remind politicians of this basic rule. For example, the military intervention in Iraq, one based, moreover, on falsehoods, is unambiguously a violation of the principle of non-interference, a flagrant violation of the *United Nations Charter*. Politicians of many nations share the blame for this violation. Equally, politicians of many nations (including Germans) share the responsibility for interventions contradicting international law on humanitarian grounds. For example, for more than a decade, violent conflicts of interest in the Balkans have been disguised behind the cloak of humanitarianism on the part of the West (including the bombing of Belgrade).

Schmidt’s observations are reinforced by Rupert Smith’s exploration of the contemporary utility of military force. Smith argues that “to apply force with utility implies an understanding of the context in which one is acting, a clear definition of the result to be achieved, an identification of the point or target to which the force is being applied – and, as important as all the others, an understanding of the nature of the force being applied.” Smith suggests that the entire concept of war has experienced a paradigm shift from “interstate industrial war” to “war amongst the people,” yet military force is still being applied in a manner designed to have utility in the expired paradigm. Smith observes:

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36 Today’s primary legal source of *jus ad bellum* derives from Article 2.4 of the *Charter of the United Nations*, which states: “All members shall refrain in their international relations from the threat or the use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the purposes of the United Nations.” A right to self-defence is provided in Article 51: “Nothing in the present Charter shall impair the inherent right of individual or collective self-defense if an armed attack occurs against a Member of the United Nations, until the Security Council has taken measures necessary to maintain international peace and security.”


38 Smith, *Utility of Force*.

39 Ibid., 8.

40 Ibid., 5-6.
This endemic problem is the result of the shift in the paradigm of war and the continued resistance to it: politicians and soldiers are still thinking in terms of the old paradigm and trying to use their conventionally configured forces to that end – whilst the enemy and the battle have changed. As a result, the utility of the effort is minimal: the force may be massive and impressive, but it is not delivering the required results, nor indeed any results that is in proportion to its assumed capabilities. As with the differences between deploying and employing force, this reflects a lack of understanding of the utility of force.\(^{41}\)

Smith’s analysis suggests that effective strategy requires an understanding of the interrelationship between instruments and objectives. In the case of the traditional force-centric strategy paradigm, the objective is some rather tangible variant of *overthrow* or *occupy*. This tangibility favours an outdated interpretation of instruments, one in which a linear causal relationship between the instrument and its effectiveness towards achieving a clearly defined objective is intuitive. This linear instrument-objective is understood in a manner similar to Newton’s laws of motion: that change requires a net force to act on an enemy to overcome its present behaviour and that the magnitude of the external force required for imposing change is proportional to the enemy’s mass or military power.\(^{42}\) While the concentrating lens of armed attack still remains a possibility, its relative weight in contemporary policymaking has diminished to a rather peripheral position.

Remainining relatively adaptive and competitive within an environment of coevolving actors has overtaken the adversary-focused model as the central national security problem in the contemporary affairs of state. Hence, what actually occurs within the black-box has become increasingly important to understand. An inspection of what is going within the black-box is therefore more crucial for ensuring that adequate responses are at least possible if and when the


situation merits. Hence, to have utility for here-and-now policymaking, an alternate form of a white-box (or glass-box) approach to understanding composite-problem grand strategy – one composed of multiple streams of sub-policy and strategy – might be suggested.\textsuperscript{43} A white-box approach is not, however, the answer it may seem.

Similar to Douglas Hofstadter’s remarkable “Ant Fugue” portrayal of the tension between reductionism and holism in relation to the behaviour of an ant colony, perception and level of analysis matter greatly in the study of grand strategy.\textsuperscript{44} The black-box approach tends towards holism – the belief that “the whole is greater than the sum of its parts.”\textsuperscript{45} A white-box approach would tend towards reductionism – the notion that “a whole can be understood completely if you understand its parts, and the nature of the ‘sum’.”\textsuperscript{46} However, a comprehensive white-box cannot be achieved since there are always limits to the number of variables that may be incorporated and the degree of transparency that can be realized. To expect full transparency within any box is unrealistic since such a condition could only be achieved by removing all sources of uncertainty. As we know from Heisenberg’s indeterminacy principle, Gödel’s incompleteness theorems, and the second law of thermodynamics, there are fundamental natural limits to attaining such a level of precision.\textsuperscript{47} Hence, for complex problems the white-box can only be approximated by a grey or opaque-box.

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\begin{itemize}
\item \textsuperscript{43} “White-box” or “glass-box” is a relatively new software testing methodology utilized in the analysis of software. For a representative example of its application in computer science see Jayalakshmi Balasubramaniam, “A Novel Approach to White-Box Policy Analysis” (Master’s thesis, University of Calgary, 2013).
\item \textsuperscript{44} Douglas R. Hofstadter, “…Ant Fugue” in Gödel, Escher, Bach: and Eternal Golden Braid (New York: Basic Books, 1979), 310-336.
\item \textsuperscript{45} Hofstadter, “Ant Fugue,” 312.
\item \textsuperscript{46} Ibid.
\item \textsuperscript{47} Uncertainty as it relates to the construct of mental patterns or concepts of meaning to cope with our environment as discussed in the context of Gödel, Heisenberg, and the Second Law of Thermodynamics was the topic of John Boyd’s early work on strategy. John R. Boyd, “Destruction and Creation,” unpublished paper, 3 September 1976. Reproduced in John R. Boyd, Destruction and Creation: Operational Level of War (Fort Leavenworth, KS: US
\end{itemize}

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In addressing the questions of whether the world should be understood through holism or reductionism, Hofstadter presented a third option: the ancient Zen answer of “Mu.” This answer rejects the categorical thinking that posits one must be chosen over the other. As Hofstadter indicated, “[b]y unasking the question, it reveals a wider truth: that there is a larger context into which both holistic and reductionist explanations fit.” This is arguably a better foundation from which to explore real-time composite-problem grand strategy. Such an approach is actually closer to that of the relatively new science of complexity than strategic theory or military history.

Complexity science concepts, such as Stuart Kauffman’s treatment of biological co-evolution as coupled deforming “fitness landscapes”, can be combined with the overthrow or occupy strategic theory brought forward from the likes of Clausewitz. As national security is a dynamic composite-problem, the contention that a pragmatic government can actually do black or white-box style grand strategy in the absence of a clarifying existential threat is a false prophesy. The complexity of the real-time pursuit of national security requires something more complex than a linear causal formula grounded in some perception of historical certainty. It requires something akin to a real-time application of Eliot Cohen’s “historical mind”:

The historical mind will detect differences as much as similarities between cases, avoiding false analogies, and look for the key questions to be asking. It will look for continuity but also for more important discontinuities, it will look for linkages between data points, but not be too quick to attribute causation. It is a well-traveled mind that appreciates the variability of people and places, conditions and problems; it avoids overreliance on “lessons learned.”

Cohen essentially describes a form of non-linear thinking. While the study of strategic theory and historical grand strategy narratives provide a baseline for policymaking in a rhizomatic/rodízio-style security environment, a failure to embrace non-linearity in the Canadian policymaking environment has meant that advocates of a Canadian grand strategy do not properly accounted for the complexity of the task. In the vein of Harford’s suggestion that there are often “unexpected advantages of having to cope with a little mess”, 51 an alternate analysis of grand strategy incorporating non-linear complexity is needed in order to provide utility for real-time policymaking.

The study and application of grand strategy has tended towards the grand oversimplification of a single hedgehog-like vision for state survival and prosperity in the sense of the Archilochus fragment “the fox knows many things, but the hedgehog knows one big thing.” 52 In contrast, foxlike complexity develops as a central theme of this study; complexity in the sense of that defined by Herbert Simon:

Roughly, by a complex system I mean one made up of a large number of parts that interact in a nonsimple way. In such systems, the whole is more than the sum of the parts, not in an ultimate metaphysical sense, but in the more pragmatic sense that, given the properties of the parts and the laws of their interaction, it is not a trivial matter to infer the properties of the whole. 53

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52 This is a fragment from Greek poet Archilochus that was popularized by Isaiah Berlin in 1953. Isaiah Berlin, The Hedgehog and the Fox: an Essay on Tolstoy's View of History (Princeton, NJ: Princeton University Press, 2013), 1.

The utility of grand strategy for Canada is suggested as something distinct from the traditional hedgehog-style interpretation designed to address great power leadership in international relations and global-scale industrial warfare.

What develops is the idea that the Canadian condition warrants the application of what business strategist Martin Reeves terms “biological thinking.” This contrasts with the “mechanical thinking” of traditional hedgehog-style grand strategy that seeks to control outcomes by focusing on predefined goals, analysis, and developing then adhering to plans that tend to evade complexity and ultimately favour efficiency.54 By rendering Canadian policymaking through the lens of a “complex adaptive system,” a model adapted from work within biological sciences, an argument is establish that the mechanical simplicity of some interpretations of ‘grand strategy’ may in fact be detrimental to the resilience of Canada.

What results is an interesting paradox. To achieve the “national security” objective, Canadian policymakers need not attempt to design or declare a grand strategy. The traditional hedgehog-like grand strategy concept is actually a poor model for attempting to ‘steer’ outcomes within complex adaptive systems where prediction-defying nonlinear co-evolution dominates. Even the brightest headlights have limited utility on a winding road. It is critical to acknowledge that what is often seen retrospectively as grand strategy was an adaptive response to the signals and boundary conditions present at a particular point of evolution along the cycle of local interaction, emergence, and feedback within a complex adaptive system. John Holland’s suggestion that the way to steer complex adaptive systems is to modify signal/boundary

54 See Martin Reeves, “How to build a business that lasts 100 years” (paper presented at TED@BCG, Paris, 9 August 2016). This talk is based upon the research presented in Martin Reeves, Simon Levin, and Daichi Ueda, “The Biology of Corporate Survival,” Harvard Business Review (January-February 2016).
hierarchies provides an alternate framework from which to view real-time national security policymaking. In the absence of an existential threat of such magnitude that the objectives of policy and strategy merge, the “complex and cautious” panache of the fox is perhaps more consistent with complex systems. In such systems, building robustness and resilience has greater utility for long-term survival than any interest-based grand strategy. In this sense, policymakers can perhaps learn more about achieving grand strategic objectives from the emergence phenomenon in biological sciences than the traditional route originating in the classics of strategy.

The implication of emergent grand strategy for Canadian policymakers parallels ‘Mu’ in Hofstadter’s Ant Fugue. It “un-asks” the closed question of whether there can be a deliberate Canadian grand strategy and suggests that greater utility will be found in understanding emergent behaviour with a view to facilitating coevolution on terms most favourable to Canada – by seeking to “shape, rather than control, unpredictable and complex situations.” Herbert Simon’s psychology of “bounded rationality” in relation to complexity factors greatly as a limitation for such shaping efforts, as uncertainty is a persistent characteristic of a complex adaptive system. The model proposed will argue that policymakers should focus their efforts on ensuring robustness and resilience to deal with uncertainty within their political ecosystems, rather than being sidetracked by false prophesies of designing and implementing some visionary Canadian grand strategy.

57 Reeves, “How to build a business.” See also Reeves et al., “Biology of Corporate Survival.”
As John Boyd observed, “[i]n dealing with uncertainty, adaptability seems to be the right counterweight.”

Rather than focusing on linear processes for designing a grand strategy, Canadians should instead be focusing on addressing the key principles that generate robustness and resilience in natural complex adaptive systems: heterogeneity; modularity; redundancy; responsiveness; feedback loops; adaptive mechanisms; trust; and reciprocity. This may be achieved by leveraging Boyd’s concept of implicit guidance and control that originates from “many-sided implicit cross-referencing projections, empathies, correlations, and rejections” occurring as part of orientation. It is the capability to continually adapt and co-evolve within the overall complex adaptive system that may see the emergence of a Canadian grand strategy over time.

Although positing grand strategic behaviour as an emergent phenomenon, the model presented does not dismiss the significance of intentional strategic planning. Integrating recent scholarship from corporate management with those of complexity science and traditional strategic thought, it is acknowledged that a framework for Canadian grand strategy must incorporate both emergent and intended strategy modes. The “adaptive strategy making model” developed for business is useful in illustrating that strategic behaviour evolves with contributions from both intended and emergent strategy modes. This acknowledges that “emergent strategies” arising from lower hierarchy levels or from aggregate interactions of actors interact...

60 These suggested principles have been adopted from the six principles advocated as key for long-term corporate survival. Reeves et al., “Biology of Corporate Survival,” 47-55. For a succinct presentation of core concept of robustness in complex adaptive systems see Reeves, “How to build a business.”
with, and compliment, “intended strategies” emanating from decisions associated with formal strategic management and planning processes.63

Identification of such a model illustrates a fatal flaw in the common conceptions of Canadian grand strategy. Much of the discourse advocating for Canadian grand strategy is akin to attempting to use the wrong tool. Advocates have overlooked the existence of at least two distinct forms of national security strategy loosely analogous to the divergent intellectual personalities of Isaiah Berlin’s foxes and hedgehogs.64 What differentiates these forms is the relative importance of emergent and intended strategy modes. Great power grand strategy is inherently centripetal and aligns with the hedgehog’s “single central vision, one system, less or more coherent or articulate, in terms of which they understand, think and feel – a single, universal, organising principle in terms of which alone all that they are and say has significance.”65 This is the form that is implied in much of the discourse on grand strategy and assumed to be a form relevant to lesser powers. The alternate fox-like centrifugal form has greater utility for a middle power. This form focuses not on an inward projection of single vision, but on capabilities to effectively integrate, prioritize, and balance interactions with the external environment – the ability to achieve adaptive advantage at the periphery in order to evolve constructively within conditions of complexity.66

The striking implication is that Canada can indeed experience grand strategy without ever attempting to design one – an apparent validation of Edward Luttwak’s suggestion that regardless of explicit statements of defined objectives, documents, or even the existence of a

64 Berlin, The Hedgehog and the Fox, 1.
65 Ibid., 2.
formal infrastructure charged with drafting and implementing grand strategy, inevitably “all states have a grand strategy, whether they know it or not.”\textsuperscript{67} What this suggests is that rather than attempting to accurately forecast the future security environment and pursuing a rather fruitless debate regarding whether a national interest-based grand strategy process is appropriate for Canada, national security can \textit{emerge} as a result of tangible efforts to enhance the nation’s resilience.

Such efforts need not be conducted blindly, for the unpublished works of John Boyd provide a noteworthy foundation by incorporating the intersection of Complex Adaptive Systems and traditional strategic theory. By expanding on Boydian concepts founded upon the perception of war as emergent collective behavior brought on by a collision of complex systems in conflict with each other,\textsuperscript{68} there is tangible utility for contemporary policymakers seeking to comprehend and profit from Canadian grand strategy as an emergent behaviour. There are two significant challenges for Canada: the need to build resilience within the emergent mode in order to insulate a passive intended strategy mode from destructive fat-tailed behaviour; and the need to overcome a propensity towards \textit{orientation-drag}, a condition whereby the nation’s adaptation to changing circumstance is impeded by a lack of awareness and understanding of how to optimize orientation processes. Reinforcing Canada’s intended strategy mode with some grand vision has no utility if the centrifugal signal/boundary mechanisms in the emergent mode have atrophied.

\textsuperscript{68} Osinga, \textit{Science, Strategy and War}, 4.
Chapter Summary

Part I of this work will explore the landscape of grand strategic thought. As grand strategy emanates from the conceptions of military strategy, Chapter 1 will review the origins of what could be referred to as *Newtonian Strategy*: strategy akin to the application of Newton’s laws of motion through which forces are imposed on other bodies. This is the realm of military-centric problems where the choice of available objectives is rather intuitive: kill or be killed; force or be forced; overthrow or be overthrown; occupy or be occupied. A domain in which everything can be reduced to a single hedgehog-like Clausewitzian central vision: the use of force to compel an adversary to do one’s will. The central vision intuitively requires a rather linear ends-means-ways pathway for organizing efforts tends towards the ideal of something like the Arrow-Debreu-McKenzie mathematical economics proof for general equilibrium for a competitive economy in which involved agents seek full optimization and act with fully rational expectations. The system of this dialectic of wills can be suitably approximated as involving

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70 Kenneth J. Arrow and Gerard Debreu, “Existence of an Equilibrium for a Competitive Economy,” *Econometrica* 22.3 (July 1954). Lionel McKenzie, “On Equilibrium in Graham’s Model of World Trade and Other Competitive Systems,” *Econometrica* 22.2 (April 1954). These articles established the theorem that under clearly defined assumptions a competitive economy could have an equilibrium, which is fundamental to modern economics. As Düppe and Weintraub explain, “General equilibrium theory, in its simplest verbal form, describes nothing but the so-called circular flow of the economy. It concerns models in which, first, consumers attempt to maximize their gains from getting goods or services. They do this by increasing their purchases of the good until what they gain from the extra units are just balanced by what they have to give up to obtain the extra units. Likewise, individuals offer services (like labor) to firms by balancing the gains from offering the marginal unit of their services, their income, with the disutility of labor itself. This results in a theory of demand for goods and supply of productive factors. Second, producers similarly attempt to produce units of a good so that the cost of producing an extra unit is just balanced by the revenue received from selling that unit. In this way profits are maximized. Firms also hire factors of production up to the point that the cost of the additional hire is just balanced by the value to output that the additional hire would produce. In this way, costs are minimized and production factors are used efficiently. The firms thus generate supplies of goods and demands for factor services. This vision involves economic agents, be they households or firms, optimizing (doing as well as they can) subject to the relevant constraints. The decision problems are worked out in markets where prices represent the relative scarcity of all goods and services and thus guide the households and firms so their conflicting desires potentially can be reconciled.” Till Düppe and E. Roy
fully rational actors since irrational conduct in warfare – i.e., actually seeking to have another’s will imposed on oneself – would generally be counterproductive to the “fundamental or ultimate desires of all human beings.”

An essence of foundational military strategy in a European context is distilled. This involves three enduring elements: strategy involves finding dynamic resolutions to tangible problems imposed by a collision of interests and therefore must work against some counteracting element in accordance with Newton’s third law of motion; successful military strategists are essentially extraordinary “hedgehogs” who can produce an image portraying a cohesive solution to an ends-ways-means equation that provides for the intuitive execution of action informed by synergized knowledge; and that there are two basic forms of military strategy. There are strategies generally preferred by military adherents that are designed to avoid protraction and achieve an unlimited object; and protracted strategies generally preferred by policy actors that are designed to pursue limited objects using the full advantages of time and space. The essence of effective strategy is the degree to which the strategist can resolve the complexity of extremes or limitations imposed within the political object. Probability of failure increases if a mismatch occurs between the form of strategy pursued and the form of strategy called for by policy. It is this reasoning that underlies the emphasis in staff colleges on assessing policy-strategy match case studies as an indicator of the effectiveness of strategy.

We see a need for something beyond this Newtonian strategy when the two basic forms of military strategy conflate – when rational opportunities to pursue the relative simplicity of


impressing a catastrophic motive force on an adversary in a culminating battle present an increased existential risk to national survival. A hybrid problem emerges in which limited and unlimited objects begin to coexist in the same time and space, and there emerges a dialectic between the military preference for operational simplicity in strategies of annihilation and the policy preference for limited or progressive objects bringing greater complexity to the ends-ways-means formula. Such complexity quickly overwhelms the centripetal hedgehog style of thinking associated with Newtonian strategies by requiring varied motive force vectors to be imposed on multiple objects in simultaneous motion, which makes the interpretation of third law opposing reactions a more intricate challenge. This neo-Newtonian hybrid strategy problem is the impetus for the creation of grand strategy.

Chapter 2 introduces the “accordion-word” nature of grand strategy. It traces the evolution of the concept as an extension of strategy inspired by a broadening set of diplomatic, military, and economic problems associated with the conduct of global warfare and the desire for an enduring global peace. Uncovering the six major modern interpretations of grand strategy attributable to scholars Paul Kennedy, John Lewis Gaddis, Edward Luttwak, Barry Posen, Robert Art, and William C. Martel, this chapter seeks to highlight the pitfalls and paradoxes of the various conceptions.

A potential problem is illustrated with the interpretation of grand strategy in an ideological form due to its utility as a lens of convenience for filtering assumptions and building consensus for some pre-conceived course of action. Such an interpretation can also reinforce delusions of grandeur in the level of control policymakers actually have on world order, leading some to observe that the relative simplicity offered by grand strategy actually has a negative utility for solving complex problems. The “incessant push to strategize grandly” may in fact
work principally as a mechanism to manufacture the threats it intends to address. The reflections and warnings on the rationality of U.S. grand strategy and the paradoxes of security policy are highlighted from past participants such as George Kennan and Henry Kissinger and contrasted with modern discourse. This inevitably invokes an examination of judgement and the limits of foresight, whereby economics scholarship on “bounded rationality” and complexity from biological sciences adds a unique cross-disciplinary perspective.

In exploring judgement and foresight and the attractiveness of grand strategy as a counter to a perceived lack of long-term focus in contemporary policymaking, the works of Philip Tetlock and Robert Kaplan are suggested as offering some insights into dealing with uncertainty and thinking in terms of Ferdinand Braudel’s model of varying wavelength of time. Critics of U.S. policymaking from seemingly incompatible ideological perspectives, such as Andrew Bacevich, Stephen Walt, John Mearsheimer, Paul Pillar, Mark Helprin, Ted Galen Carpenter, and Samuel Huntington, seem to have some common ground in advocating for an effort to “get beyond l’histoire événmentielle [individual time], to the longer term.”

Chapter 2 highlights the reality that grand strategy is easier to advocate than to achieve. It is found to be “double-edged sword” that can provide a central focus but may also cause “distortion or myopia.” The concept can have counterproductive effects if allowed to become unrealistic or grandiose. This danger has potentially increased as a result of the adversarial

74 Brands provides Truman’s Indochina policy and the Kissinger’s approach towards South Asia and Angola as examples where grand strategy had negative utility in dealing with complex situations. He suggests that Bush’s fixation on Iraq “almost certainly caused more problems than it solved.” Reagan’s “single-mindedness” is portrayed as “both an asset and a liability for his statecraft.” Brands, What Good is Grand Strategy? 192-93.
ambiguity of the post-Cold War period. While grand strategy appears feasible and has demonstrable utility, it is also “a highly exacting proposition.” This leads to a brief examination of the suggestion that there is no suitable alternative to grand strategy. What is deduced from these discussions is that the differing levels of analysis, contradictions, and diverse theoretical functions inherent to the six modern interpretations of grand strategy tend to validate Raymond Aron’s 1970 insight that “[s]trategic thought draws its inspiration each century, or rather at each moment of history, from the problems which events themselves pose.” Whether there is an alternative to grand strategy, or even a need for grand strategy, is relative to how the observer perceives his/her own environment and the interests they seek to pursue. A key observation is that as a problem-solving exercise, the typical grand strategy formula is at odds with how human beings typically approach problem-solving. Pulling from the ideas of economist and journalist Tim Harford, it is suggested that a more fruitful process is to address complexity through an adaptive process rather than through the common “marginal gains” approach.

Chapter 3 focusses on “the intellectual legwork associated with grand strategy.” Highlighting Peter Layton’s recent work in delineating grand strategy from opportunism and risk management approaches, this chapter explores options for formulating national security strategies. It also explores the national security strategy approach associated with the Goldwater-Nichols legislation of the United States. It is noted that this process has come to serve primarily to communicate a strategic vision to Congress in order to rationalize resource allocation arguments, to communicate intentions to foreign governments, to appease domestic supporters

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75 Brands, What Good is Grand Strategy? 192.
through formal acknowledgement of particular issues, to build internal consensus on foreign and
defence policies within the Executive Branch, and to contribute to the U.S. President’s overall
agenda. This highlights the fact that effective strategic planning by a system of partisan-
political institutions is problematic due to the myriad of interests and fundamental value
differences present. As Don Snider and John Nagl observe, long-range planning and strategy
formulation tends to give way to crisis management and near-term policy planning and
implementation with a corresponding limitation in long-term resource allocation. The divergence
between strategy and crisis management is thus explored. Paradoxically, while “good strategy”
is supposed to influence and shape the future environment, the comprehensive political discourse
required to build a common understanding of the strategic environment often only occurs within
the framework of crisis management.

The discussion leads to the suggestion that it is appropriate to place crisis management
alongside of grand strategy, opportunism, and risk management as available broad conceptual
approaches to assist policymakers in formulating a national security strategy. In the sense of
Peter Layton’s use of Foucault’s ‘ship of state’ metaphor, these four conceptual approaches
would be akin to the alternatives of sailing to some port (grand strategy), sailing to avoid
difficulties (risk management), sailing to take advantage of fair winds (opportunism), or
executing evasive maneuvers only when required in order to avoid a collision and remain afloat

Army War College Strategic Studies Institute, 2001), 130-1.
79 The ‘ship-of-state’ metaphor comes from Michel Foucault. See Michel Foucault, “Governmentality,” in The
Foucault Effect: Studies in Governmentality: With Two Lectures by and an Interview with Michael Foucault, eds.
Layton has employed Foucault in his recent descriptions of national security strategy. Peter Layton, “An Australian
It is quite feasible that a ‘ship’ could exercise a combination of these four approaches during a single or series of voyages in response to changing conditions, preference, or reassessment of time and space. It is argued that for the grand strategy approach to succeed in isolation, it would require a ‘ship of state’ with sufficient size and power to steam through unpredictable seas towards its chosen destination. For the smaller auxiliary members of the fleet, such a bold course may be outside the “art of the possible” for their more fragile ships.

In terms of the actual utility of common “accordion” conceptions of grand strategy, it is observed that the act of building resilience is not readily apparent in common grand strategy models focused primarily on perceptions of threats to national interests. The potential faults of the most prevalent general recipe for grand strategy, the national interest-risk management approach, are examined. Such formulas tend to underestimate the impacts of the codependent interactions occurring, or that may occur, between actors. Much of the national interest-risk management approach is focused on creating some artificial level of granularity and preferential priority to provide utility to the notion of national interest. It is suggested that such models do not effectively deal with the need to arm policymakers with the knowledge needed to effectively cross-match multi-departmental policies and strategies. This suggests that a less linear model for complex strategic decision-making may have greater utility.

Chapter 4 commences with an examination of complexity and uncertainty within the global security environment. This is characterized by new terms in the security lexicon such as ‘hybrid’ and ‘grey zone’ warfare that involve the leveraging of culture, history, geography, and economics to counter conventional military superiority. This ‘new era’ of complexity and

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uncertainty has been associated with an apparent “complexity crisis” in U.S. grand strategy, yet the discussion will suggest that the traditional conception of grant strategy is ill-suited to address such an environment. In a threat environment where policy has diverged from force-based strategy, advocating for a traditional national security policy that acts as a bridge between foreign and defence policy by identifying and confronting state-based threats to national interests is misdirected. Social, political, and economic activities are now stretching across political boundaries. Flows of trade, investment, finance, migration, and culture have intensified, and the velocity at which ideas, goods, information, capital, and people can diffuse has increased. The traditional distinctions between domestic and foreign affairs are thus blurring. 81 This creates a greater need to integrate local adaption into the traditional top-down strategy paradigm to account for the reality that complexity favours decentralization while the common conception of strategy (and therefore grand strategy) favours centralization.

It is argued that the real-time pursuit of national security requires an alternate framework for grand strategy that incorporates complexity. An infusion of local adaptation into the traditional conception of grand strategy is recommended. This commences with the introduction of the Anderson-Nielson model of adaptive strategy in which emergent strategy modes and intended strategy modes co-exist. Within this model, adaptive behaviour from the emergent mode is integrated and optimized by the intended strategy mode. This leads to the introduction of complexity science, particularly the concept of “emergence” associated with Complex Adaptive Systems (CAS). As a grand strategy for everything and anything is unachievable, complex adaptive systems demonstrate the importance of resilience. John R. Boyd’s unpublished work on

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orientation provides a natural means of operationalizing an adjusted model of real-time contemporary grand strategy by shifting away from a focus on decisions in favour of a deeper regard for orientation. By optimizing resilience within orientation in bounded subsystems (or agents), grand strategic behaviour becomes an emergent phenomenon. Such systems are effectively ‘steered’ towards advantage by constantly modifying the signal/boundary hierarchies that guide interactions with the environment. The notion of “adaptive advantage” through business model innovation (BMI) is introduced as a framework for guiding adaption. Incorporating corporate lessons gleaned from biological complex adaptive systems, it is argued that adaptive advantage can be generated by optimizing heterogeneity, modularity, redundancy, responsiveness, feedback loops, adaptive mechanisms, trust, and reciprocity within orientation nodes. This is presented as the foundation for the concept of an Emergent Grand Strategy of Resilience that accounts for complexity.

Part II shifts focus to a Canadian context. Appendixes detailing Canadian military doctrine on strategy, a survey of Canadian defence policy from 1945 to 2005, and Canada’s recent experience in Afghanistan provide background context for this Part. Chapter 5 explores the discourse on Canadian grand strategy. It is noted that this discourse tends to imitate greater powers by adopting cliché strategic traditions that have no utility for addressing the sub-strategic nature of the Canadian agent. It is argued that the Canadian discourse has overlooked the existence of at least two distinct forms of national security strategy. Great power (or great coalition) national security strategy, delineated as Newtonian grand strategy, is inherently centripetal and aligns loosely with the intellectual personality of Berlin’s hedgehog. Canadian

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82 Holland, Signals and Boundaries, 2.
83 Reeves et al., “Biology of Corporate Survival,” 47-55.
national security strategy is described as being inherently centrifugal, aligning more closely with the intellectual style of Berlin’s fox. It is suggested that much of the discourse on Canadian grand strategy has incorrectly assumed the centripetal form as being directly transferable to middle and lesser powers. The remainder of this chapter focuses on illustrating why centripetal grand strategy is inappropriate for Canada. It is argued that the nation is constrained by the need to be sensitive to, and act on signals, from larger agents or aggregates. Linkage, functionalism, and national interest consensus are presented as principle constraining factors. A centripetal grand strategy is presented as being inconsistent with these dynamic constraints.

Chapter 6 describes Canada as being predisposed to a unique centrifugal-style of national security strategy. Canada need not declare grand strategic objectives which seek to impose its will within the international arena. The external element of Canada’s pursuit of survival and sovereignty is grounded in the need to adapt to changing circumstances with a view to ensuring the continuance of a status quo strategic condition that is positional rather than aspirational. Drawing on the work of Julian Corbett, preservation of the ability to operate as a sub-strategic actor pursuing limited objectives is presented as the strategic logic underwriting the external component of Canada’s national security strategy. This Boydian orientation has acted to sustain implicit guidance and control in matters of defence and foreign affairs. In accordance with the adaptive strategy model, Canada’s natural centrifugal national security strategy is characterized by a more active adaptive emergent mode that is complemented, not led, by a more passive intended strategy mode. As the emergent mode appears to be more critical, the need to seek orientation optimization within this mode is highlighted.

Chapter 7 commences a discussion of the degree of optimization in Canada’s orientation mechanisms for national defence. It commences with a more detailed examination of Canada’s
traditional defence problem and how this has greatly influenced the nation’s defence policy orientation, which has in turn sustained an inconspicuous centrifugal-style policy. It is highlighted how Canada’s centrifugal defence policy model has consistently differed from the aspirational models that are insensitive to actual constraints. Rather than adoption of a centripetal structure with a strong intended strategy mode, developing adaptive capacity through signal, experimentation, organization, systems, and eco-social advantage within the emergent mode is presented as the most encouraging means to optimize Canadian defence policy. A more productive discourse should ask whether the natural centrifugal system is in fact optimized for adaptive advantage. This leads to identification of two areas in which Canada’s current orientation for defence is not optimized: the predilection of the mainly dormant intended strategy mode towards crisis management; and an orientation drag that occurs within the emergent mode as a result of borrowed centripetal-based doctrine.

Potential vulnerabilities within Canada’s unconscious centrifugal national security strategy are carried into the domestic security environment in Chapter 8. As continuance of Canada’s Corbettian strategic logic necessitates the power of isolation, the potential for this to be eroded is examined. It is observed that Canada’s signal/boundary (or orientation) mechanisms for dealing with the domestic domain are geared towards external actors and do not account for recent security environment evolutions. In a security environment where complexity rules, the centripetal approach is fatally flawed in its lack of sensitivity to the growing criticality of local resilience. Effective national security is shifting from macro (national), through the meso

84 Reeves et al., “Sustainability as Adaptability,” 15-16.
(regional), to the micro (local) level; from homeland security to “hometown security.” This has significant ramifications for a nation of Canada’s geographic scale. Brief examinations of counterterrorism, critical infrastructure protection, cyber security, and economic security architectures are used to illustrate this trend. It is observed that Canada’s wider national security architecture suffers from the variations of the same orientation optimization problems identified for defence: minimal insulation of the mainly dormant intended strategy mode from fat-tailed risks; and a persistent centripetal outlook within the emergent mode that imposes an orientation drag. The domestic security environment is noted as evolving towards a condition in which some of the expectations of what government should do must be redistributed amongst public and decentralized institutions. National security architectures need to shift towards an “inoculation” or “public health” orientation. This represents a shift from a centripetal orientation towards centrifugal national security strategy.

Chapter 8 sets the conditions for further research by illustrating complexity as the central theme of the contemporary national security problem. The common theme of security decentralization reinforces previous arguments that efforts to optimize the intended strategy mode will have limited utility for dealing with complexity if the precursor emergent mode is not optimized for adaptive advantage. Perceiving real-time national security as occurring within a complex adaptive system of systems assists in demonstrating that long-term sustainability is best addressed through enhancing one’s ability for adaption rather than impulsive pre-commitment to a future forecast, or a grand strategy. Hometown security is about building adaptive advantage.

This means building heterogeneity, modularity, redundancy, responsiveness, feedback loops, adaptive mechanisms, trust, and reciprocity into the orientation mechanisms of those emergent modes that are in closest contact with co-evolving agents and aggregates. Only by building robustness and resilience into the emergent mode will the nation ensure it can understand and cope with evolving environments. These are the metrics that offer the greatest utility for detailed studies of particular bounded subsystems.
PART I: THE ENVIRONMENT OF GRAND STRATEGIC THOUGHT

The future is unknowable but the past should give us hope.¹

CHAPTER 1: NEWTONIAN MILITARY STRATEGY

It is...quite impossible to forecast with certainty the rate of decline of German strength and morale; many economic and political factors, at present hidden from us, may affect events. It must obviously be greatly to our advantage to achieve victory as early as possible; we must therefore always be ready to take advantage of a favourable situation, and to seize really profitable opportunities as they arise while avoiding commitments beyond our strength in the unjustified expectation of a short cut to victory.¹

As a result of its pedigree within the military arts and sciences, the common conception of grand strategy is indivisible from strategic theory designed for warfare. The broad array of behaviour that is ascribed as ‘grand strategy’ is resultant from the conceptual imprecision of the term as a derivative of the inherently ambiguous root notion of ‘strategy.’ Hence, an examination of grand strategy must commence with defining the conception of strategy.

As United States Secretary of Defense Caspar Weinberger observed, similar to politics, strategy is an “accordion word.”² As the term strategy has no universally recognized abiding definition, its meaning is often expanded and contracted to suit an author’s tune.³ Everett Dolman characterized it as:

Strategy is not a thing that can be poked, prodded, and probed. It is an idea, a product of the imagination. It is about the future, and above all it is about change.

It is anticipation of the probable and preparation for the possible. It is, in a word, alchemy; a method of transmutation from idea into action.\(^4\)

Portrayed within such a context, it is understandable that the field of strategy – and by association that of grand strategy – has few agreed upon boundary conditions.

Regardless of this lack of conceptual precision, the advantage of employing some form of strategy to secure objectives with minimum risk during a dialectic of wills has been presumed in various forms since Sun Tzu’s military treatise was composed around the fifth century B.C.\(^5\) As Michael Handel suggests, there is a “fundamental strategic logic” underlying the writing of the classical strategic theorists that continues to inform contemporary deliberations.\(^6\) For military commanders aspiring to greatness, the proficient application of an “ends (goals), ways (the how) and means (resources) triangle”\(^7\) becomes the logical vehicle towards genius and the divine antithesis to Norman Dixon’s depiction of military incompetence.\(^8\) As Eliot Cohen outlines:

Strategy is the art of choice that binds means with objectives. It is the highest level of thinking about war, and it involves priorities (we will devote resources here, even if that means starving operations there), sequencing (we will do this first, then that) and a theory of victory (we will succeed for the following reasons).\(^9\)


\(^5\) There is in fact no consensus on the exact composition date of Sun Tzu’s *Military Strategy*, customarily known as the *Art of War*. Attributions range from the last half of the fifth century B.C. to the third century B.C. See Ralph D. Sawyer, *The Seven Military Classics of Ancient China* (New York: Basic Books, 1993), 150, 154.


\(^9\) Cohen, “What’s Obama’s counterinsurgency strategy?”
Carl von Clausewitz offers that “[a] prince or a general can best demonstrate his genius by managing a campaign exactly to suit his objectives and resources, doing neither too much nor too little.”\textsuperscript{10} The aptitude to deliberately chart a rational course and withstand diversions through strength of character was posited by Clausewitz as the key for an outstanding man to transcend the limits of the average commander to the “realm of genius, which rises above all rules.”\textsuperscript{11}

The logical deduction follows that to employ strategy in military affairs must have greater prospect of achieving efficient success than an absence of strategy. Military strategy is thus perceived to have inherent utility in its ability to intellectually merge what Air Chief Marshall Sir William Elliot referred to as the three main considerations of military planning: the enemy threat, our capability to meet that threat, and “the circumstances of the encounter.”\textsuperscript{12} Clausewitz was intimately aware of the need for such connectivity and the need to transfer such concepts to others:

Yet when it is not a question of acting oneself but of persuading others in discussion, the need is for clear ideas and the ability to show their connection with each other. So few people have yet acquired the necessary skill at this that most discussions are a futile bandying of words; either they leave each man sticking to his own ideas or they end with everyone agreeing, for the sake of agreement, on a compromise with nothing to be said for it.”\textsuperscript{13}

The introduction of discourse regarding strategy has much to do with this need to educate and inform a broader array of military planners as a result of the industrialization of warfare in the eighteenth century.

\textsuperscript{10} Clausewitz, \textit{On War (1984)}, 177.
\textsuperscript{11} Ibid., 136.
\textsuperscript{12} Air Chief Marshall Sir William Elliot, North Atlantic Military Committee Standing Group Presentation before the North Atlantic Council on NATO strategy, SGM-2309-52 Memorandum for the Standing Group, 15 October 1952, Enclosure A: Manuscript (in four parts) of the Standing Group Presentation, Part II Strategy Presentation, 1.
Although the term originates from the Greek στρατηγία (stratēgiā), meaning “office or command of a general, generalship,”\(^{14}\) the Greeks would have utilized strategike episteme (generals’ knowledge) or strategon sophia (generals’ wisdom) to refer to what is now commonly known as strategy.\(^{15}\) Modern usage derives from the French stratégie, which appeared in Antoine Du Pinet’s translation of Pliny’s *Naturalis Historia* in 1562.\(^{16}\) In 1601, Philemon Holland’s translation of the term *stratēgiā* within Pliny’s text used Strategians to describe the division of Armenia into “certaine regiments.”\(^{17}\) The term *Stratēgus* was used in 1656 by James Harrington to describe “the first President of the Senate, and Generall of the Army.”\(^{18}\) In 1688, Robert Morden utilized Strategies to describe governments or provinces controlled by a strategus.\(^{19}\)

As tactics was the preoccupation of European military writings up to the late eighteenth century, strategy remained associated with the concept of an office of command until the Enlightenment. The appearance of standing, professional armies saw the use of the term strategy

\(^{14}\) The Greek στρατηγία (stratēgiā) is derived from στρατηγός (stratēgós), meaning “a leader or commander of an army” or “top official in any capacity”; στρατηγός (stratēgós) is derived from the base στρατός (stratós) meaning “army” or “military force”, and ἀγός (agós) meaning “leader”, itself a derived from the verb ἀγω (ágō) meaning “I lead”. Oxford University Press, “Strategy,” in *OED Online*, March 2016, accessed 17 April 2016.


\(^{16}\) Antoine Du Pinet, *L’Histoire du monde de C. Pline Second ... Le tout fait et mis en François par Antoine du Pinet, Seigneur de Noroy*, 2 vols (Lyon: 1562). Oxford, “Strategy,” *OED Online*. Gaius Plinius Secundus (a.k.a. Pliny the Elder) was a Roman philosopher and military commander in the early Roman Empire. Completed around AD 77, Pliny’s *Natural History* (Latin: *Naturalis Historia*) was an early encyclopedia of “the natural world, or life.”


\(^{19}\) Oxford, “Strategy.” See “Armenia” in Robert Morden, *Geography rectified; or, a description of the world in all its kingdoms, provinces, countries, islands, cities, towns, seas, rivers, bayes, capes, ports; Their ancient and present names, inhabitants, situations, histories, customs, governments, &c. As also their commodities, coins, weights, and measures, compared with those at London* (London: 1688), 343.
to describe the preparative manoeuvre or shaping phase of battle.\textsuperscript{20} Specific reference to strategy within this context came with Paul Gideon Joly de Maizeroy’s *Théorie de la guerre*, published in 1777, which acknowledged a “sublime” level to the art of war that he argued depended on reason versus rules. Describing this level as “strategy,” de Maizeroy observed:

Making war is a matter of reflection, combination of ideas, foresight, reasoning in depth and use of available means. Some of these means are direct, others are indirect; these later are so numerous that they comprise practically everything known to man. In order to formulate plans, strategy studies the relationship between time, positions, means and different interests, and takes every factor into account …[This] is the province of dialectics, that is to say, of reasoning, which is the highest faculty of the mind.”\textsuperscript{21}

Since this first use in a European context, strategy has been interpreted through a plethora of theoretical constructs and at various levels of analysis. As Raymond Aron observed in 1970, “[s]trategic thought draws its inspiration each century, or rather at each moment of history, from the problems which events themselves pose.”\textsuperscript{22} But as the general concept of strategy has implied utility in that it does not necessarily need to be defined in the minds of those who may exercise it, the term strategy in its modern usage has taken on an inherently ambiguous character.\textsuperscript{23}

Joseph C. Wylie observed in the 1960s that “[t]here are probably more kinds of strategy, and more definitions of it, than there are varieties and definitions of economics and politics – It is

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\textsuperscript{22} Aron, “The Evolution of Modern Strategic Thought,” 25.

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a loose sort of word.”24 Lawrence Freedman echoes this sentiment in his comments on the modern usage of the term strategy:

Yet *strategy* remains the best word we have for expressing attempts to think about actions in advance, in light of our goals and our capacities. It captures a process for which there are no obvious alternative words, although the meaning has become diluted through promiscuous and often inappropriate use. In this respect *strategy* is not much different from other related words, such as *power* and *politics*. While their exact meanings are explored, rarely to conclusion, in scholarly texts, their adoption in everyday speech tends to be imprecise, loose, and lazy.25

Modern definitions of strategy are influenced by an array of traditional military-centric definitions: Carl von Clausewitz’s “use of an engagement for the object of the war”;26 Antoine-Henri Jomini’s “art of making war on the map”;27 Helmuth von Moltke’s “system of expedients”;28 Julian Corbett’s “art of directing force to the ends in view”;29 and B.H. Liddell Hart’s “art of distributing and applying military means to fulfill the ends of policy”.30 Arthur Lykke’s depiction of strategy as “concerned with ways to employ means to achieve ends” characterizes the generally accepted notion of strategy taught at war colleges and military staff schools.31 Freeman offers a common contemporary definition of strategy as “being about

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maintaining balance between ends, ways, and means; about identifying objectives; and about the resources and methods available for meeting such objectives.”

The word strategy can simultaneously imply a product or a practice. The common product form tends to portray strategy as merely “a plan, concept, course of action, or ‘idea’ of a direction in which to proceed.” Some have observed that this style of contemporary usage has become so ubiquitous that the value of strategy has become trivialized and has promoted inappropriate application in a manner virtually indistinguishable from policy. Military staff colleges generally prefer the practice characterization, seeing strategy as the act of balancing ends, ways and means. For example, the United States Army War College endorses Arthur Lykke’s theory of strategy that utilizes the metaphor of a three-legged stool as a mutually supportive system in which the ends are “objectives,” the ways exist as “concepts” for achieving objectives, and the means are embodied as the “resources” underwriting the concepts. Using an alternate visualization, Colin Gray describes strategy as “the bridge that relates military power to political purpose; it is neither military power per se nor political purpose.”

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34 Hew Stachan has suggested that ‘strategy’ has incorrectly become synonymous with ‘policy’. He observes that “[t]he word ‘strategy’ has acquired a universality which has robbed it of meaning, and left it only with banalities. Governments have strategies to tackle the problems of education, public health, pensions and inner-city housing. Advertising companies have strategies to sell cosmetics or clothes. Strategic studies flourish more verdantly in schools of business studies than in departments of international relations. Airport bookstalls carry serried ranks of paperbacks reworking Sun Tzu’s The Art of War.” Strachan, “Lost meaning of strategy,” 34.
Noting that balancing or bridging ends, ways, and means may in fact be a simple task when dealing only with inanimate objects and negligible objectives, Lawrence Freedman suggests that strategy must be more than merely a plan that “supposes a sequence of events that allows one to move with confidence from one state of affairs to another.”

Strategy is the realm of a collision between interests, where plans are influenced and countered by divergent or opposing forces for which dynamic resolutions must be sought. This dialectic aspect of strategy is fully apparent in Carl von Clausewitz’s classic statement “[w]ar is nothing but a duel on a large scale,” and General André Baufre’s depiction of strategy as “l’art de la dialectique des volontés employant la force pour resoudre leur conflict.” Authors such as Liddell Hart, Everett Dolman, Harry Yarger, and Beatrice Heuser have also emphasized this dynamic of two wills.

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39 This dialectic of wills is also apparent in the statement that war “is not the action of a living force upon a lifeless mass (total nonresistance would be no war at all) but always the collision of two living forces. The ultimate aim of waging war, as formulated here, must be taken as applying to both sides. Once again, there is interaction. So long as I have not overthrown my opponent I am bound to fear he may overthrow me. Thus I am not in control: he dictates to me as much as I dictate to him.” Clausewitz, On War (1984), 75, 77. Christopher Bassford has observed that the dialectic method used by Clausewitz is actually a source of confusion. He suggests “Clausewitz's famous line that ‘War is merely a continuation of politics,’ while accurate as far as it goes, was not intended as a statement of fact. It is the antithesis in a dialectical argument whose thesis is the point—made earlier in the analysis—that ‘war is nothing but a duel [or wrestling match, a better translation of the German Zweikampf] on a larger scale.’ His synthesis, which resolves the deficiencies of these two bold statements, says that war is neither ‘nothing but’ an act of brute force nor ‘merely’ a rational act of politics or policy. This synthesis lies in his ‘fascinating trinity’ [wunderliche Dreifaltigkeit]: a dynamic, inherently unstable interaction of the forces of violent emotion, chance, and rational calculation.” Christopher Bassford, “Clausewitz and his works,” 2016 updated version of Christopher Bassford, Clausewitz in English: The Reception of Clausewitz in Britain and America (New York: Oxford University Press, 1994) prepared for U.S. Army War College courseware.

40 In English: “the art of the dialectics of wills that use force to resolve their conflict.” General André Baufre, Introduction à la stratégie (Paris: Armand Colin, 1963), 16. Beatrice Heuser’s definition of strategy also emphasizes the dialectic character of strategy as “a comprehensive way to try to pursue political ends, including the threat or actual use of force, in a dialectic of wills – there have to be at least two sides to a conflict.” Beatrice Heuser, The Evolution of Strategy: Thinking War from Antiquity to the Present (Cambridge: Cambridge University Press, 2010), 27.

41 Hart refers to “a “conflict of wills” and “problems of the influence of mind upon mind.” Hart, Strategy, xx. Heuser defines strategy as “a comprehensive way to try to pursue political ends, including the threat or actual use of
By conceptualizing strategy as a systematic process for problem-solving, J. Boone Bartholomees has offered an elegant means of assimilating the product and practice perspectives:

In my own view, strategy is simply a problem solving process. It is a common and logical way to approach any problem—military, national security, personal, business, or any other category one might determine. Strategy asks three basic questions: what is it I want to do, what do I have or what can I reasonably get that might help me do what I want to do, and what is the best way to use what I have to do what I want to do? Thus, I agree with the War College that strategy is the considered relationship among ends, ways, and means. That sounds deceptively simple – even simplistic. Is it actually more than that relationship? Is there some deeper secret? I do not believe there is; however, the relationship is not as simple as it appears at first blush. First, a true strategy must consider all three components to be complete. For example, if one thinks about strategy as a relationship of variables (almost an equation but there is no equal sign) one can “solve” for different variables. Ends, which hopefully come from a different process and serve as the basis for strategy, will generally be given. If we assume a strategist wants to achieve those ends by specific ways, he can determine the necessary means by one of the traditional exercises of strategic art – force development. If a strategist knows both the ends to be achieved and means available, he can determine the possible ways.42

This process approach neatly accounts for the traditional narrow conception of strategy as the use or threat of military instruments to obtain political ends in war. As Bartholomees notes, the “traditional approach of classic strategists”, exemplified by the standpoints of Austrian Archduke Charles,43 Antoine Henri de Jomini,44 Carl von Clausewitz45 and B.H. Liddell Hart,46 thought of

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43 Archduke Charles fought Napoleon to a stalemate at Aspern-Essling in 1809. He viewed strategy as “the science of war,” or more strictly, “the science of the commander-in-chief”, that produced overall plans and decided the general course of military activity. Strachan, “Lost meaning of strategy,” 35.
44 According to Jomini, “[s]trategy is the art of making war upon the map, and comprehends the whole of the theater of operations...Strategy decides where to act; logistics brings the troops to this point; grand tactics decides the manner of execution and the employment of the troops.” Jomini, The Art of War, 69.
strategy in terms of ways to be employed by a military commander, a relatively short-term affair fully within the confines of war. As the general’s ends were held constant – to achieve military victory, or at least avoid defeat – and his ability to rapidly adjust means on the field of battle were severely limited, his focus logically had to be on the one remaining component of the ‘equation’ upon which he could actually exercise influence: the ways.\(^{47}\) Hence, the “idea of strategy” originally appearing in the late eighteenth century as a means of labelling pre-battle preparations of generals leading highly structured mass armies of conscripted citizens was about how to best employ available military means.\(^{48}\) This classical conception of strategy as providing synergy between military means and political ends within a context of war persists, although the modern lexicon generally utilizes military strategy or theatre strategy. Contemporary definitions, such as “the bridge that relates military power to political purpose,”\(^{49}\) or a “comprehensive way to try to pursue political ends, including the threat or actual use of force, in a dialectic of wills”\(^{50}\)

\(^{45}\) Clausewitz defines strategy as “the use of an engagement for the purpose of the war. Though strategy in itself is concerned only with engagements, the theory of strategy must also consider its chief means of execution, the fighting forces…Strategic theory must therefore study the engagement in terms of its possible results and of the moral and psychological forces that largely determine its course.” Clausewitz, *On War* (1984), 177.

\(^{46}\) Sir Basil Henry Liddell Hart rejected Clausewitz’s definition of strategy because he believed it intruded on policy and accepted the necessity of battle as a given. Preferring Helmuth von Moltke’s concept of “the practical adaptation of the means placed at a general’s disposal to the attainment of the object in view,” Hart defined strategy as “the distribution and transmission of military means to fulfill the ends of policy.” B.H. Liddell Hart, *Decisive Wars of History: A Study in Strategy* (London: G. Bell & Sons, 1929), 147-150. Later revisions use the form “the art of distributing and applying military means to fulfill the ends of policy.” Hart, *Strategy*, 321.


\(^{48}\) Hew Strachan observed that although Napoleon himself did not embrace the term ‘strategy’, “[t]he Napoleonic wars confirmed the distinction between tactics and strategy, between what happened on the battlefield and what happened off it. The introduction of conscription meant that field armies tripled in size within two decades. Their coordination and supply made demands of a general that were clearly different from the business of firing a musket or thrusting with a sword.” Strachan, “Lost meaning of strategy,” 35.

\(^{49}\) The military-centric interpretation of ‘strategy’ is also obvious in Colin Gray’s state of strategy as “the bridge that relates military power to political purpose.” Gray acknowledges that this narrow conception of strategy, originating from Clausewitz’s definition of strategy as the use of an engagement for the purpose of the war, has “an operational, even battlefield orientation.” Gray suggests that this concise definition has “compensating virtue” in that the concept of ‘engagement’ is expandable. Gray, *Modern Strategy*, 17.

\(^{50}\) Heuser, *Evolution of Strategy*, 27.
maintain this military-centric perspective. Hence, it is valuable to trace the historical roots of the term.

**The Pre-Napoleonic Era**

Most of the European ideas in the field of strategy trace back to military commentaries arising from the transformative experiences in warfare which occurred in relation to the French Revolution (1789-1799) and the Napoleonic Wars (1803-1815). As Louise Willmot describes:

> Before 1789 the armies of the European powers were relatively small forces of professional soldiers, trained and equipped to wage war in a manner that had changed little over the preceding century, with tactics based on the fact that the muskets had an effective range of some fifty yards, and cannon of three hundred. In consequence, battles in the pre-Napoleonic era were fought by soldiers drawn up into disciplined lines in order to concentrate fire at the enemy across the battlefield. Such conflicts, bloody and expensive, were avoided by the commanders of regular troops whenever possible.  

Pre-Napoleonic era military theory had focused on complex manoeuvre within enemy territory with the intent of ensuring logistic endurance in order to execute the protracted attrition of the enemy. Avoiding the uncertainty of decisive battle was the main effort.

Concepts of deliberate planning and enlightened leadership began to replace superstitious beliefs of divine intervention as the primary influences on military victory as a result of the advent of critical military histories in the eighteenth century. With volumes being published between 1766 and 1781, Henry Lloyd’s *The History of the Late War in Germany Between the King of Prussia, and the Empress of Germany and Her Allies* provided the first critical analysis

52 Notable military theorists of the pre-Napoleonic era include Paul Gideon Joly de Maizeroy (1719-80), Henry Evan Lloyd (1729-93), and Dietrich von Bülow (1757-1807). Willmot, introduction to *On War*, xii.
of modern warfare from an non-partisan objective viewpoint.\(^5^4\) Such histories “aspired to a pure, historical objectivity that would allow the author to distill lessons, in the form of general rules, laws, and principles of war, [which] could then be applied generally to planning and carrying out future wars.”\(^5^5\) By documenting every aspect of military campaigns and attempting to distil out common principles and lessons, these critical military histories were a catalyst for the subsequent development of strategic theories.

**Henry Humphrey Evans Lloyd**

The influence of eighteenth century theorist Henry Humphrey Evans Lloyd\(^5^6\) on the classic texts of Antoine-Henri Jomini (1838)\(^5^7\) and Carl von Clausewitz (1832)\(^5^8\) has often been overlooked. Lloyd has been credited as having opened “a new age in the history of military thought.”\(^5^9\) Antoine-Henri Jomini acknowledged that he was influenced by Lloyd.\(^6^0\) However, John Shy has noted a paradox in this inspiration:


\(^5^5\) Ibid.


\(^5^6\) Henry Lloyd fled England after being implicated in the Jacobite rising of 1745. He subsequently served in several Continental armies, holding a field command in the Austrian army during the Seven Years’ War for which he later wrote a history of the German campaign. It has been suggested that he may have worked as a British spy or a double agent since he reconciled with the British government prior to his death in 1783. John Shy, “Jomini,” in *Makers of Modern Strategy from Machiavelli to the Nuclear Age*, ed. Peter Paret (Princeton, NJ: Princeton University Press, 1986), 148.


\(^5^8\) Carl von Clausewitz’s *Vom Kriege* [On War], written between 1816 and 1830, was published posthumously in 1832.

Jomini admired Lloyd for his work as a military critic and theorist, and used Lloyd as a model for his own work on Revolutionary and Napoleonic warfare, but Napoleon clearly regarded Lloyd’s theorizing as a pathetic joke, and indeed nothing of Lloyd’s critical study of the Seven Years’ War [1756-1763] suggests that anything like the French military breakthrough of the 1790s is possible.61

Nonetheless, in his criticism of Frederick II as a strategist, Lloyd sowed the seeds of the two main streams of strategic thought.62 Lloyd observed in 1766:

It is universally agreed upon, that no art or science is more difficult than that of war; yet, by an unaccountable contradiction of the human kind, those who embrace this profession take little or no pains to study it. They seem to think, that the knowledge of a few insignificant and useless trifles constitute a great officer. This opinion is so general, that little or nothing else is taught at present in any army whatever. The continual changes and variety of motions, evolutions, &c. which the soldiers are taught, prove evidently, they are founded on mere caprice. This art, like all others, is founded on certain and fixed principles, which are by their nature invariable, the application of them only can be varied; but they are in themselves constant.63

Lloyd perceived two interrelated elements – one mechanical and a form of art – that were vital to consider in the preparation of individuals for the challenges of war:

This most difficult science [war] may, I think, be divided into two; one mechanical, and may be taught by precepts; the other has no name, nor can it be defined or taught. It consists of a just application of the principles and precepts of war, in all the numberless circumstances and situations which occur; no rule, so study, or application, however assiduous, no experience, however long, can teach this part; it is the effect of genius alone. As to the first, it may be reduced to

61 This influence was first emphasized by Michael Howard. Howard, “Jomini and the Classic Tradition,” 5, 10. John Shy notes that the 1781 French translation of Lloyd’s Military Memoires, likely “provided both a model and a challenge [for a young Jomini’s] efforts to reduce the fantastic world of war at the end of the eighteenth century to some kind of intellectual order.” Shy, “Jomini,” 148.
64 Major-General Henry Humphrey Evans Lloyd, “Reflections on the General Principles of War; and the Composition and Characters of the Different Armies in Europe,” in Continuation of the History of the Late War in Germany between the King of Prussia and the Empress of Germany and her Allies (London: 1781), vi-vii. Elements of this we reprinted from the initial volume ‘A General Officer who served several Campaigns in the Austrian Army’ [Henry Lloyd], The History of the Late War in Germany between the King of Prussia and the Empress of Germany and her Allies (London: T and J. Egerton, 1766). Quoted in Howard, “Jomini and the Classic Tradition,” 5.
Lloyd recognized a foundational science of war in principles and precepts, but acknowledged that the difficulty came in actually applying the mechanical aspects to circumstances:

In this art, as in poetry and eloquence, there are many who can trace the rules by which a poem or an oration should be composed, and even compose, according to the exact rules; but for want of that enthusiastic and divine fire, their productions are languid and insipid: so on our profession, many are to be found who know every precept of it by heart; but, alas! When called upon to apply them, are immediately at a stand. They then recall their rules, and want to make everything, the rivers, woods, ravins [sic], mountains, &tc. &tc. subservient to them: whereas their precepts should, on the contrary, be subject to these, who are the only rules, the only guide we ought to follow; whatever manoeuvre is not formed on these, is absurd and ridiculous. These form the great book of war; and he who cannot read it, must for ever be content with the title of brave soldier, and never aspire to that of a great general.  

Lloyd observed that the practice of war at the time was ultimately decided not by great battles but “for want to means to protract them.” Hence, much of war was characterized by “nothing more than great skirmishes” in which commanders of nearly equal abilities vainly toiled. In considering what signified the abilities of a great commander, Lloyd suggested:

Great geniuses have a fort of intuitive knowledge, they see at once the causes, and its effect, with the different combinations which unite them: they do not proceed by common rules, successively from one idea to another, by slow and languid steps: no, the whole, with all its circumstances are various combinations, is like a picture, all together present to their mind; these want no geometry, but an age produces few of this kind of men: and in the common run of generals, geometry and experience will help them avoid gross errors.

65 Ibid., vii-viii.
66 Major-General Henry Humphrey Evans Lloyd, Continuation of the History of the Late War in Germany between the King of Prussia and the Empress of Germany and her Allies (London: 1781), 35.
While not defined as strategy, this is perhaps the earliest description of the essence of strategy in a European context.\(^{68}\) Although not explicitly offered by Lloyd, it is perhaps valuable to extrapolate a definition of strategy from this early description of the quintessence of war. ‘Lloydian’ strategy might thus be defined as an image portraying a cohesive solution to an ends-ways-means equation. The practice of strategy would therefore be considered the intuitive execution of action informed by a synergized knowledge.

The Two Schools of Military Thought Inspired by Lloyd

Michael Howard suggests that two schools of military thought can be traced back to Henry Lloyd. The classical school encompasses “those who tried to follow him in establishing firm principles of strategy based on quantifiable geographic and logistic data.”\(^ {69}\) The romantic school “stressed primarily the moral and political aspects of war which made it impossible to treat its conduct as an exact science.”\(^{70}\) The classical school’s “eighteenth-century tradition of precise operational analysis, based on logistical needs and topographic limitations” would be perpetuated by Antoine Henri Jomini. The romantic school’s “emphasis on war as the realm of the uncertain and unpredictable, a matching not so much of intelligence as of will, personality,

\(^{68}\) It is important to distinguish the geographical and cultural context as such concepts were present much earlier in in ancient China. Similar ideas were being presented in Asia between the fifth and third century B.C. See Sawyer, Seven Military Classics, 150, 154.

\(^{69}\) Heinrich von Bülow, who published Geist des neueren Kriegssystem [Spirit of the new War System] in 1799, is an example of a disciple of Lloyd who “sought in the chaos of war for clear, consistent, independent principles as a guide to understanding and action.” Howard, “Jomini and the Classic Tradition,” 9.

\(^{70}\) Georg von Berenhorst, who published Betrachtungen über die Kreigskunst [Reflections on the Art of War] in 1797, rejected the existence of principles of war and “brought a Rousseauite, a Wordsworthian demand for ‘simplicity, naturalness, clarity and truth’” which “heralded the revolution in military thinking which was to match the revolution in warfare.” Howard notes: “[b]efore the invention of firearms it might have been legitimate to speak [of principles of war]; but modern weapons introduced so great an element of the contingent, the uncertain, the accidental, the unknown, that to attempt scientific analysis was a waste of sensible man’s time.” Howard, “Jomini and the Classic Tradition,” 9.
and moral fibre” would propagate through Carl von Clausewitz and his adherents, such as Helmuth Karl Bernhard von Molke, Marshal Ferdinand Jean Marie Foch, and numerous First World War generals.\textsuperscript{71}

Adam Heinrich Dietrich von Bülow

In 1799, Adam Heinrich Dietrich von Bülow depicted a clear partition between tactics and strategy in \textit{Geist des neuren Kriegssystems}.\textsuperscript{72} Bülow defined strategy in geometric terms as “the science of movements in war of two armies, out of the virtual circle of each other; or, if better liked, out of cannon-reach.” Bülow’s concept of strategy was detached from battle in that it was based on the selection of advantageous bases and lines of operations.\textsuperscript{74} Bülow’s contribution to strategic thought is generally described in unflattering terms:

In Bülow’s writings there is evident a distinct contrast between the spirit of his strategical and that of his tactical ideas. As a strategist (he claimed to be the first of strategists) he reduces to mathematical rules the practice of the great generals of the 18th century, ignoring “friction,” and maneuvering his armies \textit{in vacuo}. At the same time he professes that his system provides working rules for the armies of his own day, which in point of fact were “armed nations,” infinitely more affected by “friction” than the small dynastic and professional armies of the preceding age. Bülow may therefore be considered as anything but a reformer in the domain of strategy. With more justice he has been styled the “father of modern tactics.” He was the first to recognize that the conditions of swift and decisive war brought about by the French Revolution involved wholly new tactics, and much of his teaching had a profound influence on European warfare of the 19th century. His early training had shown him merely the pedantic \textit{minutiae} of Frederick’s methods, and, in the absence of any troops capable of illustrating the real linear tactics, he became an enthusiastic supporter

\textsuperscript{71} Howard, “Jomini and the Classic Tradition,” 10.
\textsuperscript{72} Adam Heinrich Dietrich von Bülow, \textit{Geist des neuren Kriegssystems hergeleitet aus dem Grundsatz einer Basis der Operationen auch für Laien in der Kriegskunst fässlich vorgetragen von einem ehemaligen Preußischen Offizier [Spirit of the modern war system derived from the principle of a base of operations for the laity in the art of war comprehensible presented by a former Prussian officer]} (Hamburg: Benjamin Gottlieb Hofmann, 1799).
\textsuperscript{73} Strachan, “Strategy and War,” 31.
\textsuperscript{74} Ibid., 32.
of the methods, which (more of necessity than from judgment) the French revolutionary generals had adopted, of fighting in small columns covered by skirmishers. Battles, he maintained, were won by skirmishers. “We must organize disorder,” he said; indeed, every argument of writers of the modern “extended order” school is to be found mutatis mutandis in Bülow, whose system acquired great prominence in view of the mechanical improvements in armament. But his tactics, like his strategy, were vitiated by the absence of “friction,” and their dependence on the realization of an unattainable standard of bravery.75

The spectrum of descriptors for Bülow has ranged from “conceited crank” to “the founder of modern military science.”76 Beyond his assistance in clarifying terminology for strategy and tactics and his innovation of tirailleurs, an open formation of light infantry skirmishers, Bülow’s Spirit of the Modern System has been described as simply a “codification of obsolescent ideas.”77

The Napoleonic Commentators

The Napoleonic wars (1803-1815) saw a three-fold increase in size of field armies as a result of the introduction of conscription. France’s introduction of the levée en masse replaced small professional forces with great conscript field armies exploiting their mass because of a lack of sufficient skill to execute traditional tactics. When augmented by practiced cavalry and artillery, this mass warfare was so costly it required a regime “with a significant degree of popular support, and with troops inspired, at least during their greatest triumphs, by a new ideology of revolutionary nationalism.”78

77 Palmer, “Frederick the Great, Guibert, Bülow,” 115.
78 Willmot, introduction to On War, xii-xiii.
The depth of military activity increased as the need to coordinate and supply such large forces exponentially broadened the commanders required skillsets beyond the tactical interface of combat. This solidified the distinction between tactics and strategy. While Napoleon did not make much reference to the term strategy, it became central to the subsequent commentaries about his accomplishments.  

Archduke Charles of Austria

Karl Ludwig Johann Josef Lorenz, Archduke Charles of Austria, achieved a major triumph over Napoleon at the Battle of Aspern-Essling (21–22 May 1809), but was denied a decisive victory when his opponent was able to execute a successful withdrawal. The Archduke authored two primary works on tactics and strategy – *Fundamentals of the Higher Art of War for the Generals of the Austrian Army* and *Principles of Strategy* – that were released anonymously between 1806 and 1813. As Lee Eysturlid observes, Charles’ heavily scientific principles of strategy were a “strategic hybrid” of the manoeuvre warfare of the eighteenth century and Heinrich von Bülow’s geometric formulas. The complex operational system Charles provided was based on “a set of geometric models that determined the movement and accepted reaction radius of an army in relation to the enemy.” These principles, set out as rules for specific

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action, appear to have been aimed at providing a mediocre commander with an “unfaltering guide to the conduct of war.”

In contrast to Lloyd, Archduke Charles’ perspective inverted the scientific and artistic elements of warfare, viewing tactics as an art and strategy in the form of principles and precepts. Charles defined strategy as “the science of war: it produces the overall plans, and it takes into its hands and decides on the general course of military enterprises; it is, in strict terms, the science of the commander-in-chief.” He saw strategy as the “disciplined knowledge of the highest commander [which] determines the course of wartime undertakings,” with tactics being the art of executing this strategic design.

In his 1818 translation of Volume I of Charles’ *Principes de la Stratégie, développés par la relation de la campagne de 1796 en Allemagne*, Antoine-Henri Jomini credits the Archduke as being the first to make the art of war suitable for instruction. It has been suggested that General Henry W. Halleck, General in Chief of the Union Army (1862–64) and later President Lincoln’s chief of staff, was influenced by the Archduke Charles. Little attention has generally been

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84 Eysturlid, “Formative influences, theories, and campaigns,” 82.


given to Archduke Charles since an English-language study of Archduke Charles’ writing on military theory was not produced until 1997.  

Antoine-Henri Jomini

Swiss General Baron Antoine Henri de Jomini’s studies of the campaigns of Frederick the Great, the Revolutionary wars of the 1790s, and Napoleonic warfare manifested into the publication of his Précis de l'Art de la Guerre: Des Principales Combinaisons de la Stratégie, de la Grande Tactique et de la Politique Militaire in 1838. Jomini perceived Napoleon’s Italian campaign in 1800 as the key indicator of the birth of a new system of modern warfare grounded in strategy.

Jomini described the “art of war” as consisting of six distinct parts or branches:

1. Statesmanship in its relation to war;
2. Strategy, or the art of properly directing masses upon the theatre of war, either for defense or for invasion;
3. Grand Tactics;
4. Logistics, or the art of moving armies;
5. Engineering, [or] the attack and defense of fortifications; and

Strategy and its interaction with supporting branches were underpinned by “one great principle underlying all the operations of war.” Jomini expressed this principle in four maxims:

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89 See Eysturlid, “Formative influences, theories, and campaigns,” 82.
91 During the Italian Campaign and the Battle of Marengo in May-June 1800, Napoleon outflanked the main Austrian army besieging a French force at Genoa by maneuvering a 45,000 man Reserve Army through the Grand St. Bernard Pass. This enabled the cutting of Austrian supply lines and the ensnaring of the Austrian force between two French armies. While the Austrians came close to defeating the French during the initial stages, the Battle of Marengo eventually turned in favour of the French and caused the Austrians to seek an immediate armistice – the Convention of Alessandria (or the Armistice of Marengo) – and to subsequently sign a convention committing the Austrian government in Vienna to enter peace negotiations.
1. To throw by strategic movements the mass of an army, successively, upon the
decisive points of a theatre of war, and also upon the communications of the
enemy as much as possible without compromising one’s own.
2. To maneuver to engage fractions of the hostile enemy with the bulk of one’s
force.
3. On the battle-field, to throw the mass of the forces upon the decisive point, or
upon that portion of the hostile line which it is of the first importance to
overthrow. [and]
4. To so arrange that these masses shall not only be thrown upon the decisive
point, but that they shall engage at the proper times and with energy.94

As proof of the validity of this one great principle, he provided a rather unbalanced sample of
twenty campaigns that resulted in “brilliant successes” and one case of “greatest reversal” as a
consequence of adhering or neglecting this principle.95 However, in noting the relative simplicity
of this principle of mass against a decisive point, Jomini was careful to note the potential
difficulty of actually identifying what constituted the decisive point.96

In Jomini’s opinion, based on direct observation of the Napoleonic era wars, this system
of modern strategy generally invalidated Lloyd’s eighteenth-century rational that campaign
objectives could be achieved without resorting to decisive battle. For Jomini, achieving
geographic objectives through manoeuvre was simply a means towards achieving the central
object of war – the defeat of the enemy’s force. This could only be achieved through decisive
battle.97 Jomini noted “[i]t is true that many battles have been decided by strategic movements,
and have been, indeed, but a succession of them; but this only occurs in the exception case of a

94 Jomini, The Art of War, 70.
95 Ibid., 71. Colin Gray has noted that this principle has no universal merit in that it is “an absurd irrelevance in the
strategic context of ‘small wars’ against irregulars who decline to stand and fight en masse, and who have no
obvious lines of communication.” Gray, Modern Strategy, 156.
96 Jomini, The Art of War, 70.
97 Howard, “Jomini and the Classic Tradition,” 17.
dispersed army.”\textsuperscript{98} In terms of the “general case of pitched battles,” he suggested the following definition held true:

Strategy is the art of making war upon the map, and comprehends the whole theatre of operations. Grand tactics is the art of posting troops upon the battlefield according to the accidents of the ground, of bringing them into action, and the art of fighting upon the ground, in contradistinction to planning upon a map. Its operations may extend over a field of ten or twelve miles in extent. Logistics comprises the means and arrangements which work out the plans of strategy and tactics. Strategy decides where to act; logistics brings the troops to this point; grand tactics decides the manner of execution and the employment of the troops.\textsuperscript{99}

This characterization of strategy as a planning and coordination discipline provided a \textit{raison d’être} for the institutionalization of general staffs during the nineteenth century and this delineation of strategy as the conduct of operations particular to a theatre of war dominated land warfare thinking in Europe up to the First World War.\textsuperscript{100} However, such was not the case in Britain, where academic strategic thought was not held in high esteem. Commenting on Jomini’s principles of concentration and interior lines Colonel Frederic Maude observed:

These ideas are, after all, elementary, and readily grasped even by the average intellect, though many volumes have been devoted to proving them, and yet they are all that Jomini and his followers have to offer us – a fact that both explains and justifies the contempt with which military study was so long regarded by practical soldiers in England…\textsuperscript{101}

Hew Strachan suggests that Jomini’s institutionalized and easily communicated interpretation of strategy, linking national policy and tactics and based on universal principles, defines “traditional” strategy.\textsuperscript{102} Michael Eliot Howard has suggested that the most significant legacy that Jomini provided to subsequent military strategic thought was his wider view of battle.

\textsuperscript{98} Jomini, \textit{The Art of War}, 69.  
\textsuperscript{99} Ibid.  
\textsuperscript{100} Strachan, “Lost meaning of strategy,” 36.  
\textsuperscript{102} Strachan, “Lost meaning of strategy,” 36.
Unlike Clausewitz, who perceived the outcome of battle as being determined merely by a “bloody and destructive measuring of strength of forces physical and moral,” Jomini perceived battle as “intrinsic to operations yet subject to intelligent control.” As Howard notes:

For Jomini it mattered where the battle was fought, and how the battle was fought. It could be delivered in advantageous or disadvantageous circumstances. It could lead to decisive or indecisive results, depending on the relative position of the respective lines of operation. Above all its conduct, no less than the calculations leading to its engagement, was a matter of skill as well as of resolution – of selecting the decisive moment, and the decisive point, for launching one’s reserves, of orchestrating flanking threats with frontal attack.

The significance of this cerebral aspect of the where and how of battle was eventually obscured by the development of interpretations, mainly from disciples of Clausewitz, that advocated a more superficial reliance on physical and moral strength as the means to destroy an enemy’s army.

Carl von Clausewitz

Carl Philipp Gottlieb von Clausewitz first suggested “[t]actics is the theory of the use of military forces in combat; strategy is the theory of the use of combat for the object of the war” in an anonymous article commenting on Bülow published in 1805. Clausewitz’s Vom Kriege,

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104 Howard, “Jomini and the Classic Tradition,” 18.
105 Ibid., 17.
106 Michael Howard suggests that Moltke (the elder) and others read this interpretation into Clausewitz. Howard, “Jomini and the Classic Tradition,” 18.
written between 1816 and 1830, was published posthumously in 1832. In Clausewitzian terms, war is “an act of force to compel our enemy to do our will.” In relation to strategy – also referred to as the theory of major operations – Clausewitz notes:

Though strategy in itself is concerned only with engagements, the theory of strategy must also consider its chief means of execution, the fighting forces. It must consider these in their own right and in their relation to other factors, for they shape the engagement and it is in turn on them that the effect of the engagement first makes itself felt. Strategic theory must therefore study the engagement in terms of its possible results and of the moral and psychological forces that largely determine its course.

Although Clausewitz characterizes war as “an act of policy” and notes “[t]he political object – the original motive for the war – will thus determine both the military object to be reached and the amount of effort it requires,” he did not actually define policy. As Colin Gray notes, “[t]here is nothing in On War on the causes of war, the political goals of policy in war, or on statecraft in general…War is about policy, but On War is not.” Hew Strachan notes that Clausewitz’s use of the German Politik, which can mean both policy and politics, has been a source of ambiguity in later commentaries. Strachan notes:

Clausewitz was at least clear that conceptually Politik was not the same as strategy, even if the two were interwoven. When he concluded that war had its own grammar but not its own logic, he implied that strategy was part of that grammar. By contrast policy provided the logic of war, and therefore enjoyed an overarching and determining position which strategy did not. Clausewitz’s definition of strategy was therefore much narrower than that of contemporary usage.

\[\text{References}\]

\(^{109}\) An English translation of On War by Colonel J.J. Graham became available in 1873.


\(^{111}\) Clausewitz, On War (1984), 177.

\(^{112}\) Ibid., 87.

\(^{113}\) Ibid., 81.

\(^{114}\) Gray, Modern Strategy, 106.

\(^{115}\) Strachan, “Lost meaning of strategy,” 34.
Clausewitz defined strategy as “the use of the engagement for the purpose of the war”. Clausewitz’s focus was on the nation and the state, not on party politics. Too much, therefore, can be made of the ambiguity created by the fact that the German word, Politik, means policy and politics. This may matter less for our understanding of On War than for our interpretations of later commentators.

As much has been written in relation to the influence of Clausewitz, a full review of On War is quite beyond the scope of this study; however, it is perhaps relevant to examine the work of one of his key Prussian disciples.116

Kriegführung (The Modern Conduct of War)

_Helmuth Karl Bernhard Graf von Moltke_

A student at the Prussian War College during Clausewitz’s tenure, Field Marshal Helmuth Karl Bernhard Graf von Moltke (the Elder) served as Chief of the Prussian General Staff from 1857-1871 and then Chief of the Great General Staff (GGS) from 1871-1888. He was the architect of Prussian strategy during the Austro-Prussian (1866) and the Franco-Prussian (1870-71) wars, and is recognized as securing a key success at the Battle of Sedan in September 1870, which would eventually set the conditions for German unification under Prussia. The staff

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system of military organization, training, logistics, and armament developed by Moltke set the standards for military professionalism into the mid-twentieth century.\textsuperscript{117}

Moltke defined the aim of strategy as being merely “to seek out the main forces of the enemy and attack them wherever we find them.”\textsuperscript{118} His writings emphasized flexibility and simplicity. “In the conduct of war (\textit{biem kriegerischen Handeln}) what one does often matters less than how one does it. A firm decision (\textit{Entschluss}) and persistent execution of a simple concept lead most certainly to the goal.”\textsuperscript{119} He observed that:

The teachings (\textit{Lehre}) of strategy go little beyond the first premises of sound reason; one may hardly call them a scholarly discipline (\textit{Wissenschaft}). Their worth lies almost entirely in practical application. What counts is to comprehend in good time the momentarily changing situation and after that to do the simplest most natural things with steadiness and prudence. War thus becomes an art that many disciplines serve. Steadiness and prudence alone do not by a wide margin make the highest commander (\textit{Feldherr}), but where they are lacking, they must be replaced by other qualities.\textsuperscript{120}

He suggested that strategy was nothing more than a “system of expedients” or “practical adaptations”\textsuperscript{121} since “[n]o plan of operations survives the first collision with the main body of the enemy.”\textsuperscript{122}

Moltke adapted Clausewitz’s Napoleon model to incorporate the logistical advantages for mass mobilization of industrialization and improved transportation networks available by the

\textsuperscript{119} Moltke, “1869 Instructions for Large Unit Commanders” in Hughes, \textit{Moltke on the Art of War}, 171.
\textsuperscript{120} Ibid., 174-75.
\textsuperscript{121} Freedman, \textit{Strategy: A History}, 104.
\textsuperscript{122} Rothenberg in “Foreword” to Hughes, \textit{Moltke on the Art of War}, viii-ix.
Expanding on Clausewitz’s notion of strategy as the “the use of the engagement for the goal of the war,” Moltke interpreted strategy as a form of adaptive sequencing:

In fact, strategy affords tactics the means for fighting and the probability of winning by the direction of armies and their meeting at the place of combat. On the other hand, strategy appropriates the success of every engagement and builds upon it. The demands of strategy grow silent in the face of a tactical victory and adapt themselves to the newly created situation. Strategy must keep the means that tactics require in readiness at the proper time and place.

This idea of “strategy sequencing” was derived from Moltke’s assessments of the Austro-Sardinian War in Italy (1859), the Second Schleswig War in Denmark (1864), and the American Civil War (1861-65). These conflicts highlighted that exposure on multiple frontiers could lead to protracted wars of attrition. This was a situation that Prussia needed to avoid. Hence, Moltke’s campaigns during the Austro-Prussian War (1866) and Franco-Prussian War “combined rapid mobilizations, transportation, deployment, movement, and combat into one continuous sequence, making every effort to bring superior numbers into a final decisive battle.”

In relation to this decisive battle, Moltke argued:

The modern conduct of war (Kriegführung) is marked by the striving for a great and rapid decision. Many factors press for a rapid termination of the war: the struggle of the armies; the difficulty of provisioning them; the cost of being mobilized; the interruption of commerce, trade, business, and agriculture; the battle-ready organization of the armies, and the ease with which they may be assembled. Minor engagements exercise only a small influence on this, but they make possible the main decision (Hauptentscheidung) and break the path to it.

The aim of war was the destruction of the enemy’s fighting power:

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125 Hughes, *Moltke on the Art of War*, 47.
127 Moltke, “1869 Instructions,” 176.
Victory (Sieg) in combat [Waffentscheidung: literally “decision of arms”] is the most important factor in war. Victory alone breaks the will of the enemy and forces him to submit to our will. Neither the possession of a tract of land nor the conquest of a fortified position will suffice. On the contrary, only the destruction (Zerstörung) of the enemy’s fighting power will, as a rule, be decisive. This [destruction of the enemy’s fighting power] is therefore the foremost object of operations (Operationsobjekt).”128

The method advocated by Moltke, to concentrate a superior force against an enemy before they are able to react, has been characterized as “strategic envelopment.”129

Moltke accepted the Clausewitzian notion of war being waged for a political objective, but was weary of political interference in the actual conduct of war. He recognized political considerations only so far as they did not call for objectives inconsistent with military reality.130 Based on the historical resolve to safeguard against “princely incompetence” that had been the impetus for the establishment of the Prussian general staff after Prussia’s defeat at the Battle of Jena–Auerstedt (1806), Moltke advocated for full authority for the military once war began, preferring a separation between strategy and policy.131 As Lawrence Freedman notes, this attitude towards “political exclusion” from the conduct of war was in fact a fallacy, but nonetheless influenced subsequent military thought as “an article of faith, essential to the proper and successful implementation of strategy.”132

By the 1890s, Moltke came to reconsider the utility of military force as a means to settle the political disputes between substantial powers.133 As is evident in the caution “[w]oe to him that sets Europe on fire, who throws the match into the powder box!” expressed in an address to

128 Moltke, “1869 Instructions,” 176.
130 Ibid., 103.
131 Ibid., 106.
132 Ibid., 107.
the German Parliament, he was wary of Germany’s ability to wage a war on both eastern and western fronts that would not inevitably become protracted.\footnote{Herwig, The Marne, 31.}

\textit{Han Delbrück}

German historian Han Delbrück’s \textit{History of Warfare in Political History}\footnote{Han Delbrück, \textit{Geschichte der Kriegskunst im Rahmen der politischen Geschichte [History of warfare in political history]} (Berlin: 1900). This work encompasses seven volumes, of which only the first four are attributable directly to Delbrück.} contributed to military theory in its illustration of the “interplay of military and political factors.”\footnote{Gordon A. Craig, “Delbrück: The Military Historian,” in \textit{Makers of Modern Strategy from Machiavelli to Hitler}, ed. Edward Mead Earle (Princeton, NJ: Princeton University Press, 1961), 272.} He categorized strategy at the beginning of the twentieth century into the two basic forms: \textit{Niederwerfungsstrategie} (the strategy of annihilation); and \textit{Ermattsungsstrategie} (the strategy of exhaustion).\footnote{Craig, “Delbrück,” 272-73.} The strategy of annihilation, drawing on the Clausewitzian concept of absolute war, sought a decisive battle through which an enemy’s fighting power was eradicated.\footnote{Freedman, \textit{Strategy: A History}, 108.} The strategy of exhaustion (or attrition) was influenced by the fragmentary Clausewitzian suggestion of the existence of limited war found in his 1827 revisionary notes for \textit{On War} that suggested:

\[\text{War can be of two kinds, in the sense that either the objective is to overthrow the enemy – to render him politically helpless or militarily impotent, thus forcing him to sign whatever peace we please; or merely to occupy some of his frontier-districts so that we can annex them or use them for bargaining at the peace negotiations.}\footnote{Clausewitz, \textit{On War} (1984), “Note of 10 July 1827,” 69.} \]
Delbrück differentiated the forms of strategy by indicating “that the *Niederwerfungsstrategie* has only one pole, the battle, whereas the *Ermattungsstrategie* has two poles, battle and maneuver, between which the decisions of the general move.” ¹⁴⁰

As Gordon Craig explains:

In *Ermattungsstrategie*, the battle is no longer the sole aim of strategy; it is merely one of several equally effective means of attaining the political ends of the war and is essentially no more important than the occupation of territory, the destruction of crops or commerce, and the blockade. This second form of strategy is neither a mere variation of the first nor an inferior form. In certain periods of history, because of political factors or the smallness of armies, it has been the only form of strategy which could be employed. The task it imposes on the commander is quite as difficult as that required of the exponent of the strategy of annihilation. With limited resources at his disposal, the *Ermattungsstratege* must decide which of several means of conducting war will best suit his purpose, when to fight and when to maneuver, when to obey the law of “daring” and when to obey that of “economy of forces.” The decision is therefore a subjective one, the more so because at no time are all circumstance and conditions, especially what is going on in the enemy camp, known completely and authoritatively. After a careful consideration of all circumstances – the aim of war, the combat forces, the political repercussions, the individuality of the enemy commander, and of the government and people of the enemy, as well as his own – the general must decide whether a battle is advisable or not. He can reach the conclusion that any greater actions must be avoided at all costs; he can also determine to seek [battle] on every occasion so that there is no essential difference between his conduct and that of one-pole strategy. ¹⁴¹

Delbrück’s historical analysis suggested that Alexander III of Macedon (356-323 B.C.), Gaius Julius Caesar (100-44 B.C.), and Napoléon Bonaparte (1769-1821) employed strategies of annihilation. Athenian General Pericles (495-429 B.C.), Byzantine General Flavius Belisarius (c. 505-565), Bohemian Generalissimo Albrecht Wenzel Eusebius von Wallenstein (1583-1634),

¹⁴¹ Ibid.

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Swedish King Gustavus Adolphus (1594-1632), and Frederick the Great (1712-1786)\textsuperscript{142} were depicted by Delbrück as being practitioners of strategies of exhaustion.\textsuperscript{143}

For officers indoctrinated in the institution of Napoleon and Moltke’s vision of decisive battle, Delbrück’s notion of \textit{Ermattungsstrategie} was akin to strategic heresy.\textsuperscript{144} Gordon Craig notes that these critics “completely missed the deeper significance of Delbrück’s strategical theory. History showed that there could be no single theory of strategy, correct for all ages. Like all phases of warfare, strategy was intimately connected with politics, with life and the strength of the state…No strategical system can become self-sufficient; once an attempt is made to make it so, to divorce it from its political context, the strategist becomes a menace to the state.”\textsuperscript{145}

As Lawrence Freedman notes, Delbrück did not associate the decision to pursue a strategy of annihilation or exhaustion with the relative strength or resources of a state. He saw a strategy of exhaustion as a gradual wearing down of the enemy, but did not believe this could occur as a result of pure manoeuvre entirely without battles. His view of a strategy of exhaustion was more akin to an operational art in that it was about choosing when and where to engage in battle, when to manoeuvre, or when and where to employ other operational methods – such as territorial occupations, blockades, or economic targeting – to the greatest advantage within a campaign. Significantly, it was not “an anticipation of the later concept of attritional war” employed during the First World War, which was sustained through an emphasis on economic, industrial, and demographic factors rather than the deliberate act of most effectively matching

\textsuperscript{142} Delbrück’s inclusion of Frederick in this category was criticized significantly by German General Staff historians. Freedman, \textit{Strategy: A History}, 109.
\textsuperscript{143} Craig, “Delbrück,” 273.
\textsuperscript{144} Ibid., 274.
\textsuperscript{145} Ibid.
time and space considerations with political objectives that was the essence of the *Ermattungsstrategie* concept. ⁴⁴⁶

**The Essence of Strategy from Dynastic (Cabinet) and National (Peoples’) Wars**

Having traced the evolution of strategy from ancient Greece through the change from the dynastic style of war to national wars on the Continent of Europe that was ushered in by the French Revolution and the Napoleonic Wars, ⁴⁴⁷ a crossroads is reached. A review of the concepts of strategy might be continued into the twentieth century with an examination of the detailed influences of the World War strategists (Alfred Graf von Schlieffen, Charles Jean Jacques Joseph Ardant du Picq, Marshal Ferdinand Jean Marie Foch, Winston Churchill, Lloyd George, Georges Benjamin Clemenceau, Erich Friedrich Wilhelm Ludendorff, Vladimir Ilyich Ulyanov (Lenin), Leon Trotsky, Joseph Stalin, André Maginot, and Liddell Hart), the military power economists (Adam Smith, Alexander Hamilton, and Friedrich List), the social reformists (Friedrich Engels and Karl Marx), the geopoliticians and geostrategists (Karl Haushofer and Halford Mackinder), the sea and air power strategists (Alfred Thayer Mahan, Julian Corbett, General Giulio Douhet, William Lendrum “Billy” Mitchell, and Alexander Nikolaievich Prokofiev de Seversky), and the nuclear strategists (Bernard Brodie, Thomas Schelling, Herman Kahn, Henry Kissinger, and Albert Wohlstetter). ⁴⁴⁸ However, a mere restatement of existing

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⁴⁴⁸ John Chipman argues that nuclear deterrence and arms control theories that were the focus of strategic studies during the Cold War were not strategy per se: “The profession of strategic studies was dominated by a perversion for
sociation would add relatively little to the main effort of determining the utility of grand strategy.\textsuperscript{149} It is therefore pertinent at this juncture to ask whether a sufficient understanding of foundational military strategy in a European context can be distilled without delving into the latter commentators of strategy, who themselves have arguably been influenced by the classical texts already touched upon.

Acknowledging Raymond Aron’s insight that “[s]trategic thought draws its inspiration each century, or rather at each moment of history, from the problems which events themselves pose,”\textsuperscript{150} it is possible to distil three enduring characteristics that perpetuate from the foundation of military strategic thought. First, strategy involves finding dynamic resolutions to problems imposed by a collision of interests. Strategy cannot exist in a vacuum. As Peter Layton offers, problems of strategy are “those that firstly involve interacting with intelligent, adaptive adversaries and secondly where a particular objective can be defined. If the first factor is missing, a plan as opposed to a strategy is needed.”\textsuperscript{151} Without a counteracting element there is no need for strategy. Strategy thus follows Newton’s third law of motion, which advises that any


\textsuperscript{150} Aron, “The Evolution of Modern Strategic Thought,” 25.

action is opposed by an equal reaction.\textsuperscript{152} Much of what is tagged as strategy is in fact simply planning or road mapping rather than strategizing to address an intelligent and adaptive adversary.\textsuperscript{153}

Second, dynamic resolutions are most effective when they provide an image portraying a cohesive solution to an ends-ways-means equation that provides for the intuitive execution of action informed by synergized knowledge. This cannot be provided by simple adherence to standard principles or axioms; it is the realm of intuitive judgement in knowing when and where such guidelines should and should not be applied. Such judgement cannot be imparted in an individual, but can be sharpened in individuals that possess some level of inherent aptitude for synergizing knowledge into a holistic vision or strategy. In this sense, successful military strategists could be considered as extraordinary “hedgehogs.”

Analogized with the expression “the fox knows many things, but the hedgehog knows one big thing,”\textsuperscript{154} military strategy exemplifies a “simple and confident” hedgehog style of thought in comparison to the “complex and cautious” panache of the fox.\textsuperscript{155} As perceived by Isaiah Berlin, the hedgehog’s “intellectual personality” tends towards a “single central vision, one system, less or more coherent or articulate, in terms of which they understand, think and feel – a single, universal, organising principle in terms of which alone all that they are and say has significance.”\textsuperscript{156} The likes of Dante, Plato, Lucretius, Pascal, Hegel, Dostoevsky, Nietzsche, Newton, Newton’s Principia, 83.

Citing the statement “[t]he Canada First Defence Strategy provides a detailed road map for the modernization of the Canadian Forces.” Layton argues that the current Canadian defence strategy, the 2008 Canada First Defence Strategy, is merely a plan. Layton, “Canadian National Security Strategy,” 40n.

This is a fragment from Greek poet Archilochus that was adopted by Isaiah Berlin in 1953. Berlin, The Hedgehog and the Fox, 1.

Gardner, Future Babble, 27.

Berlin, The Hedgehog and the Fox, 2.
Ibsen, and Proust have been offered as exhibiting attributes of this “centripetal” hedgehog style of thinking.\textsuperscript{157} Derived from the Latin terms \textit{centrum} (centre) and \textit{petere} (to seek), a centripetal force directs towards a fixed point within the centre. Strategy is analogous to a centripetal force: a single, universal, organizing principle that informs intellectual constructs in war. It is the lens through which priorities are considered, sequencing is determined, and a “theory of victory” is perceived.\textsuperscript{158}

In terms of classical military strategists, we find something akin to this “simple and confident” hedgehog thinking within the “classical school” of military thought that sought to establish “firm principles of strategy based on quantifiable geographic and logistic data.”\textsuperscript{159} Antoine Henri de Jomini’s “one great principle underlying all the operations of war” and Adam Heinrich Dietrich von Bülow’s “science of movements in war of two armies” would arguably place them within the domain of hedgehogs.\textsuperscript{160}

In contrast, Berlin associates the “complex and cautious” thinking of the fox to personalities such as Shakespeare, Herodotus, Aristotle, Montaigne, Erasmus, Molière, Goethe, Pushkin, Balzac, and Joyce. This style of thinking is articulated as:

…those who pursue many ends, often unrelated and even contradictory, connected, if at all, only in some de facto way, for some psychological or physiological cause, related to no moral or aesthetic principle. [Those who] lead lives, perform acts and entertain ideas that are centrifugal\textsuperscript{161} rather than centripetal; their thought is scattered or diffused, moving on many levels, seizing upon the essence of a vast variety of experiences and objects for what they are in themselves, without, consciously or unconsciously, seeking to fit them into, or

\textsuperscript{157} Berlin, \textit{The Hedgehog and the Fox}, 2.
\textsuperscript{158} Cohen, “What’s Obama’s counterinsurgency strategy?”
\textsuperscript{159} Heinrich von Bülow, who published \textit{Geist des neueren Kriegssystem} [\textit{Spirit of the new War System}] in 1799, is an example of a disciple of Lloyd who “sought in the chaos of war for clear, consistent, independent principles as a guide to understanding and action.” Howard, “Jomini and the Classic Tradition,” 9.
\textsuperscript{160} Jomini, \textit{The Art of War}, 70; Strachan, “Strategy and War,” 31.
\textsuperscript{161} Meaning: tending away from centralization. From the Latin \textit{centrifugus}, a derivation of \textit{centr} and \textit{fugere} (to flee).
exclude them from, any one unchanging, all-embracing, sometimes self-
contradictory and incomplete, at times fanatical, unitary inner vision.\textsuperscript{162}
At first glance this categorization would appear to align loosely with the “romantic school” of
military thought, which placed “emphasis on war as the realm of the uncertain and
unpredictable.”\textsuperscript{163} Carl von Clausewitz’ suggestion of the need to “study the engagement in
terms of its possible results and of the moral and psychological forces that largely determine its
course” would seem to place him among Berlin’s foxes.\textsuperscript{164} Certainly Clausewitz’s objective of
developing a theory of the art of war as a means to “educate the mind of the future commander,
or, more accurately, to guide him in his self-education, not to accompany him to the
battlefield,”\textsuperscript{165} would appear to be an example of fox-like thinking. However, to perceive that a
theory of the art of war is achievable is akin to centripetal thinking. As Clausewitz argued,
“[t]heory exists so that one need not start afresh each time sorting out the material and plowing
through it, but will find it readily at hand and in good order.”\textsuperscript{166} \textit{On War} seeks to view the
complex conduct of armed conflict through a lens similar to the “unitary inner vision” of Berlin’s
hedgehog. Clausewitz’s teachings arguably sought to distil the complexity of war into a form
comprehensible to hedgehog generals; those that one of his influencers, eighteenth century
military critic and theorist Major-General Henry Lloyd, called the “common run of generals.”\textsuperscript{167}

Clausewitz’s unresolved theory of the art of war was an attempt to address the challenge
of lesser generals trying to approximate military genius in their management of the increasing
complexity of post-Napoleonic warfare. But as Lloyd had aptly observed prior to Clausewitz’s

\begin{footnotes}
\item[162] Berlin, \textit{The Hedgehog and the Fox}, 2.
\item[163] Howard, “Jomini and the Classic Tradition,” 10.
\item[164] Clausewitz, \textit{On War} (1984), 177.
\item[165] Ibid., 141.
\item[166] Ibid.
\item[167] Lloyd, “Reflections on General Principles,” xxi.
\end{footnotes}
discourse, self-education alone cannot substitute for the coveted intuitive knowledge representative of military brilliance:

Great geniuses have a sort of intuitive knowledge, they see at once the causes, and its effect, with the different combinations which unite them: they do not proceed by common rules, successively from one idea to another, by slow and languid steps: no, the whole, with all its circumstances are various combinations, is like a picture, all together present to their mind; these want no geometry, but an age produces few of this kind of men: and in the common run of generals, geometry and experience will help them avoid gross errors.\textsuperscript{168}

The unfinished intricacy of \textit{On War} – the “rather formless mass” that Clausewitz desired to fully rework\textsuperscript{169} – is all too often reduced by “simple and confident” thinking of hedgehogs into what Edward Luttwak has described as a “crude, popularized form” of strategic thought stressing “the primacy and desirability of offensive warfare in pursuit of decisive results.”\textsuperscript{170} This reduction is fully understandable in that Clausewitz was solely concerned with two very tangible policy objectives indivisible with war: “to overthow the enemy – to render him politically helpless or militarily impotent, thus forcing him to sign whatever peace we please; or merely to occupy some of his frontier-districts so that we can annex them or use them for bargaining.”\textsuperscript{171} Hedgehog-like thinking makes sense in this military-centric problem domain where the available objectives are rather intuitive: kill or be killed; force or be forced; overthrow or be overthrown; occupy or be occupied. Everything in military strategy can be reduced to a single central vision – the use of force to compel an enemy to do one’s will.\textsuperscript{172} Seeking the most efficient ends-means-ways pathway for organizing efforts to achieve this clear objective is instinctive. Hence, this type of

\textsuperscript{168} Lloyd, “Reflections on General Principles,” xxi.
\textsuperscript{171} Clausewitz, “Note of 10 July 1827,” 69.
\textsuperscript{172} Clausewitz, \textit{On War (1984)}, 75.
military strategy tends towards the Arrow-Debreu mathematical economics proof for general equilibrium for a competitive economy based on the neoclassical economics principles of agent optimization and rational expectations. Actors addressing military problems can generally be assumed to be “fully rational” in the projection of their own actions towards the future consequence of imposing their will on their adversaries.

Expectations of victory are linked to a rational understanding of the interrelationship between instruments of power and tangible objectives. In the case of the Clausewitzian force-centric paradigm, the objective is some rather tangible variant of overthrow or occupy. This tangibility favours a hedgehog-like interpretation of instruments, one in which a linear causal relationship between the instrument and its effectiveness towards achieving a clearly defined objective is intuitive. This linear instrument-objective relationship is understood in a manner similar to Newton’s axioms: that change requires a net force to act on an enemy to overcome its present behaviour and that the magnitude of the external force required to impose change is proportional to the adversary’s mass or military power.

It is illustrative to place the Clausewitzian tradition into the framework of Newton’s first and second laws of motion:

173 Kenneth Arrow and Gerard Debreu utilized convexity and fixed point theory to demonstrate the clearing behavior (i.e., attainment of an equilibrium price based on supply and demand without sustainable opportunities for profit) of a complete market composed of ‘fully rational’ traders with awareness of prices for contracts based on full knowledge of the intrinsic nature of goods as well as when, where, and under what circumstances they are to be delivered. Lionel McKenzie provided an independent proof of the general economic equilibrium. For a discussion of the variance between the Arrow-Debreu equilibrium simplification and the real behavior of markets, see John Geanakoplos, “The Arrow-Debreu Model of General Equilibrium,” in The New Palgrave Dictionary of Economics, 2nd ed., ed. Steven N. Durlauf and Lawrence E. Blume (Basingstoke: Palgrave Macmillan, 2008), 222-232. For original proofs see Arrow and Debreu, “Existence of an Equilibrium”; and McKenzie, “On Equilibrium in Graham’s Model.”
174 Adapted from Isaac Newton’s first and second “axioms, or laws of motion,” first expressed in 1686 within his Philosophiae Naturalis Principia Mathematica. Newton, Newton’s Principia, 83-84.
Law I.
Every object perseveres in its state of rest, or of uniform motion in a right line, unless it is compelled to change that state by forces impressed thereon. PROJECTILES persevere in their motions, so far as they are not retarded by the resistance of the air, or impelled downwards by the force of gravity. A top, whose parts by their cohesion are perpetually drawn aside from rectilinear motions, does not cease its rotation, otherwise than as it is retarded by the air. The greater bodies of the planets and comets, meeting with less resistance in more free spaces, preserve then motions both progressive and circular for a much longer time.

Law II.
The alteration of motion is ever proportional to the motive force impressed; and is made in the direction of the right line in which that force is impressed. If any force generates a motion, a double force will generate double the motion, a triple force triple the motion, whether that force be impressed altogether and at once, or gradually and successively. And this motion (being always directed the same way with the generating force), if the body moved before, is added to or subducted from the former motion, according as they directly conspire with or are directly contrary to each other; or obliquely joined, when they are oblique, so as to produce a new motion compounded from the determination of both.  

These axioms offer a rather concise précis of On War. Clausewitz’s eight books, intended to guide the self-education of the future commander, are essentially a commentary on how to conduct oneself in war in a manner that minimizes the effects of the inherent laws of nature on oneself and uses them to maximize effects against one’s adversary. Book One, “On the Nature of War,” with its chapters exploring danger, physical effort, intelligence, and friction in war, is in essence identifying the “forces impressed thereon” that must be applied to the enemy with all-out strength and defended against during “l’art de la dialectique des volontés employant la force pour resoudre leur conflict.” Within On War’s subsequent books on strategy, the engagement, military forces, defence, the attack, and war plans, Clausewitz essentially lays out the

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175 Newton, Newton’s Principia, 83.
176 Clausewitz, On War (1984), 141.
177 In English: “the art of the dialectics of wills that use force to resolve their conflict.” Baubre, Introduction à la stratégie, 16.
considerations through which a commander should seek to maximize the proportionality of the “motive force impressed” upon their enemy.

A similar correlation to Newton’s axioms is also found in the five factors Sun Tzu suggests are key to seeking out the “true nature” of warfare, and thus assuring victory.\(^\text{178}\) Sun Tzu claims that one can “know victory and defeat” by estimation of:

\begin{align*}
\text{Which ruler has the Tao?}\quad \text{179} \\
\text{Which general has greater ability?} \\
\text{Who has gained [the advantages of] Heaven and Earth?}\quad \text{180} \\
\text{Whose forces are stronger?} \\
\text{Whose officers and troops are better trained?} \\
\text{Whose rewards and punishments are clearer?}\quad \text{181}
\end{align*}

Sun Tzu further councils that an estimation favourable to victory can be “put…into effect with strategic power (shih) and supplemented by field tactics that respond to external factors.”\(^\text{182}\) As with *On War, The Art of War* is essentially a commentary on how to leverage the “true nature” of warfare – something akin to Newton’s first and second laws of motion – to forecast and secure victory for oneself. In both works there is an underlying hedgehog-like simplicity – a linear causal relationship between knowing the nature of the application or threat of force and the objective of victory in warfare. The objective is static and intuitive because, as Sun Tzu

\[^{179}\text{Tao is interpreted in the Sawyer translation to be “legal and administrative measures and policies”. In this sense the question is referring to government policies and leadership that have the support of the people. Sun Tzu, *The Art of War* (1994), 303n. In modern terms, Tao corresponds loosely to a government version of the corporate social responsibility concept of “Social Licence to Operate” coined by Canadian mining executive Jim Cooney in a 1997 meeting with the World Bank. Social licence emerged in the early 2000s within the context of growing divergence around the expectations of minerals-led development. It was an industry response to opposition and a mechanism to ensure the viability of the sector. See Jason Prno, “An analysis of factors leading to the establishment of a social licence to operate in the mining industry,” *Resources Policy* 38.4 (2013): 577-590; and John R. Owen and Deanna Kemp, “Social licence and mining: A critical perspective,” *Resources Policy* 38.1 (2013): 29-35.}\]
\[^{180}\text{Heaven means the natural environment, the “yin and yang, cold and heat, and the constraints of the seasons.” Earth refers to the terrain over which war is conducted. Sun Tzu, *The Art of War* (1994), 303n.}\]
\[^{182}\text{Ibid., 168.}\]
intimates, “Warfare is the greatest affair of state, the basis of life and death, the Way (Tao) to survival or extinction.”183 To seek the alternate objective – defeat – in the face of an existential threat would be decidedly irrational.

The third enduring characteristic that perpetuates from the foundations of military strategic thought is that there are two basic forms of military strategy: 1) strategies designed to avoid protraction and achieve an unlimited object; and 2) protracted strategies designed to pursue limited objects using the full advantages of time and space.184 Although militaries will tend towards the extreme of the unlimited object due to the potential operational simplicity of strategies of annihilation, policy tends towards more limited objects that impose greater complexity in their requirement for dynamic strategies that can deal with protraction. The essence of effective strategy is the degree to which the strategist can resolve the complexity of extremes or limitations imposed within the political object. Probability of failure increases if a mismatch occurs between the form of strategy pursued and the form of strategy called for by policy. It is this reasoning that underlies the emphasis placed by military staff colleges on assessing policy-strategy match case studies as an indicator of the effectiveness of strategy.185

These three characteristics provide valuable insight into the evolution of something beyond military strategy. As long as strategy remained “below politics in a hierarchy of

184 ‘Limited object’ is used here in the sense of Julian Corbett’s description of the “Nature of the Ulterior Object,” which classified wars according to their object: “War with limited object (“limited war”) is where we merely seek to take from the enemy some particular part of his possessions, or interests…War with an unlimited object is where we seek to overthrow the enemy completely, so that to save himself from destruction he must agree to do our will (become subservient).” Corbett, “Strategical Terms and Definitions,” 308.
determinants” the application of Newton’s laws of motion were relatively easy to manage with existing knowledge and instruments.\textsuperscript{186} But as rational opportunities to pursue the relative simplicity of impressing a catastrophic motive force on an adversary in a culminating battle began to present increased existential risk to national survival, a conflation of the two basic forms of military strategy essentially occurred. A hybrid problem emerged in which limited and unlimited objects began to coexist in the same time and space. An emerging dialectic between the military preference for operational simplicity in strategies of annihilation and the policy preference for limited or progressive objects brings greater complexity to the ends-ways-means formula. Such complexity quickly overwhelms the centripetal hedgehog style of thinking with the requirement to impress varied motive force vectors to multiple objects in simultaneous motion; the resultant of these combined forces complicating perception of third law opposing reactions. Conceptions of grand strategy evolved as the response to this neo-Newtonian hybrid strategy problem.

\textsuperscript{186} Heuser, \textit{Evolution of Strategy}, p. 27.
CHAPTER 2: A GRAND “ACCORDION”

Grand strategy is a conceptual framing that describes how the world is, envisions how it ought to be, and specifies a set of policies that can achieve that ordering. Grand strategies are designed to mold the international environment by regulating international regimes, influencing the foreign policy choices made by other states, and shaping or even determining the domestic regime characteristics of other countries. A successful grand strategy will have the support of some other major states. It will be heuristically powerful: able to guide policy across a wide range of issue areas. It will provide resources – diplomatic, bureaucratic, ideational, military, economic – for specific policies.¹

Grand strategy is a splendid “accordion word” in that it experiences even greater expansion and contraction to meet the needs of its commentators than the root term strategy.² As an extension of strategy inspired by a broadening of the set of diplomatic, military, and economic problems incorporated into the conduct of global warfare and the desire for global peace, the contemporary usage of grand strategy remains rather ambiguous. A fundamental problem of trying to describe grand strategy is that it, like military strategy, has an undeniable element of Potter Stewart’s “I know it when I see it.”³ Grand strategy is an inherently progressive discipline seeking to set enduring goals and ideas to guide future policy, but is simultaneously a

² The characterization of strategy as an “accordion word” was made by Casper Weinberger in the context of the adoption of the concept of strategy by the American business community. US DoD, Report of the Secretary on the FY 1987 Budget, 33.
³ In his concurring opinion in Jacobellis v. Ohio, 378 U.S. 184 (1964) in relation to pornography, Associate Justice of the Supreme Court of the United States Potter Stewart stated: “I shall not today attempt further to define the kinds of material I understand to be embraced within that shorthand description; and perhaps I could never succeed in intelligibly doing so. But I know it when I see it, and the motion picture involved in this case is not that.” This association has been made in Timothy Andrews Sayle “Defining and Teaching Grand Strategy,” The Telegram 4 (January 2011).
retrospective discipline that seeks to draw insight from the past in order to project towards the future.  

Sprouting out of the advent of critical military history by Henry Lloyd, Dietrich von Bülow’s early attempt to differentiate between tactics and strategy, and the influence of Napoleonic military theorists, the general concept originates with naval historian Sir Julian S. Corbett. The adolescence of the concept in the post-World War I writings of J.F.C. Fuller, Basil Henry Liddell Hart, and Edward Mead Earle was a natural reaction to the added complexity of global-scale industrial warfare. As Beatrice Heuser notes:

Until the First World War, ‘strategy’ was used by most writers to mean something below politics in a hierarchy of determinants. Since then, terms like ‘grand strategy’ or ‘major strategy’ (as opposed to ‘pure strategy’ or ‘minor strategy’) have been coined, embracing the pursuit of political ends (primarily in international relations) not only with military tools, but also with diplomatic, economic or even cultural instruments. The Cold War with its blurred distinction between war and peace finally pushed ‘strategy’ over the fence up to the level of politics, leading to a ‘conflation of strategy and politics.’ One attempt to bring clarity to this area is the introduction particularly in Britain of the term ‘grand strategy’, referring to the way political aims are translated into the use of different available tools of state politics. But the expansion of the word ‘strategy’ in contemporary usage continues.

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6 Lukas Milevski notes that early writers employing the general idea of grand strategy, such as Corbett, Fuller, Liddell Hart, and Earle, all had their own interpretation of grand strategy and none ever justified their own definition. Lukas Milevski, “The Mythology of Grand Strategy,” Infinity Journal 3.1 (Winter 2012): 32.
8 Heuser, Evolution of Strategy, 27.
This expansion has continued into the twenty-first century with various grand strategy conceptions being used to describe the pursuit of political aims with a wide array of state instruments, to account for a blurring of distinctions between war and peace, and to address a “conflation of strategy and politics.”

As a result of its pedigree within the military arts and sciences, contemporary conceptions of grand strategy – well represented in the works of modern scholars such as Paul Kennedy, John Lewis Gaddis, Edward Luttwak, Barry Posen, Robert Art, and William C. Martel – remain closely linked to the act of applying or threatening force to achieve defence or foreign policy objectives. Echoing this military lineage, Dennis Drew and Donald Snow observe:

Grand strategy is the highest level connection and primary interface between nonmilitary instruments of power and the military establishment. This is an important point for at least three reasons. First, grand strategy becomes the focal point for arguments about the utility of military force in international relations. This was particularly important in the nuclear age because the commitment of forces to combat could lead to escalation and unintended superpower confrontation. Second, in a major “conventional” war of any significant duration, the nonmilitary instruments of power must be mobilized in support of the military establishment and its prosecution of the war. Conversely, how a war is prosecuted depends, in large part, on how well the military forces are supported. Third, a “package” approach was required to combat the so-called revolutionary wars in the third world that had become prevalent in the nuclear age. The package was a sophisticated orchestration of political, psychological, economic, and military actions calculated to dry up support for revolutionary insurgents and to destroy their military capability. American efforts in Vietnam, for example, were criticized for purported overreliance on combat operations and lack of attention to pacification efforts (a failure to successfully address the nonmilitary roots of the problem) and for a lack of coordination between military and nonmilitary actions.

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The traditional Clausewitzian interpretation of strategy as “the use of an engagement for the purpose of the war” underwrites grand strategy.\(^\text{11}\) Within the “package” approach, the implied threshold for a grander strategy is met when nonmilitary instruments of state are added to augment the application or threat of force by the military establishment, thereby providing a wider array of engagement options.

Edward Luttwak has suggested that regardless of explicit statements of defined objectives, documents, or even the existence of a formal infrastructure charged with drafting and implementing grand strategy, inevitably “all states have a grand strategy, whether they know it or not.”\(^\text{12}\) This idea originates with Luttwak’s observation that the Byzantine Empire thrived for centuries despite significant vulnerabilities and resource limitations due to its unique ‘strategic culture’, rather than bureaucratic mechanisms or tangible instruments of power. Luttwak presents grand strategy as simply a “level” at which knowledge and persuasion interact with the tangible instruments of state power to regulate outcomes in a competitive world of states pursuing their own grand strategies.\(^\text{13}\) But Luttwak’s idea of an unseen grand strategy level is problematic in its tendency to encourage observations of a grand strategic pattern in decision-making where such a majestic design may not have in fact guided the chosen courses of action.

To conclusively identify instances or patterns of policy decision-making as being guided by an intended grand strategy is difficult due to the reality that the concept has no universally recognized abiding definition, and therefore provides little in terms of an easily accessible common frame of reference. As Hal Brands asks:

\(^{11}\) Clausewitz, *On War (1984)*, 177.
\(^{12}\) Luttwak, *Grand Strategy of the Byzantine Empire*, 422.
\(^{13}\) Ibid., 408-418.
But what exactly is “grand strategy”? Why is it so important and, it would seem, so elusive? Grand strategy, it turns out, is one of the most slippery and widely abused terms in the foreign policy lexicon. The concept is often invoked but less often defined, and those who define the phrase do so in a variety of different, and often contradictory, ways. The result is that discussions of grand strategy are often confused or superficial. Too frequently, they muddle or obscure more than they illuminate.¹⁴

While an overall lack of consensus as to what grand strategy actually means or looks like adds confusion and complexity to its study, it also provides for opportunities to observe and characterize behaviour as a grand strategy based solely on the perception and interpretive lenses of the observer. Hence, it is important to critically examine its evolution and various conceptions with attention to the fortes and pitfalls of accompanying perceptions and interpretive lenses.

Conceptions of Grand Strategy

An early germination of what would eventually become known as grand strategy can be deduced from Jomini’s observation “the great ends of strategy is to be able to assure real advantages to the army by preparing the theatre of war most favorable for its operations…”¹⁵ Expanding beyond Jomini’s purely military frame of reference, grand strategy is comparable to preparing real advantage for the nation; something akin to the concept of the “general Advantage of Canada” referenced in the Canadian Constitution.¹⁶ The influence of Clausewitz on the incubation of grand strategic thought emanates primarily from subsequent efforts to challenge the underlying assumptions, limitations, and common misconceptions of his theoretical construct

of war. As evidenced by his observation that “[i]f war be a continuation of policy, as Clausewitz…declared, it must necessarily be conducted with a view to post-war benefit,” B.H. Liddell Hart’s post-World War I rebuttals of what he saw as the Clausewitz-inspired “dogmatic rigidity” of the true aim of war being “the destruction of the enemy’s main forces on the battlefield” fed his arguments for the indirect approach.¹⁷

Modern usage of the expression originates formally with naval historian Sir Julian S. Corbett’s bifurcation of strategy into major (or grand) strategy and minor strategy in his 1906 Royal Naval War College student handout.¹⁸ Corbett’s “Strategical Terms and Definitions Used in Lectures on Naval History,” often referred to as the “Green Pamphlet,”¹⁹ was utilized to provide the theoretical foundation for the War Course at the Royal Navy War College.²⁰ Corbett suggested:

Strategy is the art of directing force to the ends in view. Classified by the object it is Major Strategy, dealing with ulterior objects; Minor Strategy, with primary objects.

Major Strategy (always regarding the ulterior object) has for its province the plan of the war, and includes: (1) Selection of the immediate or primary objects to be aimed at for attaining the ulterior object; [and] (2) Selection of the force to be used, i.e., it determines the relative functions of the naval and military forces.

Minor Strategy has for its province the plans of operations. It deals with – (1) The selection of the “objectives,” that is, the particular forces of the enemy or the strategical points to deal with in order to secure the object of the particular operation; [and] (2) The directing of the force assigned for the operation.²¹

¹⁹ Reproduced in Appendix to Corbett, Some Principles, 305-25.
²⁰ For a brief background on this document see J.J. Widen, Theorist of Maritime Strategy: Sir Julian Corbett and his Contribution to Military and Naval Thought (New York: Routledge, 2016), 5.
²¹ Corbett, “Strategical Terms and Definitions,” 308.
In a corresponding note, Corbett clarified:

Major Strategy in its broadest sense has also to deal with the whole resources of the nation for war. It is a branch of statesmanship. It regards the Army and Navy as parts of one force, to be handled together; they are instruments of war. But it also has to keep in view constantly the politico-diplomatic position of the country (on which depends the effective action of the instrument), and its commercial and financial position (by which the energy for working the instrument is maintained). The friction of these two considerations is inherent in war, and we call it the deflection of strategy by politics. It is usually regarded as a disease. It is really a vital factor in every strategical problem. It may be taken as a general rule that no question of grand strategy can be decided apart from diplomacy, and vice versâ. For a line of action of an object which is expedient from the point of view of strategy may be barred by diplomatic considerations, and vice versâ. To decide a question of grand strategy without consideration of its diplomatic aspect, is to decide on half the factors only. Neither strategy or diplomacy has ever a clean slate. This interaction has to be accepted by commanding officers as part of the inevitable “friction of war.” A good example is Pitt’s refusal to send a fleet into the Baltic to assist Fredrick the Great during the Seven Years War, for fear of compromising our relations with the Scandinavian Powers.22

The historical roots of the modern concept of grand strategy can be seen in the post-World War I writings of J.F.C. Fuller, Basil Henry Liddell Hart, and Edward Mead Earle.

In 1923, Fuller presented grand strategy as an overarching force for unifying, controlling, and directing national spirit during peace with a view to optimizing the nations’ will to win future wars:

The soldier does not only think of war as a compartment of human activity, but as a nest of pigeon-holes: strategy, tactics, organization, administration, etc., etc., each nest being crammed with pill-boxes – infantry tactics, cavalry tactics, artillery tactics, etc., etc. The danger underlying these uncorrected values is to be sought in the temptation to invest them with individual, that is separate, existences, and then, when combined action is demanded, to produce a mixture of values in place of a compound.

War may be compared to a pyramid possessing a base and three surfaces. Its base is represented by civil moral and resources, and its three surfaces, or sides, by the land, sea and air forces. Our great work is to build this pyramid… Whatever

22 Corbett, “Strategical Terms and Definitions,” 308.
period of war we may examine, the base of this pyramid is, from its military aspect, the moral of the civil population and the commercial and industrial resources at their disposal. This base gives stability to the whole figure, it forms the fourth surface uniting the three above it. If we compare the three military surfaces to earth, water and air, then the civil will may be likened to fire, the extinguishment of which in war is the object of the three military elements. When these four elements are compounded, a fifth element emanates from the compound, the element of spirit or the national will to exist; it is the driving force of all warlike activities. During peace time this spirit is ever present, and though its nature, during war, does not change, the resistance offered to its progress is greater, and the relationship between this resistance and the will to win gives to any particular war its specific character.

During peace or war, our object is to conserve and control this spirit; consequently, we must understand the probable resistance to be met with, for otherwise we shall not be able to gauge the character of war, and not being able to gauge the character we shall not know what type of warfare will prove the most efficient and economical. This control and direction of the will to win and all the means whereby this will may be expressed I will call grand strategy.  

In explaining the object of grand strategy, Fuller offered:

The transmission of power in all its forms, in order to maintain policy, is the aim of grand strategy, its actual employment being the domain of grand tactics. While strategy is more particularly concerned with the movement of armed masses, grand strategy, including these movements, embraces the motive forces which lie behind them both – material and psychological. From the grand strategical point of view, it is just as important to realize the quality of the moral power of a nation, as the quantity of its man-power, or to establish moral communication by instituting a common thought – the will to win throughout the nation and the fighting services. The grand strategist we see is, consequently, also a politician and a diplomatist.

Fuller also extended grand strategy beyond periods of open conflict:

Paradoxical as it may seem, the resting time of the grand strategist is during war, for it is during peace that he works and labours. During peace time he not only calculates the resources in men, supplies and moral forces of all possible enemies, but, having weighed them, he, unsuspected by the enemy, undermines them by a plan. He attacks the enemy’s man and weapon power by advising his government, (i.) to enter into alliance with other nations, (ii.) to limit his material resources by

gaining actual or fiscal control over commodities the enemy's country cannot produce; and, according to their ethics, his government attacks the enemy morally either by fostering sedition in his country or by winning over the approval of the world by the integrity of its actions.25

To war plans there can be no finality, for every nation is a potential enemy, and, as the policy of each nation changes, so must the plan change with it, and whatever the plan may be, the commercial and moral powers of the nation should not be squandered or degraded when it is put into force. Finally, the plan or plans having been agreed upon, the fighting forces should unitedly be trained to carry them out.26

Fuller was in essence attempting to highlight what is now termed a “whole-of-government approach,” designed to integrate “the collaborative efforts of the departments and agencies of a government to achieve unity of effort toward a shared goal.”27

In a similar vein of seeking to elevate the nations’ effectiveness in future wars, Basil Henry Liddell Hart employed the term ‘grand strategy’ in 1925 by suggesting that “[i]t is the function of grand strategy to discover and exploit the Achilles’ heel of the enemy nation; to strike not against its strongest bulwark but against its most vulnerable spot.”28 By 1929 Hart had refined his view of grand strategy with an extension of its boundary condition into the nations’ prosperity in the subsequent peace:

As tactics is an application of strategy on a lower plane, so strategy is an application on a lower plane of ‘grand strategy.’ If practically synonymous with

25 Fuller, Reformation of War, 220.
26 Ibid., 220.
27 United States Institute of Peace, “Whole-of-Government-Approach,” in Glossary of Terms for Conflict Management and Peacebuilding, ed. Dan Snodderly (Washington, DC: United States Institute of Peace, 2011), 54. In Canada, a “whole-of-government framework” is championed by the federal government to “map the financial and non-financial contributions of federal organizations receiving appropriations by aligning their program activities to a set of high level outcome areas defined for the government as a whole.” Treasury Board of Canada Secretariat, Report on Plans and Priorities: 2016-17 (Ottawa: Treasury Board of Canada Secretariat, 2016), 20. A related concept is the “3D” (Diplomacy, Defence, Development) or “joined-up government” approach that has been championed as part of post-Cold War conflict resolution efforts. Department of Foreign Affairs and International Trade, Canada’s International Policy Statement: A Role of Pride and Influence in the World – Diplomacy (Ottawa: Department of Foreign Affairs and International Trade, 2005), 10.
the policy which governs the conduct of war, as distinct from the permanent policy which formulates its object, the term ‘grand strategy’ serves to bring out the sense of ‘policy in execution.’ For the role of grand strategy is to coordinate and direct all the resources of a nation towards the attainment of the political object of the war – the goal defined by national policy…Furthermore, while the horizon of strategy is bounded by the war, grand strategy looks beyond the war to the subsequent peace. It should not only combine the various instruments, but so regulate their use as to avoid damage to the future state of peacefulness, secure and prosperous. Little wonder that, unlike strategy, the realm of grand strategy is for the most part terra incognita [*unknown land*]!  

With grand strategy being thus interpreted in the pre and post-war horizontal domains, Edward Mead Earle’s contribution in 1943 was to extend the vertical interpretation of grand strategy beyond policy by suggesting “[t]he highest type of strategy – sometimes called grand strategy – is that which so integrates the policies of and armaments of the nation that the resort to war is either rendered unnecessary or is undertaken with the maximum chance of victory.”  

Earle’s perspective corresponds rather closely with Sun Tzu’s “factors from which victory can be known.”

The seeds of Corbett, Fuller, Hart, and Earle have subsequently germinated into a jungle of grand strategy definitions and interpretations. The modern concept of grand strategy is often used as a description of how the world should be, envisioning a set of policies to “mold the international environment by regulating international regimes, influencing the foreign policy choices made by other states, and shaping or even determining the domestic regime.” In his recent study of the evolution of modern grand strategic thought, Lukas Milevski has suggested

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six major modern interpretations of grand strategy attributable to scholars Paul Kennedy, John Lewis Gaddis, Edward Luttwak, Barry Posen, Robert Art, and William C. Martel.\textsuperscript{33}

Art suggests grand strategy “concentrates on how military instruments can best be used to support foreign policy goals.”\textsuperscript{34} Posen sees grand strategy as “a political-military, means-end chain, a state’s theory about how it can best ‘cause’ security for itself.”\textsuperscript{35} Gaddis argues that “grand strategy is the calculated relationship of means to large ends. It’s about how one uses whatever one has to get to wherever it is one wants to go.”\textsuperscript{36} Luttwak characterizes grand strategy as simply “the level of final results,”\textsuperscript{37} while Kennedy perceives it as “the evolution and integration of policies that should operate for decades, or even centuries.”\textsuperscript{38}

William Martel’s interpretation, a form that has garnered significant attention as a result of a perceived lack of grand strategic achievement in the so called “9/11 Wars,”\textsuperscript{39} appreciates grand strategy as the ideology underlying state action.\textsuperscript{40} Martel notes:

In recent centuries, the term strategy described political, economic, and military means that policy makers use to accomplish the state’s broad objectives. In effect, strategy tells us what policies to pursue, whereas foreign policy is about the how to do so. Missing is the broad question of why the state pursues such policies using particular strategies, which is the precise function of grand strategy...grand strategy establishes and then balances the state’s priorities in terms of the general framework within which the state accomplishes its foreign policy goals.\textsuperscript{41}

\textsuperscript{33}Milevski, “Evolution of grand strategic thought,” 2-3.
\textsuperscript{34}Robert J. Art, America’s Grand Strategy and World Politics (London: Routledge, 2009), 1.
\textsuperscript{36}Gaddis, “What is Grand Strategy?” 7.
\textsuperscript{37}Luttwak, Strategy, p. 207.
\textsuperscript{39}Jason Burke, The 9/11 Wars (Toronto: Penguin Group, 2011).
\textsuperscript{40}Milevski, “Evolution of grand strategic thought,” 2.
\textsuperscript{41}William C. Martel, Grand Strategy in Theory and Practice: The Need for an Effective American Foreign Policy (New York: Cambridge University Press, 2015), 4.
The potential problem with such an interpretation is that grand strategy in this ideological form is essentially a lens of convenience through which the explorations of such questions may be filtered and assumptions may be institutionalized in an effort to build consensus and simplify communications rather than truly identify the most appropriate direction for a nation. This has potential of “situating the estimate” – or simply reinforcing and justifying the pre-determined course of action.42

Precisely because of the pitfalls of the ideological interpretation of grand strategy, the notion has been ridiculed as “grand flattery.”43 As Hal Brands notes, policymakers often delude themselves that it is feasible for them to impose their preferential view of order on a world that is characterized by complexity and disorder.44 Brands has noted in relation to Harry Truman’s Indochina policy, Henry Kissinger’s approach towards South Asia and Angola, and George W. Bush’s global war on terrorism, that grand strategy has negative utility for dealing with complex situations.45 While its simplicity can provide a central focus, the accompanying “distortion or myopia” can have counterproductive effects.46 An “incessant push to strategize grandly” may in fact work principally as a mechanism to manufacture the threats it intends to address.47 “Strategy likes enemies” because an adversary allows for a level of focus that obscures the true complexity of the environment.48 A dangerous situation arises when this search for simplicity creates an adversarial condition where one did not previously exist. Paradoxically, this self-generated

42 Infused within modern military planning doctrine, “The Estimate” is a reasoned consideration of what must be done, along with an analysis of the circumstances affecting how it is to be done, with the intent of arriving at a sound course of action. It seeks to remove extraneous detail and allow focus on issues of critical importance to the accomplishment of a military mission. DND, B-GL-300-003/FP-000, 123-27.
44 Brands, What Good is Grand Strategy? 256n.
46 Ibid.
48 Ibid.
adversarial element acts to further simplify interpretations of the environment and enhances focus on the original grand strategic vision.

The threat intensification theme is evident in challenges to the portrayal of “containment” as an effective grand strategy. Thomas Meany and Stephen Wertheim posit a contrasting view of the Cold War:

Grand strategy, despite having posited a clear, single enemy, could not resolve the central conundrum of the cold war. In the end, the United States needed fewer grand strategies, not better ones. It needed more people willing to question whether the Soviets were bent on world domination and fewer people predisposed to view the world in adversarial terms. Rather than a straightforwardly demanding grand strategy, the cold war was in part created and sustained by the American desire for one.  

While Meany and Wertheim acknowledge that a “single overarching purpose” may exist in concert with an “all-consuming threat,” they argue that making the assumption that grand strategy is required at all times “becomes a recipe for simplifying the world and magnifying threats.” Due to its promise of “synoptic knowledge,” it can be argued that grand strategy is “less likely to respond to real problems than to enlarge them to ‘grand’ proportions.”

Several examples of this theme of magnifying threats are evident in U.S. policy since the Second World War. It has been noted that George Kennan – generally credited with prompting the policy of “containment” that became the foundation of U.S./NATO grand strategy throughout the Cold War (1947–1989) – recorded in his memoir that he revisited his 1947 Long

49 Meany and Wertheim, “Grand Flattery.”
50 Ibid.
51 Meany and Wertheim argue that should this be the case, not having a grand strategy may in fact be the best grand strategy. Ibid., 27-31.
52 It was in his anonymous article penned for Foreign Affairs that Kennan remarked “[t]he main element of any United States policy toward the Soviet Union must be that of a long-term, patient but firm and vigilant containment of Russian expansive tendencies.” X [George Kennan], “The Sources of Soviet Conduct,” Foreign Affairs (July 1947). For further on the development of the containment policy and Kennan’s role see United States National
Telegram with “horrified amusement” due to its tone being “like one of those primers put out by alarmed congressional committees or by the Daughters of the American Revolution, designed to arouse the citizenry to the dangers of the Communist conspiracy.” Henry Kissinger remarked in retrospect that the United States essentially created a national interest by simply being in Vietnam, suggesting that grand strategy was used to effectively simplify a complex problem through the amplification of an enemy.

Kennan and Kissinger’s sober second looks illustrate what Arnold Wolfers has described as the “paradox of security policy”:

It implies that national security policy, except when directed against a country unalterably committed to attack, is more rational the more it succeeds in taking into consideration the interests, including the security interests, of the other side. Only in doing so can it hope to minimize the willingness of the other to resort to violence. Rather than to insist, then, that under all conditions security be sought by reliance on nothing but defensive power and be pushed in a spirit of national selfishness towards the highest targets, it should be stressed that in most instances efforts to satisfy legitimate demands of others are likely to promise better results in terms of security.


Kennan’s “Long Telegram” did not actually utilize the word containment. Rather he suggested “[w]e must formulate and put forward for other nations a much more positive and constructive picture of sort of world we would like to see than we have put forward in past. It is not enough to urge people to develop political processes similar to our own. Many foreign peoples, in Europe at least, are tired and frightened by experiences of past, and are less interested in abstract freedom than in security. They are seeking guidance rather than responsibilities. We should be better able than Russians to give them this. And unless we do, Russians certainly will.” George Kennan to George Marshall, 861.00/2-2246: Telegram, 22 February 1946, Part 5: Practical Deductions From Standpoint of US Policy.


Ibid.

Wolfers suggests that this rational consideration of opposing interests was the essence of what George Kennan was trying to portray in his Long Telegram.\textsuperscript{57} This argument is perhaps validated by Kennan himself in his 1966 statement to the United States Foreign Relations Committee that “there is more respect to be won in the opinion of this world by a resolute and courageous liquidation of unsound positions than by the most stubborn pursuit of extravagant or unpromising objectives.”\textsuperscript{58}

Ardent grand strategist John Lewis Gaddis maintains a contrasting view. The elements of oversimplification and threat magnification that Kennan attempted to warn against are clearly evident in Gaddis’ description of five characteristics of grand strategy: breadth; maintenance of an objective; response to the unexpected; moral judgments; and great language.\textsuperscript{59} While he acknowledges that grand strategy is “an ecological enterprise” that requires the taking of “information from a lot of different fields, evaluating it intuitively rather than systematically, and then acting,” he suggests that “to remain broad you’ve got to retain a certain shallowness.” By quoting Henry Kissinger’s observation that “a president with the shallowest academic background was to develop a foreign policy of extraordinary consistency and relevance,” Gaddis offers Ronald Reagan as an example of how educational shallowness, rather than that common academic preference for specialization and professionalization, appears to be an advantage in the

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\textsuperscript{57} Wolfers, “An Ambiguous Symbol,” 161.

\textsuperscript{58} Cited in James Eayrs, “Foreign Policy Review – I: Future Roles for the Armed Forces of Canada,” \textit{Behind the Headlines} 28.1-2 (April 1969), 12. In the tradition of Thucydides’ teachings about understanding the future through knowledge of the past, Kennan was an advocate of historical study. In 1959, he observed that only the study of history “can expose the nature of man as revealed in simpler and more natural conditions, where that which was elemental was less concealed by artificialities.” George F. Kennan, “The Experience of Writing History,” in \textit{The Vital Past: Writings on the Uses of History}, ed. Stephen Vaughn (Athens: University of Georgia Press, 1985), 97.

conduct of grand strategy. Gaddis would appear to be arguing that successful grand strategists require something more than the centripetal hedgehog style of thinking common in military strategy, yet he simultaneously champions a contradictory hedgehog style for grand strategic leadership.

For Gaddis, grand strategy requires “setting an objective and sticking to it” and providing leadership by saying “here’s where we ought to be by such and such a time, and here’s how we’re going to get there” rather than systematically exploring all alternatives. Paradoxically, Gaddis also offers that “grand strategy requires the ability to respond rapidly to the unexpected. It acknowledges that trends can reverse themselves suddenly, that ‘tipping points’ can occur, and that leaders must know how to exploit them.” But in contrast to the academic tradition of being guided by theory, this reaction tends to favour intuition rather than systematic analysis.

Rounding out this view of grand strategy as leadership, Gaddis further suggests that:

[Grand strategy requires the making of moral judgments, because that’s how leadership takes place: in that sense, it’s a faith-based initiative. You have to convince people that your aspirations correspond with their own, and that you’re serious about advancing them. You don’t lead by trying to persuade people that distinctions between good and evil are social constructions, that there are no universal standards for making them, that we should always try to understand the viewpoint of others, even when they are trying to kill us.]61

To effectively persuade and convince people, Gaddis advises that “grand strategy requires great language” in the sense that “words are themselves instruments of power.”62

President Bill Clinton’s view of the politician’s role as “to be able to crystallize complexity in a way people get right away” is an illustration of this characteristic of ‘power

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60 Gaddis, “The Past and Future.”
61 Ibid.
62 Ibid.
Clinton mused his Administration’s “operative problem of the [immediate post-Cold War period was] that a bunch of smart people [hadn’t] been able to come up with a new slogan, and saying that there [weren’t] any good slogans [wasn’t] a slogan either.”64 As such, Clinton had tasked his staffers to imitate the conceptual simplicity of “containment” by reducing the complexity of the post-Cold War world into a single term expression or slogan.65 George Kennan, ever conscious of how concepts and ideas can be misappropriated,66 warned that such an attempt to package U.S. foreign policy neatly into a word or phrase was imprudent.67 In summarizing this engagement, James Boys explains:

[Kennan] lamented that in retrospect he “had tried to pack so much diagnosis and prescription into three syllables,” a folly that led to “great and misleading oversimplification of analysis and policy.” Instead, Kennan recommended drafting a “thoughtful paragraph or more, rather than trying to come up with a bumper sticker.” When notified, President Clinton observed wryly, “That’s why Kennan’s a great diplomat and scholar and not a politician.”68

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64 Talbott, The Russia Hand, 134.
65 Ibid.
66 Paul Nitze, who succeeded Kennan as Director of Policy Planning within the United States Department of State, interpreted Kennan’s argument within the ‘X article’ that Soviet pressure had to “be contained by the adroit and vigilant application of counterforce at a series of constantly shifting geographical and political points” within a military sense. Rather than Kennan’s original political and economic conception that had informed President Truman’s version of containment outlined in National Security Council Report 20/4 (1948), it was Nitze’s more militant version of containment that influenced the NSC 68 (1950). While Kennan had been the primary architect of a conception of containment that deemphasized military action, he became a critic of the more militant variant propagated in NSC 68. Kennan, “The Sources of Soviet Conduct.” Michael J. Gallagher, “Intelligence and National Security Strategy: Reexamining Project Solarium,” Intelligence and National Security (2014), 5. See also Gary B. Nash, “Containment Defined,” The American People: Creating a Nation and a Society, 6th ed. (New York: Pearson Education, 2008), 825.
67 Meany and Wertheim, “Grand Flattery,” 27-31. It is interesting to note that divergence of view between the Clinton Administration and George Kennan in the immediate post-Cold War period. As related by former U.S. State Department official Strobe Talbott, President Bill Clinton’s reading of Presidents Franklin Roosevelt and Harry Truman was that neither were guided by grand strategies asserting American leadership. While undoubtedly guided by “powerful instincts about what had to be done,” Clinton’s view was that Roosevelt and Truman “just made it up as they went along.” Clinton’s perception on “strategic coherence” during the Cold War was that of a “huge myth” retrospectively enacted by academics, memoirists, and “the chattering classes.” Clinton is recorded as asserting that “[s]ure, the cold war was helpful as an organizing principle, but it had its dangers because every welt on your skin became cancer.” Talbott, The Russia Hand, 133.
68 Boys, Clinton’s Grand Strategy, 84.
National Security Advisor Anthony Lake ultimately chose the largely-forgotten phrase “Democratic Enlargement” as the abridging descriptor of the Clinton Administration’s post-Cold War policies.  

In challenging Gaddis’ notion that a certain level of shallowness is required in order to retain broad perspective, Meany and Wertheim contend that superficial thought is something that needs to be overcome rather than embraced. They argue that due to its promise of “synoptic knowledge,” grand strategy is “less likely to respond to real problems than to enlarge them to ‘grand’ proportions.” Meany and Wertheim observe:

The more the output of grand strategists is examined, the more the enterprise comes down to a desire by statesmen, and their would-be tutors, not so much to understand the world as to stake their place in it. What Kennan, Kissinger and Yale’s grand strategists share is a deep respect for the exercise of human judgement at the highest echelons of power, along with a faith that far-seeing individuals can rise above structural forces and political exigencies to shape history. In this regard, grand strategy is nostalgic less for the cold war than for a fabled earlier age when citizens trusted their leaders and leaders heeded their intuition. The grand strategists prefer to quote The Art of War or the Seven Pillars of Wisdom than to busy themselves with policy briefs…

Paradoxically, those that tend towards superficial analysis to justify their judgement and intuition are generally not as “far-seeing” as they may claim to be. While they may hold an optimistic belief in “the idea that states can combine vision and rationality with power,” or act as though policymakers can “salvage order from chaos and impose their own meaning on events,” they are

69 Boys, Clinton’s Grand Strategy, 85.
71 Ibid.
72 This is a reference to John Lewis Gaddis and Yale University’s International Security Studies Grand Strategy Program.
also prone to inept implementation of overambitious grand strategies based on faulty assumptions.\textsuperscript{74}

The existence of such foresight is certainly challenged by Philip Tetlock’s work on political judgement that observed “[w]hen we pit experts against minimalist performance benchmarks – dilettantes, dart-throwing chimps, and assorted extrapolation algorithms – we find few signs that expertise translates into greater ability to make either ‘well-calibrated’ or ‘discriminating’ forecasts.”\textsuperscript{75} Such empirical studies would suggest that policymakers often delude themselves that it is feasible for them to impose their preferential view of order on a world that is characterized by complexity and disorder.\textsuperscript{76} Grand strategy has thus been characterized as analogous to “grand flattery”;\textsuperscript{77} a “holy grail” for hedgehogs seeking to neatly resolve the true complexity of contemporary policymaking.\textsuperscript{78} It might follow that the “simple and confident” hedgehog style of Gaddis’ interpretation of grand strategy is perhaps a poor foundation for informing the pursuit of long-term objectives in a complex world since the hedgehog’s predictions of their future environment could be expected to be relatively poor.

The real-world limits of judgement and intuition are clearly evident in the modelling of the market in the economics field. As Stuart Kaufmann notes:

General equilibrium theory, the marvelous invention of Arrow and Debreu, is odd enough. Posit all possible conditional goods, bananas delivered tomorrow if it rains in Manitoba. Posit the capacity to exchange all possible such oddities, called complete markets. Posit infinitely rational economic agents with prior expectations about the future, and it can be shown that these agents, buying and selling rights to such goods at a single auction at the beginning of time, will find

\textsuperscript{74} Brands, \textit{What Good is Grand Strategy?} 190, 192.
\textsuperscript{76} Brands, \textit{What Good is Grand Strategy?} 256n.
prices for these goods such that markets will clear as the future unfolds. Remarkable, marvelous indeed. But it was easier in the days of hunter-gatherers.

Balderdash. In the absence of complete markets the theory fails. Worse, infinite rationality is silly, we all know it. The difficulty is that if there were a “smart” knob, it always seems better to tune that knob towards high smart. The problem of bounded rationality looms as fundamental as price formation. Since Herbert Simon coined the term all economists have known this. None, it appears, has known how to solve it.\(^79\)

As was suggested in Chapter 1, ends-means-ways pathways for organizing efforts to achieve military victory can be perceived as a projection of the application of force in accordance with Newton’s laws of motions. With sufficient attention to the teachings of strategic thought, judgement and intuition can tend towards infinite rationality for military problems involving a cause-effect relationship based in the utility of force. As the effects of friction act simultaneously on both sides to balance the dialectic of wills, the result of warfare can be seen to approximate the clearing behaviour of a complete market. It can thus be argued that military strategy can tend towards the realization of the Arrow-Debreu model of a competitive economy in which the conditions of victory or defeat represent the equilibrium of the particular market.\(^80\) But, as with globalized markets, the grand strategy problem challenges bounded rationality with its limitless permutations of ends, ways, and means.

Borrowing from biological science studies addressing the fundamental Darwinian oversights of how organisms manage to adapt and learn and how complex systems coordinate

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behavior, the field of economics began to address the bounded rationality problem by embracing the science of complexity. As Kaufmann observed:

In a deep sense, E. coli and IBM know their respective worlds in the same way. Indeed, E. coli and IBM have each participated in the coevolution of entities which interact with and know one another. The laws which govern the emergence of knower and known, which govern the boundedly rational, optimally complex biological and social actors which have co-formed, lie at the core of the science of complexity. This new body of thought implies that the poised coherence, precarious, subject to avalanches of change, of our biological and social world is inevitable. Such systems, poised on the edge of chaos, are the natural talismen of adaptive order.

In contrast to Darwinian Theory positing that organisms *evolve* through successive accumulation of useful random variations, complexity science acknowledges that:

Organisms, economic entities, nations, do not evolve, they coevolve. Almost miraculously, coevolving systems, too, mutually achieve the poised edge of chaos. The sticky tongue of the frog alters the fitness of the fly, and deforms its fitness landscapes that is, what changes in what phenotypic directions improve its chance of survival. But so too in technological evolution. The automobile replaced the horse. With the automobile came paved roads, gas stations hence a petroleum (sic) industry and war in the Gulf, traffic lights, traffic courts, and motels. With the horse went stables, the smithy, and the pony express. New goods and services alter the economic landscape. Coevolution is a story of coupled deforming “fitness landscapes”. The outcome depends jointly on how much my landscape is deformed when you make an adaptive move, and how rapidly I can respond by changing “phenotype”.

Kaufmann notes that due to this co-evolution over time, even an infinitely rational agent with limitless analytical tools cannot predict beyond a certain period. He notes:

…even infinitely rational agents with unbounded computer time should only calculate a certain optimal number of periods into the future, a “Tc”, to decide how to allocate resources at each period. Calculation yet further into the future will leave the infinitely rational agents progressively less certain about how to allocate resources in the current period. In short, even granting the economist

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82 Ibid., 299.
83 Ibid., 303.
complete knowledge on the part of agents, there is an optimal distance into the future to calculate to achieve optimal allocation of resources. Bounded rationality not only suffices, but is optimal. There is an optimal tuning of the “smart knob”. If this obtains, then the same results should extend to cases with incomplete knowledge in fixed as well as evolving economies. Thank goodness. If evolution itself tunes how smart we are, perhaps we are optimally smart for our worlds.\textsuperscript{84}

An element of this optimal forecasting limit is found in Tetlock’s work on expert political judgement, which found that modest but real foresight is possible depending on the style of thinking. His twenty year study found consistently better forecasting performance was associated with the “complex and cautious” style of thinking of foxes.\textsuperscript{85} Tetlock is careful to note that his fox/hedgehog model is not an end, but a starting point. Like all models meant to simplify, his model is an approximation of reality. And as statistician George Box observed, “essentially, all models are wrong, but some are useful.”\textsuperscript{86} Subsequent work by Tetlock has suggested that a unique style of thinking characteristic of “superforecasters” indeed exists.\textsuperscript{87} His “Ten Commandments for Aspiring Superforecasters” provide themes that have been experimentally demonstrated to enhance accuracy in real-world forecasting, but also reinforce the progressive decline in the utility of forecasting beyond an optimal distance, or “goldilocks zone of difficulty.”\textsuperscript{88}

\textsuperscript{84} Kaufmann, “The Sciences of Complexity,” 317.
\textsuperscript{85} Gardner, Future Babble, 27. Tetlock, Expert Political Judgement.
\textsuperscript{88} These ‘Ten (+1) Commandments’ are: triaging questions to those more likely to pay off; breaking seemingly intractable problems into tractable sub-problems; striking the right balance between inside and outside views; striking the right balance between under- and overreacting to evidence; looking for the clashing causal forces at work in each problem; striving to distinguish as many degrees of doubt as the problem permits but no more; striking the right balance between under- and overconfidence, between prudence and decisiveness; looking for the errors behind your mistakes but being aware of rearview-mirror hindsight biases; bringing out the best in others and letting others bring out the best in you; mastering the error-balancing bicycle; and not treating commandments as commandments. Tetlock and Gardner, Superforecasting, 277-85.
While Tetlock’s axioms imply that a moderate enhancement to forecasting accuracy within this goldilocks zone is feasible, Nassim Taleb’s work on the significance of “Black Swan Events” offers a noteworthy caution. Such an event is characterized by its “rarity, extreme impact, and retrospective (though not prospective) predictability.”\(^{89}\) Taleb suggests that “[a] small number of Black Swans explain almost everything in our world, from the success of ideas and religions, to the dynamics of historical events, to elements of our own personal lives.” He argues that “[t]he inability to predict outliers implies the inability to predict the course of history, given the share of these events in the dynamics of events.”\(^{90}\) Taleb identifies a significant incongruity in how humans tend to cope with this reality:

But we must act as though we are able to predict historical events, or, even worse, as if we are able to change the course of history. We produce thirty-year projects of social security deficits and oil prices without realizing that we cannot even predict these for next summer – our cumulative prediction errors for political and economic events are so monstrous that every time I look at the empirical record I have to pinch myself to verify that I am not dreaming. What is surprising is not the magnitude of our forecast errors, but our absence of awareness of it. This is all the more worrisome when we engage in deadly conflicts: wars are fundamentally unpredictable (and we do not know it). Owing to this misunderstanding of the casual chains between policy and actions, we can easily trigger Black Swans thanks to aggressive ignorance – like a child playing with a chemistry set.\(^{91}\)

He suggests that this behaviour reinforces an illusion of prognostic knowledge:

Our inability to predict environments subjected to the Black Swan, coupled with a general lack of awareness of this state of affairs, means that certain professionals, while believing they are experts, are in fact not. Based on their empirical record, they do not know more about their subject matter that the general population, but

\(^{89}\) Taleb describes the three attributes of a Black Swan Event as follows: “First, it is an outlier, as it lies outside the realm of regular expectations, because nothing in the past can convincingly point to its possibility. Second, it carries an extreme impact (unlike a bird). Third, in spite of its outlier status, human nature makes us concoct explanations for its occurrence after the fact, making it explainable and predictable.” Nassim Nicholas Taleb, \textit{The Black Swan: The Impact of the Highly Improbable} (New York: Random House, 2010), xxii.

\(^{90}\) Taleb, \textit{The Black Swan}, xxii.

\(^{91}\) Ibid., xxii-xxv.
they are much better at narrating – or, worse, at smoking you with complicated mathematical models. They are also more likely to wear a tie.\textsuperscript{92}

Rather than expending frivolous effort in trying to predict the unpredictable Black Swans, Taleb advocates adjusting to the existence by focusing on “antiknowledge, or what we don’t know.”\textsuperscript{93}

Paralleling Tetlock’s argument that forecasting is a skill that can be cultivated, Robert Kaplan encourages better understanding of the limits of the modern style of thinking that is rather detached from the physical realm. He suggests that it is a delusion for humans to believe that they are completely in control of their destinies.\textsuperscript{94} Kaplan’s recent study of the relevance of geography for the United States in the 21\textsuperscript{st} Century was guided by the aim of characterizing the fallacies of our current view of physical reality.\textsuperscript{95} Kaplan intimates:

My reporting over three decades has convinced me that we all need to recover a sensibility about time and space that has been lost in the jet and information ages, when elite molders of public opinion dash across oceans and continents in hours, something which allows them to talk glibly about what the distinguished \textit{New York Times} columnist Thomas L. Friedman has labelled a \textit{flat world}.\textsuperscript{96}

With the goal of challenging the view that “geography no longer matters,” Kaplan attempts to reintroduce readers to “decidedly unfashionable thinkers.”\textsuperscript{97} One of these thinkers is Ferdinand Braudel,\textsuperscript{98} who Kaplan suggests can guide us “to the attendant realization that the more we are aware of our limits, the more power we have to affect outcomes within them.”\textsuperscript{99}

\begin{footnotes}
\item[Taleb, \textit{The Black Swan}, xxv.]
\item[Ibid., xxv.]
\item[Kaplan, \textit{Revenge of Geography}, 322.]
\item[Ibid., xix.]
\item[Ibid.]
\item[Ibid.]
\item[Ferdinand Braudel is associated with “the Annales school” of French historians (founded in 1929) who contributed to \textit{Annales d'histoire e'conomique et sociale} [\textit{Economic and social history Annals}]; known as \textit{Annales: e'conomies, societe's, civilisations} since 1947.]
\item[Kaplan, \textit{Revenge of Geography}, 322.]
\end{footnotes}
Although Braudel has been criticised for his inclination towards geographic determinism, Kaplan observes:

> It was Braudel who helps us understand how the rich forest soils of northern Europe, which required little to make an individual peasant productive, led ultimately to freer and more dynamic societies compared to those along the Mediterranean, where poorer, more precarious soils meant there was a requirement for irrigation that led, in turn, to oligarchies. Such poverty-stricken soils, combined with uncertainty, drought-afflicted climate, spurred the Greeks and Romans in search of conquest.

In reviewing Braudel, H.R. Trevor-Roper highlights the significance of geography:

> Geography, climate, population determine communications, economy, political organization, but each can react upon the other; man is a social animal and is conditioned by the society in which he lives, as that society in turn is conditioned by its geographical and climatic matrix; and politics and ideas are limited not only by these external forces but by the political and intellectual deposit around them, which was similarly determined, and into which they fall.

Braudel offered that since the environment “establish[es] the general conditions of human life,” the study of geography “helps us to discover the almost imperceptible movement of history.”

In his study of the significance of Mediterranean geography on human activity, Braudel observed that:

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100 Kaplan remarks that “[g]eography, from a Greek word that means essentially a ‘description of the earth,’ has often been associated with fatalism and therefore stigmatized: for to think geographically is to limit human choice, it is said. But in engaging with such tools as relief maps and population studies I merely want to add another layer of complexity to conventional foreign policy analyses, and thus find a deeper and more powerful way to look at the world. You do not have to be a geographical determinist to realize that geography is vitally important. The more we remain preoccupied with current events, the more that individuals and their choices matter; but the more we look out over the span of the centuries, the more that geography plays a role.” Kaplan, *Revenge of Geography*, xix.


104 One of Braudel’s main themes is that “[a] double constraint has always been at the heart of Mediterranean history: poverty and uncertainty of the morrow. This is perhaps the cause of the carefulness, frugality, and industry of the people, the motives that have been behind certain, almost instinctive, forms of imperialism, which are sometimes nothing more than the search for daily bread. To compensate for its weaknesses, the Mediterranean has
…even in the investigation of short-term crises, we are often obliged to look to structural history for an answer. This is the sea-level by which we must measure everything else, the achievement of progressive cities for example but also the short-term historical phenomena which we sometimes tend to explain away too promptly, as if their shallow eddies were responsible for the deeper currents of history instead of the other way around. The fact is that economic history has to be rethought step by step, starting from these slow, sometimes motionless currents. Still waters run deep and we should not be misled by surface flurries.

Of particular relevance to grand strategists is Braudel’s use of the sea as an analogy for the “varying wavelengths of time.” As described by Barry Cunliffe, “[a]t the surface are the transient flecks of surf, whipped up and gone in a minute. These are carried on water enjoying a more gentle motion, that of the tide and of the swell; but further down, in the deep, are the sluggish, almost imperceptible, movements of the mass of water that bears everything.”

![Figure 2.1: Braudel’s Varying Wavelengths of Time](image)

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107 Cunliffe, *Europe Between the Oceans*, 18.
108 Adapted from Cunliffe, *Europe Between the Oceans*, Fig. 1.10, 18.
Braudel’s model divines historical time into the *longe durée* (geographic time), *conjoctures* (social time), and *l’historie événementielle* (individual time). Cunliffe has described these elements as follows:

At the base of it all is the *longe durée*, the deep rhythm of underlying forces influencing all human society, ‘a history in which all change is slow, a history of constant repetition, of ever recurring cycles’. This is geographical time – a time of landscapes that enable and constrain, of stable or slow developing technologies and of deep-seated ideologies.

Above this, at a rather faster wavelength, come the medium-term cycles. These Braudel refers to as *conjoctures* – a term that to French economists usually means ‘trends’ but to the Annales historians implies more specifically the changing trajectories of discrete systems, demographic, economic, agrarian and socio-political. These are essentially collective forces, impersonal and usually restricted in time to no more than a century.

Together the *longe durée* and *conjoctures* provided the basic structures, largely imperceptible to the individual, against which human life was played out. These structures are the frameworks that control human action. Like the landscape itself, they constrained and enabled.

The shortest-term cycle Braudel refers to as *l’historie événementielle* – events instigated by individuals creating diplomatic or political ripples. It is, he says, the history ‘richest in human interest’ yet events are little more than ‘surface disturbances, crests of foam that the tides of history carry on their strong backs…we must learn to distrust them’. Elsewhere he is even more dismissive of the history of events, describing it as ‘the actions of a few princes and rich men, the trivia of the past, bearing little relation to the slow and powerful march of history…These statesmen were, despite their illusions, more acted upon than actors’.

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110 Braudel takes this terminology for the wavelength of traditional history from Paul Lacombe and Francois Simiand’s *histoire événementielle* [episodic history]. As Braudel noted, “history, one might say, on the scale not of man, but of individual men, what Paul Lacombe and Francois Simiand called ‘*l’historie événementielle*’, that is, the history of events: surface disturbances, crests of foam that the tides of history carry on their strong backs. A history of brief, rapid, nervous fluctuations, by definition ultra-sensitive; the least tremor sets all its antennae quivering.” Braudel, *The Mediterranean*, 21.

Within this model, the daily variations of politics and diplomacy that are the mainstay of media reporting were simply the “transient flecks of surf” of the short-term \( l'historie événementielle \).\(^{112}\)

Kaplan contends that there is a need to:

…think of Braudel as simply encouraging us to take a more distant and dispassionate view of our own foibles. For example, reading Braudel, with the events of the first decade of the twenty-first century uppermost in one’s mind, it is impossible to avoid the question: Are the wars in Iraq and Afghanistan transient flecks of surf only; or are they part of something deeper, more profound, and structural in America’s destiny? For that matter, might World War I and World War II even, which saw violence on a scale never before experienced in history, belong merely to \( l'historie événementielle \)? Braudel, precisely because he places the events of humankind against the pressure of natural forces, facilitates thinking in terms of the \( longe durée \).\(^{113}\)

Within this notion of the \( longe durée \), Kaplan offered up geography as key to understanding events such as the Arab Spring\(^{114}\) through the proper contextualizing of the dynamics of the Arab World.\(^{115}\) He argues that those who have questioned post-Cold War U.S. foreign policy for its lack of long-term focus – for example Andrew Bacevich,\(^{116}\) Stephen Walt, John Mearsheimer,\(^{117}\) and others – underestimate the role that geographical peculiarities play in shaping the political landscape of the Middle East.

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\(^{112}\) Kaplan, *Revenge of Geography*, 323.

\(^{113}\) Ibid., 324.

\(^{114}\) The Arab revolt started in December 2010 in the Tunisian town of Sidi Bouzid when a fruit and vegetable vendor set himself on fire as an act of protest. Kaplan characterized the Arab Spring as an example of “the defeat of geography through the power of new communications technologies. Satellite television and social networking Internet sites have created a single community of protesters throughout the Arab world: so that democracy advocates in such disparate places as Egypt and Yemen and Bahrain are inspired by what has begun in Tunisia. Thus, there exists a commonality in the political situations of all these countries. But as the revolt has gone on, it has become clear that each country has developed its own narrative, which, in turn, is influenced by its own deep history and geography. The more one knows about the history and geography of any particular Middle Eastern country, therefore, the less surprised one will be about events there.” Kaplan, *Revenge of Geography*, xx.

\(^{115}\) Kaplan suggested that “[g]eography testified that Tunisia and Egypt are naturally cohesive; Libya, Yemen, and Syria less so. It follows, therefore, that Tunisia and Egypt required relatively moderate forms of autocracy to hold them together, while Libya and Syria require more extreme varieties. Meanwhile, geography has always made Yemen hard to govern at all.” Kaplan, *Revenge of Geography*, xxi.


\(^{117}\) Mearsheimer and Walt have observed that the remarkable level of material and diplomatic support that the United States provides to Israel is due largely to the political influence of a loose coalition of individuals and organizations that actively work to shape U.S. foreign policy in a pro-Israel direction. They argue that this lobby has a far-reaching impact on America's posture throughout the Middle East and the policies it has encouraged are
Paul Pillar, Mark Helprin, Ted Galen Carpenter, and Samuel Huntington – are essentially advocating for an effort to “get beyond l’histoire événmentielle to the longer term.” Kaplan advances Fernand Braudel’s notion of the longue durée as the starting point for such an effort.

Stephen Krasner argues that most efforts to realize grand strategy actually fail. This is a result of an unrealistic perception of the ends that can actually be achieved, an inability to synchronize desired ends with the appropriate ways and means, or the inability to bring resources to bear due to the presence of internal friction within the institution or lack of political licence.

Krasner notes:

Empirically, successful grand strategies have rarely started with a clearly articulated vision that was then implemented through targeted policies and associated resource allocations. The international environment with its multiple actors, conflicting interests, changing technological dynamics, and exposure to unexpected shocks is too complex for such a rational process. Rather, successful grand strategies are consolidated after a series of debates or missteps by linking polices and resources with an overarching vision.

What Krasner describes as the reality of grand strategy is actually similar to most endeavours of human activity. This is a theme that has recently been illustrated by Tim Harford in his succinct exploration of how frustration enhances human creativity.

inconsistent with America’s national interest and Israel’s long-term interest. They contend that the lobby’s influence has also impacted the United States’ relationship with key allies and increased the dangers from global jihadist terrorism. John J. Mearsheimer and Stephen M. Walt, The Israel Lobby and U.S. Foreign Policy (New York: Farrar, Straus and Giroux, 2007).


Helprin, a former Israeli soldier, defence consultant and novelist, emphasizes the need to acknowledge China as America’s primary military adversary. He argues that “underlying the surface chaos that dominates the news cycle are the currents that lead to world war.” He notes that superficial immediacy of “governance by tweet” is not addressing these currents. Mark Helprin, “Indefensible Defence,” National Review, 22 June 2015.

Ted Galen Carpenter is a senior fellow for defense and foreign policy studies at the Cato Institute. Ted Galen Carpenter, Smart Power: Toward a Prudent Foreign Policy for America (Washington, DC: Cato Institute, 2008).

Kaplan, Revenge of Geography, 325.


Ibid.

Harford, “How frustration can make us more creative.”
most successful solo jazz album, a recording of Keith Jarrett in front of a live audience at the Cologne opera house on in January 1975, came as a result of Jarrett embracing and overcoming the messy circumstances of being handed an unplayable piano.\textsuperscript{125} Extracting empirical evidence from cognitive psychology, complexity science, social psychology, and music, Harford concludes that there are often “unexpected advantages of having to cope with a little mess.”\textsuperscript{126}

Harford suggests that truly complicated problems can’t be solved “all in one go” as the common grand strategy conception would suggest. Real world problems are complex in that they “have a human dimension, a local dimension, and are likely to change as circumstances change.”\textsuperscript{127} Complexity is customarily addressed through a “marginal gains” approach. A prototype (i.e. policy and associated strategy) is developed, tested, tweaked, re-tested, re-tweaked, and so on. Improvements evolve from this ongoing step-by-step process and the final outcome can look quite different from what was envisioned in the prototype stage.\textsuperscript{128} The holistic behaviour that has been characterized as grand strategy is arguably much more consistent with this marginal gains approach than the grossly oversimplified conception of a “vision for the

\textsuperscript{125} The piano that had been ordered did not arrive in time for the concert, leaving only a wholly substandard piano available. After initially refusing to play, Jarrett eventually played the concert on this ‘unplayable’ piano. As Harford notes in his TED presentation, “within moments it became clear that something magical was happening. Jarrett was avoiding those upper registers, he was sticking to the middle tones of the keyboard, which gave the piece a soothing, ambient quality. But also, because the piano was so quiet, he had to set up these rumbling, repetitive riffs in the bass. And he stood up twisting, pounding down on the keys, desperately trying to create enough volume to reach the people in the back row. It's an electrifying performance. It somehow has this peaceful quality, and at the same time it's full of energy, it's dynamic. And the audience loved it. Audiences continue to love it because the recording of the Köln Concert is the best-selling piano album in history and the best-selling solo jazz album in history.” Harford, “How frustration can make us more creative.”

\textsuperscript{126} Harford, “How frustration can make us more creative.” See also Harford, \textit{Adapt}; Laura Haynes \textit{et al.}, \textit{Test, Learn, Adapt}; Diemand-Yauman \textit{et al.}, “Fortune favors the bold”; Carson \textit{et al.}, “Decreased Latent Inhibition”; and Philips \textit{et al.}, “Is the Pain Worth the Gain?”

\textsuperscript{127} Harford, \textit{Adapt}, 25.

\textsuperscript{128} Tim Harford, “How frustration can make us more creative.”
future and a precise plan for the fulfillment of that vision.”129 But as Harford observes, even this marginal gains approach “can walk you gradually down a dead end.”130

A superior complicated problem-solving technique may in fact be to embrace “a dash of mess” in an “adaptive, experimental approach.” As Harford notes:

We face a difficult challenge: the more complex and elusive our problems are, the more effective trial and error becomes, relative to the alternatives. Yet it is an approach that runs counter to our instincts, and the way in which traditional organizations work.131

This approach calls for better problem-solving by adding randomness early on in the process, making crazy moves, and trying stupid things that shouldn’t work.132 In essence, you must send out signals, interpret others’ signals and responses, and adapt to this understanding of the real-time environment in the most advantageous way, rather trying to fit a predefined prototype into a preconceived notion of the environment. An analogous process is evident in Nuclear Magnetic Resonance (NMR) spectroscopy. Since molecular structure cannot be directly measured, NMR imposes external magnetic field pulses to induce a response signals. By measuring relative rates of relaxation to steady state, the molecular structures can be deduced from signal patterns.

There is a parallel here with U.S. Lieutenant General Raymond Odierno’s statement: “Intelligence is an operation. You have to fight for Intelligence.”133 Such a statement is recognition that when solving the complex problems of counterinsurgency warfare the

129 Sibii, 299.
130 Tim Harford, “How frustration can make us more creative.”
131 Harford, Adapt, 35.
132 Sibii, 299.
intelligence mission often is the mission. The intelligence mission facilitates decision-making rather than supporting decisions already made; however, this approach has its limitations.

Adherents of adaptive processes also need to heed what Harford calls the three Palchinsky principles: “first, seek out new ideas and try new things [variation]; second, when trying something new, do it on a scale where failure is survivable [survivability]; third, seek out feedback and learn from your mistakes along the way [selection].” The effectiveness of feedback mechanisms is crucial for such adaptive processes. Such an approach seemingly contradicts the notion of grand strategy as a simplified formula for solving complicated problems in the affairs of state.

Hal Brands suggests that “fundamental tensions” plague the notion of grand strategy. Its practice must find a dynamic equilibrium “between the quest for coherence and the reality of complexity; between the need for foresight and the fact of uncertainty; between the steadiness and purpose that are necessary to plan ahead, and the agility that is required to adapt on the fly”; between the merits of confidence and modesty in practitioners; between decisive authority and democratic accountability; and between bold ideas motivating audacious action “and the ‘small ball’ technical competence that is needed to turn these ideas into reality.” As such tensions defy concrete resolution, “[t]he real question is whether American leaders can achieve enough vision and enough coherence – enough of the time – so that the United States can protect its vital interests and accomplish its basic purposes. Grand strategy, in this sense, can never be a game of perfect; it can only be a game of good enough.”

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134 Harford named these principles after Peter Palchinsky, a Russian engineer who became an influential economic advisor to the Tsar and the Soviet government. Harford, Adapt, 25.
While Brands acknowledges that seeking to transcend the inherent tensions of grand strategy is unrealistic, he provides ten “basic suggestions” to grand strategists pursuing a “good enough” balance that are worth citing in detail:

1. **There is no good alternative to grand strategy**…Refusing to do grand strategy will not allow [a state] to escape the dilemmas that make the task so difficult; it will only exacerbate the confusion and contradictions within [the state’s] policy. And the more daunting the conditions, the higher the premium one should place on the intellectual legwork associated with grand strategy: setting priorities, thinking systematically about means and ends, and establishing general strategic ideas that can serve as conceptual anchors amid the geopolitical storms;

2. **Start with first principles**…It is a truism that grand strategy is about setting priorities and limits, balancing means and ends, and generally asking the fundamental questions about a country’s role in the world. In practice, however, this can prove surprisingly hard to do…Because [policy makers] are usually pressed for time and buffeted by competing demands, there are fewer opportunities than one would like for asking the truly searching questions. Policy acquires a momentum of its own; muddling through becomes the default option…[But in today’s world of complex interdependence] prioritization and reassessment are not luxuries but necessities…The question, then, is not whether big decisions and hard choices are coming; it is how well those choices will end up being made…Which commitments are truly vital and what threats are really most menacing, and what can this tell us about how – or even whether – to respond to emerging challenges and opportunities? What tools and institutions are serving the purposes for which they were designed, and which ones need to be modified or simply junked? … What part should non-traditional security issues play in the country’s strategic posture? What is the proper balance between domestic and foreign commitments in the years and decades to come? Answering these questions will not be easy or painless, but avoiding them would be far worse;

3. **Invest in planning**… if grand strategy is to have any value, planning – the effort to look beyond the current crisis and think rigorously about the future – will be extremely important. In one sense, the sort of fundamental questions that grand strategy must address cannot usually be answered intelligently through mere intuition or instinct, but rather demand a more thorough, searching form of analysis. In another sense, while planning cannot eliminate uncertainty or the need for judgment calls, it can provide a better conceptual foundation for dealing with that uncertainty and making those judgment calls more effectively. It can do so by giving leaders a firmer sense of the essential goals and interests that transcend any given crisis, and by forcing them to think about different scenarios and eventualities before they actually occur. Planning, like grand strategy as a
whole, can help policy makers maintain their equilibrium in a constantly shifting world. Yet for planning to be effective, planners have to be put in a position to succeed.

4. *Think of grand strategy as a process, not a blueprint*… If a grand strategy is soundly conceived, then the overall goals or guiding principles may remain the same over a period of years or even decades. But the precise combination of policies used to pursue those goals will undoubtedly shift as conditions change and rivals react… Grand strategy should start with systematic planning, the setting of goals and priorities, and the outlining of a realistic course of action for realizing those objectives. Yet regardless of how well this initial planning is done, the subsequent progression of events will inevitably require the road map to be revised, the assumptions reconsidered, and new routes plotted for getting from here to there… Accordingly, leaders need a core set of principles and objectives, but they also need to avoid wedding themselves so tightly to a single course of action that change becomes unthinkable and contrary indicators are ignored. For the real test of a grand strategy often lies in how effectively its authors can adapt when things do not proceed precisely according to design. Grand strategy, then, should not be seen as something fixed or finite. Rather, it is properly viewed as an iterative, continuous process – one that involves seeking out and interpreting feedback, dealing with surprises, and correcting course where necessary, all while keeping the ultimate objective in view. Planning and reassessment are constants, and the work of the grand strategist is rarely done;

5. *Emphasize the “how” as well as the “what”*… Conception and implementation are both vital aspects of grand strategy, and neither one is worth much without the other. Accordingly, grand strategy requires vision and planning, but it also demands basic, day-to-day policy competence. To borrow a famous juxtaposition, policy makers have to be “foxes” as well as “hedgehogs.” They need to know (as hedgehogs do) the one “big thing” that tells them where they want to go and what their overriding priorities should be, but they also need to know (like foxes) the many “little things” that are necessary to turn big ideas into workable policies on the ground. In fact, having either foxes or hedgehogs dominate the policy process is a sure recipe for trouble. Foxes need hedgehogs to give them direction and purpose, but hedgehogs need foxes to keep their grand schemes tethered to reality… [Decision makers] need to invest themselves in the “how” of their grand strategy as well as the “what”… These two tasks should not be seen as fully distinct or sequential parts of the policy process; rather, they should form two interrelated aspects of a continuing, reciprocal dialogue. Planning works best when it is informed by operators’ input on what can work and what will not. Similarly, operations should be tailored so that the characteristics of a given initiative (whether diplomatic, military, or other) do not undercut broader strategic goals and plans. Accordingly, planners and operators need to be brought together at every stage of the process;
6. Embrace the democratic messiness of grand strategy… Kennan, Kissinger, and their intellectual brethren were certainly right in arguing that the vicissitudes of democracy can have pernicious effects on policy. Moreover, the present political climate often seems downright hostile to reasoned strategic debate. But just as there is no good alternative to grand strategy, there is really no good substitute for embracing this messiness and making the best of it. It has yet to be shown that authoritarian regimes are any better at grand strategy than democracies, because arbitrary rule and personalistic decision making bring about pathologies all their own… there is a crucial political aspect to grand strategy, one that requires as much attention as the geopolitical aspects. Making any grand strategy work requires building consensus both within and outside an administration… All this, in turn, will unavoidably entail bargaining, compromise, and the frustration that comes with them. This is never going to be a pretty or an entirely satisfying process, but there is no good way around it;

7. Don’t treat bureaucracy as the enemy of policy… policy and bureaucracy need not be mortal foes. To be sure, there is frequently a tension between strategic coherence and bureaucratic procedure, and the temptation to centralize authority has long been a strong one… A centralized style can easily lead to confusion or even obstructionism by officials who feel shut out of the loop, thereby undercutting the very unity of action it is meant to produce. Additionally, a restricted decision-making process places extraordinary demands on the intelligence and judgment of those few individuals at the top. It increases the dangers of groupthink, limits the extent to which flawed assumptions can be probed or exposed, and generally discourages top officials from exploiting the full range of bureaucratic expertise that would otherwise be available to them… Conversely, for all its inefficiencies, a rigorous and inclusive process can bring important benefits. It can help puncture bad ideas before they make it into policy, and it can minimize the ambiguity and confusion that often result from a closed, secretive approach. It can provide mechanisms for systematic planning and reassessment, for mediating intramural disputes, and for obtaining buy-in from various governmental constituencies. Not least of all, it can help ensure that the intellectual burdens of dealing with a vast, complicated world are shared rather than concentrated. A deliberate process need not be the enemy of good policy; it can actually be an important ally.

8. Look backward as well as forward… the past is always present in the shaping of grand strategy. Grand strategy is about looking backward in other ways, as well. It is impossible to understand which way the world is moving without understanding how things came to be as they are, just as it is impossible to comprehend our own country’s position in the world without comprehending how we arrived at this point. Moreover, grand strategy is a discipline that necessarily involves as much reassessment as it does forecasting. Setting out on a long-term journey requires a degree of self-confidence that one is ultimately headed in the right direction, but the only way to test that belief is to evaluate (and re-evaluate)
whether one’s policies are producing the desired short and medium-term results. In a way, then, grand strategy depends on the rigorous study of the recent past to determine what mix of perseverance and flexibility constitutes the proper way forward… aspiring grand strategists should be sensitive to history. They need to understand how much the study of the past can tell them about the world they are dealing with, as well as their own efforts to deal with it. They need to see that history can provide the valuable, longer-term viewpoint that is often missing from hectic policy debates. And they need to be aware that the lack of such perspective can prove quite costly. For while an ability to look backward and engage in critical reassessment will hardly ensure success when it comes to grand strategy, an inability to do so will definitely heighten the chances of failure;

9. Power must be conserved as well as exploited. As Liddell Hart observed long ago, grand strategy is about being both effective and efficient in the use of power. Grand strategy involves using the full range of a country’s capabilities so as to defeat enemies and accomplish essential national objectives, but it also involves conserving and protecting the underlying sources of that power. Accordingly, good grand strategists have to understand that power is simultaneously multidimensional and finite. It is multidimensional in the sense that countries…possess a wide range of tools that they can use to achieve desired goals. But it is finite in the sense that there are never enough resources to go around, that overstretch continually lurks, and that statesmen thus have to be highly judicious in how they define and pursue those goals in the first place; and

10. Keep expectations realistic… Too often, grand strategy is thought of as a grandiose, transformative project to remake the global order, or as a panacea that will wipe away the complexity of world affairs. Both of these aspirations are simply begging for disappointment… At best, grand strategy can provide an intellectual reference point for dealing with [uncertainties and challenges of a changing global order], and a process by which dedicated policy makers can seek to bring their day-to-day actions into better alignment with their country’s enduring interests. Achieving this would be good enough; expecting more would probably be unrealistic. 136

Whether any strategist can effectively transpose such guidelines into actual practice is the core disagreement in contemporary studies of grand strategy.

Hal Brands notes “[g]ood grand strategy may not be altogether illusory, then, but it can still prove frustratingly elusive. It is not necessarily a pipe dream, but it is by no means a

panacea, either.”

His characterization of grand strategy as “double-edged sword” is perhaps the most balanced interpretation. In a positive sense it can provide a central focus, but in the negative it can cause “distortion or myopia.” There is a significant potential shortcoming of grand strategy in that it may have counterproductive effects if allowed to become unrealistic or grandiose; a situation arguably demonstrated in George W. Bush’s global war on terrorism based upon an overambitious grand strategy characterized by “flawed assumptions and incompetent implementation.”

This danger has potentially increased as a result of the adversarial ambiguity of the post-Cold War period. As John Chipman noted in a 1992 projection of the future of strategic studies:

> In the absence of the conceptual clarity provided by the Cold War, the primary obligation of the strategist is to identify the principal features of the evolving international system and the consequences for policy-makers. New axioms are needed to determine the conditions under which military force might be used and the diplomatic, economic and military instruments of war prevention or pacification. To establish priorities for action in a world self-evidently interdependent, there is not only a need to go beyond the narrow confines of strategic studies as practised during the Cold War, but also to go beyond the ‘grand strategies’ and *realpolitik* that shaped foreign policy in the 19th century.

In the wake of the misfortunes of the Coalition campaigns in Iraq and Afghanistan, grand strategy continues be a conceptual double-edged sword that can be wielded with wide-ranging consequences. The central dilemma of grand strategy – at least in the American context where its exploration has recently become fashionable – is that its rewards can be substantial but its...
development and execution is “damned hard to get right.”141 While grand strategy appears feasible and has demonstrable utility, at least within the historical examples of the Truman, Reagan, and to a lesser extent the Nixon-Kissinger Cold War Administrations, it is also “a highly exacting proposition.”142

Alternatives to Grand Strategy

It has been suggested that there is no suitable alternative to grand strategy. A state may in fact refuse to develop processes to array and employ the instruments of state power in order to avoid the complex problems encompassed in the deliberate pursuit of national interests; however, it has been contended that such a course of inaction may only serve to introduce further complexity since it may intensify confusions and contradictions within the state’s policy.143 It is logical to assume that the potential utility of grand strategy increases as the circumstances become more daunting because “the intellectual legwork associated with grand strategy… can serve as conceptual anchors amid the geopolitical storms.”144 But the actual need for a grand strategy must also be logically assumed to be relative to environmental conditions.

Grand strategy is relative to its environmental conditions. John Lewis Gaddis has offered the idea that “danger is a school for strategy.”145 Gaddis argues:

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141 Brands, What Good is Grand Strategy? 192.
142 Ibid.
143 Ibid., 194.
144 Ibid., 194-206.
145 This is a reworking of Samuel Johnson’s 1777 principle that “when a man knows he is to be hanged in a fortnight, it concentrates his mind wonderfully.” Recorded in a journal maintained by James Boswell, this phrase relates to an entry made 19 September 1777. The remark by Samuel Johnson was in relation to the hanging of Anglican clergyman William Dodd in June 1777. James Boswell, The Life of Samuel Johnson, Vol. 3 (London: Routledge, Warnes, & Routledge, 1859), 112.
Grand strategy is...an ecological discipline. It’s about seeing forests and not just trees, about viewing the world as round and not square, about relating all of the means at your disposal to the ends you have in view. But it’s also, these days, an endangered discipline, for in the absence of sufficiently grave threats to concentrate our minds, there are insufficient incentives to think in these terms. We ought to be able to reverse this trend without waiting for some new calamity to do it for us: we need not be bound forever by Dr. Johnson’s principle [of the mind being wonderfully concentrated when he knows he will be hanged shortly].”

Colin Gray notes the merit in Gaddis’ thought of danger being a precursor to strategic education, but provides the caveat that “challenge need not stimulate an effective response, intellectual, moral, or physical. Learning by doing is more likely to educate the educable strategist better than is education by observation.” This is perhaps why Gaddis has found cause to question why American grand strategic thought following the 9/11 attacks has not emulated that which transpired in the wake of Pearl Harbor.

Stimulated by the apparent “grand strategic deficit” highlighted by the ineffective Afghanistan and Iraq campaigns, contemporary American-centric studies of grand strategy are rife with calls for fresh grand strategy. William Martel argues:

With the end of the Cold War and the gradual collapse of the grand strategy of containment, the foreign policy establishment failed completely in its efforts to define a widely accepted and compelling successor grand strategy, much less broad concepts, to help the American people and their policy makers answer some the fundamental questions about what choices to make in foreign policy. What is the condition that in the world that we seek to achieve, what does the world look like that we want to help build and shape for future generations, at home and abroad, and what resources can we and should we devote to conducting American foreign policy to achieve these ends? Inherent in these larger questions is the matter of what our core interests are, what the most critical threats to the nation are, how we prioritize and counter them, and who our friends and allies are in our

efforts to meet these challenges. In fundamental terms, grand strategy provides answers to all these and many other questions.\textsuperscript{149}

In a similar call to arms advocating renewed interest in the education of American strategists, John Gaddis remarks:

So could it be that one of the sources of our grand strategic deficit – if you agree with me that there is one – resides in an excessive reliance on autopilots? That’s what theory, when it’s misused, can become: you try to deduce universal laws governing every single case, regardless of all haphazard influences. Grand strategy, in contrast, demands both reliance on theories and the disposal of them. Knowing which to do when requires the ability to see all of the parts in relation to the whole: the vision is not that of a theorist but of a quarterback. For it’s only if you know where you’re trying to go and what stands in the way that you can make decisions about which theories to respect and which to abandon. And that brings us back, one more time, to the need for generalists.\textsuperscript{150}

In contrast to this view for the need to strategize grandly, Stephen Krasner suggests foreign policy guided by grand strategy is not a natural default situation. Therefore, having no grand strategy at all is in fact a viable option. In such a scenario policymakers would seek to maximize their economic and security interests without trying to influence the international environment or the domestic affairs of other states, which are simply accepted as they are.\textsuperscript{151}

As a second option, Krasner contends that nations should seek more modest goals than those professed to be associated with grand strategy:

In the contemporary international environment, coherence is more likely to be achieved by aiming at something more modest, a principle around which foreign policy might be oriented. Responsible sovereignty is the most promising candidate. Responsible sovereignty focuses on the need to create states capable of governing effectively within their own borders and to realizing, where possible, mutually beneficial bargains with regard to global public goods. Irresponsible sovereigns and failing states threaten the well-being of their own populations and

\textsuperscript{149} Martel, \textit{Grand Strategy in Theory}, 1.
\textsuperscript{150} On the need to educate generalists, Gaddis remarks: “[t]o put in terms made famous by Isaiah Berlin, we’re good at educating hedgehogs, who know one big thing, and much less adept at training foxes, who know lots of little things and have the agility to cope with them.” Gaddis, “What is Grand Strategy?” 16.
\textsuperscript{151} Krasner, “An Orienting Principle,” 5.
the security, domestic norms, and authority structures of even the world's most powerful countries. There is no alternative to responsible sovereigns; no regional much less global authority structure can replace the state.\textsuperscript{152}

In Krasner’s view this is achieved through reliance on “orienting principles” to guide foreign affairs rather than by grand strategy. He suggests:

Orienting principles provide a description of some elements of the existing environment and a vision for how they might be transformed. A foreign policy based on an orienting principle differs from one motivated by a successful grand strategy in four ways. First, orienting principles focus on specific issue-areas. Second, there is no consensus, either domestically or internationally, about the extant situation or what it might become. Third, there is ongoing uncertainty about what policies might be most effective. Fourth, because of this uncertainty policies will not necessarily be adequately resourced. The reduction of greenhouse gases, financial sector stability, trade openness, and the responsibility to protect would all be examples of orienting principles.\textsuperscript{153}

In response to the potential claim that reliance on operating principles in simply “ad hocery,” Krasner argues that such principles must be grounded in something beyond short or medium-term material interests and should incorporate a clear priority for resource allocations.\textsuperscript{154}

Krasner contends that an effective grand strategy is impossible to cultivate in a contemporary environment that is characterized by complexity and uncertainty. He provides three justifications for this position. First, that “the contours of power are dynamic and uncertain.” Second, that “the ideological predispositions of the major powers do not divide along any clear lines.” And third, that “major powers do not have the same understanding of key elements in the international environment.” Based on these factors, he contends that nations should seek to ascertain “an orienting principle that could guide some policies, some of the time,

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\textsuperscript{153} Ibid., 5.  
\textsuperscript{154} Ibid. 
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rather than to aspire to a grand strategy that could align overarching goals, policies, resources, and domestic and international support.”

As an example of an effective orienting principle for global order he offers the notion of “responsible sovereignty,” whereby foreign policy is guided by the goal of creating “a world of effectively governed states.” These states would then act as a regulating and moderating influence on world affairs. They would provide their own citizens with reasonable levels of public service. Krasner views effective sovereign states as the “necessary condition for peace and prosperity both within and among countries” as such states “would conduct themselves in conformity with the principle that policies with international consequences ought to be reached through voluntary agreements among states, while accepting that such agreements will not always be possible.”

The degree to which this argument is valid is likely related to whether the complexity and uncertainty perceived as its impetus is in fact insurmountable or simply a justification to settle for a lesser objective. It contrast to Krasner’s view that the contemporary environment is unique in its complexity, it should be noted that “[c]omplexity, or the perception of complexity, [has been] the timeless companion of the national security strategist.” Canadian policy documents are littered with the idea of complexity and uncertainty. The 1994 Defence White Paper discussed “an unpredictable and fragmented world” and an “unsettled nature of global affairs.” The 2008 Canada First Defence Strategy notes an “increasingly complex global environment” and portrays a volatile and unpredictable international security environment that

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156 Ibid., 5, 11.
“poses complex challenges.”159 Rather contradictory in relation to the title of the document, this policy statement provides:

The fluid nature of the international security environment makes it difficult to predict the precise threats that we might face even five years from now. Nevertheless, in order to concentrate our efforts in areas where Canada can make a difference, the Government has decided to focus on failed and failing states.160

Reading between the lines, one could infer that the idea of complexity and uncertainty is being used here to justify the government’s pre-determined position.

As Timothy Edmunds observes:

If there are two words that have become synonymous with the contemporary western security environment, they are ‘complexity’ and ‘uncertainty’. It is a rare national security review document or defence white paper that can even get through the preamble without using them. Of course, security policy has always been characterized by uncertainty to one degree or another, not least because it involves interaction with other states and actors, who themselves have autonomous agency in the international arena. Likewise, strategy, and perhaps particularly strategy in war, must inevitably grapple with complexity owing to the constant interplay of different factors, actions and reactions which comprise evolving strategic circumstances.161

Edmunds reflects on the impact of this complexity and uncertainty on the United Kingdom’s foreign policy as follows:

Today, in contrast to some earlier periods, the UK lacks a hegemonic national narrative such as empire or Cold War to concentrate minds on the national interest and to unite British grand strategy around a powerful organizing idea. Instead, UK foreign policy incorporates a range of sometimes complementary, sometimes competing strategic narratives of varying strength and character – Atlanticist, Europeanist, liberal interventionist, multilateralist, among others. All these narratives exist within the context of contemporary strategic complexity, in which direct threats are diffuse and uncertain, and in which the international environment itself is neither static nor highly predictable. Against this

159 DND, Canada First Defence Strategy, 6.
160 Ibid., 5.
background, even when national interests are defined with any degree of clarity, they tend either to present non-hegemonic, and so inherently contestable, goals—such as free trade, for example—or to be cast at such a level of generality that their utility as a guide to strategy-making is limited. Even on the specific issue of defence, and the more limited question of national interest within this, the complex nature of the contemporary security environment means that multiple interpretations of strategic priority are possible, perhaps likely.\textsuperscript{162}

What can be deduced from the preceding discussion is simply that the differing levels of analysis, contradictions, and diverse theoretical functions inherent to these six modern interpretations of grand strategy tend to validate Raymond Aron’s 1970 insight that “[s]trategic thought draws its inspiration each century, or rather at each moment of history, from the problems which events themselves pose.”\textsuperscript{163} Whether there is an alternative to grand strategy, or even a need for grand strategy, is relative to how the observer perceives their own environment and the interests they seek to pursue.

\textsuperscript{162} Edmunds, “Complexity, strategy and the national interest,” 530.
\textsuperscript{163} Aron, “The Evolution of Modern Strategic Thought,” 25.
CHAPTER 3: THE INUTILITY OF NEWTONIAN GRAND STRATEGY

Only since 1945 has the emergence of new technologies of mass destruction invalidated the fundamental assumptions of the Clausewitzian approach to grand strategy. We, like the Romans, face the prospect not of decisive conflict, but the permanent state of war, albeit limited. We, like the Romans, must actively protect an advanced society against a variety of threats rather than concentrate on destroying the forces of our enemies in battle.¹

National security strategy is often used as a synonym for “the intellectual legwork associated with grand strategy.” It is characterized by the “process of setting priorities, thinking systematically about means and ends, and establishing general strategic ideas that can serve as conceptual anchors amid the geopolitical storms.”² As Harry Yarger has suggested:

The strategic process is about how (concept or way) leadership will use power (resources or means) available to the state to exercise control over sets of circumstances and geographic locations to achieve objectives (ends) in accordance with state policy. Strategy provides direction for the coercive or persuasive use of this power to achieve specified objectives. The direction is by nature proactive, but is not predictive. Strategy assumes that while the future cannot be predicted, the strategic environment can be studied, assessed, and, to varying degrees, anticipated and manipulated. Only with proper analysis can trends, issues, opportunities, and threats be identified, influenced, and shaped through what the state chooses to do or not do. Thus good strategy seeks to influence and shape the future environment as opposed to merely reacting to it.³

As suggested previously, a grand strategy is in fact only one option or approach to securing certain interests and should therefore not be considered as simply synonymous to national security strategy. Noting that a ‘national security strategy’ as a formulation and ‘grand strategy’ as a conceptual approach are often misunderstood as one in the same, Peter Layton has recently

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¹ Luttwak, Grand Strategy of the Roman Empire, xi-xii.
suggested that a grand strategy conceptual approach need not be understood as the sole foundation for foreign policy or national security decision-making.

Layton suggests “[t]here are three broad conceptual approaches – grand strategy, opportunism, and risk management – that policymakers can potentially use when formulating national security strategies.” 4 In delineating these three approaches Layton argues:

A grand strategy has a defined objective—a specific desired end—whereas opportunism and risk management instead await external events; they do not deliberately progress to some particular endpoint. Opportunistic or risk management policies still require resources [or capabilities] to be developed and allocated, but the purpose for which this is done is imprecise and generic; the emphasis is instead on the means. Opportunism and risk management are means-centred; grand strategy is ends-centred. 5

Utilizing Foucault’s ‘ship of state’ metaphor, Layton condenses these three conceptual approaches to the captaining alternatives of sailing to some port (grand strategy), sailing to avoid difficulties (risk management), 6 or sailing to take advantage of fair winds (opportunism). 7 Layton defines the risk management approach as less intellectually and bureaucratically demanding, requiring “only the periodic compilation of possible risks and a simple focus on the ‘means’ almost independent of external factors.” In contrast, a grand strategy approach is a significantly

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6 “Under a risk management conceptual approach the intent is not some specific objective but instead to lessen the impact of any of the chosen security risks that actually eventuate. Foucault’s ship of state is not being steered towards any particular destination, instead attention is directed towards minimising any harm done to the sailors, the cargo and the ship by the sea’s elemental forces. With a risk management approach the ship as it exists is simply being safeguarded from the intrinsic risks involved in sailing the sea. There is no well-crafted grand strategic plan guiding the ship of state towards a safe harbour, and neither is the captain taking advantage of favourable opportunities to make the crew more secure or more prosperous.” Layton, “Australian National Security Strategy,” 107.
7 “The ship of state is simply sailing on the sea; it has not left a known port nor is it headed towards a desired landfall but rather the captain—the government—is simply seeking to take advantage of any favourable winds.” Layton, “Australian National Security Strategy,” 110.
more complex and demanding enterprise requiring continual refinement, but perhaps offering
greater potential to integrate objectives and proactively seek desired outcomes not reachable
through a “set and forget” approach.8

Layton’s interpretation of grand strategy is noteworthy in the absence of a distinct foreign
policy nexus. This clearly deviates from the customary foreign policy focus of legislated
‘national security strategy.’ 9 Layton’s perspective on the intellectual and bureaucratic complexity
of grand strategy is well illustrated by the political realities of the mandated U.S. grand strategy
formulation process, which appears to have manifested into more of a communications and crisis
management process than Layton’s “defined objective” characterization.

American grand strategy, referred to as ‘national strategy’ or ‘national security strategy’
in U.S. legislation and doctrine,10 has come to be associated with the proactive pursuit of national
objectives within the international system.11 In the early Cold War, American national security
strategy was founded on the concept of “containment” detailed in United States National
Security Council Reports 68 and 162/3.12 An extra-territorial influence and shaping aspiration
interpretation was solidified in the Goldwater-Nichols Defense Department Reorganization Act
of 1986, which in amending the National Security Act of 1947, introduced the requirement for

9 The institutionalization of the interchangeable use of the terms ‘grand strategy’ and ‘national security strategy’ in
the United States comes from the wording in the Goldwater-Nichols Department of Defence Reorganization Act of
1986. This legislation introduced the requirement for the Executive to provide an “Annual Report on National
Security Strategy” to Congress.
10 The United States Department of Defense Dictionary defines National Security Strategy, also called national
strategy or grand strategy, as “[t]he art and science of developing, applying and coordinating the instruments of
national power (diplomatic, economic, military, and informational) to achieve objectives that contribute to national
security...”
Cerami and James F. Holcomb (Carlisle, Pennsylvania: U.S. Army War College Strategic Studies Institute, 2001),
12.
12 United States National Security Council Report 68 (NSC-68), 14 April 1950; United States National Security

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the President to provide Congress a comprehensive “Annual Report on National Security Strategy.”

Goldwater-Nichols states:

Each national security strategy report shall set forth the national security strategy of the United States and shall include a comprehensive description and discussion of the following:

(1) The worldwide interests, goals, and objectives of the United States that are vital to the national security of the United States.

(2) The foreign policy, worldwide commitments, and national defense capabilities of the United States necessary to deter aggression and to implement the national security strategy of the United States.

(3) The proposed short-term and long-term uses of the political, economic, military, and other elements of the national power of the United States to protect or promote the interests and achieve the goals and objectives referred to in paragraph (1).

(4) The adequacy of the capabilities of the United States to carry out the national security strategy of the United States, including an evaluation of the balance among the capabilities of all elements of the national power of the United States to support the implementation of the national security strategy.

(5) Such other information as may be necessary to help inform Congress on matters relating to the national security strategy of the United States.

The broadly accepted intent of the Goldwater-Nichols legislation was to provide a vehicle “for effective political discourse on issues affecting the nation's security,” with a view to facilitating “a common understanding of the strategic environment and the administration’s intent as a

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13 Don Snider suggests that the intent in introducing the Annual Report on National Security Strategy requirement was an attempt to “legislate a solution to what [Congress], and many observers, believed to be a legitimate and significant problem of long-standing in [the United States] governmental processes – an inability within the executive branch to formulate, in an coherent and integrated manner, judiciously using resources drawn from all elements of national power, the mid- and long-term strategy necessary to defend and further those interests vital to the nation's security.” Don M. Snider, The National Security Strategy: Documenting Strategic Vision, 2nd ed. (Carlisle Barracks, PA: U.S. Army War College Strategic Studies Institute, 1995), 2.

starting point for future dialogue” between the Executive Branch and the Congress.¹⁵ John Lewis
Gaddis suggests Goldwater-Nichols formalizes “the Periclean precedent that in a democracy
even grand strategy is a matter for public discussion.”¹⁶

This mandated form of grand strategy declaration is in fact merely a political starting
point rather than a functional strategy. Earl Tilford notes:

In theory, a formal presentation of grand strategy was intended to lend coherence
to the budgeting process; a clear statement of interests, objectives, and concepts
for achieving them gave Congress a clear idea of the resources required to support
the President’s strategy. The problem with such documents is that they often
create the false impression that strategy formulation is a rational and systemic
process. In fact, strategy formulation both within the executive branch and
between the executive branch and Congress is an intensely political process from
which national strategy emerges after protracted bargaining and compromise. Key
personalities do what they can agree to do.¹⁷

Due to the adversarial political context within which these strategy reports are prepared, they do
not emerge as a “neutral planning document.”¹⁸ Rather than representing a consensus on the
most appropriate grand strategy for the nation guided upon the best available strategic thinking,
Don Snider and John Nagl suggest that the publishing of a United States National Security
Strategy has primarily become the means by which a strategic vision is communicated to
Congress. This is in order to rationalize resource allocation arguments, to communication
intentions to foreign governments, to appease domestic supporters through formal
acknowledgement of particular issues, to build internal consensus on foreign and defence

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policies within the Executive Branch as a result of the drafting process, and to contribute to the President’s overall agenda.¹⁹

The underlying concepts of post-Cold War U.S. national security strategies have progressed through the phases of “Engagement and Enlargement” under Clinton, the Bush Administration’s “Pre-emption and Democratization,” and President Obama’s “Domestic Revitalization and International Institutions.” Stephen Krasner has summarized and critiqued these national security strategies as follows:

The Clinton administration’s first national security strategy was entitled “A National Security Strategy of Engagement and Enlargement.” It referred to the need to reframe international regimes, especially in the economic area; shape the incentives of other countries, particularly through the enlargement of NATO and the European Union; and encourage democracy. Many global developments in the 1990s conformed with the concepts of engagement and enlargement. The WTO and NAFTA were created. The number of democracies increased from about 60 to 80. Enlargement and engagement, however, failed empirically by not recognizing the risk posed by transnational terrorism. As orienting principles, they failed to motivate the American public. The Clinton administration focused on domestic affairs. Clinton withdrew American troops from Somalia after the “Black Hawk Down” incident. The bombing campaign against Serbia was conducted from very high altitudes to minimize the chance of American casualties. Not surprisingly, national defense spending fell to three percent of GDP during the 1990s – the lowest level in 60 years.²⁰

The 2002 “National Security Strategy of the United States” offered a coherent approach for addressing the threat of transnational terrorism. It identified “the crossroads of radicalism and technology” as the “gravest danger” to American security. It argued that the United States and its allies would have to redefine the conventional understanding of imminent threat and preemptive war because transnational terrorists would not engage in the “visible” mobilization of armed forces… The Bush administration, like all of its predecessors, argued that the United States had to support freedom and democracy. It departed from its predecessors, however, in directly relating this support to American national security. Islamic radicalism was understood as a product of political repression, especially in the Arab world. In the long run it was a challenge that could be

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addressed only by the spread of democracy and freedom. The promotion of democracy as well as a redefinition of imminent threat was central to the Bush doctrine. As a grand strategy the Bush administration's policies failed in three ways. First, the concept of preventive preemption generated anxiety rather than support from other countries. Second, there was no agreement on the severity of the threat posed by transnational terrorism. Many policymakers in America's traditional allies argued that terrorism ought to be understood as a crime that could be dealt with through the traditional criminal justice system rather than as a new kind of war that required unique institutional practices and legal structures like renditions and indefinite confinement. Third, the soaring rhetoric of Bush’s second inaugural (“So it is the policy of the United States to seek and support the growth of democratic movements and institutions in every nation and culture, with the ultimate goal of ending tyranny in our world.”) proved to be very hard to realize in practice. The vividness of the “color revolutions” of 2005 had dimmed by 2007.21

The May 2010 “National Security Strategy” of the Obama administration is more modest than those of its two predecessors. It is not a grand strategy. Written in the midst of a major economic recession and continued American involvement in, and uncertainty about, the wars in Iraq and Afghanistan, the document stresses the importance of rebuilding America’s national strength by investing in critical domestic priorities such as health care, education, science, and technology. Its only orienting principle is the need for international institutions.22

As is evident in these varied policy conceptions, the U.S. President’s National Security Strategy report is not in itself a statement of grand strategy, but “a statement of preference from the Executive Branch as to current, and perhaps future, grand strategy” that provides an initial starting point for “a constructively adversarial process with the Congress to refine that preferential strategy into one that has any chance of being effective—one around which there can be created domestic political consensus, and thus an allocation of resources effective in creating instruments of national power.”23

22 Ibid.
Since a degree of consensus is a prerequisite to any effective security strategy or policy,\textsuperscript{24} Snider and Nagl suggest “the fundamental value differences in [the American] electorate, and the resulting legacy of federal government divided between the political parties and buffeted by the myriad of factions that effectively cross party lines on separate issues” makes the realization of effective strategic planning problematic.\textsuperscript{25} Snider suggests the need to “place national interests above political, personal, or even organizational concerns if the United States is to be served well by a coherent and appropriate strategy.”\textsuperscript{26} However, two political realities limit the realization of broad consensus as a precursor to effective long-range planning activities:

The first is the limit of what is physically possible for elected officials to do in any given amount of time. Long-range planning and strategy formulation will always run a poor second to the pressing combination of crisis management and near-term policy planning and implementation….And this is as it should be; the maxim is true in diplomatic and political activity at this level—if today is not cared for, tomorrow will not arrive in a manageable form. Secondly, the pernicious effects of divided government, manifest in micromanaging and punitive legislation on the one hand and intractable stonewalling and relentless drives for efficiency on the other, preclude resources for permanent, long-range planning staffs that could institutionalize such a process.”\textsuperscript{27}

These realities set the conditions for the futility of substantial and systematic long-range planning within the U.S. Executive Branch, thereby creating an absence of direction for security policy and strategy from elected officials that constrains the willingness and ability of departments and agencies to undertake over-the-horizon planning.\textsuperscript{28}

\textsuperscript{25} Ibid. Snider and Nagl distinguish between comprehensive long-range planning and mere bureaucratic programming.
\textsuperscript{26} Snider, \textit{The National Security Strategy}, v.
In the stead of a non-partisan consensus on an appropriate grand strategy for the nation and adequate political direction for execution of long-range planning is “episodic planning for particular events as they rise to prominence.” This process of episodic planning is perhaps best described within the context of a field frequently labelled as the antithesis of strategy – crisis management. In describing the first premise of strategic theory as being “proactive and anticipatory, but not predictive”, Harry Yarger suggests that “[s]trategy is not crisis management. It is to a large extent its antithesis. Crisis management occurs when there is no strategy or the strategy fails to properly anticipate.”

As an academic field of inquiry, crisis management has developed to some extent in parallel to strategic studies. Where strategic studies have generally focused on ends-ways-means calculations in the context of instruments of national power, crisis management has focused on organization and decision-making processes. The theoretical foundations for crisis management can be traced to the appearance of disciplines such as administrative science, management science, operations research, team theory, and organization theory in the 1950s. Since they fell between the customary categorizations of the existing disciplines, many of these new areas of social science inquiry became known as “in-between” disciplines. Although approaching research from divergent perspectives and with increased specialization, interdisciplinary approaches became increasingly warranted as the study of decision-making became a common

30 Yarger, Strategic Theory for the 21st Century, 6.
31 Many of these disciplines have since gone out of fashion. Barbara Czarniawska notes that within the context of an increasingly conservative climate since the late 1980s, the sociology of organizations was overtaken by social theorizing in areas such as science, technology, and culture as a result of ‘managerialization’ (sociologists and anthropologists being forced to seek viable employment in business schools) and ‘marketization’ (a shift in the object of organization scholarship away from the organization itself towards what Roland Warren dubbed “interorganizational fields”). Barbara Czarniawska, “Complex Organizations Still Complex,” International Public Management Journal, 10.2 (2007), 148-9.
field of investigation.\textsuperscript{32} Much of this work focused on reducing the theorist’s gap in knowledge “about the firm and its decision making processes” as a means of developing economic theories for refined interpretation of corporate decision-making under conditions of market uncertainty.\textsuperscript{33}

Supplementing this search for a “theory of the firm,” was an increased interest in the dynamics of foreign policy decision-making. Decision-making within the foreign policy context was regarded as a special case of complex organizational decision-making.\textsuperscript{34} Influenced by case studies of contemporary international crises, such as Richard Snyder’s examination of U.S. President Harry S. Truman’s June 1950 crisis-decision-making within the context of Korea,\textsuperscript{35} international relations theorist Charles Hermann observed that the reaction of foreign offices and international organizations to external crises displayed characteristics common to formal or complex organizations.\textsuperscript{36} Snyder observed that an external crisis could have “two polar effects” on an organization: “The crisis may be associated with the closer integration of the organization, the appropriate innovations for meeting the crisis, and the clarification of relevant values, or at the other extreme, it can lead to behaviour which is destructive to the organization and seriously


\textsuperscript{33} Shubik, “Studies and Theories of Decision Making,” 297-298.


limits its viability.”"37 Snyder’s works subsequently influenced Charles Hermann’s work on crisis decision-making,38 which produced the commonly accepted definition of an organizational crisis within the context of an international crisis for a state.39 Hermann defined an organizational crisis as one that “(1) threatens high-priority values of the organization, (2) presents a restricted amount of time in which a response can be made, and (3) is unexpected or unanticipated by the organization.”40

These rudiments, with slight modifications, tend to permeate definitions of crisis and crisis decision-making theories for various types of international crises. For example, Michael Brecher has offered examples of conditions for military-security and economic crisis events:

Viewed from the perspective of a state, a [military-security] crisis is a situation with three necessary and sufficient conditions, deriving from a change in its external or internal environment. All three conditions are perceptions held by the highest level of decision-makers: (1) threat to basic values, with a simultaneous or subsequent (2) high probability of involvement in military hostilities, and the awareness of (3) finite time for response to the external value threat.41

Viewed from the perspective of a state, an [economic] crisis is a situation with three necessary and sufficient conditions, deriving from a change in its external or internal environment. All three conditions are perceptions held by the highest level of decision-makers: (1) threat to basic values, with a simultaneous or subsequent (2) expectation of adverse material consequences unless the response were drastic – and effective, and the awareness of (3) finite time for response to the external value threat.42

40 Hermann, “Some Consequences of Crisis,” 64.
The implication of these essential conditions originating as “perceptions held by the highest level of decision-makers” is significant. Hermann presented the hypothesis that it was the concurrent presence of threat to values, restricted time, and surprise that caused a change to decision-making processes. Hermann observed that “if all three traits are present then the decision process will be substantially different than if only one or two of the characteristics appear.”

Although previous definitions of crisis had incorporated the dimensions of threats to organizational values and time compression, Hermann’s definition incorporated the less common third element of surprise in the sense that “unanticipated” implied both a lack of “prior recognition of the possibility of the event occurring” and a lack of response programming. Surprise and time constraints induce stress among decision makers which changes perceptions.

An inference could thus be made that the demarcation between pursuit of a crisis management or grand strategic approach lies not in the characteristics of the triggering event or situation, but in the conditions under which the perceptions of the highest level decision-makers are formed. Low-probability triggers naturally tend towards crisis management as resources for permanent, long-range planning for such eventualities is rarely prioritized. This creates a unique dialectic whereby the triggers most closely associated with surprise are the ones that most often

46 Forgues and Roux-Dufort, “Crises: Events or Processes?” 6.

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escape proactive efforts to prepare and manage adverse perceptions, while the element of surprise is often the very catalyst required to form the degree of consensus prerequisite to any effective security strategy or policy.

While “good strategy” is supposed to “influence and shape the future environment as opposed to merely reacting to it,”

the comprehensive political discourse required to build a common understanding of the strategic environment often only occurs within the framework of crisis management. What follows is a possible distinction between grand strategy and other levels of strategy. Grand strategy seeks to anticipate triggering events and proactively prepare highest level decision-makers’ perceptions with a view to minimizing the impacts of surprise and truncated reaction time. The grand strategy process would thus seek to enable the most advantageous decisions through the elimination of the influence of stress-inducing elements of crisis acting on decision-makers’ perceptions of their strategic environment, thereby enhancing the level of objectivity in judgments regarding threats to high-priority values and interests.

An argument can be made that the realization of grand strategy in this sense would rely upon the alignment of at least seven significant factors:

1) That collection and analysis of information pertaining to strategic analysis identifying threats, issues, trends, and opportunities is in fact feasible;

2) That such assessments can be effectively (and undoubtedly efficiently) communicated to decision-makers;

3) That decision-makers are receptive to such assessments;

4) That decision-makers have an actual interest in avoiding crisis conditions rather using them to further an alternate interest;

47 Yarger, Strategic Theory for the 21st Century, 6.
5) That decision-makers have the opportunity or ability to make decisions influencing events;  

6) That decision-makers have a willingness to make decisions that influence events; and  

7) That a capability exists to actually implement the decisions made.  

The low probability that all these factors could lineup without some kind of conscious effort would seem to defy Edward Luttwak’s suggestion that regardless of explicit statements, documents, or even the existence of formal infrastructure charged with drafting and implementing grand strategy, inevitably “all states have a grand strategy, whether they know it or not.” 

It is quite reasonable that gifted leaders could cause the favourable alignment of the factors suggested above within the “level” of interaction between knowledge, persuasion, and the instruments of state – particularly if many of the analysis, decision-making, and implementation functions were vested in a singular individual or an exclusive group of likeminded individuals. It is unlikely, however, that choices to influence and shape the future environment rather than merely react to it could somehow be anything but deliberate. While it is realistic that grand strategic decision-making might not be explicitly declared, Luttwak’s proposition that an unconscious form of grand strategy could play some role in determining outcomes more closely resembles effective, or lucky, crisis management.  

That crisis management is potentially misrepresented in hindsight as grand strategy adds weight to Peter Layton’s attempt to disassociate grand strategy from national security strategy. 

With grand strategy conceived merely as one conceptual approach to the development of a

national security strategy, it is feasible that a state’s national security strategy may follow – deliberately or by default – a crisis management approach. It would therefore be appropriate to place crisis management alongside of grand strategy, opportunism, and risk management as available broad conceptual approaches to assist policymakers in formulating a national security strategy. To update Layton’s ship-of-state image, these four conceptual approaches would be akin to the alternatives of *sailing to some port* (grand strategy), *sailing to avoid difficulties* (risk management), *sailing to take advantage of fair winds* (opportunism), and *executing evasive manoeuvres only when required in order to avoid a collision and remain afloat* (crisis management).

That, in response to changing conditions, preference or reassessment of time and space, a ‘ship of state’ could exercise a combination of these four approaches during a single or series of voyages is also quite feasible. This would acknowledge the reality that the seven factors for realization of grand strategy will ebb and flow based on the type and severity of issues and opportunities for action. As circumstances change these factors may realign in ways that merit adoption of different combinations. While a risk management approach may be adopted for risks deemed probable, there may be a conscious choice to rely upon crisis management in the event of a less probable risk materializing. In a similar fashion, preparations may also be made to allow for the exercise of opportunism should certain conditions materialize. A deduction could be made here that for the grand strategy approach to succeed in isolation it would require a ‘ship of state’ with sufficient size and power to steam through unpredictable seas towards its chosen

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destination. For the smaller auxiliary members of the fleet, such a bold course may be outside the “art of the possible” for their more fragile ships.

The Utility of the Common Conceptions of Grand Strategy

Based on the preceding discussion, it is evident that grand strategy is as much of an “accordion word” as the term strategy. The six modern characterizations – as a focuser of military instruments supporting foreign policy;\textsuperscript{51} as a theory of how to “cause security”;\textsuperscript{52} as a calculation between means and large ends;\textsuperscript{53} as “the level of final results”;\textsuperscript{54} as the “evolution and integration” of long-term polices;\textsuperscript{55} and as an ideology underlying state action\textsuperscript{56} – all provide useful themes, but in aggregate do not generate much clarity. What can be deduced from this discussion, however, are the subsequent themes.

While originating in military affairs, grand strategy is about creating synergy between multiple policies and their associated strategies. The principal utility of grand strategy is to be found in its ability to act as a preemptive overarching policy-strategy matching tool.\textsuperscript{57} In this sense it is consistent with a process rather than a product \textit{per se}. As such, it may assist in the

\textsuperscript{51} Art, \textit{America’s Grand Strategy}, 1.
\textsuperscript{53} Gaddis, “What is Grand Strategy?” 7.
\textsuperscript{54} Luttwak, \textit{Strategy}, 207.
\textsuperscript{55} Kennedy, “Grand Strategy in War and Peace,” 4.
\textsuperscript{56} Milevski, “Evolution of grand strategic thought,” 2.
\textsuperscript{57} “Policy-strategy match” is a reference to the “policy strategy matrix” that was an element of the “Strategy and Policy” course developed by Admiral Stansfield Turner for the U.S. Naval War College. This matrix queries the match between policy and military strategy with the following core questions: “Were the military means chosen appropriate to the political objective? Were the costs and risks of war accurately anticipated? Were alternate strategies considered? [and] Was there timely reassessment?” Additional sub-factors considered in support of the policy-strategy match include: the adequacy of strategy, coalitions, prewar plan versus wartime reality, civil-military relations, social dimensions of strategy, and war termination. Holger H. Herwig, “Military Strategy in War and Peace: Some Conclusions,” \textit{Journal of Military and Strategic Studies} 13.1 (Fall 2010), 130.
development of a national security strategy, but is not synonymous with it. The intent of grand strategy is therefore to produce a degree of matching (or synergy) between overarching national security policy and the various strands of interdependent national strategy. The grand strategy process (or approach) is therefore the continuing process of attempting to maintain a match (or synergy) between an overarching national security policy and the multitude of interdependent strands of national strategy. This activity could be described as the art of projecting long-term interests upon the prioritization, preparation and synchronization of present decisions – and associated action or contingencies – under the pressure of an unforeseeable future.

Although grand strategy has traditionally been seen as a guide for foreign policy, its utility need not be tied to the international domain. The grand strategy approach is in essence a mechanism to manage complexity. As complexity is arguably increasing in the conduct of domestic affairs due to the impacts of globalization, it is fully feasible that this tool for dealing with complexity should be wielded as a mechanism for synergizing domestic policies and strategies. As John Lewis Gaddis intimates, “grand strategy need not apply only to war and statecraft: it’s potentially applicable to any endeavor in which means must be deployed in the pursuit of important ends.”58 Just as the utility of military force can shift over time, the employment of grand strategy need not be constant and may be found beyond the domains of military and foreign affairs.

It is also apparent that a grand strategy approach need not necessarily be used in isolation. It is feasible that a grand strategy process can be utilized for aspects of national policy-strategy matching while alternate approaches, such as risk management, opportunism, or crisis

management, are used in areas where risk assessments do not call for such an approach. In this vein, it is fully feasible for a state to practice grand strategy domestically while utilizing a risk management approach internationally. This dual nature in the synergizing of national policy is the foundation for what will be suggested in a later chapter as Canada’s natural position of tactical offensive and strategic defensive.

Although a grand strategy approach is intended to impart the effect of influencing and shaping the future environment rather than simply reacting to it, the comprehensive political discourse required to build a common understanding of the strategic environment often only occurs within the framework of crisis management. Hence, crisis management and grand strategy appear to be rather interdependent. A grand strategy approach must seek to anticipate triggering events and proactively prepare highest level decision-makers’ perceptions with a view to minimizing the impacts of surprise and truncated reaction time. The grand strategy process should thus seek to enable the most advantageous decisions through eliminating the influence of stress-inducing elements of crisis upon decision-makers’ perceptions of their strategic environment, thereby enhancing the level of objectivity in judgements regarding threats to high-priority values and interests. In essence this is a process by which a continual attempt is made to push policymakers’ frame of reference from l’historie événementielle (individual time) towards the deeper context, the longue durée (geographic time). To be effective, such a process requires a number of undertakings: proactive collection and analysis of information to identify threats, issues, trends, and opportunities; effective communication of strategic analysis to decision-makers; receptiveness of decision-makers to strategic assessments; an interest in avoiding crisis

59 Yarger, Strategic Theory for the 21st Century, 6.
conditions rather than using them to further alternate interests; an ability and willingness to make decisions influencing events; and a capability to actually implement decisions made. This is essentially a form of crisis prevention and mitigation through building resilience. Noticeably, the act of building resilience is not readily apparent in common grand strategy models that focus primarily on perceptions of threats to national interests.

The most prevalent general recipe for grand strategy is a national interest-risk management approach to national security policy planning. Much of this common doctrine is based on the national security policy planning processes developed in the United States and United Kingdom. In laying out the U.S. approach, Drew and Snow observe:

The making and implementation of strategy at the national level is largely an exercise in risk management and risk reduction. Risk, at that level, is the difference between the threats posed to our security by our adversaries and our capabilities to counter or negate those threats. Assessing risk and resolving it has two primary dimensions. The first is the assessment of risk itself: what conditions represent threats to our security, and how serious are those threats relative to one another and to our safety? The answers to these questions are not mechanical and obvious but are the result of subjective human assessments based on different political and philosophical judgments about the world and our place in it. The other dimension is the adequacy of resources to counter the threats that we identify. In circumstances of plenty, where there are adequate resources (manpower, materiel, perceived will, etc.) to counter all threats, this is not a problem. In the real world, each of these dimensions presents a real set of issues, which we must acknowledge up front.

In describing the modern national level strategy process, Drew and Snow note:

In the modern era, it is much more accurate and descriptive to consider strategy as a complex decision-making process that connects the ends sought (national objectives) with the ways and means of achieving those ends. The modern strategy process (in both theory and successful practice) consists of at least five fundamental, interconnected, and sequential decisions that define and shape strategy at each level of authority. They range from broad and occasionally abstract decisions about long-term national objectives to very narrow and concrete decisions concerning battlefield tactics. Between those two extremes are three other crucial decisions that we will refer to as grand strategy, military strategy, and operational strategy.63

The grand strategy decision involves the determination of necessary instruments of national power and their employment towards the national objectives identified.64

At their core, these processes are an expanded application of the “the orderly analysis of a problem leading to a reasoned solution” infused within modern military planning doctrine, known generally as the “Estimate of the situation” and the “Operational Planning Process.”65

Seeking to remove extraneous detail and allow focus on issues of critical importance to the accomplishment of a military mission, the Estimate is a reasoned consideration of what must be done, along with an analysis of the circumstances affecting how it is to be done, with the intent of arriving at a sound course of action.66

The historical roots of such processes are evident in the

64 Ibid., 17.
65 The Canadian military identifies three distinct forms of the Estimate: 1) the “Combat Estimate” in which a commander uses a truncated process to focus his/her assessment of a problem; 2) a “Formal Estimate” in which a commander, with or without supported by his/her staff, completes a formal process of assessment of a problem; 3) once the process become a collective staff effort it is termed the “Operation Planning Process.” The Estimate process commences with a trigger, such as receipt of a mission of a fundamental change in a situation, and then flows through the four phases of mission analysis, evaluation of adversary, environment, and friendly forces factors, consideration of courses of action, and the commander’s decision. The decision made becomes the basis for the development of a detailed plan and the issuance of direction to subordinate commanders. DND, B-GL-300-003/FP-000: Command, 123-27.
66 DND, B-GL-300-003/FP-000, 123.
initial chapter of Sun Tzu’s *Art of War*, entitled ‘Estimates,’ ‘Initial Estimations,’ or ‘Preliminary Calculations.’

Just as the pursuit of war-related policy *ends* through the most advantageous *ways* of employing the accessible *means* of deterrence, persuasion, or force characterizes traditional military strategy, the ways and means of national security strategy are interlocked with the values and goals, or *interests* a nation state desires to promote and secure. If the “crux of grand strategy” lies in the ability of national leaders to synchronize policy for the “preservation and enhancement of the nation’s long-term best interests,” then an understanding of interests must be the forerunner to grand strategy. It has been suggested that any grand strategy process must answer three basic questions: What are the state’s core interests? What are the forces that threaten them? And what actions can be taken to protect them?

Don Macnamara has proposed a model for developing a Canadian grand (or national security) strategy that could be described as essentially a National Security Estimate. Essentially an avocation for the adoption of existing U.S. doctrine, Macnamara’s process is based on addressing six key questions:

1. What are our interests – our values and goals?
2. What events, issues, trends, risks, or threats are developing in our domestic and international environments?
3. What impact may they have on our interests?
4. What are the ways we can protect and advance our interests?

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70 The national security strategy model advocated by Macnamara closely mirrors U.S. doctrine for formulating national security as illustrated in Drew and Snow, *Making Twenty-First-Century Strategy*. 
5. What are the available means – resources and constraints?
6. What is the strategy – the policies and plans?\textsuperscript{71}

The foundation for this approach is the strategic planning model proposed by American authors Ascher and Overhold.\textsuperscript{72} Under the Ascher-Overhold model for strategic forecasting, interests are identified along with the possible future environments within which they must be pursued. Decision-makers subsequently seek to develop core strategies that will be viable in various environments, basic strategies that seek to bring about preferred environments, and hedging strategies to be used as contingencies in the face of possible non-ideal future environments.\textsuperscript{73}

Macnamara notes that “this model says simply that a country’s strategy is a set of policies, a product of understanding the impact that perceived political, economic, socio-cultural and military environments (both domestic and international) have on the nations interests – which are the country’s assets, fundamental values and its national goals.”\textsuperscript{74}

As the foundational step in this process is the definition of interests, such models naturally build upon U.S. interpretations of national interests, such as Donald Nuechterlein’s description of the United States’ four long-term, enduring national interests as: defence of the homeland; enhancement of the nation’s economic well-being; creation of a favorable world order; and promotion of democratic values.\textsuperscript{75} Nuechterlein’s suggestion of four levels of

\textsuperscript{71} Macnamara, “Canada’s National and International Security Interests,” 47.
\textsuperscript{72} Macnamara, “Canada’s Domestic Strategic Interests,” 13.
\textsuperscript{74} Macnamara, “Canada’s Domestic Strategic Interests,” 13.
intensity of interest – *survival* (critical), *vital* (dangerous), *major* (serious), and *peripheral* (bothersome) – has also permeated Macnamara’s model of national security strategy.\(^76\) As Macnamara and Fitz-Gerald note, this “national interest approach” to national policy planning can be traced back to Lord Palmerston’s 1848 statement: “We have no eternal allies and perpetual allies. Our interests are eternal and perpetual and those interests it is our duty to follow.”\(^77\)

In his 1934 study of the idea of the national interest, Charles Beard remarked “[i]f citizens are to support the government which prosecutes it, soldiers are to die for it, and foreign policies are to conform to it, what could be more appropriate than to ask: What is national interest?”\(^78\) As Joseph Frankel notes, ‘national interest’ is a “singularly vague concept” that “assumes a variety of meanings in the various contexts in which it is used and, despite its fundamental importance, these meanings often cannot be reconciled; hence no agreement can be reached about its ultimate meaning.”\(^79\) Writing in the late-1960s, Frankel observed that ‘national interest’ was conspicuously absent in the Oxford Dictionaries – an observation that remains valid in 2017.\(^80\) Of the definitions that do exist, most tend to characterize the national interest as “a

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\(^77\) Palmerston was a British Prime Minister. Cited in Macnamara and Fitz-Gerald, “A National Security Framework for Canada,” 92. See also Roskin, “National Interest.”


\(^80\) While no entry for ‘national interest’ exists, the current Oxford Dictionaries do define the term ‘public interest’ as “the benefit or advantage of the community as a whole; the public good.”
conception of an overriding common good transcending the specific interests of parties, factions, and other entities smaller than the nation as a whole.\textsuperscript{81}

The lack of definitional precision in relation to national interest owes much to the varied contexts within which the concept continues to be utilized. National interest can be employed to describe a perceived necessity or principle with sufficient breadth and resonance to concern the entire nation, or alternately as a means to frame or justify specific policies. The parallel existence of various conceptions for identifying a national interest nexus in International Relations theory literature imposes further ambiguity.\textsuperscript{82} The \textit{elitist} interpretation associates the national interest with the foreign policies of national leaders under the assumption that these individuals are in the best position to perceive, prioritize, and defend societal objectives. This leads to the perception that “[t]he national interest is what decision-makers at the highest levels of government say it is.”\textsuperscript{83} The \textit{realist} view recognizes the national interest within the assumed anarchy of the international environment, thereby making security and the associated struggle for power the preeminent foreign policy concern.\textsuperscript{84} The \textit{constructivist} or \textit{normative} approach sees national interests as a product of the political process, whereby the behavioural aspects of democratic procedure result in a manifestation of the nation’s preferred objectives.\textsuperscript{85}

Naomi Rosenbaum observed:

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\textsuperscript{83} Critics of this approach note that its ability to distinguish the relative effectiveness of a foreign policy is limited, since it is difficult to discern when a government acts contrary to the national interest. Martin Griffiths, Terry O’Callaghan, and Steven C. Roach, \textit{International Relations: The Key Concepts}, 2\textsuperscript{nd} ed. (New York: Routledge), 217.
\textsuperscript{84} This approach is often criticized for its determinism and the tendency to define interest in terms of power and vice versa. Griffiths \textit{et al.}, \textit{International Relations}, 217.
\textsuperscript{85} Ibid.

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The term [national interest] is often used in the singular – the national interest – to suggest that at any time there is always some one correct policy for a nation, that once the national interest has been discovered the right course of action becomes obvious. It may or may not be part of actual policy, it may or may not be what the nation – its policy-makers or public – want, but it would serve the nation.\textsuperscript{86}

Charles Marshall argues the opposite:

The national interest is not singular. Rather, the national interests are plural. Difficulties arise from conflict between one interest and another – for example, a clash between the goal of peace and a prospering economy, between protection of American rights and property abroad and some fledgling regime’s amity, or between the goodwill and friendship of one nation and of another at loggerheads with it. Again, the list might be indefinitely extended.

A policy-maker’s job is to work out, within limits of what seems feasible, a combination of actions best to serve multiple national interests in their total relation to each other. Those involved in decisions may well differ as to the quotients of value to be regarded to multiple interests at stake at some juncture. It is scarcely conceivable for them to argue whether or not to follow a foreign policy conceived to be in the nation’s interests.\textsuperscript{87}

National interest is also a dynamic entity prone to constant shifts in interpretation. In the 1950s, Arnold Wolfers perceived a change in the United States from a “welfare” to “security” interpretation of national interest. Noting the Great Depression and the New Deal economic program responses as the background of Charles Beard’s study,\textsuperscript{88} Wolfers observed that the

\textsuperscript{86} Naomi Rosenbaum, “An Effective Foreign Policy for Canada,” \textit{Behind the Headlines} 28.5-6 (June 1969), 2.
\textsuperscript{88} A controversial element of Beard’s 1913 publication, \textit{An Economic Interpretation of the Constitution}, was the observation that the economic self-interests of the ‘founding fathers’ influenced the drafting of the United States Constitution. Beard states: “It cannot be said...that the members of the Convention were "disinterested." On the contrary, we are forced to accept the profoundly significant conclusion that they knew through their personal experiences in economic affairs the precise results which the new government that they were setting up was designed to attain. As a group of doctrinaires, like the Frankfort assembly of 1848, they would have failed miserably; but as practical men they were able to build the new government upon the only foundations which could be stable: fundamental economic interests.” Beard, \textit{An Economic Interpretation of the Constitution} (New York: Macmillan Co., 1913), 150. For a discussion of subsequent challenges to Beard’s thesis, see Alan Gibson, “What Ever Happened to the Economic Interpretation: Beard's Thesis and the Legacy of Empirical Analysis” (paper presented at the annual meeting of The Midwest Political Science Association, Palmer House Hilton, Chicago, Illinois, 15 April 2004). See also Burchill, \textit{The National Interest in International Relations Theory}, 2.
fundamental question of the 1930s was “whether American foreign policy, then largely economic in scope and motivation, was aimed not at promoting the welfare interests of the nation as a whole but instead at satisfying the material interests of powerful subnational interest or pressure groups.”\textsuperscript{89} If policy based on “narrow group selfishness” defined the historic policy course, a reconsidered national interest trajectory would involve a more inclusive approach focused on the welfare interests of the nation as a whole was what was advocated in the 1930s. As the environmental context shifted from depression and social reform to protracted threats of external aggression, policymakers had seemingly overshot the interior target of national interest in favour of the “interests of all of mankind.” Wolfers observed that the question in the early 1950s was “not one of transcending narrow group selfishness, as it was at the time of Beard’s discussion, but rather one of according more exclusive devotion to the narrower cause of the national self.”\textsuperscript{90}

Donald Nuechterlein defines the national interest of the Unites States as “[t]he country’s perceived needs and aspirations in relation to other sovereign states constituting its external environment,” an outcome of “a political process in which the country’s elected national leadership arrives at decisions about the importance of specific external events that affect the nation’s political and economic well-being.”\textsuperscript{91} Nuechterlein describes the four “long-term, enduring national interests” that underpin U.S. foreign policymaking as: defence of the homeland; enhancement of the nation’s economic well-being; creation of a favorable world

\textsuperscript{89} Wolfers, “An Ambiguous Symbol,” 147.
\textsuperscript{90} Ibid., 148.
\textsuperscript{91} Neuchterlein, America Overcommitted, 7. Neuchterlein notes his first use of this definition in the article “The Concept of ‘National Interest’: A Time for New Approaches,” Orbis (Spring 1979), 73-92.
order; and promotion of democratic values.\textsuperscript{92} For the United States, this political process of determining national interests occurs within the context of the constitutionally ingrained checks and balances regulating the relationship between the President and Congress.\textsuperscript{93} In the context of the four persistent national interests previously identified, this political process is more about assessing the \textit{intensity} of the interest at any point in time and balancing the potential advantages of applying the available instruments of state to defend or pursue said interests.\textsuperscript{94}

Significantly, the content of the Nuechterlein model of national interests includes a separation of foreign and domestic interests by distinguishing between the nature of \textit{national interest} and \textit{public interest}.\textsuperscript{95} Nuechterlein makes a key distinction between U.S. national interests and public interests by suggesting that the latter may be regarded as “the well-being of the American people and American enterprise within the territorial boundaries of the United States.”\textsuperscript{96} The “internal well-being of society” is consequently pursued through decentralized legislative means. National interest differs in that its application is towards the external environment, and due to the preference of sovereign states to “reserve to themselves the ultimate authority to decide how to function in the international arena,” the executive level of government retains the exclusive authority to define national interests.\textsuperscript{97} While noting this significant difference, Nuechterlein acknowledges their interdependence, suggesting “[t]he public interest is heavily influenced by the international environment at a given time, especially during

\textsuperscript{93} Nuechterlein, \textit{America Overcommitted}, 7.  
\textsuperscript{94} Ibid., 9.  
\textsuperscript{95} Ibid., 6.  
\textsuperscript{96} Ibid.,  
\textsuperscript{97} Nuechterlein, “America Recommitted,” 117-118.
international tensions; the national interest is influenced by the degree of social stability and political unity prevailing in the country.  

Adding further complexity to steps two through six in Macnamara’s national security framework is the reality that, similar to strategy, grand strategy, and national interest, ‘security’ is another “accordion word” with various interpretations. As Barry Buzan contends:

Security is taken to be about the pursuit of freedom from threat and the ability of states and societies to maintain their independent identity and their functional integrity against forces of change, which they see as hostile. The bottom line of security is survival, but it also reasonably includes a substantial range of concerns about the conditions of existence. Quite where this range of concerns ceases to merit the urgency of the “security” label (which identifies threats as significant enough to warrant emergency action and exceptional measures including the use of force) and becomes part of everyday uncertainties of life is one of the difficulties of the concept.

Samuel Huntington offers:

The aim of national security policy is to enhance the safety and the nation’s social, economic, and political institutions against threats arising from other independent states. National security policy may be thought of as existing in three forms and two levels. Military security policy is the program of activities designed to minimize or neutralize efforts to weaken or destroy the nation by armed forces operating from outside its institutional and territorial confines. Internal security policy deals with the threat of subversion – the effort to weaken or destroy the state by forces operating within its territorial and institutional confines. Situational security policy is concerned with the threat of erosion resulting from long-term changes in social, economic, demographic, and political conditions tending to reduce the relative power of the state. Each of these three forms of policy has an operating level and an institutional level. Operating policy consists of the immediate means taken to meet the security threat. Institutional policy deals with the manner in which operational policy is formulated and executed.

In relation to the burden of security, Arnold Wolfers observes:

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98 Nuechterlein, “America Recommitted,” 118.
Efforts for security are bound to be experienced as a burden; security after all is nothing but the absence of the evil of insecurity, a negative value so to speak. As a consequence, nations will be inclined to minimize these efforts, keeping them at the lowest level that will provide them with what they consider adequate protection. This level will often be lower than what statesmen, military leaders, or other particularly security-minded participants in the decision-making process believe it should be. In any case, together with the extent of the external threats, numerous domestic factors such as national character, tradition, preferences, and prejudices will influence the level of security that a nation chooses to make its target.\textsuperscript{101}

What it means to be ‘secure’ is inherently subjective, which further complicates consensus building regarding impacts to interests, and the ways and means of protecting or advancing national interests.

Regardless of this complexity, the common formula posits that a grand strategy can be designed through a linear process of identifying interests, conducting a threat and risk assessment in relation to those interests, and then applying an ends-ways-means calculus to determine optimal objectives, policies, and plans. This linear process is evident in the Cohen model of strategy in the 21\textsuperscript{st} Century that incorporates assumptions, a discourse regarding ends-ways-means, an articulation of accepted risks, the setting of priorities, and a theory of victory.\textsuperscript{102} However, such formulas tend to underestimate the impacts of the codependent interactions occurring, or that may occur, between actors. There is also a propensity to overcome the challenge of assessing the impact of a wide range of concerns with assumptions favouring a form of “single issue analysis” that becomes “extrapolated to represent the main case to be dealt

\textsuperscript{101} Wolfers, “An Ambiguous Symbol,” 153.
\textsuperscript{102} Drew and Snow, \textit{Making Twenty-First-Century Strategy}, 13; Cohen, “What’s Obama’s counterinsurgency strategy?”; Cohen, “Supreme Command in the 21\textsuperscript{st} Century”; Benson, “What is the Counter-Daesh Strategy?” Benson notes that this article is based on 2013 personal correspondence from Cohen explaining his strategy model. See also Hammes, “Assumptions – A Fatal Oversight,” 4-6.
Much of the national interest-risk management approach is focused on creating some artificial level of granularity and preferential priority to provide utility to the notion of national interest.

Although the natural policy making process may intuitively follow a process through which elements of Macnamara’s six questions are addressed, it is unrealistic to believe that such a framework can easily be imposed on a policy-making processes. It is critical to recognize that government decision-making, particularly in relation to domestic affairs, involves multiple concurrent observe-orientate-decide-act (OODA) processes and potentially multiple levels of government and bureaucracy. To try and superimpose some type of overarching decision making framework beyond an overarching policy-strategy matching tool may indeed be impossible.

While logically coherent, the national interest-risk management approach is arguably too sterile when applied in the absence of a finite problem such as the concentrating lens of a tangible existential threat – a lens that confines the scope of codependent interactions. The standard formula favours a form of “historical permanence” doctrine whereby national interests and objectives remain relatively static in relation to all circumstances. The national interest-risk management approach props up a grand strategy myth that has been built based on selective postmortem narratives of past behaviour. While these constructs bring order from the complexity

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103 Macnamara, “Canada’s Domestic Strategic Interests,” 15.
105 Eliot Cohen describes the doctrine of historical permanence as “blanket appeals to historical certainties” and a belief that “some things just don’t change.” Cohen, “The Historical Mind and Military Strategy,” 582.
of factors and variables that were at play, they are merely a précis. As Sir Michael Howard has counselled:

The first lesson that historians are entitled to teach is the austere one: not to generalise from false premises based on inadequate evidence. The second is no more comforting: the past is a foreign country; there is little we can say about it until we have learned its language and understood its assumptions; and in deriving conclusions about the processes which occurred in it and applying them to our own day we must be careful indeed.  

To suggest that the modern national interest-risk management exercise can account for true mass of complex and messy processes involving leadership, vision, intuition, adaptation, and the infinite idiosyncrasies of human interactions of real-time national policymaking is a truly tall order.

**Beyond Black-Box Grand Strategy**

Irrespective of its real-time policy utility, a behavioural phenomenon demarcated as grand strategy most certainly exists and has been observed in varied forms throughout history.  

Eliot Cohen notes that “[i]t is easier to grasp strategy in theory than to put it into practice, and not least because strategic decisions only rarely present themselves as such.” The occasion of a clear “first order choice about a course of action” is atypical. Strategic decisions present more often as “incremental choices” which are often at odds with rather simplistic initial concepts. Cohen properly observes how the Allies’ simple principle of “Germany First” was quickly

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107 For representative historical studies of grand strategy see Williamson Murray and Richard Hart Sinnreich, eds., *Successful Strategies: Triumphing in War and Peace from Antiquity to the Present* (Cambridge: Cambridge University Press, 2014); and Kennedy, *Grand Strategies in War and Peace*.
eclipsed by much more difficult incremental choices on where and how to bring this about.\textsuperscript{108} Nigel Hamilton’s recent reexamination of the military direction of the Second World War is a prudent example of this theme of real-time strategic decision making being a series of incremental decisions rather than some majestic first order choice.\textsuperscript{109}

Owing to President Franklin Delano Roosevelt’s death prior to being able to record his perspective, much of the strategic history of the war has been based on the perspectives of Prime Minister Winston Churchill and members of Combined Chiefs of Staff.\textsuperscript{110} Hamilton’s two volumes focusing on FDR as U.S. Commander in Chief provide novel insight into the series of incremental choices addressed during the war.\textsuperscript{111} Hamilton compellingly argues that the story of how allied strategy came into being is “almost the polar opposite of what we have been led, for the most part to believe.”\textsuperscript{112} Hamilton offers a correction to the common narrative of Churchill’s influence on Allied strategy by illustrating an “irreconcilable difference between his grand strategic ideas and his too-often ill-considered opportunism”:

After the war the former prime minister would go to great lengths to cast himself, in his six-volume epic \textit{The Second World War}, not only as a lonely oracle but architect of war. Inasmuch as he saw better than any of his contemporaries the ebb and flow of military history, necessitating that Britain withstand the predations of Hitler’s Third Reich until it could be rescued, he was by 1943 proven right. He had, after all, lost every battle against the Germans since 1940, yet with his U.S. partner in war was helping to force Hitler, thanks to [Operation] Torch, onto the defensive. Once Tunis fell, the Allies would possess a springboard for eventual victory in Europe, he felt – provided the Russians

\textsuperscript{109} Hamilton, \textit{The Mantle of Command}. Hamilton, \textit{Commander in Chief}.
\textsuperscript{111} Hamilton, \textit{The Mantle of Command}; Hamilton, \textit{Commander in Chief}.
\textsuperscript{112} Hamilton, \textit{The Mantle of Command}, xi. For a perspective on the standard narrative see Cohen, “Churchill and Coalition Strategy.”

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continued to face the brunt of Hitler’s Wehrmacht in the East. But beyond that his military strategy did not go, since he did not believe a cross-Channel attack could possibly succeed. In reality he had no idea how, in fact, the Third Reich could be defeated, beyond constant peripheral pressure and air attack.  

In portraying key interactions within the Allied decision making processes, such as the War Department’s antagonism towards FDR’s insistence on gaining battle and amphibious operational experience prior to a cross-Channel invasion, Hamilton effectively provides an enhanced view of the dynamic context behind the simplified strategic narrative of “Germany First.” Hamilton’s argument that FDR’s interest in North Africa preceded British strategy proposals opens an important window on how Second World War grand strategy came into being. Hamilton’s work represents WWII grand strategy more correctly as emerging from a marginal-gain process rather than some fixed vision.

Such reexaminations highlight the pitfalls of the précised case study approach that has generally been used to characterize historical examples of grand strategy. Such an approach tends to fix interests related to a specific problem in a particular time and space – commonly in terms of intuitive survival interests in response to some problem of existential magnitude for the states involved. The resultant grand strategy narratives are therefore aided by the ability to define an interconnected beginning (stimulus), middle (strategy), and end (resultant). The interests involved are either declared or implied from the objectives pursued, and thus the strategy – “the art of choice that binds means with objectives” – comes to characterize the middle portion of the narrative in the form of an elucidation of prioritization, sequencing, and the apparent “theory of

113 Hamilton, Commander in Chief, 71.
114 Ibid., 51.
victory” pursued to solve the presented problem.\(^\text{116}\) While the stimulus and the resultant are generally tangible elements of the historical record, the middle narrative is inherently flexible in that it needs only tie these two fixed points together in some coherent manner. The strategic narrative can thus take varied paths between end points and remain subjectively coherent. The central pitfall of such an approach is that it often pays insufficient attention to environmental influences acting on decision making processes. The importance of this environmental factor is highlighted in Jared Diamond’s Pulitzer Prize winning study on fates of human societies – a study that would fall within the domain of *conjectures* (social time) in Ferdinand Braudel’s varied wavelengths of time\(^\text{117}\) – which suggests that history tends to follow different courses for different societies as a result of differences in people’s environment.\(^\text{118}\)

Different environmental problems call for varied approaches to decision making. In reviewing the existent literature on strategy formation in the late-1970s, Henry Mintzberg identified three theoretical “modes” for how organizations make strategic decisions.\(^\text{119}\) The *planning mode* is the traditional “highly ordered, neatly integrated [process] with strategies explicated on schedule by a purposeful organization.”\(^\text{120}\) Charles Lindblom’s “muddling through” process in which various decision-makers with conflicting interests bargain among themselves to produce a “stream of incremental, disjointed decisions” is representative of the

\(^{116}\) Cohen, “What’s Obama’s counterinsurgency strategy?”


The third, found in economics and management literature, is the entrepreneurial mode characterized by a dominant leader executing intrepid and hazardous decisions toward some future vision. Mintzberg argued that the common theme of all strategy being a “deliberate conscious set of guidelines that determines decisions into the future” was flawed in its tendency to make the study of strategy formation into a perceptual phenomenon.

The précised ex post facto case study approach upon which much of the discourse on strategy and grand strategy is founded is roughly equivalent to the style of “black-box analysis” utilized in science and engineering, whereby inputs and outputs are the anchors of analysis. The inner workings of the system itself forgo full characterization due to their inherent complexity.

The general black-box theory is described as follows:

A black box is a fiction representing a set of concrete systems into which stimuli S impinge and out of which reactions R emerge. The constitution and structure of the box are altogether irrelevant to the approach under consideration, which is purely external and phenomenological. In other words, only the behavior of the system will be accounted for.

Within such as conceptualization, strategy becomes the conceptual bridge bringing a coherent linkage between the stimulus and the observed response. This bridge often becomes a

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123 Mintzberg, “Patterns in strategy formation,” 935.
124 The origins of ‘black-box’ analysis can be traced to German mathematician and scientist Wilhelm Cauer’s 1926 work on circuit analysis. It was developed as a theory in the 1960s. Bunge, “A General Black Box Theory,” 346.
125 A bridge metaphor has been used by Colin Gray to convey the core function of strategy. In portraying the “strategy bridge” as being more than a passive construction, Gray notes “[t]he strategists who hold the bridge are tasked with the generally inordinately complex and difficult mission of translating political purpose, or policy, into feasible military, and other, plans. Theirs is the task of turning one currency – military (or economic, or diplomatic, and so forth) power into quite another (desired political consequence). This near alchemical process necessarily
retrospective hybrid construct of the interaction between the decision maker’s initial “strategic concept” and the actual friction encountered during its attempted execution.\textsuperscript{126} Strategy in this sense provides a simplified surrogate narrative, adding linear coherence between apparent or implied threats to interests and observed reactive behavior without need to detail the complex interactions that occurred within the black-box itself.

![Figure 3.1: Ex Post Facto Strategy as a Conceptual Bridge in Black-Box Analysis\textsuperscript{127}]

\begin{quote}
Mintzberg coined the phrase “realized strategy” to differentiate the ex post facto results of decisional behaviour from the explicit a priori guideline of “intended strategy.”\textsuperscript{128} Realized strategy was defined as “a pattern in a stream of decisions” or a “sequence of decisions in some involves manipulation of two distinct currencies, military effect and political effect, via the potency of strategic effect. Overwhelming virtues of the bridge metaphor include its merits as a simple image that is universally accessible and comprehended, and the singularity of its ubiquitous, transcultural function. A bridge, even a metaphorical one, has to connect two distinctive entities or phenomena that otherwise would be divided. In the proverbial nutshell, this is exactly the function of strategy.” Gray, The Strategy Bridge, 7.
\end{quote}

\textsuperscript{126} Strategic concept’ is defined in Canadian military doctrine as: “[t]he course of action accepted as a result of the estimate of the strategic situation. It is a statement of what is to be done in broad terms sufficiently flexible to permit its use in framing the military, diplomatic, economic, and psychological and other measures, which stem from it.” DND, CFJP 01, Glossary.

\textsuperscript{127} This type of analysis favours a well-defined stimuli (or problem) and observable behaviours easily attributable to that stimulus.

\textsuperscript{128} Mintzberg, “Patterns in strategy formation,” 935.
area [that] exhibits a consistency over time.” The advantage of this differentiation was noted by Mintzberg as follows:

Defining strategy as we do enables us to consider both sides of the strategy formation coin: strategies as intended, a priori guidelines as well as strategies as evolved, a posteriori consistencies in decisional behavior. In other words, the strategy-maker may formulate a strategy through a conscious process before he makes specific decisions, or a strategy may form gradually, perhaps unintentionally, as he makes his decisions one by one. This definition operationalizes the concept of strategy for the researcher. Research on strategy formation (not necessarily formulation) focusses on a tangible phenomenon – the decision stream – and strategies become observed patterns in such streams.

This lens acknowledges that there is interaction between intended and realized strategies. Mintzberg offered a model of interplay between three potential pathways: deliberate strategies, which are intended strategies that become realized; unrealized strategies represented by intended strategies that are abandoned due to “unrealistic expectations, misjudgments about the environment, or changes in either during implementation”; and emergent strategies that have displaced or formed in the absence of intended strategies.

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129 A ‘decision’ was defined by Mintzberg as a commitment to action, often represented by a commitment of resources. Mintzberg, “Patterns in strategy formation,” 935.
130 Mintzberg, “Patterns in strategy formation,” 935.
131 Ibid., 945.
Mintzberg posited that strategy naturally tends to form in an adaptive mode rather than being truly formulated in a planning mode:

Planning theory postulates that the strategy-maker “formulates” from on high while the subordinates “implement” lower down. Unfortunately, however, this neat dichotomy is based on two assumptions which often prove false: that the formulator is fully informed, or at least as well informed as the implementor, and that the environment is sufficiently stable, or at least predictable, to ensure that there will be no need for reformulation during implementation. The absence of either condition should lead to a collapse of the formulation-implementation dichotomy, and the use of the adaptive mode instead of the planning one. Strategy formation then becomes a learning process, whereby so-called implementation feeds back to formulation and intentions get modified en route, resulting in an emergent strategy.133

From examination of case studies, a successful deliberate strategy is suggested to form when decision-makers have an uncharacteristic level of intuitive knowledge and inhabit an environment in which a reasonable level of forecasting is achievable. In the absence of these conditions, emergent strategies tend to be the norm.134 The two flawed assumptions noted by Mintzberg have rarely been incorporated into précised historical case studies of military and grand strategy, which tend to situate themselves in a planning or entrepreneurial mode rather than a more intricate adaptive one.

Indivisible with strategic theory designed for warfare, most of what is characterized as grand strategy in historical studies is akin to warfare by other means – e.g., the pursuit of national security objectives with the entire array of instruments of state employed to augment the use or threat of force – and transcends the actual hostilities. Black-box analysis works well in

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132 Reproduced from Figure 1 Types of Strategies in Mintzberg, “Patterns in strategy formation,” 945.
133 Mintzberg, “Patterns in strategy formation,” 946.
134 Ibid.
this military-centric problem domain in which the stimuli and responses are rather simple and intuitive: kill or be killed; force or be forced; overthrow or be overthrown; occupy or be occupied. Such analysis can be appropriately extended to the traditional grand strategic problem of how to apply augmented force to combat a short-term or protracted existential threat to the nation – to flourish or to fade as a nation. Précised historical case studies of military and grand strategy arguably tend towards this type of analysis as observable behaviours or personal memoires are projected back towards the stimulus problem to build a rational narrative for the actions observed. Strategy (or grand strategy) provides a conceptual bridge to explain the observed behavior and causation in relation to the problem. Strategy provides the narrative of the “alchemical process” through which military, economic, or diplomatic power is turned into desired political consequence. The constructed strategic narrative, however, can only act as a surrogate in place of a full examination of the inner workings of the black box.

In a mathematical sense, such strategic narratives often misrepresent optimal behaviour as the result of a “here-and-now strategy” in which a decision or policy, which is dependent solely on stimulus observations, has predicated all actions subsequently encountered. In reality, a more complex incremental “wait-and-see strategy,” or hedging strategy, involving decisions predicated by emergent indicators or probability estimations of certain conditions may actually have been deployed. For someone attempting to steer a path through the complexity and uncertainty of world events in real-time, insight into the inner workings of the black-box – i.e.,

136 Forms of here-and-now, wait-and-see, and mean-value (i.e. hedging) strategies are utilized in stochastic optimization modelling to ‘solve’ complex decision problems such as power management, in which problem-specific parameters such as future electricity prices, load demand, reservoir inflows, and fuel prices include some degree of uncertainty. Daniel Kuhn, Generalized Bounds for Convex Multistage Stochastic Programs (New York: Springer, 2005), 25.
knowledge of the signals, boundary conditions, and agent-to-agent interactions occurring or anticipated to occur – are perhaps more important than the strategic narrative construct itself. While black-box type analysis allows for a retrospective presentation of complex interactions through a concise strategic narrative, it often has little utility for complex decision making under conditions of uncertainty that represent real-time strategy and policymaking.

The application of black-box type analysis is wholly unsuitable to the less focused problems of contemporary national security. Absent the concentrating lens of a tangible existential threat, the quantity and complexity of stimuli or signals, along with the corresponding demand for diversity within policy responses, creates a situation in which any particular middle narrative (grand strategy) is inherently inadequate as a holistic solution for guiding prioritization, sequencing, and a “theory of victory” to a matrix of complex interdependent problems. In effect, the central problem changes from a tangible one of how to apply augmented force to compel an adversary to do one’s will, towards a vague protracted process of adaption and co-evolution in which the adversary element of the problem remains undefined, uncertain, and under constant dynamic change.

Remaining relatively adaptive and competitive within an environment of coevolving actors has arguably overtaken the adversary-focused model as the central national security problem in the contemporary affairs of state. Hence, what actually occurs within the black-box has become increasingly important to understand and more crucial for ensuring that adequate responses are at least possible if and when the situation merits. To have utility for here-and-now policymaking, some alternate form of “white-box” or “glass box” approach to understanding
composite-problem grand strategy – one composed of multiple streams of sub-policy and strategy – might be suggested.137

A white-box approach is not, however, the answer it may seem. Similar to Douglas Hofstadter’s remarkable “Ant Fugue” portrayal of the tension between reductionism and holism in relation to the behaviour of an ant colony, perception and level of analysis matter greatly in the study of grand strategy.138 The black-box approach tends towards holism – the belief that “the whole is greater than the sum of its parts.”139 A white-box approach would tend towards reductionism – the notion that “a whole can be understood completely if you understand its parts, and the nature of the ‘sum’.”

But a comprehensive white-box cannot realistically be achieved as there is always a limit to the number of variables that may be incorporated and the degree of transparency that can be incorporated. To expect full transparency within any box is unrealistic since such a condition could only be achieved by removing all sources of uncertainty. As we can know from Heisenberg’s indeterminacy principle,141 Gödel’s incompleteness theorems,142 and the second law of thermodynamics,143 there are fundamental natural limits to attaining such a

137 “White-box” or “glass-box” is a relatively new testing methodology utilized in the analysis of software. For a representative example of its application in computer science, see Jayalakshmi Balasubramaniam, “A Novel Approach to White-Box Policy Analysis” (Master’s thesis, University of Calgary, 2013).
139 Ibid., 312.
140 Ibid., 312.
141 Heisenberg’s uncertainty principle indicates it is inherent in nature that all observable physical quantities are subject to unpredictable fluctuations and therefore their values are not precisely defined. Werner Heisenberg, Physics and Philosophy: The Revolution in Modern Science (New York: Penguin Classics, 2000), x.
142 Published in 1931, Gödel’s first incompleteness theorem states that: “Any consistent set of formulas cannot be complete, in particular, for every consistent set of formulas there is a statement that is neither provable nor disprovable.” Gödel’s work on completeness and incompleteness challenged the general perception of mathematics as a field of absolutes, suggesting that truth rested merely on the assumption that the axioms chosen are true. His proof demonstrates that identical statements can simultaneously be proved both true and false if the axioms are changed. Kurt Gödel, On Formally Undecidable Propositions of Principia Mathematica and Related Systems, B. Meltzer, trans. (New York: Basic Books, 1962).
143 The laws of thermodynamics describe how energy effects matter and the relationships between thermal energy and other forms of energy. The second law of thermodynamics states that the entropy (i.e., the degree of disorder or
level of precision.\textsuperscript{144} Hence, for complex problems the white-box can only be approximated by a grey or opaque-box.

In addressing the questions of whether the world should be understood through holism or reduction, Hofstadter presented a third option: the ancient Zen answer of “Mu.” This answer rejects the categorical thinking that posits one must be chosen over the other. As Hofstadter indicated, “[b]y unasking the question, it reveals a wider truth: that there is a larger context into which both holistic and reductionist explanations fit.”\textsuperscript{145} This is arguably a better foundation from which to explore real-time composite-problem grand strategy. As contemporary national security is a dynamic composite-problem, the contention that a pragmatic government can actually \textit{do} black or white-box style grand strategy in the absence of a clarifying existential threat is a false prophesy. The complexity of the real-time pursuit of national security requires something more elegant.

The progressive application of strategic thought beyond intuitive military objectives has fueled a misguided interpretation of grand strategy as the mechanism for the ‘common run’ of policymaker to achieve great genius in a much broader sphere of rather intangible policy objectives. The term grand strategy was adopted in the twentieth century to describe the pursuit of political aims using a wider array of state instruments, to account for the blurring between the states of war and peace, and to account for an increased political element in the military domain. But the inconsistency of the decidedly hedgehog-like underpinnings of military strategy with the randomness in the system) of an isolated system not in equilibrium will tend to increase over time, approaching a maximum value at equilibrium. See Esther Hänggi and Stephanie Wehner, “A violation of the uncertainty principle implies a violation of the second law of thermodynamics,” \textit{Nature Communications} 4,1670 (2013).

\textsuperscript{144} Uncertainty as it relates to the construct of mental patterns or concepts of meaning to cope with our environment is discussed in the context of Gödel, Heisenberg, and the Second Law of Thermodynamics in John Boyd’s early work on strategy. Boyd, “Destruction and Creation.” See also Osinga, \textit{Science, Strategy and War}, 180-184.

\textsuperscript{145} Hofstadter, “Ant Fugue,” 312.
corresponding implication that all available state instruments can in fact be used to impose a preferential view of order on one’s world has somehow been overlooked. Strategy requires a clear objective and is therefore understood to be a rather linear ends-means-ways formula for organizing efforts to achieve this. As it is founded in strategy, grand strategy must logically be directed at some clear objective as well, albeit at a higher political-military level. A corresponding linear relationship between ends, means, and ways is implied. This linearity is clearly evident is the definitions of grand strategy as “the art and science of coordinating the development and use of the instruments of national power to achieve national security objectives.”\textsuperscript{146} But while this traditional force-based grand strategy appears to be a logical extension of military strategy that resonates with those educated by means of the classics on the art of war, traditional centrality of force within the grand strategy conception is rarely challenged. Modern grand strategy needs to decouple and demilitarize policy and strategy.

A Divergence of Policy and Strategy

It is significant that the contemporary utility of force differs fundamentally from that understood by the classical military theorists. The global reaction to two world wars and the nuclear reality of Mutually Assured Destruction (MAD) have upended the traditional core of strategy. The Clausewitzian policy objectives of \textit{overthrow} or \textit{occupy} to compel an enemy to do one’s bidding are no longer accepted as lawful outside very limited \textit{jus ad bellum} parameters.

\textsuperscript{146} Drew and Snow, \textit{Making Strategy}, 16.
solidified in Articles 2.4 and 51 of the Charter of the United Nations. As ardent political pragmatist Helmut Schmidt recently observed:

Since 1945, international law, in the shape of the United Nations Charter, has forbidden any external interference in a state’s affairs by means of force; only the Security Council may decide upon exceptions to this basic rule. It appears urgently necessary to me today to remind politicians of this basic rule. For example, the military intervention in Iraq, one based, moreover, on falsehoods, is unambiguously a violation of the principle of non-interference, a flagrant violation of the United Nations Charter. Politicians of many nations share the blame for this violation. Equally, politicians of many nations (including Germans) share the responsibility for interventions contradicting international law on humanitarian grounds. For example, for more than a decade, violent conflicts of interest in the Balkans have been disguised behind the cloak of humanitarianism on the part of the West (including the bombing of Belgrade).

Schmidt’s observations are reinforced by Rupert Smith’s exploration of the contemporary utility of military force. Smith argues that “to apply force with utility implies an understanding of the context in which one is acting, a clear definition of the result to be achieved, an identification of the point or target to which the force is being applied – and, as important as all the others, an understanding of the nature of the force being applied.”

Smith suggests that the entire concept of war has experienced a paradigm shift from “interstate industrial war” to “war amongst the people,” yet military force is still being applied in a manner designed to have utility in the expired paradigm. Smith has argued that:

147. Article 2.4 of the Charter of the United Nations, which states: “All members shall refrain in their international relations from the threat or the use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the purposes of the United Nations.” A right to self-defence is provided in Article 51: “Nothing in the present Charter shall impair the inherent right of individual or collective self-defense if an armed attack occurs against a Member of the United Nations, until the Security Council has taken measures necessary to maintain international peace and security.”
149. Smith, Utility of Force.
150. Ibid., 8.
151. Smith’s use of “paradigm shift” is based upon Thomas Kuhn’s theory of scientific revolutions whereby scientific communities experience a shift necessitating revision of prior assumptions and development of new assumptions as
This endemic problem is the result of the shift in the paradigm of war and the continued resistance to it: politicians and soldiers are still thinking in terms of the old paradigm and trying to use their conventionally configured forces to that end — whilst the enemy and the battle have changed. As a result, the utility of the effort is minimal: the force may be massive and impressive, but it is not delivering the required results, nor indeed any results that is in proportion to its assumed capabilities. As with the differences between deploying and employing force, this reflects a lack of understanding of the utility of force.\textsuperscript{153}

Such analysis suggests that effective strategy requires an understanding of the interrelationship between instruments and the objectives. In the case of the traditional force-centric strategy paradigm the objective is some rather tangible variant of overthrow or occupy. This tangibility favours an outdated interpretation of instruments, one in which a linear causal relationship between the instrument and its effectiveness towards achieving a clearly defined objective is intuitive. This linear instrument-objective is understood in a manner similar to Newton’s laws of motion: that change requires a net force to act on an enemy to overcome its present behaviour and that the magnitude of the external force required for imposing change is proportional to the enemy’s mass or military power.\textsuperscript{154}

What Schmidt and Smith have identified is a general lack of sensitivity to the fact that policy and strategy converge and diverge depending on proximity to an existential threat. Hew Strachan has also identified this divergence of policy and strategy in relation to the magnitude of threat:

The expectation of major war enabled the subordination of strategy to policy, because in major war the tensions in civil-military relations are reduced by the

\textsuperscript{152} Smith, Utility of Force, 5-6.
\textsuperscript{153} Smith, Utility of Force, 7.
\textsuperscript{154} Newton, Newton’s Principia, 83-84.
elemental and existential nature of the threat. If wars in reality fall short of such expectations, and are waged at lower levels of intensity over longer periods of time, then the divergence between policy and strategy are likely to be greater. The need for strategy to remain grounded in its understanding of the war’s nature, and the consistency with which it argues from that premise, is proportionately more vital. Only by doing so can it usefully serve the needs of policy.\textsuperscript{155}

Only as policy and strategy conflate under a perceived existential threat will the linear instrument-objective akin to Newton’s laws become the rational interpretation. While the concentrating lens of industrial interstate war still remains a possibility, its relative weight in contemporary policymaking has diminished to a rather peripheral position. The traditional understanding of national security policy being led by the nation’s foreign affairs department and acting as a bridge between foreign and defence policy by identifying and confronting state-based threats to national interests is in need of reconsideration in relation to the contemporary threat environment in which policy and strategy have diverged.

CHAPTER 4: AN EMERGENT GRAND STRATEGY OF RESILIENCE

People must…get away from the idea that serious work is restricted to beating to death a well-defined problem in a narrow discipline, while broadly integrative thinking is relegated to cocktail parties. In academic life, in bureaucracies, and elsewhere, the task of integration is insufficiently respected. Yet anyone at the top of an organization, a president or a prime minister or a CEO, has to make decisions as if all aspects of the situation, along with the interaction among those aspects, were being taken into account. Is it reasonable for the leader, reaching down into the organization for help, to encounter only specialists and for integrative thinking to take place only when he or she makes the final intuitive judgments?¹

A Complexity Crisis?

Observers of the global security environment noted an apparent shift, starting in late 2013, from the “unipolar moment” of the post-Cold War era to a condition of complexity and uncertainty characterized by increased great power competition and uncertainty.² The 2015 U.S. National Military Strategy characterized this contemporary security environment as follows:

Today, the probability of U.S. involvement in interstate war with a major power is assessed to be low but growing. Should one occur, however, the consequences would be immense. VEOs [violent extremist organizations], in contrast, pose an immediate threat to transregional security by coupling readily available technologies with extremist ideologies. Overlapping state and non-state violence, there exists an area of conflict where actors blend techniques, capabilities, and resources to achieve their objectives. Such “hybrid” conflicts may consist of

military forces assuming a non-state identity, as Russia did in the Crimea, or involve a VEO fielding rudimentary combined arms capabilities, as ISIL [The Islamic State of Iraq and the Levant] has demonstrated in Iraq and Syria. Hybrid conflicts also may be comprised of state and non-state actors working together toward shared objectives, employing a wide range of weapons such as we have witnessed in eastern Ukraine. Hybrid conflicts serve to increase ambiguity, complicate decision-making, and slow the coordination of effective responses. Due to these advantages to the aggressor, it is likely that this form of conflict will persist well into the future.

Others have simply characterized this contemporary security environment as a return of feudalism.

The term ‘hybrid’ or ‘ambiguous’ warfare has recently become common in describing the antagonistic form of Russian military and paramilitary activities in Crimea and eastern Ukraine. Although it is generally noted in Russian military circles that hybrid warfare is a Western construct, it does present a useful lens for defence analysts attempting to address the contemporary challenge of converting battlefield victories into lasting strategic gains – as emphasized by the West’s poor performance at the strategic level in Afghanistan and Iraq. As savvy adversaries leverage culture, history, geography, and economics to counter conventional

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military superiority, hybrid warfare increasingly becomes the most viable option for achieving desired ends.\textsuperscript{7}

Peter Mansoor notes that hybrid warfare, although having emerged recently as a buzzword to describe twenty-first century conflicts characterized by the tandem engagement of conventional and irregular forces within the same battlespace, is nothing new. As a historical example, Mansoor suggests the 1755-1763 French and Indian War in North America was an instance where both belligerents utilized hybrid warfare:

Initially, the French held the edge because of their use of Indian auxiliaries and unconventional methods, but by 1759, both sides were using a combination of regular military forces, colonial militias, and native irregulars to contend for mastery of the North American continent. British adaptation to French-Canadian methods doomed France to defeat as Indian scouts, American rangers, and British light infantry took their place alongside conventional Redcoat battalions. British commanders such as James Wolfe and Jeffrey Amherst even went so far as to use light infantry and rangers to raid French-Canadian settlements, thereby wreaking havoc on morale and causing desertions as militiamen left the ranks to protect their families.

The French commander, the Marquis de Montcalm, actually degraded the capabilities of his forces by shunning the type of warfare practiced so successfully by the natives and French Canadians in earlier decades. Instead, he offered the British an opportunity to engage in a conventional war in which the side with the bigger battalions held all of the advantages. No longer possessing a conceptual or tactical advantage over their opponents, the 6,000 French soldiers in Canada and the Ohio River Valley had no hope of defeating 44,000 British and Colonial soldiers and sailors arrayed against them. The British seizure of Quebec in 1759 and Montreal the next year sealed the French defeat.\textsuperscript{8}

Citing the famed Carl von Clausewitz observation that “[w]ar is more than a true chameleon that slightly adapts its characteristics to the given case,” Mansoor suggests that although war in the twenty-first century is a complex phenomenon, war’s essence has not changed. Regardless of

\textsuperscript{7} Peter R. Mansoor, “Introduction: Hybrid Warfare in History”, in Murray and Mansoor, \textit{Hybrid Warfare}, 2.

\textsuperscript{8} Mansoor, “Hybrid Warfare in History,” 5-6.
how its conduct changes with circumstances, “war is still war.”

Mansoor argues that “hybrid warfare” is simply a useful concept through which to analyze past, present, and future conflicts involving regular and irregular forces engaged simultaneously in symmetric and asymmetric warfare.

In the case of China’s attempts to gain greater control of peripherals in the East and South China Seas, the term ‘gray-zone warfare’ or ‘salami-slicing tactics’ has recently entered the security and defence lexicon.

The ‘grey-zone’ has been described as a zone on the peace-conflict continuum “characterized by intense political, economic, informational, and military competition more fervent in nature than normal steady-state diplomacy, yet short of conventional war.”

In his March 2015 testimony before the U.S. House Armed Services Committee Subcommittee on Emerging Threats and Capabilities, General Joseph L. Votel offered two significant implications of this type of strategic environment:

First, the diffusion of power is decreasing the ability of any state, acting alone, to control outcomes unilaterally. Globalization has created networked challenges on a massive scale. Only by working with a variety of security partners can we begin to address these issues. Second, our success in this environment will be determined by our ability to adequately navigate conflicts that fall outside of the traditional peace-or-war construct. Actors taking a “gray zone” approach seek to secure their objectives while minimizing the scope and scale of actual fighting. In this “gray zone,” we are confronted with ambiguity on the nature of the conflict, the parties involved, and the validity of the legal and political claims at stake.

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10 Ibid., 3.
These conflicts defy our traditional views of war and require us to invest time and effort in ensuring we prepare ourselves with the proper capabilities, capacities, and authorities to safeguard U.S. interests.¹³

Four types of changes have been described as characterizing globalization, which is conceived as “a process (or set of processes) that embodies a transformation in the spatial organization of social relations and transactions, generating transcontinental or interregional flows and networks of activity, interaction, and power”:¹⁴

First, it involves a stretching of social, political, and economic activities across political frontiers, regions, and continents.

Second, it suggests the intensification, or the growing magnitude, of interconnectedness and flows of trade, investment, finance, migration, culture, and so on.

Third, the growing extent and intensity of global interconnectedness can be linked to a speeding up of global interactions and processes, as the evolution of worldwide systems of transport and communication increases the velocity of the diffusion of ideas, goods, information, capital, and people.

Forth, the growing extent, intensity, and velocity of global interactions can be associated with their deepening impact, such that the effects of even the most local developments may come to have enormous global consequences. In that sense, the boundaries between domestic matters and global affairs become increasingly blurred.¹⁵

Such changes would naturally accelerate conflicts with traditional peace-or-war constructs. Certainly this should not be surprising in light of Martin Van Creveld’s perspective on the interrelation between technology and war:

…war is completely permeated by technology and governed by it. The causes that lead to wars, and the goals for which they are fought; the blows with which campaigns open, and the victories with which they (sometimes) end; the relationship between armed forces and the societies that they serve; planning.

¹³ General Joseph L. Votel, statement before the House Armed Services Committee Subcommittee on Emerging Threats and Capabilities, 18 March 2015, 7.
¹⁴ Held et al., “Global Transformations,” 7.
¹⁵ Ibid.
preparation, execution, and evaluation; operations and intelligence and organization and supply; objectives and methods and capabilities and missions; command and leadership and strategy and tactics; even the very conceptual frameworks employed by our brains in order to think about war and its conduct—not one of these is immune to the impact that technology has had and does have and always will have.¹⁶

Douglas Lovelace offers a useful summary of the contemporary national security problem in observing that hybrid or ambiguous warfare:

…provides a useful shorthand expression for the mutation of the international security environment brought on by decades of unrivaled U.S. conventional military power. It encompasses conventional warfare, irregular warfare, cyberwarfare, insurgency, criminality, economic blackmail, ethnic warfare, “lawfare,” and the application of low-cost but effective technologies to thwart high-cost technologically advanced forces. Hybrid warfare targets entire societies, not just nations’ military forces. In many cases, aggressors employ elements of hybrid warfare either in measures just under their adversaries’ thresholds for response or in ways that make attribution too uncertain to justify lethal responses—this area is sometimes called the “Gray Zone.” In most cases, hybrid adversaries prefer to achieve their aims without resort to politically and economically costly traditional warfare.¹⁷

The lens of hybrid and grey-zone warfare seeks to provide justification for challenging traditional views of conflict and investing time and effort in questions surrounding the corresponding level of readiness required to address these new patterns of conflict below the threshold of lethal response.

While a standard naming convention for this “new” international security environment has yet to be decided upon,¹⁸ suggested descriptors have included Cold War 2.0,¹⁹ the Era of

¹⁷ Lovelace, Terrorism: Commentary on Security, ix. For more on hybrid warfare see Murray and Mansoor, Hybrid Warfare, 3.
¹⁸ O’Rourke, Shift in the International Security Environment, 8.
Disorder, and the Age of Everything. This ‘new era’ of complexity and uncertainty has been associated with an apparent crisis in U.S. strategy. As argued by Anthony Cordesman:

…the United States has no clear strategy for dealing with Russia and Asia and is reacting tactically to the immediate pressures of events in the Middle East and Afghanistan without any clear goals or direction. Worse, these military tactical reactions are steadily more decoupled from the need to create an integrated civil-military strategy: Grab any short-term form of “win” and ignore the need to “hold” and “build.”

This declared “complexity crisis in U.S. strategy” has directly contributed to a reintroduction of grand strategy as a hopeful means of dealing with recent developments in the international security environment. In the words of U.S. Deputy Defense Secretary Robert Work, “the era of everything is the era of grand strategy.”

This notion that grand strategy (as most in the defence field would traditionally interpret it) offers some panacea for complexity is disingenuous. The problem is that traditional grand strategy processes, such as the linear national interest-risk management approach that seeks to

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24 Peniston, “The Age of Everything.”
balance perceived threats with capabilities to counter or negate those threats, is outpaced by the ambiguous adaptive nature of irregular warfare, cyberwarfare, insurgency, criminality, economic blackmail, ethnic warfare, and lawfare. More nimble and adaptive adversaries can get inside of their opponents’ decision action cycle, or observe-orientate-decide-act (OODA) loop, and thereby seize the initiative through the opportunity to make more and faster decisions.  

Hybrid warfare exists because it effectively turns the very strength of the dominant power against itself. This theme of “vacuity and substance,” of striking and exploiting voids and weaknesses and avoiding strengths, is obvious in Sun Tzu’s notable teaching that “[s]ubjugating the enemy’s army without fighting is the true pinnacle of excellence.” In the contemporary sense this is not being applied against an adversaries’ physical army, but against the increasing inertia of modern institutions of governance. It acknowledges that with increasing power comes greater bureaucratic complexity. With increased bureaucratic complexity comes a more cumbersome “institutional learning cycle,” thereby hindering the grander organization’s ability to adapt quickly and bring its disproportionate strength to bear with strategic effect. The problem is less a matter of how to employ a nation’s instrument of power with utility, and more about how to minimize a lag in ability to maintain initiative in relation to a rapidly shifting environment.

One response to addressing this initiative lag has been the incorporation of organizational theory as a significant component of attempts to learn how militaries can adapt more effectively

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25 Boyd developed the theory of the OODA loop after observing that certain pilots excelled in aerial dogfights and questioned why the US kill ratio over Korea was 10:1 when North Korean and Chinese aircraft where often superior in capability. Boyd, “Patterns of Conflict.”


to deal with perceived shifts in the patterns of conflict. Military innovation does not occur spontaneously or without friction as “militaries tie their cultural identities to specific roles or have career structures that fail to reward (or even punish) new ways of thinking.” As John Nagl has aptly stated:

Organizational theory suggests that organizations are created in order to accomplish certain missions. Over time certain missions become more important than other missions to the leadership of the organization. According to an early proponent of organizational theory, the essence of an organization is the view of the dominant group in that organization on the best roles and missions for that organization. The essence is ‘the notion held by members of an organization as to what the main capabilities and primary mission of the organization should be.’ …Organizations favor policies that will increase the importance of their organization, fight for capabilities that they view as essential to their essence, seek to protect those capabilities viewed as essential, and demonstrate comparative indifference to functions not viewed as essential. Leaders of an organization have substantial influence over their own destinies: ‘Career officials of an organization believe that they are in a better position than others to determine what capabilities they should have and how they should have and how they should best fulfill their mission. They attach very high priority to controlling their own resources so that these can be used to support the essence of the organization.’

Janine Davidson has argued that militaries only adjust their ‘essence’ in response to three catalysts: failure; the opportunity or need to grow and/or survive; and external pressure.

Attempts to synthesize the lessons learned from recent conflicts and prepare for the realities of future warfare – a situation that may encompass elements of all three catalysts for change – have generally incorporated systematic processes from learning and organizational

30 Davidson, *Lifting the Fog of Peace*, 12.
theorists.\textsuperscript{31} Richard Downie’s “Institutional Learning Cycle,” developed to study doctrinal change in the United States Army, is a representative example of such efforts to enhance post-conflict military learning that has received renewed attention in post Iraq and Afghanistan lessons learned studies and examinations of future courses of action to address options concerns such as hybrid and grey-zone warfare.\textsuperscript{32} Downie defines learning as “a process by which an organization uses new knowledge or understanding gained from experience or study to adjust institutional norms, doctrine and procedures in ways designed to minimize previous gaps in performance and maximize future successes.”\textsuperscript{33} Similarly, John Nagl offers that “[t]he institutional learning process begins with the recognition of shortcomings in organizational knowledge or performance. It moves through the critical phase of searching for and achieving consensus on the right solution for the shortcomings to the adoption and dissemination of the modified doctrine. The process then repeats itself endlessly.”\textsuperscript{34}

Unfortunately, as evident from the rate of doctrinal adaption of Coalition Forces to recent insurgencies in Afghanistan and Iraq, such institutional adaption within large hierarchical organizations is often as slow and messy as T.E. Lawrence’s characterization of “eating soup with a knife.”\textsuperscript{35} It is also significant that the impetus for institutional adaption often comes from the bottom-up rather than the top-down approach envisioned by grand strategy. Decentralized non-hierarchical organizations are generally more adaptive to changes in their environment.\textsuperscript{36}

\begin{thebibliography}{9}
\bibitem{Downie} Downie, \textit{Learning from Conflict}, 38.
\bibitem{Ibid} Ibid., 22.
\bibitem{Nagl} Nagl, \textit{Counterinsurgency Lessons}, 6.
\bibitem{Lawrence} T.E. Lawrence, \textit{Seven Pillars of Wisdom} (Harmondsworth: Penguin Books, 1962), Chapter XXXIII.
\bibitem{Andersen} Torben J Andersen and Bo Bernhard Nielsen, “Adaptive strategy making: The effects of emergent and intended strategy modes,” \textit{European Management Review} 6.2 (2009), 94. See also James R. Galbraith, \textit{Competing with}
\end{thebibliography}
Recently published memoires and analyses of the gradual adoption of U.S. Counterinsurgency doctrine offer a picture of considerable friction embodied by cultural resistance to change and dogmatic inertia at higher echelons.\textsuperscript{37} The strategy and doctrinal adaptations that had to occur over a protracted period were a much more substantial undertaking and fully disconnected from the initial strategy for the “Global War on Terror,” which had been rather swiftly formulated over the course of about a week.\textsuperscript{38} Adaption occurred gradually through a combination of dispersed initiatives and central coordination.\textsuperscript{39} In the business field, such adaption has been attributed to the influence of a combination of \textit{emergent} and \textit{intended} strategies.\textsuperscript{40} This interaction has alternately been described as permutations of \textit{crescive} and \textit{cultural} strategies, \textit{inductive} and \textit{deductive} strategies, \textit{generative} and \textit{rational} strategies, or \textit{autonomous} and \textit{induced} strategies.\textsuperscript{41} The process of protracted adjustment during the insurgencies in Afghanistan and Iraq more closely fit the business model of adaptive strategy \textit{formation} proposed by Anderson and Nielson than the traditional planning mode-only model of grand strategy \textit{formulation}.


\textsuperscript{38} Burke, \textit{9/11 Wars}, 45.

\textsuperscript{39} Andersen and Nielsen, “Adaptive strategy making,” 94.

\textsuperscript{40} Mintzberg, “Patterns in strategy formation,” 943-48.

\textsuperscript{41} Andersen and Nielsen, “Adaptive strategy making,” 94.
Figure 4.1: Anderson and Nielson Adaptive Strategy Model

The Andersen-Nielsen model imagines realized strategy – in the context of Mintzberg’s “pattern in a stream of decisions”⁴³ – as the result of a process characterized by “a combination of variance-increasing autonomous initiatives and variance-reducing planning activities.”⁴⁴ Anderson and Nielson proposed that emergent strategy modes and intended strategy modes co-exist. This allows adaptive behaviour from the emergent mode to be integrated and optimized by the intended strategy mode. This accounts for the observations of bottom-up adaption, such as the U.S. 3rd Armored Cavalry Regiment’s unauthorized counterinsurgency program implemented in Tal Afar, Iraq during the spring of 2005.⁴⁵ Anderson and Nielson argue:

Emergent strategies arise from initiatives taken at lower hierarchical levels monitored by middle managers and their potential significance is often realized by

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⁴² Adapted from “Adaptive strategy-making model” in Torben J Andersen and Bo Bernhard Nielsen, “Adaptive strategy making: The effects of emergent and intended strategy modes,” *European Management Review* 6.2 (2009), 95, Figure 1.
⁴³ Mintzberg, “Patterns in strategy formation,” 943.
⁴⁴ Andersen and Nielsen, “Adaptive strategy making,” 95.
top management at a later stage. Intended strategies, in contrast, arise as a consequence of decisions made in conjunction with formal strategic management or planning processes.\textsuperscript{46} This is an inherently more complex process than a top-down national interest-risk management approach.

While some have countered that “[c]omplexity, or the perception of complexity, [has been] the timeless companion of the national security strategist,”\textsuperscript{47} in this suggested “age of everything” where indeterminate security challenges are seemingly served up in an unmoderated and random fashion, it is quite reasonable that security and defence analysts have turned to grand strategy in the hope of wresting back some degree of control over their security challenges. Peter Layton notes that a strategy, as opposed to a plan, is required when the problem being faced involves two elements: an interactive, intelligent, adaptive adversary, and an identified particular objective or outcome.\textsuperscript{48} As “[a] grand strategy tries to change the existing relationship a country has with another nation or group of nations to something more favourable,”\textsuperscript{49} a prerequisite must be an attempt to understand the characteristics of the current security environment. Appreciating the adversarial tactics and strategies being, or likely to be, employed within this environment therefore becomes a key component for developing and implementing specific countermeasures within a synchronizing grand strategy. But there is a significant difference in fully appreciating the adversary and manipulating perceptions of the adversary as an expedient to strategy formulation.

\textsuperscript{46} Andersen and Nielsen, “Adaptive strategy making,” 95.
\textsuperscript{49} Ibid.
It is noteworthy that the central dilemma recognized by U.S. defence officials in the immediate aftermath of 9/11 was that there was a significant difference between identifying the perpetrators and defining the enemy. As the nature of the ‘new’ terrorism threat had seemingly shifted towards mass murder from the traditional notion that “terrorists want a lot of people watching and a lot of people listening, but not a lot of people dead,” the primary policy objective became to prevent subsequent attacks. This was a significant shift from the pre-9/11 “Roll Back”: the December 2000 strategy for dealing with Al-Qaeda within which the American objective was to “reduce the al Qida network to a point where it no longer pose[d] a serious threat to [U.S.] security or that of other governments.” The outgoing Clinton administration had suggested the following strategy:

The United States goal is to roll back the al Qida network to a point where it will no longer pose a serious threat to the US or its interests, as was done to previously robust terrorist groups such as the Abu Nidal Organization and the Japanese Red Army. In order to significantly reduce the threat al Qida poses to US interests, every element of its infrastructure must be considerably weakened or eliminated most notably: the significant camp and facility infrastructure for training and safehaven sanctuary in Afghanistan; access to large amounts of money and the ability to disperse it internationally to support cells and affiliated terrorist groups; multiple active cells capable of launching military style, large-scale terrorist operations; a large pool of personnel willing to risk being identified as al Qida members and willing to reside at al Qida facilities. The United States actively seeks to reduce al Qida to such a rump group in the next three to five years through a steady and coordinated program employing all relevant means.

52 National Security Council, “Strategy for Eliminating the Threat,” 3. The covering ‘Clarke memo’ indicates this document as the year-end 2000 strategy on Al-Qaeda developed by the Clinton Administration for the Bush administration; however, in a 25 September 2006 interview with the New York Post Editorial Board, Secretary of State Condeleezza Rice denied that the Clinton administration had presented the incoming administration with “comprehensive strategy” against al-Qaeda. An earlier 1998 strategy paper entitled “Pol-Mil Plan for al-Qida”, also
After 9/11, Bush Administration officials perceived a need to define the adversary as “the wider network of terrorists and their backers that might organize additional, large-scale strikes against the United States.”\textsuperscript{53} Devising a strategy to deal with a worldwide network was considerably different from determining how to apply instruments of power against a nation state or “rolling back” a single terrorist network.

Under Secretary of Defence for Policy Douglas Feith has indicated that Claire Sterling’s work on terrorism networks influenced thinking within the Bush Administration regarding the nature of terrorism. Sterling’s terrorism network thesis suggested that the international terrorist groups of the 1980s operated as a network serving the interests of sponsors – primarily the Soviet Union – rather than under a cohesive hierarchy of self-interest.\textsuperscript{54} Feith’s interpretation of Sterling, “that [terrorist] groups could be understood fully only by seeing how they worked with each other and with their state supporters,” suggested that understanding the operational, ideological, and financial linkages between terrorist groups and their state sponsors was vital.\textsuperscript{55} This was essentially an intelligence problem for which existing U.S. intelligence coverage was “inadequate.”\textsuperscript{56}

Feith has noted the difficulties that this dilemma presented:

The U.S. government could not simply define the enemy as a set of terrorist organizations together with states that helped them in one way or another. If we


\textsuperscript{55} Feith, \textit{War and Decision}, 7.

\textsuperscript{56} Lieutenant General John Abizaid, head of the Strategy and Plans Office of the Chairman of the Joint Chiefs of Staff, is noted by Under Secretary of Defence for Policy Douglas Feith to have lamented that “our intelligence about the enemy was inadequate” during initial discussions of the U.S. response to 9/11. Feith, \textit{War and Decision}, 8.
did, we could find ourselves declaring war against all countries that gave safe
haven, funds, or ideological and other types of support for terrorists – a list that
would include Afghanistan, Cuba, Iran, Iraq, Libya, North Korea, Pakistan, Saudi
Arabia, Sudan, and Syria. This was clearly an unrealistic idea. It further
complicated matters that the Unites States considered some of these states
important friends. Moreover, a formal list of terrorist enemy organizations would
require continual revision, reflecting mergers, acquisitions, splits, and name
changes that were common among them. We needed a better way to define the
enemy, one that would cover all the relevant bases but preserve our flexibility
regarding how, when, and against whom we should act.\(^\text{57}\)

As there was no precise formulation for defining the enemy, the term “war on terror” was
employed to indicate that “the enemy was not a list of organizations and states but certain
inherently evil activities that included both terrorism and state support for terrorism.”\(^\text{58}\) Feith
indicates:

\textit{The coinage of the term ‘war on terror’} allowed the Administration to defer
naming the enemy while considering these perplexing questions \[how broad the
target set would be? should it be restricted to AQ and its sponsors? Should it be
all Sunni groups? Should it be all Islamic groups? What about state supporters
generally? States supporters with WMD capabilities? What was the level of
evidential linkage to AQ required?\].\(^\text{59}\)

This deferral of clearly defining the adversary effectively allowed an uncomfortable intelligence
problem to be transformed into a military problem by adopting a much more tangible \textit{territorial
counter-terrorism strategy} based on the assumption that it was easier to target state sponsors
with the objective of destroying the supporting network than to target the terrorists themselves.\(^\text{60}\)

Declaring the adversary as “terror” was an attempt to defer defining a specific war aim.
This was seen as an application of the primary lesson of the First Gulf War: that defining the war

\(^{57}\) Feith, \textit{War and Decision}, 8.
\(^{58}\) Ibid., 8-9.
\(^{59}\) Ibid., 9.
\(^{60}\) Ibid., 8.
aim as merely the liberation of Kuwait had limited options when circumstances developed.\textsuperscript{61} As it was unrealistic to attempt to eliminate terrorism, the strategic goal was framed as “defeating terrorism as a threat to American freedom and openness.”\textsuperscript{62} The territorial counter-terrorism strategy essentially assumed that state support for terrorism networks, which could be tangibly targeted using traditional instruments of power, could act as a substitute for defining the adversary. This strategic concept was expressed to the President as follows:

A key war aim would be to persuade or compel States to stop supporting terrorism. The regimes of such States should see that it will be fatal to host terrorists who attack the U.S. as was done on September 11. If the war does not significantly change the world’s political map, the U.S. will not achieve its aim. There is value in being clear on the order of magnitude of the necessary change. The [United States Government] USG should envision a goal along these lines: New regimes in Afghanistan and other key State (or two) that supports terrorism (to strengthen political and military efforts to change policies elsewhere); Syria out of Lebanon; Dismantlement or destruction of WMD capabilities in [redacted]; End of [redacted] support for terrorism; End of many other countries’ support or tolerance of terrorism.\textsuperscript{63}

The overall strategic objectives issued by the U.S. Defense Department in early October 2001 were:

Protect the US and prevent further attacks against the US or US interests; Support the creation of an international political environment hostile to terrorism to dissuade individuals, non-state actors, and states from entering into or initiating support for terrorism; Deter aggression or the use of force against the US, allies, friends and partners, and defend their populations, forces and critical infrastructures. If deterrence fails, defeat aggression or the use of force; Prevent or control the spreading or escalation of conflict; Assist other instruments of national power as directed to encourage populations dominated by terrorist organizations or their supports to overthrow that domination.\textsuperscript{64}

\textsuperscript{61} Feith, \textit{War and Decision}, 10.
\textsuperscript{62} Ibid., 10-11.
This was arguably a rather linear and superficial view of the interconnectedness of global terrorism networks within the international political environment. While attacking the policies of states supporting or tolerating terrorist groups was logical in a Newtonian strategy sense, the ambiguous grand objective of the war on terror was fatally flawed in that it discounted the adaptability of networks and assumed that such a complex network could be shaped without actually understanding system attributes.

The fatal assumption of U.S. officials was that the worldwide terrorist network had conventional hierarchical command and control nodes where “information flows up from the bottom, being aggregated at specific points in the chain of command, and orders and instruction flow down, being disaggregated into detailed tasks at each point in the chain.” Since the loss of such nodes tends to break the adversaries chain, hierarchical command nodes are centers of gravity that are seen as key strategic military objectives. Rupert Smith notes how this assumption does not reflect the actual complexity of the nervous system of non-conventional networks:

Guerrilla, and in particular terrorist, nervous systems do not work in this way …mainly because of their dependence on the people and their lack of strategic military objectives. As a result they tend to have characteristics specific to the locale in which they are operating. To use a botanical analogy, their nervous system is “rhizomatic.” Rhizomatic plants can propagate themselves through their roots; nettles, brambles and most grasses do this. They can increase by spreading fertilized seed, or vegetatively through their root systems, even when the root is severed from the parent body. This allows the plant to survive a bad season or seasons and the disturbance of the soil.

Smith further observes:

65 Smith, Utility of Force, 331.
66 Ibid.
67 Ibid., 332.
A “rhizomatic” command system operates with an apparently hierarchical system aboveground, visible in the operational and political arenas, and with another system centred on the roots underground: the true system. It is a horizontal system, with many discrete groups. It develops to suit its surroundings and purpose in a process of natural selection, and with no predetermined operational structure; its foundation is that of the social structure of its locale.\(^{68}\)

Counteracting such a complex command and control system is as challenging as eradicating rhizomatic weeds:

Rhizomes are eradicated by one of three methods: digging them up, poisoning or removing the nutrients from the soil, or by penetrating the roots with a systemic poison. Cutting off their visible heads causes them to lie dormant for a season – at best. Much the same is true of organizations with a rhizomatic command system such as guerrilla and terrorist networks, in which people are to the organization as the soil is to the rhizome…Unlike the attack on rhizomatic plants, where one or the other method can be used, the attack on the rhizomatic command system is done best from all three directions, operations in each direction being conducted so as to complement the others. It is important to remember that the outward and visible elements of the system, particularly those involved in low-level actions, are to an extent expendable. While their death or capture limits their actions and acts as a deterrent to others not to act in that way again, it does not necessarily deter the resolve to act; indeed, it is often a spur to action in another direction. As a result, any use of force against these opponents must be carefully calculated.\(^{69}\)

The complexity of this problem, coupled with the limited utility of force against such systems, was something not well addressed by the initial territorial counter-terrorism strategy based on the objective of persuading or compelling states to cease supporting or tolerating terrorism.\(^{70}\)

The initial strategy for the Global War on Terror arguably had a level “intellectual coherence and internal logic” consistent with the accepted standard of Goldwater-Nichols national security strategy.\(^{71}\) A national interest-risk management process was applied and resulted in a form of grand strategy consistent with William Martel’s ideological interpretation.

\(^{68}\) Smith, *Utility of Force*, 332.
\(^{69}\) Ibid., 333.
\(^{70}\) US Secretary of Defense, “Strategic Thoughts,” 2.
\(^{71}\) Burke, *9/11 Wars*, 45.
Framing of the adversary as the global network of terrorism provided the answer to the broad question of why the U.S. intended to pursue specific policies with particular strategies. This ideological form of grand strategy provided the lens of convenience needed to institutionalize efforts and simplify communications rather than truly identify the most appropriate course of action. The fatal flaw was that the initial “Estimate” was situated as a result of the political need to defer defining the true nature of the adversary but maintain the preference to employ the inherent strengths of American instruments of power without prior need for adaption or reorientation of these tools.

The abundance of post 9/11 discourse on grand strategy is a result of a policy-level search for “Alternate Organizational Actions” in the United States becoming reinvigorated in response to recent indications of Davidson’s three catalysts. The countless works cited in reports by the U.S. Congressional Research Service illustrates the significant level of activity occurring in this area. In regards to the commentary of the Wests’ search for a strategic solution for Afghanistan, Thomas Hammes notes:

“Afghanistan strategy” results in over 28 million hits on Google. Yet most commenters – and to be fair, most administration personnel – are not really speaking about strategy but rather about what goals are appropriate for Afghanistan. This means that most of the discussion is simply wasted. A discussion of goals avoids the difficult task of developing genuine strategy.

Such searching for a ‘better’ grand strategy embodied by alternate policy goals for existent state instruments to implement has limited utility. Such efforts do not address that the ambiguity of the nature of the conflict and the parties involved has fundamentally challenged one of Layton’s

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73 Downie, *Learning from Conflict*, 38.
74 See detailed citations in O’Rourke, *Shift in the International Security Environment*.
precursor elements of a strategy problem: the identification of a particular objective or outcome.\textsuperscript{76} Contemporary security challenges actually present more of a crisis of adaptation to complexity than a complexity-induced crisis requiring some ‘better’ grand strategy. Irrespective of the search for alternate policy goals, structural flaws inhabit the traditional grand strategy system due to the fact that such constructs do not effectively incorporate the reality that actors tend to co-evolve.\textsuperscript{77} As the complexity of actor-to-actor interactions become increasingly complex and diffuse, the ability to continually adapt becomes relatively more important.

While there is indeed a growing opportunity for potential adversaries to achieve their aims through grey-zone tactics below the \textit{jus ad bellum} threshold for conventional warfare response, the actual utility of the old paradigm of force-based grand strategy must be challenged. The key challenge is not to invoke grand strategy to mitigate complexity; but rather to modify the common conception of grand strategy itself to account for an environment requiring, first and foremost, a faster rate of adaptation. Where the adversary remains relatively undefined, the focus of grand strategy must shift towards mitigating the negative effects of increasing bureaucratic complexity rather than addressing individual threats.

Such ambiguity does not exist in Sun Tzu’s commentary on seeking out the “true nature” of warfare and leveraging “the strategic configuration of power (\textit{shih})” to forecast and secure victory for oneself.\textsuperscript{78} Something akin to Newton’s first and second laws of motion underwrites discussions of \textit{shih} within \textit{The Art of War}:

\textsuperscript{76} Layton, “Canadian National Security Strategy,” 37.
\textsuperscript{77} Co-evolution is referenced here in the sense of complexity science concepts, such as Stuart Kauffman’s treatment of biological co-evolution as coupled deforming “fitness landscapes.” Kauffman, “The Sciences of Complexity,” 299-322. See also Kauffman, \textit{Origins of Order}.
\textsuperscript{78} Sun Tzu, \textit{The Art of War} (1994), 167, 187.
The strategic configuration of power (shih) [is visible in] the onrush of pent-up water tumbling stones along. The [effect of] constraints [is visible in] the onrush of a bird of prey breaking the bones of its [target]. Thus the strategic configuration of power (shih) of those that excel in warfare is sharply focused, their constraints are precise. Their strategic configuration of power (shih) is like a fully drawn crossbow, their constraints like the release of the trigger.

... One who employs strategic power (shih) commands men in battle as he were rolling logs or stones. The nature of wood and stone is to be quiet when stable but to move when on precipitous ground. If they are square they stop, if round they tend to move. Thus the strategic power (shih) of one who excels at employing men in warfare is comparable to rolling round boulders down a thousand-fathom mountain. Such is the strategic configuration of power (shih).79

An awareness of an underlying focus, target, direction of aim, or force of gravity appear to be a prerequisite for the creation of a strategic configuration of power. Newtonian grand strategy is thus founded on the assumption that the adversary and their attributes are recognizable, or at least can be estimated. This linear causal relationship between knowing the nature of the application of threat of force and the objective of victory in warfare permeates classical strategy thought. The objective is static and intuitive because, as Sun Tzu intimates: “Warfare is the greatest affair of state, the basis of life and death, the Way (Tao) to survival or extinction.”80 To seek an alternate objective – defeat – in the face of an existential threat would be decidedly irrational.

It is difficult to apply grand strategy to “change the relationship a country has with another nation or group of nations to something more favourable” if there is no certainty as to the actual nature of that relationship.81 Layton’s two elements of the strategic problem requiring a strategy versus a plan – an interactive, intelligent, adaptive adversary and an identified objective

79 Ralph Sawyer notes that “constraints,” a translation of chieh, is generally accepted to refer to the modulation of both time and space. He suggests that the term is intended to denote a deliberate structuring of actions in terms of timing and position. Sun Tzu, The Art of War (1994), 187-88, 314n.
or outcome – are not as easily evident within conceptions of hybrid and grey-zone warfare. Without a well-defined strategic problem, it is difficult to see how Sun Tzu’s five factors can be applied to “know victory or defeat.”

Real-time policy and strategy making is increasingly a domain in which rhizomatic security challenges are served up in an unmoderated and random rodízio-style. Diverse accumulative threats appear and disappear at various rates and magnitudes without clear patterns. As no single threat appears to meet the existential threshold in itself, it becomes difficult to anticipate and prioritize the degree and depth to which each offering should be addressed. This is a significantly different strategic environment from the more deliberate and predictable à la carte-style characteristic of periods of perceptible existential threat, or the self-indulgent buffet-style of “engagement and enlargement” in the immediate post-Cold War era. Without a specific adversary to focus specific objectives upon, there is no corresponding fine-tuning of one’s relative interests until presented with a specific stimulus. Although force-based grand strategy appears to be a logical extension of military strategy that resonates with those educated by means of the classics on the art of war, the traditional centrality of force within the grand strategy conception offers little respite as such tools lack positive utility in a rhizomatic/rodízio-style environment.

This problem has been characterized as a “Complexity Trap,” a perception that the modern strategic environment has become a “Gordian knot” so complex that it resists the art of

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83 Rodízio refers to the style of service common in Brazilian restaurants where an endless procession of courses is served directly from the cooking spit at the table until the customer signals servers otherwise.
84 The terms “engagement and enlargement” and “democratic enlargement” are associated with the Clinton Administration’s post-Cold War policies in which Western powers dabbled in various forms of nation building. Boys, *Clinton’s Grand Strategy*, 85.
strategy.\textsuperscript{85} Some point to the post-9/11 failure of the United States to implement true grand strategy as being caused by the “current trend toward worshipping at complexity’s altar.” Gallagher, Geltzer, and Gorka argue:

Entranced by the notion of complexity, the United States responds with paralysis, “bet-hedging,” and repeated calls for new conceptual paradigms. Too often, the national security community seems content to accept the analytical trepidation—or paralysis—that is the natural by-product of believing in unprecedented complexity and, in turn, to adopt a fundamentally reactive posture, essentially viewing strategy as a process of watching, waiting, and scrabbling to adapt and respond in an ad hoc fashion.\textsuperscript{86}

This is perhaps a logical perception when considering that even one of the most effective U.S. Army commanders in Iraq intimated: “It’s so damn complex. If you ever think you have the solution to this, you’re wrong and you're dangerous…Remember General [Robert Georges] Nivelle, in the First World War, at Verdun? He said he had the solutions and then destroyed the French army until it mutinied.”\textsuperscript{87} While this would seem to be an admission of complexity paralysis, this statement had a significant qualifying statement: “You have to keep listening and thinking and being critical and self-critical.”\textsuperscript{88} This was recognition of the need for the integration of local adaption into the traditional top-down strategy paradigm. It is a re-emergence of the tension between centralization and decentralization. Complexity favours decentralization, yet the traditional conception of strategy (and therefore grand strategy) favours centralization.

\textsuperscript{86} Ibid.
\textsuperscript{87} Colonel Herbert Raymond McMaster quoted in George Packer, \textit{Interesting Times: Writings from a Turbulent Decade} (New York: Farrar, Straus and Giroux, 2009), 72. McMaster was commander of the U.S. 3\textsuperscript{rd} Armored Cavalry Regiment responsible for engineering initial successes against insurgents in Tal Afar, Iraq during the spring of 2005. He is also known for his exploration of Vietnam War policies in his 1997 publication \textit{Dereliction of Duty: Lyndon Johnson, Robert McNamara, The Joint Chiefs of Staff, and the Lies that Led to Vietnam}. In February 2017, McMaster was appointed as National Security Advisor within the Trump Administration.
\textsuperscript{88} H.R. McMaster quoted in Packer, \textit{Interesting Times}, 72.
The centralization/decentralization dilemma in the contemporary security environment has been illustrated as follows:

Decisions taken at the centre can be more coordinated, limit wasteful duplication, and may be able to lower average costs because they can spread fixed resources (anything from a marketing department to an aircraft carrier) across a bigger base. But decisions taken at the fringes of an organisation are quick and the local information will probably be much better, even if the big picture is not clear.\(^8^9\)

This observation reiterates economist Friedrich Hayek’s 1945 reflection on “how valuable an asset in all walks of life is knowledge of people, of local conditions, and of special circumstances.”\(^9^0\)

What this suggests is that an adjusted model of grand strategy is needed to deal with a contemporary security environment where force has limited utility and complexity reigns. The requirement for Newtonian grand strategy in a rhizomatic/rodízio security environment has receded as policy and strategy have diverged with traditional force-based existential threats. A corresponding infusion of local adaptation into the traditional conception of grand strategy is needed. This necessitates the introduction of complexity science, particularly the concept of “emergence” associated with Complex Adaptive Systems (cas). This subsequently leads to John R. Boyd’s unpublished work on “evolving, open-ended, far-from-equilibrium process of self-organization, emergence, and natural selection”\(^9^1\) as a natural means of operationalization of an adjusted model of real-time contemporary grand strategy.

\(^8^9\) Harford, *Adapt*, 25.
National Security Policy within a Complex Adaptive System

Adaption refers to the process by which an entity fits itself into its environment.⁹² Policymaking is a form of adaption.⁹³ Hence, it can be stated that real-time national security policymaking is the process of seeking a best fit within the present security environment. This national security environment can be characterized as a complex adaptive system (cas), or an “aggregate emergent agent” that interacts with other agents (or bounded subsystems) and subsequently learns from those interactions.⁹⁴ The national security adaptation processes are untidily nested within regional ecosystems, which are themselves nested within a complex global environment, all of which are complex adaptive systems.⁹⁵ As John Holland suggests, “[e]cosystems, governments, biological cells, markets, and complex adaptive systems in general are characterized by intricate hierarchal arrangements of boundaries and signals.”⁹⁶ Holland notes:

At a fundamental level, thought itself depends on our penchant for seeing the world in terms of the bounded shapes we call objects. To see an object, we must organize the perpetually novel, confusing array of light signals striking the eye into familiar, bounded shapes. Once we organize our sensory input into objects, we can go on to parse the world about us in increasingly sophisticated ways.⁹⁷

Continuous evolution of signal/boundary systems represent the mechanisms by which adaptions occur, albeit at differing time scales for different adaptive agents and systems. For example, the

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⁹⁴ Ibid., 3.
⁹⁶ Holland, *Signals and Boundaries*, 1.
⁹⁷ Ibid., 6.
time scale of adaptation (or modification time) for a central nervous system (i.e. seconds to hours) varies greatly from that of an ecosystem (i.e. years to millennia). 98

A cas has been described as a:

…system composed of interacting agents described in terms of rules. These agents adapt by changing their rules as experience accumulates. In cas, a major part of the environment of any given adaptive agent consists of other adaptive agents, so that a portion of any agent’s efforts at adaption is spent adapting to other adaptive agents. This one feature is a major source of the complex temporal patterns that cas generate. To understand cas we must understand these ever changing patterns. 99

The essential features of any cas are: diversity and individuality of components, where there are diverse mechanisms that sustain and refresh diversity over time; localized interactions among the components that could be reproductive, competitive, or predatory in nature; and an autonomous process through which the outcomes of localized interactions may be replicated or enhanced as warranted by their fit with the environment. 100 The key elements of complex adaptive systems have been described as heterogeneity of components, aggregation (or hierarchical structural arrangements) among components, and nonlinear flows (or interactions) between components. 101

Bounded subsystems (or agents) are the components of a cas that adapt and learn as they interact with other agents in accordance with a “program” or sequence of rules that guides interactions with its environment. 102 These programs are illustrated in their simplest form as stimulus-

98 Holland, Hidden Order, 9-10.
99 Ibid., 10.
100 Levin, Fragile Dominion, 12. Alternately, John Holland describes a more detailed “seven basics” of complex adaptive systems categorized into four properties (aggregation, nonlinearity, flows, and diversity) and three mechanisms (tags, internal models, and building blocks). Holland, Hidden Order, 10.
101 Levin provides examples of flow in an ecosystem as “the flow of nutrients, the flow of water, the flow of toxicants, the flow of energy, the flow of individuals, and the flow of information.” Levin, Fragile Dominion, 13-14.
102 Holland, Signals and Boundaries, 281.
response rules such as: IF stimulus $S$ occurs THEN give response $R$. The range of stimuli that agents can process and their repertoire of responses bound their freedom-of-action. The behaviour of any agent is a result of the sequencing of these rules. Interacting signals and boundaries are evident in the membrane hierarchies of biological cells, niches within ecosystems, the equity and derivative exchanges of markets, departmental hierarchies of governments, and the international systems of governance.

The field of complex adaptive systems challenges the notion that an understanding of a system as a whole can be fully known by understanding the behaviour of the component parts. Within any cas – such as the biosphere, an ecosystem, the human immune system, the mammalian central nervous system, economies, cities, or corporations – local interactions between “agents” and events cascade through the system of systems and restructure it in a nonlinear process called “emergence.” Higher levels of organization and hierarchy emerge from the “building blocks” of certain aggregates of agents. An example is how water forms from molecules of $\text{H}_2\text{O}$, which are derived from aggregates of hydrogen and oxygen atoms, which are themselves aggregates of protons, neutrons, and electrons that are each aggregations of quarks. But just as the phenomenon of ‘wetness’ is not a simple summation of the properties of the

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103 IF/THEN rules are alternately described as ‘condition-action’ or ‘production’ rules. Holland, Hidden Order, 7.
104 Holland, Hidden Order, 7.
105 Ibid., 8.
106 Holland defines ‘hierarchical organization’ as an agent composed of agents or semi-autonomous subsystems. Holland, Signals and Boundaries, 281, 289.
108 Levin, Fragile Dominion, 12; Holland, Hidden Order, 1-2; Reeves et al., “Biology of Corporate Survival,” 48.
109 Nonlinearity refers to disproportionality between cause and effect. Small changes in a critical variable can have disproportionate effects on a system’s properties. Holland uses the example of “path dependency” in economics, in which the level of market success may be dictated by the time and circumstances related to the introduction of a product. Levin, Fragile Dominion, 14.
component molecules, atoms, subatomic particles, and elementary particles, wetness emerges from the interplay between molecules.\textsuperscript{110}

Nonlinearity, where “the action of the whole is more than the sum of the actions of the parts,” is characteristic of any complex adaptive system.\textsuperscript{111} An ongoing process of adaption occurs as emergent properties or behaviours provide “feedback” that further influences constituent agents, resulting in subsequent alterations to the broader system. This cycle of local interaction, emergence, and feedback produces a constantly evolving system of an unpredictable and uncontrollable character. Further complexity and uncertainty is introduced as the cycle of local interaction, emergence, and feedback cascades between nested ecosystems and the broader environment.\textsuperscript{112} Complexity and tension between what is good for individual agents and what is good for aggregates of agents and the entire system therefore exists within all levels of this nested system.\textsuperscript{113}

Conceptualizing national security policymaking within the lens of a complex adaptive system overcomes the problem of the customary grand ends-integrated ways-consolidated means formula of grand strategy being a poor model for attempting to ‘steer’ or ‘shape’ complexity. It acknowledges that there are no central “instructions” or “goal-seeking behavior” guiding the development of a complex system. There is instead an autonomous self-organizing process that is bounded by numerous simpler rules that govern change within the system. Multiple outcomes are typically possible in response to stimuli as a result of this self-organization characteristic in


\textsuperscript{111} Ibid., 2.

\textsuperscript{112} The complex adaptive system model originates in biological science, but has been adapted by Martin Reeves for describing the business environment. Reeves \textit{et al.}, “Biology of Corporate Survival,” 48-49.

\textsuperscript{113} Ibid., 49.
the development of complex adaptive systems.\textsuperscript{114} This suggests that the utility of the conception of grand strategy is limited to the relatively narrow role as an aid to quelling the “universal thirst for clarity” and the longing for an “orderly scheme of things” within the human mind.\textsuperscript{115}

Just as Carl von Clausewitz sought to develop a theory of the art of war as a means to “educate the mind of the future commander, or, more accurately, to guide him in his self-education, not to accompany him to the battlefield,\textsuperscript{116} the study of grand strategy may enlighten policymakers or stimulate processes through historical reflection. There is clear utility in historical case studies of grand strategy through which the successes and failures of attempts to preserve long-term interests by integrating political, economic, and military ambitions are subjected to post-mortem examination.\textsuperscript{117} Grand strategy is, as Paul Kennedy suggests, at its most basic about finding a proper balance of priorities.\textsuperscript{118} Reflection on past balances serves to inform the range of possibilities and the factors that were perhaps considered in choosing a particular course of action; however, it is critical to acknowledge that these combinations were an adaptive response to the signals and boundary conditions present at a particular point of evolution within a complex adaptive system.

Policymakers do not really perform or execute grand strategy in real-time. The phenomenon of grand strategy is better described as the \textit{emergent behaviour} of an aggregate of agents positioned within a complex adaptive system nested within a network of other complex adaptive systems. Although this emergent behaviour can indeed be observed as an outcome, its

\textsuperscript{114} Levin, \textit{Fragile Dominion}, 12.
\textsuperscript{115} Clausewitz, \textit{On War} (1984), 71.
\textsuperscript{116} Ibid., 141.
\textsuperscript{117} A representative example of post-mortem grand strategy in the context of European powers is Paul Kennedy, ed., \textit{Grand Strategies in War and Peace} (New Haven, CT: Yale University Press, 1991), ix.
\textsuperscript{118} Ibid.
development is nonlinear; it is an *aggregate* of how the indicative activities of complex adaptive systems have interacted to produce a particular behaviour.

Holland describes four typical patterns of emergent behaviour that are easily evident in the security domain and make forecasting of the long-term evolution of the security environment all but impossible:

1) self-organization into patterns;

2) chaotic behaviour where small changes in initial conditions produce large later changes;

3) ‘fat-tailed’ behaviour, where rare events occur much more often than would be predicted by a normal (bell-curve) distribution;\(^\text{119}\) and

4) adaptive interaction, where interacting agents modify their strategies in diverse ways as experience accumulates.\(^\text{120}\)

Retrospective study of the apparent aggregation processes in order to describe patterns in how the emergent behaviour came about undoubtably has educational merit, but its utility for ‘steering’ a complex adaptive system towards a particular emergent behaviour – the avowed goal of the customary form of grand strategy – relies on the assumption that emergence in a complex adaptive system can be deliberately organized and controlled by a participant agent or aggregate of agents. This in turn assumes that these agents are ‘fully rational’ and act based on “full knowledge of the *future* consequences of their actions, including the responses of other agents to those actions.”\(^\text{121}\)

The challenge for the forward looking national security policymaker is not how to engineer a particular grand strategic objective upon a complex adaptive system whose evolution

\(^{119}\) Nassim Taleb’s characterization of “Black Swan Events” is an elegant portrayal of ‘fat-tailed’ behaviour. See Taleb, *The Black Swan*, xxii.

\(^{120}\) Holland, *Complexity*, 5-6.

\(^{121}\) Ibid., 24.
they cannot conceivably control, but to adapt and coevolve the myriad of imbedded cycles of local interaction, emergence, and feedback in a manner that best satisfies the nation’s particular interests. The key question must not be how to reduce complexity through development and adherence to a grand strategy, but how to cope with the increasing complexity and interdependence of global and domestic affairs in a manner that secures the best advantage within the evolving network of nested complex adaptive systems.

While understanding of different complex adaptive systems continues to develop, a conclusive model for steering such systems has yet to be advanced; however, Holland’s recent suggestion that the key to such an endeavour lies in studying the origin and co-evolution of signal/boundary hierarchies provides a foothold for examining a more adaptive grand strategy conception. The significance of the interaction between signals and boundaries is described by Holland as follows:

At a fundamental level, thought itself depends on our penchant for seeing the world in terms of the bounded shapes we call objects. To see an object, we must organize the perpetually novel, confusing array of light signals striking the eye into familiar, bounded shapes. Once we organize our sensory input into objects, we can go on to parse the world about us in increasingly sophisticated ways. Present-day human society depends on cataloguing boundaries that range from geographic, linguistic, and political boundaries down to the boundaries that define bodily organs and the membranes that compartmentalize biological cells. In each case there are matching signals that facilitate interaction and control.\(^{122}\)

Holland’s suggestion that the way to steer complex adaptive systems is to modify signal/boundary hierarchies has significant utility.\(^{123}\) Just as Jacob Bjerknes’ work in illustrating the mechanism of fronts in generating weather had a fundamental impact on accuracy in weather

\(^{122}\) Holland, *Signals and Boundaries*, 6.
\(^{123}\) Ibid., 2.
forecasting, an exploration of signal/boundary mechanisms for national security strategy offers a better guide than traditional grand strategy for steering along an evolving path rather than a predetermined course of navigation. This is in recognition of the fact that even the brightest headlights have limited utility on a winding road.

Fortunately, there has been one commentator employing Murray Gell-Mann’s view of “broadly integrative thinking” that has provided a foundation of signal/boundary mechanisms for national security strategy. Colonel John Boyd’s work on the continual creation and destruction of mental patterns, or concepts of meaning, to comprehend and cope with our environment provides a useful groundwork. Elements of John Holland’s adaptive agent flourish within Boyd’s work in the sense that:

Adaptive agents are defined by an enclosing boundary that accepts some signals and ignores others, a ‘program’ inside the boundary for processing and sending signals, and mechanisms for changing (adapting) this program in response to the agent’s accumulating experience. Once the signal/boundary agents have been defined, they must be situated to allow for positioning of the relevant signals and boundaries. That is, the agents must be placed in a geometry that positions populations of agents of various kinds and localizes non-agent ‘resources.’ Within this geometry, agents must be able to form conglomerates that yield higher levels of organization with new boundaries so that the framework can capture hierarchical organization.

Boyd provides a framework that can facilitate Holland’s suggestion that the way to steer complex adaptive systems is to modify signal/boundary hierarchies. A Boyd-Holland hybrid model therefore offers significant utility for national security policymaking.

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125 Boyd, “Destruction and Creation.”
127 Ibid., 2.
Boyd’s Model as a Signal/Boundary Mechanism

‘Boyd Theory’, superficially known to military professionals as the Observation-Orientation-Decision-Action (OODA) “Loop”, is the foundation of what might be called adaptive kinetics: an alteration in both perceptions and the rate of change in decision making with the intent of seizing decisive advantage. In the context of air-to-air combat, Boyd advocated “fast transient” or “buttonhook” characteristics whereby a pilot should pick and choose engagement opportunities by losing and gaining energy more quickly while out-turning their opponent.128 As Boyd notes:

Such activity will make us appear ambiguous (unpredictable) thereby generating confusion and disorder among our adversaries – since our adversaries will be unable to generate mental images or pictures that agree with the menacing as well as faster transient rhythm or patterns they are competing against.129

Boyd’s theory of conflict suggested that all actions are reached by going through an OODA loop in which “in order to win, we should operate at a faster tempo or rhythm than our adversaries – or better yet, get inside (the) adversary’s OODA time cycle or loop and beat him by making more and faster decisions thereby seizing the initiative.”130 Boyd’s influence on contemporary air-land battle (i.e., manoeuvre warfare) doctrine has resulted in “getting inside” an adversary’s OODA loop becoming dogma within Western military training curriculums.131

Boyd’s work went well beyond simply operating within OODA loops.132 His studies of conflict provide a level of clarity into strategy that is often overlooked. In his 1986 “Pattern of

129 Ibid., 5. Emphasis in original.
130 Ibid.
Conflict” briefing, Boyd provided a “New Conception,” or unifying vision, rooted in human
nature that arguably helps understand adversarial decision making. His vision was intended to
provide a basis for Western military strategy, the overall goal indicated as being to “[c]ollapse
[the] adversary’s system into confusion and disorder by causing him to over or under react to
activity that appears simultaneously menacing as well as ambiguous, chaotic, or misleading.”
Boyd expanded on this concept to the point of providing a holistic approach from national
objective through strategy and tactics. His framework is characterized as follows:

**National Goal.** Improve our fitness, as an organic whole, to shape and cope with
an everchanging environment.

**Grand Strategy.** Shape pursuit of national goal so that we not only amplify our
spirit and strength (while undermining and isolating our adversaries) but also
influence the uncommitted or potential adversaries so that they are drawn toward
our philosophy and are empathetic toward our success.

**Strategic Aim.** Diminish adversary’s capacity while improving our capability to
adapt as an organic whole, so that our adversary cannot cope while we cope with
events/efforts as they unfold.

**Strategy.** Penetrate adversary’s moral-mental-physical being to dissolve his moral
fiber, disorient his mental images, disrupt his operations, and overload his
systems, as well as subvert, shatter, seize, or otherwise subdue those moral-
mental-physical bastions, connections, or activities that he depends upon, in order
to destroy internal harmony, produce paralysis, and collapse adversary’s will to
resist.

**Grand Tactics [Operational Art].** Operate inside the adversary’s observations-
orientation-decision-action loops, or get inside his mind-time-space, to create
tangles of threatening and/or non-threatening events/efforts as well as repeatedly
generate mismatches between those events/efforts adversary observes, or
imagines, and those he must react to, to survive;

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thereby

Enmesh adversary in an amorphous, menacing, and unpredictable world of uncertainty, doubt, mistrust, confusion, disorder, fear panic, chaos, … and/or fold adversary back inside himself;

thereby

Maneuver adversary beyond his moral-mental-physical capacity to adapt or endure so that he can neither divine our intentions nor focus his efforts to cope with the unfolding strategic design or related decisive strokes as they penetrate, splinter, isolate or envelope, and overwhelm him.

Tactics. Observe-orient-decide-act more inconspicuously, more quickly, and with more irregularity as basis to keep and gain initiative as well as shape and shift main effort; to repeatedly and unexpectedly penetrate vulnerabilities and weaknesses exposed by that effort or other effort(s) that tie-up, divert, or drain-away adversary attention (and strength) elsewhere.  

That such a framework provides a foundation consistent with a complex adaptive system within a rhizomatic/rodízio security environment is perhaps illustrated by its resonance with T.E. Lawrence’s interpretations of strategy within the context of his experience engineering an insurgency against the Ottomans during WWI.

Lawrence perceived strategy as “the aim in war, the synoptic regard which sees everything by the standard of the whole,” and tactics as “the means towards the strategic end, the steps of its staircase.” The three elements of strategy and tactics proposed by Lawrence – the algebraic (or hecastic), the biological (or bionomic), and the psychological (or diathetic) – are an underlying theme of Boyd’s framework. An example of the algebraic/hecastic element (i.e., geography, weather, railways, etc.) was the assessment by Lawrence that within the Turkish Army manpower was abundant but material resources were scarce and costly. Lawrence  

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134 Boyd, “Patterns of Conflict,” 134, 141.
therefore aimed efforts at destroying these scarce materials as opposed to the Army itself, and sought to gain advantage in resources at a dominant moment or in a single aspect.\textsuperscript{137} With respect to the biological/bionomic element (i.e., wear and tear, life and death, and humanity), Lawrence emphasized never being on the defensive, unless by “rare accident,” by “never giving the enemy’s soldier a target.”\textsuperscript{138} The psychological/diathetic element is demonstrated by the importance that Lawrence placed on influencing not just the minds of the adversary, but the minds of the population supporting them, the minds of the “hostile nation waiting the verdict,” and the “neutrals looking on.”\textsuperscript{139}

Boyd’s national goal of improving fitness to shape and cope with an ever-changing environment is a significantly different focus than the national interest-risk management approach, previously characterized as a higher form of the “Estimate” methodology entrenched in contemporary military planning doctrine. While algebraic, biological, and the psychological elements of strategy may indeed become assessment factors within Eliot Cohen’s model of strategy in the 21\textsuperscript{st} century – incorporating assumptions, a discourse regarding ends-ways-means, an articulation of accepted risks, the setting of priorities, and a theory of victory\textsuperscript{140} – such models presume the existence of perfect fitness to shape the environment based on relatively static interests. Boyd’s model recommends the continual interpretation of signals from algebraic, biological, and the psychological elements with a view towards adapting boundaries and improving fitness to adapt advantageously as these elements shift and re-form within the

\textsuperscript{137} Lawrence, “The Evolution of a Revolt,” 10.
\textsuperscript{138} Ibid.
\textsuperscript{139} Ibid., 11.
\textsuperscript{140} Cohen, “What’s Obama’s counterinsurgency strategy?”; Cohen, “Supreme Command in the 21\textsuperscript{st} Century”; and Benson, “What is the Counter-Daesh Strategy?” Benson notes that this article is based on 2013 personal correspondence from Cohen explaining his strategy model. See also Hammes, “Assumptions – A Fatal Oversight,” 4-6.
environment. Boyd’s model is analogous to constructing an unconscious policy-strategy matching tool.\textsuperscript{141}

Boyd’s perception of a national goal and grand strategy as “constructive” elements, as opposed to the destructive focus of the strategic aim, strategy, grand tactics (operational art), and tactics, is significant. Boyd’s focus is not how to force change to the environment in the name of national interests, but to construct “mental patterns or concepts of meaning” to “comprehend and cope with our environment.”\textsuperscript{142} Simultaneously, the algebraic, biological, and the psychological elements of the environment are interpreted and exploited through strategic aims, strategy, operational art, and tactics in order to destroy the ability of adversaries to construct their own mental patterns for effective adaption. Rather than being the primary input, national interests emerge from this complex co-evolution process. In Boyd’s words, a “dialectic in nature generating both disorder and order that emerges as a changing and expanding universe of mental concepts matched to a changing and expanding universe of observed reality.”\textsuperscript{143} Boyd’s theory is unique in its focus on the human element of decisions making rather than static national interests. It also has greater consistency with real-time strategic decision making as a series of incremental choices through ongoing hypothesis formulation and testing rather than some standalone first order choice.

Boyd has been cited as warning his briefing audiences to avoid joining the Clausewitz and Sun Tzu schools based on the simple argument that “a lot has happened since 1832” and “an

\textsuperscript{141} Herwig, “Military Strategy in War and Peace,” 130.
\textsuperscript{142} Boyd, “Destruction and Creation,” 1.
\textsuperscript{143} Ibid., 1.
awful lot has happened since 400 BC” respectively. Inherently cautious of dogma, Boyd instead advocated for a process that incorporated many perspectives. His analysis interweaves numerous works from science and engineering, along with the classics of strategic thought and military history. He encouraged analysis through pulling each perspective apart while “intuitively looking for those parts of the disassembled perspectives which naturally disconnect with one another to form a higher order, more general elaboration (synthesis) of what is taking place.”

Boyd was significantly influenced by scientific developments in relation to complex adaptive systems. He read the major works that dealt with the emerging field of complexity science, inquiring into chemical, biological and social systems and adopting thoughts consistent with complex systems approaches. Biographical notes suggest Boyd’s favorite book was Brian Goodwin’s How the Leopard Changed Its Spots: The Evolution of Complexity. The central proposition of John Boyd’s work is that uncertainty permeates everything. Boyd’s description of an Observe, Orient, Decide, Act (OODA) Loop as an “evolving, open-ended, far from equilibrium process of self-organization, emergence and natural selection” is a direct reference to complexity science. It is therefore not surprising that we find a well-developed model of signal/boundary interaction in Boyd’s final briefing, The Essence of Winning and Losing.

145 Boyd, Discourse on Winning and Losing, 2.
147 Ibid., 122.
149 Osinga, Science, Strategy and War, 2.
151 Ibid.
Boyd never actually illustrated his OODA model in the form of a loop or sequential process in his earlier work. Boyd referred to “operating inside opponents’ OODA loops,” but never explicitly defined this beyond indicating the need to “Observe, orient, decide and act more inconspicuously, more quickly, and with more irregularity.” Nonetheless, the introduction of the concept of an OODA sequence became a key concept in Western military thought during the 1990s. William Lind, in assisting with the development of Air-Land Battle, translated Boyd’s ideas into a digestible format for the wider military and codified the OODA loop into practical application for the U.S. Marine Corps. Lind has credited Boyd as providing the background for maneuver warfare doctrine.

In the absence of a detailed illustration of the OODA model from Boyd, superficial interpretations of the need for “telescoping time,” or operating inside an opponent’s OODA loop, by going through a linear sequence of observe, orientate, decide, and act more rapidly than an adversary flourished. In challenging the OODA loop concept, Jim Storr noted:

The OODA Loop suggests that the process of observation, orientation, decision and action is a circular, iterative process. Military advantage accrues from being able to go around the loop faster than one’s opponent.

However, the OODA process is not circular. It apparently takes 24 hours to execute a divisional operation. Planning takes a minimum of 12 hours. Thus a divisional OODA loop would have to be at least 36 hours long. Yet the Gulf War and other recent operations show divisions reacting far faster. Military forces do

152 Boyd, “Patterns of Conflict.”
154 Osinga, Science, Strategy and War, 8. See also Robert B. Polk, A Critique of the Boyd Theory – Is it Relevant to the Army? (Fort Leavenworth, KS: School of Advanced Military Studies, United States Army Command and General Staff College, 1999), 7.
not in practice wait to observe until they have acted. Observation, orientation and action are continuous processes, and decisions are made occasionally in consequences of them. There is no OODA loop. The idea of getting inside the enemy decision cycle is deeply flawed. There is considerable advantage in reacting faster than one’s opponent, but the OODA Loop does not adequately describe the process.157

Such commentaries, which tend to misinterpret Boyd’s theory as a linear decision-making process, often offer technology as a more fruitful path towards engineering military advantage through enhanced ability to Decide and Act. Such criticism misconstrues the central theme of Boyd’s work, the deduction that “[t]o flourish and grow in a many-sided uncertain and ever changing world that surrounds us…we have to make intuitive within ourselves those many practices we need to meet the exigencies of that world.”158 While commentators have fixated on timescales within the decision and action elements of the OODA Loop, Boyd was actually attempting to accentuate the Orient phase. Boyd’s core idea was the necessity to “exploit operational and technical features to: generate a rapidly changing environment (quick/clear observations, fast tempo, fast transients, quick kill); [and] inhibit an adversaries capacity to adapt to such an environment (suppress or distort observations).”159 Such an undertaking is considerably more complex than merely stepping through a linear decision-making process more

158 Boyd, Discourse on Winning and Losing, 1.
159 John R Boyd, “New Conception for Air-to-Air Combat,” Unpublished Briefing Slides, 4 Aug 1976, 19-22. Boyd synthesized Gödel’s Proof, Heisenberg’s Principle, and the Second Law of Thermodynamics to form the key deduction that “[w]e cannot determine the character or nature of a system itself. Efforts to do so will only generate confusion and disorder.” This idea was central to his “fast transient” conception for air battle and warfare in general. As illustrative examples, he provided the contrasts between Blitzkrieg and “Maginot Line Mentality” in 1940, air-to-air combat between the F-86 Sabre and MiG-15 during the Korean War, and the successful 1976 Israeli hostage rescue at Entebbe Airport in Uganda (Operation Entebbe).
rapidly than an adversary. It advocates a form of complex adaption through optimization of signal and boundary interactions.¹⁶⁰

Boyd’s emphasis on the Orient phase as the “Schwerpunkt” of military advantage followed from his synthesis of Sun Tzu’s teachings regarding the orthodox (cheng) and unorthodox (ch’i).¹⁶¹ As Ralph Sawyer interprets Sun Tzu’s basic strategy focused on manipulating one’s adversary:

Warfare is a matter of deception – of constantly creating false appearances, spreading disinformation, and employing trickery and deceit. When such deception is imaginatively created and effectively implemented, the enemy will neither know where to attack nor what formations to employ and thus will be condemned to make false errors.¹⁶²

Boyd narrowed in on exploiting the transition between cheng and ch’i with the understanding that the unorthodox and orthodox at any given point in time is mutually influenced by the dialectic between opponents.¹⁶³ For Boyd this translated to an emphasis on orientation, defined by himself as:

\[
\text{...an interactive process of many-sided implicit cross-referencing projections, empathies, correlations, and rejections that is shaped by and shapes the interplay of genetic heritage, cultural tradition, previous experiences, and unfolding circumstances.}\]¹⁶⁴

In shaping observation, decisions, and actions, orientation was offered as the most important part of the OODA loop due to its ability to provide implicit guidance and control towards the shaping and exploitation of “fast transient” opportunities.¹⁶⁵

¹⁶⁰ Holland, Hidden Order, 9.
¹⁶² Sawyer, Seven Military Classics, 155.
¹⁶³ Osinga, Science, Strategy and War, 63.
¹⁶⁵ Ibid., 26.
Although Boyd’s writings consistently portrayed interactions with the environment as a complex implicit cross-referencing process, a model of the OODA loop was not actually produced until Boyd distilled his core ideas into the five-slide presentation, “The Essence of Winning and Losing,” in 1995. It was in this later work that was not part of Boyd’s more accessible A Discourse on Winning and Losing (The Green Book), assembled in 1987, that his emphasis on implicit guidance and control through orientation became explicitly clear.

![Figure 4.2: John Boyd’s OODA “Loop” Sketch](image)

Boyd argued that such orientation could be either explicit or implicit, and suggested that any tendency to “build-up explicit internal arrangements that hinder interaction with [the] external world” should be suppressed as a hindrance. Emphasis must be placed in the implicit

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168 Ibid.
orientation as a means of gaining a “favorable mismatch in friction and time (i.e. ours lower than adversary) for superiority in shaping and adapting to circumstances.”

Boyd noted that:

Without the implicit bonds or connections, associated with similar images or impressions, there can be neither harmony nor individual initiative within a collective entity, therefore, no way that such an organic whole can stay together and cope with a many-sided uncertain and everchanging environment.

Boyd thus saw implicit orientation as the shaping of one’s ability:

- to unveil adversary plans and actions and “foresee” own goals and appropriate plans and action [i.e., shape insight and vision];
- to achieve some goal of aim [i.e., shape focus and direction];
- to cope with uncertain and everchanging circumstances [i.e., shape adaptability]; and
- to remain unpredictable [i.e., shape security].

This was succinctly summarized in an early briefing as “[h]e who can handle the quickest rate of change survives”.

Boyd consolidated this central theme as follows:

**Without our genetic heritage, cultural traditions, and previous experiences,** we do not possess an implicit repertoire of psychophysical skills shaped by environments and changes that have been previously experienced.

**Without analyses and synthesis** across a variety of domains or across a variety of competing/independent channels of information, we cannot evolve new repertoires to deal with unfamiliar phenomena or unforeseen change.

**Without a many-sided, implicit cross-referencing process of projection, empathy, correlation, and rejection** (across these many different domains or channels of information), we cannot even do analysis and synthesis.

**Without OODA loops,** we can neither sense, hence observe, thereby collect a variety of information for the above processes, nor decide as well as implement actions in accord with these processes.

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171 Ibid., 22.
172 Ibid., 3, 24.
Or put another way:

**Without OODA loops** embracing all of the above and **without the ability to get inside other OODA loops** (or other environments), we will find it impossible to comprehend, shape, adapt to and in turn be shaped by an unfolding evolving reality that is uncertain, everchanging, and unpredictable.\(^{174}\)

To break the ability to comprehend, shape, and adapt to uncertain complexity could thus be unpacked to the core task of optimizing an “implicit repertoire of psychophysical skills” through which the “many-sided implicit cross-referencing projections, empathies, correlations, and rejections” transpire.

While Boyd’s OODA “Loop” is rather intuitive in its aggregate form, it is Boyd’s emphasis on continually seeking to optimize one’s ability to interpret and adapt to environmental signals that needs to be incorporated into the discourse on grand strategy. As has been seen in the preceding discussions, grand strategy discourse has had a tendency to focus too much on the decision element. What Boyd’s argument regarding the criticality of implicit orientation suggests is that policymakers seeking to effectively cross-match multi-departmental policies and strategies may see greater utility in focusing on building implicit bonds or connections to deal with an uncertain and ever-changing environment. Boyd’s implicit orientation is the boundary through which signals in complex adaptive systems are decoded. This offers greater utility in shaping or steering a complex adaptive system in which the persistent co-evolutionary interactions involving self-organization, chaotic behaviour, ‘fat-tailed’ behaviour, and adaptive interactions between agents cannot feasibly be controlled. As “orientation shapes observation, shapes decision, shapes action, and in turn is shaped by the feedback and other phenomena coming into

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our sensing or observing window,” it is the logical point of focus for a nation seeking to optimize
the rate of change that it can effectively handle or adapt to.\(^{175}\) As John Boyd observed, “[i]n
dealing with uncertainty, adaptability seems to be the right counterweight.”\(^{176}\) In essence, by
continually reevaluating and reforming mental patterns, or concepts of meaning, to comprehend
and cope with an uncertain environment, a nation can attempt to steer emergent grand strategy
using a stable objective of *adaptive resilience* rather than subjective interests.

**Countering Complexity with Resilience**

Newtonian grand strategies have utility when a direction for adaptation is clearly visible.
The existential threat provides a lens through which signals are filtered and rationality becomes
bounded by the need to survive. This in turn truncates cross-referencing demands for orientation,
thereby sharpening implicit guidance and control mechanisms and allowing intuitive action and
observation. The decision stage often undergoes a form of “natural selection” through which
poor hypotheses are overtaken by unfolding circumstances and environmental interactions.\(^{177}\)
Grand strategies characterized through retrospective précis models or black-box analyses will
inevitably be biased towards those hypotheses that survived this natural selection process. Hence,
historical case studies tend to see grand strategy as a tangible narrative.

As conditions move farther away from periods of perceptible existential threat towards a
rhizomatic/rodízio-style security environment, real-time policymaking is characterized by
increased orientation uncertainty. The complexity of cross-referencing processes becomes

\(^{176}\) Boyd, “Patterns of Conflict,” 124.
\(^{177}\) Natural selection is utilized here in the sense of Charles Darwin’s observation that those less suited to the
environment are less likely to survive and less likely to propagate. See Charles Darwin, *On the Origin of Species by
Means of Natural Selection, or the Preservation of Favoured Races in the Struggle For Life* (London: John Murray,
1859).
overwhelming, which degrades implicit guidance and control mechanisms. As a grand strategy for everything and anything is unachievable, complex adaptive systems offers an alternate form of assistance in demonstrating the importance of resilience.

In biology, organisms fit themselves into their environment through adaption, learning, and related processes that guide changes in the organism’s structures (or signal and boundary interactions) over time to more advantageously interact with its environment. As the optimum direction for adaption is uncertain and unpredictable due to the interactional complexity of co-evolving agent interactions within these nested systems, the agents that perpetuate are those whose structures provide sufficient resilience to enable ongoing optimization signal/boundary interactions. In the absence of a clear signal illuminating adaption, resilient agents maintain the ability to adapt their boundary conditions as the environment dictates. The sustained objective is to survive and prosper in the co-evolving environment. In Boyd’s terminology, these biological agents continually create and destroy patterns of meaning to comprehend and cope with their environment.

Policymakers operating in the absence of an existential threat – a signal that identifies a clear direction for adaption – do not require grand strategy. Efforts to build resilience, to enhance their institutional ability to adapt boundary conditions as the environment dictates, have greater potential for utility. This means a shift away from a focus on decisions in favour of a deeper regard for orientation. By optimizing resilience within orientation in bounded subsystems (or agents), grand strategic behaviour becomes an emergent phenomenon. Prosperous survival comes not as a result of projecting subjective point-in-time interests, but as a result of focusing

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178 Holland, Hidden Order, 9.
on the goal of improving the institution’s organic fitness to shape and cope with a complex and adaptive environment. Bounded subsystems (or agents) within the nested complex adaptive systems must adapt and learn as they interact with other agents in accordance with a “program”, or sequence of rules, that guides its interactions with its environment.\textsuperscript{179} These systems are effectively ‘steered’ or ‘shaped’ towards advantage by constantly modifying the signal/boundary hierarchies that guide interactions.\textsuperscript{180}

The notion of an \textit{emergent grand strategy through resilience} is sensitive to the reality that it is more consistent with the natural world to merely attempt to “shape, rather than control, unpredictable and complex situations”\textsuperscript{181} and that “bounded rationality” limits the degree of shaping that can actually be achieved.\textsuperscript{182} Building robustness and resilience into orientation elements at every level of institutional hierarchy arguably offers the best hopes of facilitating the ongoing modification of implicit bonds and connections that will allow adaption to uncertainty within political ecosystems. Loosely akin to massive bureaucratic corporations, public institutions can learn from the business community’s recent efforts to sustain themselves and continually adapt business models in an increasingly tempestuous world through “adaptive advantage.”\textsuperscript{183} Accelerating business model innovation (BMI) has become increasingly crucial as global competition, rapid technological innovation, and interconnectedness disrupts and dislocates the stability of traditional industries, thereby truncating business model lifecycles.\textsuperscript{184}

\textsuperscript{179} Holland, \textit{Signals and Boundaries}, 281.
\textsuperscript{180} Ibid., 2.
\textsuperscript{181} Reeves, “How to build a business.” See also Reeves \textit{et al}., “Biology of Corporate Survival.”
\textsuperscript{183} Reeves \textit{et al}., “Sustainability as Adaptability,” 16.
\textsuperscript{184} A business model is comprised of the \textit{value proposition}, with sub-elements of target segment(s), product or service offering(s), and revenue model(s), and the \textit{operating model}, with value chain, cost model, and organization sub elements. Business model innovation (BMI) is characterized by two or more elements of a business model being
Developing capabilities for signal, experimentation, organization, systems, and eco-social advantages have been suggested as key to countering the constricting viability-period and accelerating rates of market position decay.\textsuperscript{185} Signal advantage is characterized as the ability to recognize change signals and act on them. For example, a corporate entity attunes itself to its external environment by constructing “data-capture” and “data-mining” systems to acquire and decode relevant change signals that allow it to rapidly adjust business models or even attempt to reshape the information landscape of its market ecosystem.\textsuperscript{186} An ability to experiment with “advantaged economics” represents experimentation advantage. This involves changing the manner in which an entity generates and tests innovative ideas, broadening the scope of innovation from products and services to entire business models, and increased cultural tolerance to failure.\textsuperscript{187} Organization advantage denotes the ability to build the leadership, culture and structure necessary to facilitate signal and experimental advantage. Rather than the top-down approach of traditional strategy, organizational structures may successfully “follow” and exploit localized adaption as decision making authority is devolved to those groups who can recognize and act on environment changes more quickly. This requires the development of “environments that encourage the knowledge flow, diversity, autonomy, risk-taking, sharing, and flexibility on which adaption thrives.”\textsuperscript{188} The capability to “orchestrate a complex, multi-company ecosystem of companies” is described as systems advantage. This involves pushing strategies beyond the boundaries of single entities and thinking in terms of ecosystems of co-dependent companies, reconstructed to deliver value in a novel manner. Zhenya Lindgardt, Martin Reeves, George Stalk, and Mike Deimler, “Business Model Innovation: When the Game Gets Tough, Change the Game,” Boston Consulting Group Perspectives (December 2009), 1.
\textsuperscript{185} Reeves et al., “Sustainability as Adaptability,” 15-6.
\textsuperscript{186} Ibid., 16.
\textsuperscript{187} Ibid.
\textsuperscript{188} Ibid.
which involves devising system-level strategies that account for the traditional control mechanisms.\textsuperscript{189} \textit{Eco-social advantage} recognizes the need for adaptation beyond merely the business environment and account for change related to social and ecological interactions. This involves “continuous retuning and renovation of the business model to avoid imbalances and limits in the flows of materials, labor, economic value, and trust in and out of [the ecological, economic, and social] spheres of activity.”\textsuperscript{190} Adaptive advantage is essentially the corporate operationalization of Boyd’s “fast transients” and Sun Tzu’s \textit{cheng/ch’i} interaction.

The corporate world is learning from biological complex adaptive systems that the ability to generate adaptive advantage is created through the existence of characteristics such as heterogeneity, modularity, redundancy, responsiveness, feedback loops, adaptive mechanisms, trust, and reciprocity within orientation nodes.\textsuperscript{191} \textit{Heterogeneity} involves ensuring a sufficient “reservoir” of diversity amongst individuals, philosophies, innovations, and endeavors for new variations and combinations of adaptive units to emerge. This characteristic allows the agent to mitigate “collapse risks” that cause abrupt obsolescence of internal models as a result of ecosystem failures caused by unanticipated adaptive interactions in other parts of the system.\textsuperscript{192} \textit{Modularity} refers to the presence of firewalled or loosely linked modular components that minimize the “contagion risk” of environmental shocks in one part of a system perpetuating throughout the entire ecosystem.\textsuperscript{193} \textit{Redundancy} involves overlapping of roles between components, such as the multiple lines of defence inherent to an immune system. This

\textsuperscript{189} Reeves \textit{et al}., “Sustainability as Adaptability,” 17.
\textsuperscript{190} Ibid.
\textsuperscript{191} These suggested principles have been adopted from the six principles advocated as key for long-term corporate survival. Reeves \textit{et al}., “Biology of Corporate Survival,” 47-55.
\textsuperscript{192} Reeves \textit{et al}., “Biology of Corporate Survival,” 50.
\textsuperscript{193} Ibid., 51-2.
characteristic provides a buffer against “fat-tailed risks” associated with low probability/high consequence (or “Black Swan”) events. Response

s acknowledges the fact that the emergent behaviour or properties of a complex adaptive system cannot be accurately forecasted. However, agents can anticipate plausible outcomes by gathering signals and deducing patterns of transformation, thereby allowing “precautionary action” to be taken to decrease the likelihood of disadvantageous consequences. Feedback loops are critical as a means of detecting environmental changes and identifying advantageous adaption corridors by facilitating adaptive mechanisms that encourage “variation, selection, and propagation of innovations” through “iterative experimentation.”

Trust characterizes the need to foster cooperation between agents and aggregates within a complex adaptive system that has no central command and control mechanism. As illustrated by Elinor Ostrom’s study of the “collective action problem” in the context of common-pool resources, “trust, along with variables such as the number of users, the presence of leadership, and the level of knowledge, promotes self-organization for sustainability.” Acting in a manner that provides value to other agents or aggregates within the ecosystem encourages the development of reciprocity norms and enforcement mechanisms.

These characteristics enhance a complex adaptive system agent’s capacity to perform Boyd’s “interactive process of many-sided implicit cross-referencing projections, empathies,

194 Reeves et al., “Biology of Corporate Survival,” 52.
195 Ibid., 53.
196 Ibid., 54.
197 The collective action problem involves the lack of incentives for individuals to act in a manner beneficial to the whole unless they perceive immediate value for themselves. Reeves et al., “Biology of Corporate Survival,” 55. For a detailed discussion see Elinor Ostrom, Governing the Commons: The evolution of institutions for collective action (Cambridge, UK: Cambridge University Press, 1990).
198 Ibid.
correlations, and rejections.”

Such characteristics provide the impetus for overcoming the inertia of deep-seated mental images associated with genetic heritage, cultural tradition, and previous experiences that often obstruct timely adaptation. Ingraining these common characteristics of successfully adaptive agents within orientation nodes of lower hierarchal levels provides the framework through which implicit guidance and control mechanisms may be created, destroyed, and refreshed. This in turn allows adaptive tuning of the signal/boundary dialectic that facilitates more rapid response to change signals, thereby shaping the context for behaviour. This is not to say that strategic planning modes have no utility; only that their contribution in a complex non-existent threat environment is more limited. In the sense of Anderson and Nielson’s adaptive strategy model, “emergent strategies” arise out of decentralized aggregate interactions of actors and are subsequently complimented or enhanced by “intended strategies” emanating from more centralized strategic management and planning processes.

In terms of Layton’s ship-of-state metaphor, this complimentary planning mode may involve elements of any one, or combination of, sailing to some port (grand strategy), sailing to avoid difficulties (risk management), sailing to take advantage of fair winds (opportunism), or executing evasive manoeuvres to avoid a collision and remain afloat (crisis management).

What is critically important is that the emergent/adaptive mode provides the initial orientational foundation from which outcomes are enhanced or exploited through the intended strategy mode. In an uncertain complex environment of sub-existent signal noise, the ability to optimize the emergent mode has the greatest utility for guaranteeing adaptive advantage.

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200 Ibid., 95.
Efforts to construct a grand strategy in the absence of a known counterforce (i.e., existential threat) are akin to attempting apply force to a vacuum, a situation at odds with the Newtonian strategy principle that problems of strategy are “those that firstly involve interacting with intelligent, adaptive adversaries and secondly where a particular objective can be defined. If the first factor is missing, a plan as opposed to a strategy is needed.”

So much of the discourse of grand strategy attempts to demonstrate the superiority of the intended strategy mode regardless of environment and circumstances. Such discourse does not account for the fact that the seas and weather are uncertain, unpredictable, and co-evolving as a result of an infinitely complex array of variables, some determinate but most indeterminate. Planning and road mapping within the intended strategy mode provides a false sense of security, often tactically fixated on problems at the lower end wavelengths of *l’histoire événementielle* (individual time) rather than projecting towards the longer-term of *conjectures* (social time).

In the complex adaptive system of systems of real-time national security policymaking, long-term sustainability is best addressed through enhancing one’s ability for adaption rather than impulsive pre-commitment to a future forecast or corridor of adaption that may rapidly become obsolete or incompatible with a constantly evolving environment. For nations seeking to understand and cope with a rhizomatic/rodízio-style security environment, efforts to build heterogeneity, modularity, redundancy, responsiveness, feedback loops, adaptive mechanisms, trust, and reciprocity within the orientation mechanisms of those emergent modes that are in closest content with co-evolving agents and aggregates has greater relative utility. Efforts to optimize the intended strategy mode encompassing grand strategy, risk management, and opportunism

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mechanisms will have limited utility for dealing with complexity if the precursor emergent mode is not optimized for adaptive advantage.
PART II: A GRAND STRATEGY FOR CANADA?

Arguably, national security policy in Canada has always been an ad hoc affair.¹

CHAPTER 5: DISCOURSE ON CANADIAN GRAND STRATEGY

Before Canadians reflect upon the reason why they never produced a Sun Tzu, a Jomini, a Clausewitz, a Mahan, or yes, a Liddell Hart, they might ask themselves whether they ever needed one. 1

Prior to worshipping at the altar of grand strategy, Canadian policymakers ought to question the validity and utility of imported national security strategy models. Recent notions of a “grand strategic deficit” have nevertheless promulgated such models into Canadian academic and political discourse. 2 The rejuvenation of grand strategy as a “panacea that will wipe away the complexity of world affairs” 3 in the post-9/11 era has stimulated a limited discourse questioning whether Canada can do, should do, or has ever done grand strategy. 4 Unfortunately, Canadian discourse on grand strategy tends to imitate greater powers by adopting cliché strategic traditions

3 Brands, What Good is Grand Strategy? 206.
that have no utility for addressing the complex and uncertain problems actually facing Canada’s position within the complex adaptive system of nested sub-national, national, regional and global ecosystems. The theoretic foundations of post-Napoleonic commentators on continental nineteenth century warfare that underwrite much of this discourse have little resonance with the sub-strategic nature of the Canadian agent. The Canadian national security problem differs fundamentally from the traditional logic and pedigree of Western strategic thought, which traces its roots to the nineteenth century military strategy tradition exemplified in Swiss general Antoine-Henri Jomini’s *Precis de l’art de la guerre* and Carl von Clausewitz’ *On War*. Much of the discourse advocating for Canadian grand strategy is akin to attempting to apply the wrong tool to this problem.

What the current discourse has overlooked is the existence of at least two distinct forms of national security strategy that are loosely analogous to the divergent “intellectual personalities” of Isaiah Berlin’s foxes and hedgehogs. Great power (or great coalition) grand strategy – delineated in Chapter 3 as Newtonian grand strategy – is inherently centripetal and aligns with the hedgehog’s “single central vision, one system, less or more coherent or articulate, in terms of which they understand, think and feel – a single, universal, organising principle in terms of which alone all that they are and say has significance.” In this form, grand strategy and national security strategy are essentially synonymous, as has been institutionalized in the
American terminology utilized in *Goldwater-Nichols*.\(^9\) This is the form that is implied in much of the discourse on grand strategy and incorrectly assumed to be a form directly transferable to lesser powers.

In accordance with Peter Layton’s observation that a grand strategy approach is but one option towards the development of national security strategy,\(^10\) national security strategy for lesser powers has a divergent form that is in no way synonymous with the customary Newtonian-style grand strategy of “defined objectives” and augmented force. Middle power national security has a different approach and form. In contrast to the centripetal Newtonian form, Canadian national security strategy is inherently *centrifugal*, aligning more closely with the intellectual style of Berlin’s fox. The fox’s intellectual style is described as:

…those who pursue many ends, often unrelated and even contradictory, connected, if at all, only in some de facto way, for some psychological or physiological cause, related to no moral or aesthetic principle. [Those who] lead lives, perform acts and entertain ideas that are *centrifugal* rather than *centripetal*; their thought is scattered or diffused, moving on many levels, seizing upon the essence of a vast variety of experiences and objects for what they are in themselves, without, consciously or unconsciously, seeking to fit them into, or exclude them from, any one unchanging, all-embracing, sometimes self-contradictory and incomplete, at times fanatical, unitary inner vision.\(^11\)

A fox-style national security strategy represents a distinctive variation of ‘hope and drift non-strategy’ for surviving an approaching geopolitical storm.

While distant observers might perceive Foucault’s ship-of-state following a *centrifugal* national security strategy as being dangerously adrift in a storm, activity within the ship (i.e.,

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\(^9\) The institutionalization of the interchangeable use of the terms ‘grand strategy’ and ‘national security strategy’ in the United States comes from the wording in the *Goldwater-Nichols Department of Defence Reorganization Act* of 1986.


efforts of optimize orientation) may in fact be extensive. The captain and crew may in fact be quite active adapting and deciding how to keep the ship afloat as their limited size brings a greater need to adapt to mitigate negative interactions between external forces and internal circumstances. The ship may be taking on water through a shoddily manufactured budget hull. The underpowered engine may have become overheated. The storm sails may have been left behind in favour of offsetting cramped quarters with extra rum rations. The sails and rigging may be degraded due to a lack of resources for replacements. The rudder may stick for want of proper maintenance. The navigator may be incapacitated by outdated charts. The crew may be lacking in esprit de corps. For this ship-of-state lacking the critical mass of a great power, a more complex and dynamic style of strategy may be the required precursor to sustained survival. It is likely that the captain’s ultimate course of action will be influenced by the crew’s capabilities to effectively integrate, prioritize, and balance inboard and outboard considerations simultaneously – their ability to achieve adaptive advantage over the complexity of their environment. This is a form of emergent grand strategy that favours resilience over vision.

The fundamental problem with the current discourse on Canadian grand strategy is that advocates tends to fixate on emulating the centripetal hedgehog-form of grand strategy that is appropriate to a great power agent that has the capacity to steer emergent behaviour within a complex adaptive system due to their ability to dominate interactions between ecosystem agents and aggregates. In the context of the previous discussion of emergent and intended strategy modes, the central intended strategy mode tends to dominate within a centripetal system as an optimized emergent/adaptive strategy mode is less vital for great powers. A form of inherent

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12 Reeves et al., “Sustainability as Adaptability,” 16.
resilience is present as a result of achieving a sufficient critical mass to absorb environmental shocks without need to adapt significantly.

As a middle power has less mass through which to dissipate environmental shocks, theirs tends towards a *centrifugal* system in which the outer emergent/adaptive mode has vastly greater importance. The middle power cannot seek to have other agents adapt to non-existent gravitational forces, hence it must focus on optimizing orientation mechanisms to adapt in the most favourable manner as relevant change signals are collected and decoded. In the centrifugal system the intended strategy mode compliments rather than dictates. Aspirations towards a *centripetal* hedgehog-form of grand strategy therefore are inconsistent with the natural Canadian condition. A conceptual anchor beyond the national goal of improving organic fitness to shape and cope with an ever-changing environment would be imprudent.13 What advocates of Canadian grand strategy have overlooked is that a “unifying, long-term vision of a country’s global values and interests” has little overall utility for building the nation’s resilience.14 Reinforcing Canada’s intended strategy mode will have no impact if the centrifugal signal/boundary mechanisms in the emergent mode have atrophied.

What follows is a discussion of how advocacy for Canadian grand strategy has been misdirected towards a form of grand strategy inconsistent with Canadian realities.

13 Boyd, “Patterns of Conflict,” 134.
Centripetal Grand Strategy

Potter Stewart’s “I know it when I see it” adage applies to the existing literature on Canadian grand strategy. Discourse has focused chiefly on the question of whether Canada can do, should do, or has ever done grand strategy. Much of this is due to the fact that the principle commentators – David Haglund, David Pratt, David McDonough, Donald Macnamara, and Jack Granatstein – use dissimilar conceptual lenses that focus attention on divergent elements of behaviour and provide interpretations within divergent frames of reference. This, in turn, has reinforced the conceptual blockade built on a lack of consensus on whether Canadian grand strategy actually exists. This blockade was clearly evident during the 2011 Grand Strategy Symposium organized by the Centre for National Security Studies (CNSS) at the Canadian Forces College (CFC). While exploring Canada’s history of grand strategic practice and contemporary needs for such initiatives, the complex nature of the grand strategy concept prevented consensus on how to even describe the phenomenon.15

Perceiving grand strategy as a core element of statecraft, former Canadian diplomat Daryl Copeland has defined grand strategy as “a unifying, long-term vision of a country’s global values and interests; an expression of where the country is, and where it wants to go in the world; and an analysis of its potential and capacity to achieve its objective.”16 Former Minister of National Defence David Pratt advocates borrowing Paul Kennedy’s definition of grand strategy as “nothing more than a state’s (and a people’s) long term plan to survive and, one would hope,

15 Lieutenant Colonel Angelo N. Caravaggio, “Grand Strategy Symposium Overview,” Summary of the Grand Strategy Symposium co-sponsored by the Centre for National Security Studies and the University of Calgary’s School of Public Policy, conducted at the Centre for National Security Studies (CNSS) at the Canadian Forces College (CFC), Toronto, Ontario, 6-11 April 2011.
thrive in what can be an often chaotic and unpredictable world.” 17 In his 2007 Ross Ellis Memorial Lectures in Military and Strategic Studies, Pratt suggested grand strategy is “an intellectual construct – a tool – to be used by policy makers and academics alike to try to better understand what a nation’s long term strategic interests are, and to seek to translate those long term interests into long term public policy.”18 Conceptions such as these have been challenged by Jack Granatstein as being merely visionary statements beyond the actual abilities of all but the greatest states to implement and sustain.19

Peter Layton suggests that recent Canadian behaviour appears based on a risk management, rather than a grand strategy, approach. He cites the 2004 National Security Policy,20 2010 Cyber Security Strategy,21 and the 2013 Counterterrorism Strategy22 as examples. Layton suggests this is a logical default position for Canada as “the intellectual and bureaucratic demands of a risk management approach are limited. It requires only the periodic compilation of possible risks and a simple focus on the ‘means’ almost independent of external factors.” In contrast, a grand strategy approach is a significantly more complex and demanding enterprise requiring continual refinement, but perhaps offering greater potential to integrate objectives and proactively seek desired outcomes not reachable through a “set and forget” approach.23

18 Pratt, “Grand Strategy in Canadian Foreign Policy?” 2.
Exercising grand strategy in the international domain is commonly understood to have utility for securing the national security interests of great-powers, but the calculation of utility could be quite different for middle powers. Jack Granatstein acknowledges that smaller states have national interests and develop policies – and possibly overarching policies or principles aimed at pursuing interests of limited scope – to protect these objectives, but that these policies must be conceptualized in realistic terms consistent with the actual resources of the nation.  

Granatstein argues:

Smaller countries can fight wars against other smaller powers or manoeuvre to avoid them. They can join Great Power alliances or not. They can follow particular economic policies or decide not to. But they do not have Grand Strategies because they lack the human, industrial, and military resources to sustain them. In other words, the God of Grand Strategy is only found on the side of the big battalions…This is the way of the world, and while we may grumble, there is little that can be done about this. Great powers think in grandiose terms and fight to protect their global interests; small powers are small and think small – or, at best, in medium size terms. Their aim…is to survive and prosper and to be left alone to do so, and a judicious use of their limited power, management of their alliances, and maximization of their resources to these ends is assuredly their best strategy.

Williamson Murray has expressed a similar sentiment in observing that:

…grand strategy is a matter involving great states and great states alone. No small states and few medium-size states possess the possibility of crafting a grand strategy. For the most part, their circumstances condemn them to suffer what Athenian negotiators suggested to their Melian counterparts in 416 BC about the nature of international relations: “The standard of justice depends on the equality

24 A state can be defined as “a generally unified and relatively autonomous institution that claims sovereignty over a given territory and people and pursues on their behalf objectives understood in terms of the national interest, though it may involve internal and external resistance.” Steven Kendall Holloway, Canadian Foreign Policy: Defining the National Interest (Peterborough, ON: Broadview Press, 2006), 257. An alternate definition is offered by Stephen Krasner as “a unified and autonomous actor pursuing aims understood in terms of the national interest despite internal and external resistance.” Stephen D. Krasner, Defending the National Interest: Raw Materials Investments and US Foreign Policy (Princeton: Princeton University Press, 1978).

of power to compel and that in fact the strong do what they have the power to do and the weak accept what they have to accept.”

Murray notes only two exceptions to this rule, embodied by the ability of Switzerland and Finland to sustain independent grand strategic frameworks. He suggests that the Finns were effective in “creating the distinct impression in the minds of the Soviets that they were willing to fight to the last man and woman in defense of their independence.” Murray observes the Swiss grand strategy framework is embodied by effective balancing of great powers off against each other.

The views of Granatstein and Murray contrast with others’ arguments that grand strategy is not defined in relation to any particular type of state, suggesting that any size state actor – even a middle power such as Canada – may in theory practice it to achieve the objective of national security. Canadian national security has been defined as:

…the preservation of a way of life acceptable to the Canadian people and compatible with the needs and legitimate aspirations of others. It includes freedom from military attack or coercion, freedom from internal subversion, and freedom from the erosion of the political, economic, and social values which are essential to the quality of life in Canada.

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28 The middle power concept, a core element of international liberalism, has been aptly described by Dominika Kunertova as “a state that does not seek a great power status but nevertheless can be considered as a great power in the domains where it has acquired expertise and in which it has interests.” Dominika Kunertova, “The Canadian Politics of Fair-Share during NATO's Formative Years,” Canada-Europe Transatlantic Dialogue Working Policy Paper, April 2015, 5.


While grand strategy has traditionally been grounded in war and diplomacy, John Lewis Gaddis intimates that “grand strategy need not apply only to war and statecraft: it’s potentially applicable to any endeavor in which means must be deployed in the pursuit of important ends.”

A significant barrier in the Canadian context has been the general consensus that strategic foresight is something that has “only arisen when the threats to Canadian national security are unambiguous and the costs of inaction high; otherwise, Canada has shown a strong inclination to forego both strategic planning and the adequate funding of its key strategic capabilities.” As David McDonough observes, “[t]he conventional wisdom is that Canada’s fractured, reactive, and astategic decision making process largely precludes recourse to consistent strategic behaviour or long-term grand strategy.” These themes are readily apparent in David Haglund’s efforts to illuminate a consistent Cold War grand strategy necessitating considerable preliminary arguments in order to simply demonstrate that the national interest and grand strategy make conceptual sense in a Canadian context.

In coupling the “North Atlantic Triangle” with the notion of Canadian grand strategy being dependent on the adaption of persistent fundamental foreign policy to changing realities, Haglund has provided one interpretation of a theoretical and historical foundation for the study of International Security Studies in the Post-Cold War Era, 2nd ed. (Boulder Colorado: Lynne Rienner Publishers, Inc., 1991), 17.

of Canadian grand strategy.\textsuperscript{35} Based on this foundation, David Pratt coined the expression “a grand strategy within a grand strategy” as a way of describing the manner in which Canada pursued its own unique, but complementary objectives within the broader Allied Cold War grand strategy of containment.\textsuperscript{36} Although the grand strategy concept is invoked by Pratt to neatly package a complex pattern of behavior observable in Canadian history, it does not necessarily follow that the multitude of actors involved were in fact consciously aware and guided by any particular ‘recipe’.

In addition to Haglund’s account of a post- World War II grand strategy, a handful of other scholars appear to see elements of Canadian grand strategic behaviour. Matthew Trudgen has suggested that “[f]rom 1950s to 1980s, Canada pursued a Cold War grand strategy that was based on support of NATO, a strong defence relationship with the Americans and support for the United States and its allies in international organizations such as the UN and the Commonwealth.”\textsuperscript{37} Another common post factum characterization of Canada’s strategic behaviour since the Second World War is based upon Nils Ørvik’s “defence against help” argument. The concept was Ørvik’s response to the question of how a smaller power could effectively achieve its defence needs in the shadow of the vastly superior capabilities of larger neighbours. Ørvik proposed a hybrid strategy encompassing elements of three major options:

\textsuperscript{35} Pratt, “Grand Strategy in Canadian Foreign Policy?” 19.
\textsuperscript{36} Pratt suggests that the “Golden Age of Canadian Diplomacy” coincided with a “Golden Age of Canadian Grand Strategy” in which Canada “successfully pursued objectives which were specific to Canada, but which strongly complemented the overall US and Allied grand strategy of containment.” Ibid.
enhancing the state’s “own power”; acquiring “borrowed power” from more powerful states; or acquiescing to inadequate power and mounting a merely “symbolic defence.”

As Ørvik observed in 1973:

Today, many Canadians cannot see any threat to their national security from the Soviet Union, but fear the consequences of the overwhelming superiority of the United States. The fact that it is both undesirable and unthinkable that Canadian armed forces should ever attempt to repel an American military invasion does not in itself deprive those forces of a meaningful role. Given the vast expanse of Canada and her vital strategic importance, a credible application of a ‘defence against help’ model would present her armed forces with tasks and defence needs for the North American continent… and which, if not taken up by Canada, would be fulfilled by American forces, acting as helpers, in a situation of sudden, joint emergency.

The ‘defence against help’ tactic involved the maintenance of a sufficient level of credibility in terms of niche military capabilities, training, and political will to convince the large neighbour of the smaller state’s ability to defend themselves against that neighbour’s prospective enemies, thereby minimizing the risks of military ‘help’ or assistance degrading the smaller state’s sovereignty.

In subsequent works, Ørvik expanded on ‘defence against help’ in a Canadian context by providing a “more explicitly expressed rationale for [Canadian] defence policy, and [an] agreed framework of principles and basic assumptions which may guide [Canadian policymakers] in the
more detailed what-when-and-how decisions.” Ørvik proposed a five criteria framework for Canadian defence policy: The first and primary task is to define the threat to the nation’s security and identify its origin. Second, once we know where it comes from and what form it might take, we should as a matter of principle try to meet the threat as far from home as possible, in order to provide a wide forefield, a large area for retreat and regrouping, without endangering the home base. Third, given the size of the national territory, its relative small population and as yet marginally developed resources, it can only be effectively defended in cooperation with other nations who share our basic values and our definition of the threat. Because our own strength is inadequate, we will have to “borrow” additional strength from other, like-minded nations. Fourth, while accepting an alliance framework as the norm, our defence contributions should, wherever possible, be identified as distinctly Canadian to ensure political support at home. Last, but not least, recognizing that we share the same continent, it would not be in our national interest to initiate moves in our defence and foreign policy which might by design or implication endanger the security of the United States. James Fergusson has highlighted a parallel concept in terms of “Canada’s long-standing defence industrial niche strategy to develop an internationally competitive industry capability of producing specialized goods for export markets rather than one designed to meet the operational needs of the Canadian military.”

As a challenge to Ørvik’s “defence against help” or Fergusson’s “niche strategy,” David McDonough’s recent scholarship characterizes Canada’s pursuit of a “goldilocks” grand strategy as the nation’s core strategic behavior in relation to the United States. McDonough argues that

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44 James G. Fergusson, Canada and Ballistic Missile Defence, 1954-2009: Déjà Vu All Over Again (Vancouver: UBC Press, 2010), 95.
45 McDonough adopts the ‘goldilocks’ term from Richard Samuels’ concept of “a strategic posture rooted in modesty that retains options on both the economic and the military fronts.” As a means of addressing regional concerns over China, North Korea, and waning willingness of the United States to underwrite Japan’s security
in post-World War II relations with the United States, the strategic behavior of Canadian officials – being a “loyal American ally” while concurrently maintaining “an arms-length approach” on issues involving divergent strategic preferences – provides evidence of skillful pursuit of national security and sovereignty. In an attempt to illustrate apparent patterns of consistency and continuity in how Canada has addressed its fundamental dilemma of achieving security in cooperation with likeminded states while simultaneously maintaining sovereignty, McDonough employed a cultural-cybernetic model to examine Canadian grand strategy.

In offering an explanation of foreign and defence policymaking informed by cybernetic theory, McDonough attempts to incorporate foundational and restraining factors of Canadian defence such as the nature and environment of decision making processes and the participants interests, motivations, and predispositions. McDonough suggests the goldilocks grand strategy is a better descriptor of the variable dynamics within and between two identified Standing Operational Doctrines (SODs) representing the goldilocks zone of viable policy alternatives.


McDonough defines Standing Operating Doctrines (alternately referred to as “tendency groupings” or “grand strategy policy aggregates”) as “implicit strategic doctrines that are derived from societal norms and used as heuristics or cognitive shortcuts to help ensure a relatively consistent and coordinated policy output.” McDonough, “Getting It Just Right,” 229.

Combining strategic culture and cybernetic theory\textsuperscript{50} to analyze patterns of behavior in Canadian defence policy from 1945-2005, McDonough argues that:

By so successfully balancing proximity and distance, officials have proven adept at following a strategic principle designed to safeguard Canada’s national security and ensure that sovereignty and independence are maintained. Rather than merely accepting it as an iron law,\textsuperscript{51} it might be more appropriate to call this strategic principle the defining characteristic of a uniquely Canadian grand strategy — one that seeks to balance proximity and distance toward the United States while avoiding the extremes of either inclination on a range of different strategic politico-military issues. As such, Canada has essentially pursued what can be termed a “goldilocks” grand strategy. Contrary to the claims of critics (and much like Goldilocks in the fairy tale), Canada is neither too close nor too far from the U.S., but rather pursues policy responses that are “just right.”\textsuperscript{52}

McDonough observes:

More extreme strategic doctrinal shifts toward proximity or distance are largely avoided, while modest SODs that tend to balance such competing inclinations are selected according to a consistent cybernetic pattern and result in policy choices marked by greater continuity than discontinuity. As such, there is reason to believe that elements of both subcultures – continentalism and independence – are at play in the Canadian context and guide strategic choices in this country. But these subcultures also include a wide array of differing inclinations, not all of which are readily apparent in the country’s behavior. Indeed, when plotted along a continental-independence continuum, it becomes clear that only those tendencies in the narrow goldilocks zone – coalescing in the form of the two dominant SODs – are realized in Canada’s grand strategy.\textsuperscript{53}

Canada’s goldilocks grand strategy is therefore perceived by McDonough as being characterized by modest variations within and between the SODs of “continental soft-bandwagoning” and

\textsuperscript{50} Cybernetics theory suggests that government behavior is based in ill-defined perceptions of purpose, objective, or value rather than deliberate analysis or calculations of rational outcome. John Steinbruner, The Cybernetic Theory of Decision: New Dimensions of Political Analysis (Princeton: Princeton University Press, 1974).

\textsuperscript{51} The ‘iron law’ in Canadian politics is offered by David Haglund as the concern that Canada must continually ensure constructive bilateral relation with United States in order to avoid any degradation to Canada’s economic welfare and survival by the Americans, while simultaneously avoiding any compromise to sovereignty by becoming ‘too close.’ David Haglund, “The US-Canada Relationship: How ‘Special’ is America’s Oldest Unbroken Alliance?” in America’s “Special Relationships”: Foreign and Domestic Aspects of the Politics of Alliance, ed. John Dumbrell and Axel R. Schäfer (London: Routledge, 2009), 72.

\textsuperscript{52} McDonough, “Getting It Just Right,” 225.

\textsuperscript{53} Ibid., 239.
“defensive weak-multilateralism,” which is purported to account for the apparent continuity and consistency of Canada’s post-war strategic behavior.54

McDonough’s characterization of a “goldilocks” grand strategy more precisely describes a form of reactive policymaking within a specific navigational widow rather than any particular “navigational beacon.” Neither construct provides much tangible guidance for future defence and foreign policy decisions. Similar to the Pratt interpretation of behaviour patterns, the grand strategy concept is being invoked with the significant supposition that Canadian officials identified a “tolerance range for the security-sovereignty value” and that this ‘recipe’ consciously guided the behavior of successive administrations.55 But it is difficult to appreciate how McDonough’s goldilocks grand strategy actually differs from Ørvik’s framework. Other than to acknowledge that McDonough’s characterization can potentially incorporate a broader range of non-security “issues involving divergent strategic preferences” than Ørvik’s framework, which was conceived at a time when the Soviet Union was perceived as the only viable external threat to Canadian security, the two characterizations essentially represent two sides of the same coin. While Ørvik approaches the problem of defining the factors and limitations that should inform policymaking, McDonough’s goldilocks tolerance range is effectively defining the same phenomenon. While McDonough’s grand strategy is a succinct descriptor of past behavior, the expression of considerations in Ørvik’s framework arguably has much greater utility for informing future policymaking.56

54 McDonough, “Getting It Just Right,” 236-238.
56 As Stephen Hollaway notes, “utility is an economist’s term that can be roughly translated as benefit or a useful good.” Steven Kendall Holloway, Canadian Foreign Policy: Defining the National Interest (Peterborough, ON: Broadview Press, 2006), 19n.
A further challenge to McDonough might also be made from a biological sciences point of view using Ilya Prigogine’s “dissipative structures” phenomenon that observes when systems are driven far from thermodynamic equilibrium, they become unstable, and then spontaneously reorganize on a large scale. Non-equilibrium in the context of thermodynamic equilibrium for fluid motions and chemical structures is actually a source of order. As Prigogine notes:

At equilibrium molecules behave as essentially independent entities; they ignore one another. We would like to call them “hypnons,” “sleepingwalkers.” Though each of them may be as complex as we like, they ignore one another. However, nonequilibrium wakes them up and introduces a coherence quite foreign to equilibrium.57

Dissipative structures present coherence in that the system acts as a whole. Even though the interactions among molecules are limited, “the system is structured as though each molecule were ‘informed’ about the overall state of the system.”58 If such conceptions can be extended to bilateral relations between Canada and the U.S., an understanding of what happens when the system is driven outside equilibrium (i.e., beyond the Goldilocks zone) is perhaps more interesting to a real-time policymaker. McDonough’s characterization arguably has limited utility if the bilateral system is driven beyond the SOD boundaries of “continental soft-bandwagoning” and “defensive weak-multilateralism.”

While McDonough’s analysis is illustrative as a means of reducing the overwhelming intricacy of post-World War II bilateral relations between Canada and the United States into a compact conceptual artifact, the utility of such analysis as a guideline for future national security policy formulation is questionable. Although certain realities of Canada-U.S. relations will undoubtedly remain constant, the evolving nature of strategic circumstances and their interplay

58 Ibid., 171.
with the aptitudes and agendas of the policymakers of the day will always represent a unique problem. Regardless of how well historic patterns can be compacted into a distinctive “navigational beacon” that appears to have guided past policy decision making, it is crucial to recognize that such a beacon may not in fact have been visible to those decision makers that chose a path retroactively being described as constituting grand strategy. For future Canadian policy makers, such grand strategy may simply be nothing more than an abstract security blanket.

It is significant to note that even the coveted Cold War (1947–1989) grand strategy founded on the policy of “containment” was itself an evolving process of iterative adjustments, crisis management, and political opportunism rather than a static formula born through some organic scheme of Immaculate Conception. Tracing the early development of the containment concept from George Kennan’s 1946 “Long Telegram,” through the 1947 Foreign Affairs “X-Article,” National Security Council Reports 20/4 (1948) and 68 (1950), and President Dwight Eisenhower’s Project Solarium of 1953 illustrates an iterative process whereby the

59 Daryl Copeland suggests “Grand strategy is especially useful during times – not unlike the present – of heightened danger and instability, when it serves as a primary navigational beacon which helps policy-makers chart the way forward. In a turbulent operating environment, and especially in moments of uncertainty or doubt, that beacon should be glowing in the mind’s eye, inspiring purposeful decisions and directed action.” Daryl Copeland, “Coming up short: No sign of a grand strategy in Canada’s ‘secret’ foreign policy plan,” www.guerrilladiplomacy.com, 23 November 2012. See also Daryl Copeland, Guerilla Diplomacy: Rethinking International Relations (Boulder, CO: Lynne Rienner Publishers, 2009).

60 Kennan to George Marshall, 861.00/2 - 2246: Telegram, 22 February 1946, Part 5: Practical Deductions From Standpoint of US Policy.


64 Pickett, Origins of Eisenhower’s New Look.
courses of action chosen were never preordained. While there was early consensus on the basic policy premise that American and allied security was dependent on regulating the expansion of Soviet influence, the specific policy objectives and strategies needed to achieve this condition were not as intuitive or static. As Kennan remarked in his anonymous article penned for *Foreign Affairs* “[t]he main element of any United States policy toward the Soviet Union must be that of a long-term, patient but firm and vigilant containment of Russian expansive tendencies.” But even Kennan’s perceptions of how this should be achieved evolved and matured with changing circumstances. In a similar vein to Cicero’s warning “*Summum ius summa iniuria,*” while Kennan had been the primary architect of President Truman’s version of containment that deemphasized military action – outlined in NSC 20/4 – he became a critic of the more militant variant propagated in NSC 68.

The actual meaning of *Containment* evolved significantly from George Kennan’s famous “X” article in July 1947 and initial refinement through a series of National Security Council (NSC) documents such as NSC 20/4 (1948) and NSC-68 (1950). Its basic purpose was to prevent Soviet expansionism and guarantee the security of America and its allies. This was being done primarily through military means. With Joseph Stalin’s death in March 1953, President Eisenhower saw the potential for change, yet Containment policy provided no definitive guide for what to do. Should the U.S. now attack the Soviets or launch a dialogue with them? Eisenhower recognized an urgent need to unite his entire national security and foreign policy team behind a single approach before his Administration could move forward on Soviet policy.

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65 Kennan, “The Sources of Soviet Conduct.”
66 Translated from Latin as “More law, less justice” or “Law applied to its extreme is the greatest injustice.” Marcus Tullius Cicero, *De Officiis: With an English translation by Walter Miller* (London: William Heinemann Ltd., 1913), 34-5.
The resultant National Security Council Report 162/2 of October 1953 (NSC 162/2) and the subsequent set of policies now retrospectively referred to as the containment grand strategy were formed as a result of the persistent interaction of countless factors and variables, some of which were constant, but most fluctuating in time and space based on how the involved personalities interpreted the situation at hand and the firmness of their position within it.68

Based on elements of Paul Kennedy, Liddell Hart and Edward Meade Earle, David Pratt has offered five criteria for Canadian Grand Strategy to exist. He suggests that beyond being an “inter-generational plan,” it must have political acceptance at senior levels, it must enhance understanding of threats, interests and values, it must “convey a unity of purpose,” it must incorporate hard and soft power instruments, and it should remain adaptable.69 Even when national policy makers are operating within a context of undeniably grand strategic issues, however, it is nearly impossible to conclusively determine whether decision makers are (or have been) guided by a deliberate grand strategy or are simply making “sequential ad hoc pragmatic decisions on foreign policy or national security matters as they arise.”70

The dangers of retroactive injections of intent and reverse strategic road mapping suggest that attempting to describe formal examples of Canadian grand strategy based on past behavior are of limited utility since the aggregate of varied lenses through which “I know it when I see it” examinations are conducted does not enhance conceptual clarity. It may actually impose greater conceptual complexity. As Haglund, Pratt, McDonough, Granatstein, and other commentators use dissimilar conceptual lenses that focus attention of divergent elements of behaviour and have

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contradictory views of the concept’s applicability to a middle power such as Canada – nations with no “axe to grind” and “whose security and prosperity depends on an orderly and peaceful international system” – there is essentially no theoretical baseline from which to commence further examination. As described by Angelo Caravaggio:

Grand Strategy lies at the nexus of national political will and national potential and is heavily influenced by political, social, economic and military realities. No theoretical construct, no set of abstract principles, no political science model has yet been designed that has captured the essence of grand strategy. This is due in part to the fact that grand strategy exists in a world of flux where leaders have little control over the actual course taken and where uncertainty and ambiguity dominate. The international environment will more often than not have its say, causing the fundamental assumptions of the strategy to come under constant assault from events and attitudes both internal and external.

While this imprecision provides ample opportunity for black-box efforts to describe past behaviour as grand strategy and advocate for future behaviour in accordance with the observer’s preferences, such efforts to reverse engineer the constituents of successful grand strategy often seek out some deceptive “holy grail” formula through which policymakers hope to impose their preferential view of order on a world that is characterized by complexity and disorder.

What is evident in the limited scholarship about the existence of a Canadian grand strategy and recent debates regarding whether Canada can or should do grand strategy is that the international dimension continues to be assumed to be where the utility of engaging in such activity will be realized. This is where a level of discomfort with the utility of the entire concept

71 The United Kingdom’s Secretary of State for Dominion Affairs defined Canada as a “middle-power” in 1946. Malcolm MacDonald, “Canada in 1946”, August 1946, 8; Annex to United Kingdom Cabinet, Memorandum by the Secretary of State for Dominion Affairs, 30 October 1946, C.P. (46) 406, NAC CAB 129/4/6.
of a Canadian grand strategy comes into play. The observation that “[o]ne of the most fundamental questions of grand strategy is the general role that the country will play in international affairs,”75 links the utility of grand strategy to a state’s desired role and circumstances in foreign affairs. As Canada unquestionably lacks the resources to control the international environment through brute force, it is fully rational for Canada to deliberately choose a sub-strategic role in international affairs.76 In line with Granatstein’s assessment, it is wholly unrealistic for Canada to unilaterally seek to impose a grand vision on the complex world order through some optimized formula of military, economic, and diplomatic power.

In significant contrast, a great-power must exercise a substantial role as an inherent obligation attached to their desire to maintain hegemony. A great power is obliged to provide leadership and stability to successfully navigate the unpredictable climate of global affairs. To achieve this, great powers engage in “the intellectual legwork associated with grand strategy: setting priorities, thinking systematically about means and ends, and establishing general strategic ideas that can serve as conceptual anchors amid the geopolitical storms.”77 This intellectual legwork seeks to influence global conditions and thereby attempts to control the actual onset, location, and power of the inevitable geopolitical storms.

74 Pratt, “Grand Strategy in Canadian Foreign Policy?” 2.
76 ‘Sub-strategic’ has generally been utilized to indicate a level below full strategic nuclear warfare. By the final stages of the Cold War, the strategic nuclear deterrent of the United Kingdom consisted of strategic, sub-strategic, and tactical elements. As recorded by the UK Parliamentary Defence Select Committee, “[i]n comparison with a strategic strike, which would involve a full-scale attack against an adversary in which all or a significant part of the available Trident force would be launched, a sub-strategic strike would involve the launch of one or a limited number of missiles against an adversary as a means of conveying a political message, warning or demonstration of resolve...this sub-strategic role offers the Government of the day an extra option in the escalatory process before it goes for an all-out strategic strike which would deliver unacceptable damage to a potential adversary.” United Kingdom, House of Commons, Select Committee on Defence Session 2005-06, Defence - Eighth Report, June 2006, paras. 32 and 41.
Lacking the critical mass, affluence, domestic unity, or political resolve to perceive, implement, and rally others to an alternative conceptual anchor, it is quite feasible for a middle power to address geopolitical storms by either assisting in the great-power’s preferred ‘weather modification program’ or quitting the seas altogether in the hopes of eliminating any need for a conceptual anchor. In practice, it is likely that a suitable balance between elements of these extremes, a middle ground combination that provides an acceptable balance between insurance and flexibility, would be preferred by the middle power. While the middle power may not seek to achieve independent influence on global conditions by devising a grand strategic end state, in the sense of Schattschneider’s observation that “the definition of alternatives is the supreme instrument of power,” such states may nonetheless possess an alternate source of power by the very fact that they may choose their relationship to the grand strategic end states of others.

Irrespective of the standing assumption that grand strategy relates to international affairs, it is at least feasible that grand strategy could be turned inward as opposed to outward. This is consistent with the notion that “grand strategy need not apply only to war and statecraft: it’s potentially applicable to any endeavor in which means must be deployed in the pursuit of important ends.” Certainly this is consistent with Paul Kennedy’s definition of grand strategy as “nothing more than a state’s (and a people’s) long term plan to survive and, one would hope, thrive in what can be an often chaotic and unpredictable world.” Options for a middle power are perhaps more diverse than those of the great-power, whose size and power compels influence and control as the only viable means of managing exposure. While the great-power may pre-

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commit itself to its chosen conceptual anchor, the middle power may choose to reassess its exposed assets and threatened interests in relation to the pros and cons associated with every looming geopolitical storm.

Within the abstract terms of the ship-of-state, a middle power need not always seek safety by lashing itself to the great power’s flag ship or some other capital ship in the allied fleet for the duration of a geopolitical storm. It might choose to temporarily break from the great-power’s allied fleet and change course at the first indications of a storm, navigating towards calmer seas or to a safe haven port. If the nation has confidence in the seamanship abilities of its captain and crew it has other potential options to ride out a geopolitical storm while remaining in a position to reengage quickly with the main fleet. It could drop or reef sails, start engines, and motor into the wind and waves to avoid being caught beam-on. It may choose to reef sails or switch to storm sails and prepare to heave-to into the wind and waves. Or it might decide to prepare to run downwind and down waves in a controlled manner by reefing sails or switching to storm sails and preparing to run off. The choice of not choosing – to simply maintain course or drift and rely on ‘hope’ for the safety of the ship – is perhaps the most reckless option, but may somehow succeed despite observers who would inevitably challenge with the cliché “hope is not a strategy.”

81 See Michel Foucault, “Governmentality,” 93-4. Peter Layton has employed Foucault in his recent descriptions of national security strategy. Layton, “Australian National Security Strategy”.

82 The phrase ‘hope is not a strategy’ evolved into a business cliché, utilized predominantly to belittle managers selecting courses of action without suitable analysis, from the phrase “hope is not a method.” The latter was the title of a business leadership book by former United States Army Chief of Staff General Gordon Sullivan and his key strategic planner Colonel Michael Harper. The publication sought to impart on business leaders the lessons learned through the strategic level transformation process of the 1990s that downsized and reengineered the post-Cold War U.S. Army. The title was selected by Sullivan and Harper to “help leaders understand that the future is created by positive action – not by slogans, not by fad surfing, not by more perfect planning, but by action.” This phrase has recently become a common soundbite utilized in partisan politics. It was employed by Senator Hillary Clinton to challenge a perceived lack of strategic benchmarks in military operations in Iraq beyond the mere hope that the Iraqi
The conceptual anchor of an identifiable grand strategic objective provides utility to the
great power fleet as a means of weathering the storm without need to change course. This is
feasible because their mass creates sufficient inertia to maintain a predetermined course. But for
an auxiliary flotilla of small to mid-sized ‘ships of state’ lacking similar mass and inertia, a
conceptual anchor may in fact be detrimental to their primary goal of staying afloat. While
having a declared grand strategic objective may serve to enhance the egos of Canadians, it is
quite feasible that a middle power such as Canada can survive, and perhaps thrive, without need
for a predetermined conceptual anchor. Simply adapting to the changing conditions of the seas
and other forces acting to constrain available courses of action may in fact be the most practical
option. Choosing a visionary grand strategy is in fact a poor risk management tool for a middle
power as it may be counterproductive within a dynamic risk environment where an ability to
adapt to unforeseen events is perhaps of greater importance for agents who wield less influence
within the ecosystem. These agents are constrained by the need to be sensitive to, and act on,
signals from larger agents or aggregates. As they cannot excerpt explicit control, they must co-
evolve with their environment.

government would “step-up to the task that confronts them” and by Rudy Giuliani in the form “change is not a
destination, just as hope is not a strategy” as a rebuttal to Barack Obama’s ‘hope and change’ brand during the 2008
presidential election campaign. Retired Canadian Major-General Lewis Mackenzie also invoked the idea in
suggesting NATO employed a “strategy of hope” in Kosovo and Libya, trusting that Slobodan Milosevic and
Moammar Gadhafi would easily capitulate as a result of a short punitive bombing campaign. See Gordon R.
Why How We Do Anything Means Everything* (Hoboken, New Jersey: John Wiley & Sons, Inc., 2007), xxxvii;
Hillary Clinton, Testimony of U.S. Central Command (CENTCOM) Commander General John Abizaid before the
United States Senate Armed Forces Committee, 15 November, 2006; Rudolph Giuliani, Prepared Remarks –
Republican National Convention, 3 September 2008; and Lewis Mackenzie, “NATO’s Libya ‘hope’ strategy is
The Co-Evolution Constraint (Linkage)

A critical distinction is often lost in debates about grand strategy derived from the theoretical constructs favouring a U.S.-centric great-power analysis. The cause of this misperception may be traced to the real and perceived limitations in Canada’s independent courses of action as a result of the asymmetric power balance between the United States and Canada. The politics of “tit for tat retaliation,” or “issue linkage” – “efforts to break an impasse or otherwise improve one’s bargaining position on a particular issue by tying it to another, unrelated issue” – act as a modifying influence on the potential courses of action Canada may consider.

As Brian Bow notes:

The question of linkage is a crucial one for Canada-US relations, and for Canadian foreign policy more generally. If the US is willing and able to use coercive linkages to force changes to Canadian policies, then Canada faces some tough choices. It can find ways to limit vulnerability by restraining or even rolling back interdependence between the two societies, which would involve severe – perhaps even catastrophic – economic costs for Canada. It can try to find ways to set limits on the exercise of American power, which apparently can be purchased only through reciprocal cessions of Canadian sovereignty, or perhaps not at all. Or it can find ways to live with profound vulnerability, which would ultimately amount to accepting strict limits on Canada’s autonomy in both foreign and domestic affairs.

If, on the other hand, the US is not willing and/or not able to make linkages in disputes with Canada, then the overall asymmetry of the relationship matters less.

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84 Brian Bow notes the various forms of linkages as cooperative or coercive, prospective (i.e., involving promises or threats), or retrospective (i.e., involving rewards or retaliation). Brian Bow, The Politics of Linkage: Power, Interdependence, and Ideas in Canada-US Relations (Vancouver: UBC Press, 2009), 3.

85 Brian Bow notes that prior to his 2009 study, the most noteworthy study of issue linkage in the Canada-US context was in Chapter 7 of Robert O. Keohane and Joseph S. Nye Jr., Power and Interdependence: World Politics in Transition (Boston: Little, Brown, 1977). Bow argues that Keohane and Nye’s linkage analysis is faulty because: “(1) Its expectations about the long-term pattern of dispute outcomes are not borne out by subsequent events; (2) it does not give its main theoretical rival, the realist perspective on international relations, a fair shake; (3) it conflates two different kinds of explanations for US self-restraint; and (4) it is predicated on too narrow a conception of what issue linkages might look like, and therefore misses out on the main way in which linkage politics have actually played out in the Canada-US context.” Bow, The Politics of Linkage, 25.
and the limits of what Canada can “get away with” depends on the specific bargaining context within particular issue areas. The diplomatic agenda would be that much more complex, but the scope of Canada’s autonomy would be that much greater.\footnote{Bow, The Politics of Linkage, 4.}

With the addition of linkage factors, another important element can be added to our maritime metaphor. While a ‘strategic culture’ develops over time in the patterns and preferences by which each ship-of-state chooses to interact with geopolitical storms, there may also be a ‘diplomatic culture’ that develops in relation to the bilateral and multilateral interactions between the components of the allied fleet.\footnote{Bow, The Politics of Linkage, 3-4. See for example Pauline Jewett, “The Menace is the Message,” in An Independent Foreign Policy for Canada? ed. Stephen Clarkson (Toronto: McClelland and Stewart, 1968).}

Although former Canadian ambassador to the United States Allan Gotlieb has suggested that an absence of coercive linkages represents a distinctive feature of the special relationship between the U.S. and Canada,\footnote{See Allan E. Gotlieb, “Canada-US Relations: The Rules of the Game,” SAIS Review 2 (Summer 1982): 172-87.} others contend that “the anticipation of American linkages and the profound self-restraint it induces in Canadian policy-makers” plays a significant influence on bilateral relations.\footnote{For further information on strategic culture see Alistair Iain Johnston, “Thinking about Strategic Cultures,” International Security 19.4 (1995): 32-64.} Bow sets up his own metaphor for U.S.-Canada relations as follows:

Rather than a genuine friendship, the skeptics might say, the relationship between the US and Canada is like the classical Greek story of the crocodile and the trochilus (“crocodile bird”). The crocodile opens its mouth to let the little bird pick bits of food from between its teeth, and both benefit. The crocodile resists the urge to try to take a second lunch, because it knows it will need to have its teeth cleaned again tomorrow. But if the bird pecks a little too hard in a sensitive spot, then there will be a loud snap, and one less trochilus on the riverbanks. This kind of symbolic relationship is special in the sense that it is different from what we might normally expect (i.e., it doesn’t look like the law of the jungle), but it is not special in the sense that there is any meaningful connection. There may be mutual restraint from day to day, but there is no real sense of mutual obligation, without
which there can be no assurance of restraint in those times when it is most needed.\textsuperscript{90}

Integrating the two metaphors takes account of the added complexity introduced when the middle power’s ship (the trochilus) chooses to gamble its ultimate survival in the implied restraint that a mutual benefit offers. There are tangible profits to be had from the relationship, but there is also an undefined limit to which seeking profit in the association becomes counterproductive or even an existential threat. The middle power ship-of-state may lash itself to the conceptual anchor of the great-power, only to be set adrift in the event this anchor fails and the fleet subsequently acts in its own self-interest. The auxiliary flotilla may be placed in a position whereby its ability to subsequently pursue other options is diminished.

Brian Bow’s study of “the shared norm against the resort to coercive issue linkages”\textsuperscript{91} as an element of postwar diplomatic culture presents the argument that during the early Cold War period the United States exercised self-restraint by not attempting to influence Canadian policy through the use of direct, coercive linkages. As a result of a broad diplomatic cultural norm admonishing direct, coercive linkages as negotiating options, Canada had considerable latitude to pursue policies in conflict with United States interests. In the case of pre-1970s relations:

In postwar Canada-US bargaining, coercive linkages were ruled out per se, because linkage itself was seen to have special meaning. On one hand, resort to hard linkages was recognized as a “trigger” for Canadian apprehensions about vulnerability, which might set off a spiral of mutually damaging retractions and dislocations. On the other hand, resort to linkages vis-à-vis Canada was contrary to American officials’ ideas about the nature and purpose of the United States as an international actor in general, and the nature of its relationship with Canada in particular.\textsuperscript{92}

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\textsuperscript{90} Bow, \textit{The Politics of Linkage}, 1-2.
\textsuperscript{91} Ibid., 3.
\textsuperscript{92} Brian Bow’s study focused on identifying elements of “hard” linkages in bilateral negotiations surrounding nuclear weapons (1959-63), arctic waters (1969-71), Oil and Gas (1980-83), and the War in Iraq (2002-4). Ibid., 166.
\end{flushright}
However, due to a diplomatic cultural shift inside U.S. policy-making circles and displacement of the influence of traditional transgovernmental networks during the 1970s, expectations that the U.S. might resort to such means grew rapidly and has caused Canadian policy-makers to exercise greater caution ever since. The exercise of the option of coercive linkage came to depend on the influence of “shifting configurations of bureaucratic and societal interests” on “the vast and complex latticework of bilateral agreements and formal trade-offs.” This influence was no longer modulated by a shared cultural norm precluding the resort to coercive linkages, but by “American officials’ growing appreciation for the domestic political consequences of linkages.”

This shift is described by Bow as follows:

The American officials tied into the transgovernmental network were well positioned to shape the bargaining agenda in the 1950s and 1960s, because the relatively hierarchical and coherent governing structures of the early Cold War “imperial presidency” facilitated a bigger-picture perspective on foreign policy making and granted special licence for State Department and other likeminded officials to manage particular relationships according to broader agendas and principles. The further fragmentation of foreign-policy making in the United States in the 1970s created space for conflicting ideas and priorities to force their way into the agenda, making it harder to predict which ideas and priorities would prevail in any given debate over bargaining strategies. It was not that the American officials who worked most closely with Canadians changed their minds about how to manage the relationship…but rather that their voices were drowned out by a variety of new players with very different ways of thinking about American interests and about how to approach relations with Canada.

As a result of perceptions about the domestic impacts of exercising “hard” linkages against their continental neighbour, “soft” linkages became the most viable bargaining option to counter

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94 Ibid., 167-68.
Canadian interests in response to aggravating Canadian policies. This “soft” linkage option manifests in the following fashion:

[American policy-makers] can hold grudges against a particular Canadian government, or even against Canada more generally, and therefore refuse to expend political capital in issues that are more important to Ottawa. Whereas hard linkages generally involve an active change in policy, with actual or potential effects on the target that are readily observed and unmistakably negative, these soft linkages between issues are often indirect and diffuse.

In this sense there are potential “hard” and “soft” linkage factors that will limit the actual options that are viable for Canada to pursue. And in the vein of Thomas Risse-Kappen’s observation that “ideas do not float freely,” the influence of these factors on policy outcomes is relative to the role of domestic actors who carry such ideas into the political arena and have the capacity to set the agenda and translate ideas into action.

*The Contribution Constraint (Functionalism)*

A further modifier in the case of Canada is the ‘functional’ principle. A long standing operating principle in Canadian policy, Prime Minister Mackenzie-King’s comments within the World War II context provide a succinct description of the concept:

We cannot accept the idea that our destinies can be entrusted to the four larger Powers, and we have advanced the [functional] principle that representation in international bodies should depend on the extent of the contribution which each country would be expected to make to their work. We intend to continue to press

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for the acceptance of this principle and for Canadian representation on bodies in which we have a special interest.99

Denis Stairs further described the relevance of the functional principle for Canadian policy:

Like the associated concept of the “middle power,” the functional principle was particularly suited to the Canadian interest, not least of all because in some of the newly emerging fields of international endeavour (the control of civil aviation, and the production and distribution of food supplies, for example) Canada was especially well endowed with pertinent assets. A doctrine that ultimately regarded the hierarchy of power as the principal criterion for the assignment of institutional privilege, and at the same time recognized that the hierarchy itself might vary from one issue area to the next, was an ingenious political instrument for a country with Canada’s characteristics. Once it was seriously entertained by other members of the international community, it could be used to establish a claim to special constitutional entitlements in a wide array of contexts.”100

The adoption of functionalism is perhaps in itself a recognition of Canada’s limited requirement for a grand strategic objective to guide its foreign policy. As John Holmes observed:

Necessity dictates…that [Canadian policy-makers’] attention be on issues that affect them more directly. Perhaps the concern about ownership of energy resources or the protection of Canadian television seem parochial in the eyes of those who focus on grand strategies. They may be matters of survival to the lesser power. The survival of mankind is clearly of much greater importance, even in the eyes of Canadians concerned for the integrity of their national life. In their functionalist view, however, it is the greatest powers which largely determine the greatest issues and the preoccupations of others, particularly those in relative security, are inevitably on a smaller scale. However, the Canadian attitude to the role of a middle power has grown more sophisticated. It is seen functionally. A country is not small, middle or large across the board. A country which is a minor military power and a major-minor or minor-major economic power is going to concentrate on economic issues or territorial issues which matter to it and in which it matters. In spite of some spectacular ventures in grand diplomacy, that is where the foreign policy of Canada has always had its main thrust. That is also where it has considerable clout. It is not the grand themes that make up the major part of the agenda in the Canadian Department of External Affairs. It is not that Canadians have a different estimate of what is important to international relations.

They know that the fate of Lebanon, strategic arms limitations and the confrontation between China and Vietnam are as important as the greatest powers think they are. They do not intend to keep silent on these subjects. They must vote in the General Assembly and from time to time act with a great sense of responsibility in the Security Council. They take positions and try to mould opinion in the associations to which they belong. Nevertheless, they know that their role in these issues is usually peripheral. What they think about El Salvador or Kampuchea will not matter critically. ¹⁰¹

As with the Schattschneider’s observation about the power inherent in providing alternatives, the choice to pursue functionalism rather than grand strategic objectives can be seen as creating opportunities, albeit with less control:

The term middle power, which Canadian policy-makers and policy describers began to use in the postwar period, was primarily intended to define the right of lesser powers on functional grounds to play major or minor roles depending on their specific capacity in the particular subject matter. It was intended also as a discipline for a people who tended to measure themselves alongside the two great powers between which they existed and were inclined either to see themselves as helpless or over-estimate the scope for their diplomacy. The term at first had to do with size and capacity, but as intermediary states were required for peacekeeping and arbitrating by the U.N., and the middling countries filled the bill, the term developed ambiguity. Whereas the possession of great military and economic power can perversely be an advantage in some kinds of diplomacy, the lesser power can be trusted because it has no direct involvement, because it is less intimidating and seems therefore less of a threat…It is often more beloved (or less disliked) not for superior virtue or unselfishness but because it hasn’t the capacity for malevolence. Neither has it, of course, the same capability of protecting, aiding, and abetting. ¹⁰²

In this sense, it is perhaps unwise for a middle power nation such as Canada to commit to follow a general grand strategic objective at the expense of potential functionalist opportunities. The functionalist principle is essentially analogous to Krasner’s concept of an “orienting principle” for foreign affairs. As it has served Canada well in the past, it would likely be difficult to

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¹⁰² Ibid., 66-7. For a critique of Canada as a middle power see Adam Chapnick, “The Canadian Middle Power Myth,” International Journal 55.2 (2000), 188.
abandon in favour of some grandiose vision which is perhaps unattainable with the nation’s limited resources.

The Objective Constraint (National Interest Consensus)

The April 2004 national security policy publication *Securing an Open Society* was focused on three core national security interests: protecting Canada and Canadians at home and abroad; ensuring Canada is not a base for threats to our allies; and contributing to international security.\(^\text{103}\) While noting the inherent dynamic nature of threats to Canada, the policy statement indicated Canada’s security interests as “enduring.”\(^\text{104}\) This foundational policy statement identified existent threats to these core national security interests as terrorism, proliferation of weapons of mass destruction, failed and failing states, foreign espionage, national disasters, critical infrastructure vulnerability, organized crime, and pandemics.\(^\text{105}\) It is important to note that these core national *security* interests are framed within a predominantly physical security domain within which security involves predicting, preventing, deterring and responding to existential ‘threats to life.’ Framed within the legal context, it focuses on threats to the principal governmental responsibility of ensuring citizens’ right to “life, liberty and security of the person and the right not to be deprived thereof” as expressed in the current Canadian Constitution.\(^\text{106}\) The three core national security interests identified in the 2004 national security policy are, however, merely one element of a broader set of Canadian national interests whose clear characterization remains rather illusive.

\(^{\text{104}}\) Ibid., 4.
\(^{\text{105}}\) Ibid., 6-8.
In November 2004 testimony before the Standing Senate Committee on National Security and Defence relating to a review of Canada’s defence policy, retired Brigadier General Donald Macnamara suggested Canada had yet to “clearly articulate a set of national interests.”

Defining interests as “an expression of the combination of the fundamental values and goals that [an institution] will seek to preserve, protect and promote in the conduct of its operations,” Macnamara expressed national interests as simply “those things that are important to the country.”

It is perhaps intuitive that all nations are interested in their own survival. It is the variation in perception regarding the terms and conditions of that survival that makes national interests inherently flexible. As Abraham Maslow noted:

> There is now sufficient anthropological evidence to indicate that the fundamental or ultimate desires of all human beings do not differ nearly as much as do their conscious everyday desires. The main reason for this is that two different cultures may provide two completely different ways of satisfying a particular desire, let us say, for self-esteem. In one society, one obtains self-esteem by being a good hunter; in another society, one obtains self-esteem by being a great medicine man or a bold warrior, or a very unemotional person and so on. It may then be that, if we think of ultimates, the one individual’s desire to be a good hunter has the same dynamics and the same fundamental aim as the desire of the other individual to be a good medicine man. We may then assert that it would be more useful for psychologists to combine these two seemingly disparate conscious desires into the

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107 W. Donald Macnamara, *Proceedings of the Standing Senate Committee on National Security and Defence, Issue 4 - Evidence, Morning meeting - 29 November 2004*. Note this committee was created on March 15, 2001 (37th Parliament, 1st Session) with the first meeting taking place on May 10, 2001. The initial mandate of this Committee was “to conduct an introductory survey of the major security and defence issues facing Canada with a view to preparing a detailed work plan for future comprehensive studies.” Work under this initial mandate led the Committee to conclude that there was an urgent need for a national security policy. A subsequent mandate in April 2002 authorized the Committee to “[e]xamine and report on the need for a national security policy for Canada.” Since 2002 the committee’s activities have been focused on four broad areas of study: the capabilities of the departments of National Defence and Public Safety Canada; the working relationships between various agencies involved in intelligence-gathering and analysis; the mechanisms to review the agencies involved in intelligence-gathering; and the security of borders and critical infrastructure. “Introduction to the Standing Senate Committee on National Security and Defence,” Senate of Canada, accessed 25 October 2015, http://www.parl.gc.ca/SenCommitteeBusiness/CommitteeAbout.aspx.

108 Macnamara, *Standing Senate Committee 2004*. 260
same category rather than to put them into different categories on purely behavioral [sic] grounds. Apparently ends in themselves are far more universal than the roads taken to achieve those ends, for these roads are determined locally in the specific culture.\footnote{Maslow, Motivation and Personality, 67.}

There is thus a level of path-dependency with respect to articulating national interests.

Macnamara has observed that Canada’s specific national interests could be derived implicitly from the 1995 white paper on foreign policy which expressed three key foreign policy objectives: the promotion of prosperity and employment; the protection of our security within a stable global framework; and the projection of Canadian values and culture.\footnote{Foreign Affairs and International Trade, Canada and the World: Government Statement (Ottawa: 1995), i.} He suggested, however, that the average Canadian would find significant difficulty in interpreting and articulating this material in the context of specific national interests.\footnote{Macnamara, Standing Senate Committee 2004.} Macnamara suggests four national interests for Canada that closely match the four “long-term, enduring national interests” that Donald Nuechterlein has suggested underpin U.S. foreign policymaking:\footnote{Nuechterlein describes the United States’ four long-term, enduring national interests as: defence of the homeland; enhancement of the nation’s economic well-being; creation of a favorable world order; and promotion of democratic values. Nuechterlein, “America Recommitted,” 117. See also Nuechterlein, United States National Interests; Nuechterlein, National Interests and Presidential Leadership; Neuchterlein, America Overcommitted; Nuechterlein, US National Interests in a Restructured World, 16-22; and Nuechterlein, A Superpower Assesses Its Role.} 1) Canadian national defence – the defence of the people, their assets, their values and the territory, the sovereignty of the nation; 2) economic well-being of the country; 3) a stable international environment; 4) and projecting values of democracy, freedom, and social justice abroad.\footnote{Macnamara views the character of each of these interests as foundational, fundamental, dependent, and contributory respectively. Macnamara, Standing Senate Committee 2004.} The four components of Canada’s national interests, as defined by Macnamara, are therefore security, prosperity, stable world order, and projection of values.\footnote{Don Macnamara, “Canada’s National and International Security Interest,” in Canada’s National Security in the Post-9/11 World: Strategy, Interests, and Threats, ed. David S. McDonough (Toronto: University of Toronto Press, 2004), 261.
By overlaying Nuechterlein’s analysis of national interest as a basis for foreign policy formulation on the Canadian policy context, Macnamara’s expression of Canadian national interests naturally adopts a U.S.-grounded, predominantly extraterritorial projection of national interests. It is here that the attempt to mirror an American perception of national interest is perhaps inconsistent with certain foundational elements of the Canadian strategic condition.

Recent advocacy for the adoption of a Canadian grand strategy is intricately linked to the Canadian propensity to view any open pursuit of national [self]-interest in a pejorative light. Norman Hillmer has aptly observes that:

Canada has always pursued its national interests relentlessly, but the country – politicians and voters alike – has been reluctant to admit this…. Instead, Canadians and their leaders are happiest hiding behind the mask of independence and activist internationalism, for this obscures the core interests of the country – interests which foreign policy has always advanced, just secretly.115

Hillmer offers a number of examples of this masking, such as Wilfrid Laurier and William Lyon Mackenzie King’s rhetoric of Liberal nationalism between 1887 and 1948, Canada’s Cold War internationalism, the humanitarian agenda of human security, or “Axworthyism”, in the late-1990s, and the populist narrative of a post-9/11 divergence in Canadian and American interests. Hillmer suggests that Canadians employ “diverting masks” in an attempt to disassociate themselves from their actual policy agenda, which is indeed based on the pragmatic pursuit of

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2012), 49. Don Macnamara, “‘Comprehensive’ National Security,” FrontLine Defence 7.6 (2010): 24-26. Note that these ‘four components’ are drawn directly from Don Nuechterlein’s ‘four categories’ of basic, relatively unchanging, national interests: defence; trade and commerce; the building of a stable world order; and the promotion of American values abroad. Neuchterlein, America Overcommitted, 8.
national interests.\footnote{Centre for Security and Defence Studies, \textit{Defining the National Interest: New Directions for Canadian Foreign Policy}, 4-5 November 2004 Conference Report (Ottawa: Carleton University, 2005), Summary of Panel 1: “Framing Canada’s National Interests: The Fundamental Principles,” p. 9.} Hillmer’s analysis would suggest that the “national interest approach”, advocated by Macnamara and Fitz-Gerald (see Chapter 3), that leads naturally to an autonomous Canadian grand strategy seeking to impose some magnificent Canadian end-state on the global environment is bound to fail.\footnote{Macnamara and Fitz-Gerald, “A National Security Framework for Canada,” 92. Macnamara, “Canada’s National and International Security Interests,” 47.} The apparent ingrained tendency of avoiding linkages between policy and national interests would seem to scuttle Macnamara’s proposed model at its inception. Such models would appear inconsistent with the genuine Canadian condition and the degree of complexity within which Canadian policymaking occurs.

The fundamental flaw in Macnamara’s proposed Canadian national security strategy process is the foundational belief in the existence of a “conception of an overriding common good transcending the specific interests of parties, factions, and other entities smaller than the nation as a whole.”\footnote{Brands, “The Idea of National Interest,” 239.} As any strategy requires a clear objective, to employ all available state instruments to impose a preferential view of order on one’s world must be predicated with consensus as to exactly what that preferential view entails. The decidedly linear ends-means-ways formula for organizing efforts cannot commence until such objectives are fixed. It is here that the advocacy for a Canadian grand strategy meets a perpetual impasse. Prudent Canadian decision-makers must formulate policy under the regulating influences of geographic, historical, economic, social, and cultural fault lines. These societal cracks effectively eliminate the possibility of the enduring “unifying, long-term vision of a country’s global values and interests”
inherent to Copeland’s construct of grand strategy. Barring the existence of an existential threat of such magnitude as to effectively pacify multiple fault lines, it is hard to conceive of a condition in which a fully unified Canada could pursue the “navigational beacon” of a grand strategy for any sustained period.

From Lord Durham’s 1839 observation of “two nations warring in the bosom of a single state” to a stream of Royal Commissions relating to federal-provincial relations, economic union, bilingualism and biculturalism, and aboriginal affairs, the Canadian condition would appear to defy Copeland’s conception of a unified and sustainable vision of values and interests. As the Task Force on Canadian Unity observed in 1979, “[t]here are in Canada…real conflicts, major differences of philosophies, attitudes, objectives and interests among groups and regions.” This enduring theme was captured in the celebrated 1947 University of Toronto Gray Lecture, in which Louis St. Laurent’s expressed the basic reality that characterizes and limits the pursuit of national interest in Canada: the requirement to contextualize that interest and execute policymaking with constant reverence to the impact of geographic, historical, economic, social, and cultural fault-lines on national unity.

121 For an analysis of the policy implications of Royal Commissions see Gregory J. Inwood and Carolyn M. Johns, eds., Commissions of Inquiry and Policy Change: A Comparative Analysis (Toronto: University of Toronto Press, 2014). The Royal Commissions listed above include: Royal Commission on the Indian Act and Indian Administration in General (1947); Royal Commission on Corporate Concentration (1978); Royal Commission on Canada's Economic Prospects (1957); Royal Commission on the Economic Union and Development Prospects for Canada (1985); Royal Commission to Inquire into Railways and Transportation in Canada (1917); Royal Commission on Dominion-Provincial Relations (1940); Royal Commission on Bilingualism and Biculturalism (1967-70); Royal Commission on Aboriginal Peoples (1996); and The Task Force on Canadian Unity (1979).
123 Secretary of State for External Affairs Louis St. Laurent, “The Foundations of Canadian Policy in World Affairs,” Inaugural Duncan and John Gray Memorial Lecture, University of Toronto, 13 January 1947. The lecture was established by George Leishman Gray and an Ontario Department of Education official with the intent of
David Pratt’s suggestion that Canadian grand strategy is “an intellectual construct – a tool to be used by policy makers and academics alike to try to better understand what a nation’s long term strategic interests are, and to seek to translate those long term interests into long term public policy”\textsuperscript{124} is a commendable vision, but is perhaps unfeasible in the context of the inherent divisiveness of Canada. While it is indeed comforting to suggest that a clear path towards tangible objectives of statecraft can be distilled out of a cohesive and sustainable vision of values and interests, the portrayal of grand strategy as a tool to achieve Canadian consensus is a gross oversimplification of the dynamics of Canadian policymaking. Canadian foreign policy is not characterized by the “pursuit of the ideal,” but by the “art of the possible.”\textsuperscript{125} The burden of Canada’s massive geography, cultural diversity, and economic dependencies influences regional and class perceptions regarding Canada’s national interests, thereby regulating the proximity to the ideal that Canada can actually achieve.

As David Haglund has observed, significant segments of the Canadian public and political class have generally perceived the utility of national interest in Canadian foreign and defence policy analysis with “widespread disdain.”\textsuperscript{126} Haglund observes:

Canadians seem less concerned with how we should conceive of the national interest and more animated by the question of whether a country such as Canada should even stoop to admit such interests. For reasons not readily apparent…there

\textsuperscript{124} Pratt, “Grand Strategy in Canadian Foreign Policy?” 2.


\textsuperscript{126} Haglund, “Here comes M. Jourdain,” 17.
has grown up a feeling in this country that there is something more than a bit grubby about openly acknowledging that Canada has self-interested aims in foreign policy. When the Chrétien government published its equivalent of a white paper on foreign policy in February 1995, under the title Canada in the World, some commentators were quick to bemoan its self-interested content, as if such an emphasis must be antithetical to and corrosive of “internationalism”.

With deference to the descriptions of the nature of Canada’s post-World War II behaviour in international affairs, Leigh Sarty’s examination of the legacy of Canada’s special attachment to internationalism through the vehicle of multilateralism discerns that:

…there is a pronounced idealist impulse inherent in Canada’s pursuit of collective, rule-based solutions to the dilemmas of international life. Its roots have been traced to a domestic political culture steeped in negotiation and compromise instead of revolution, and the luxury of distance from the Realpolitik of the Old World. As a result, Canadian internationalism as it developed after World War II acquired a distinctly moral overtone, a trait beautifully conveyed in one Canadian’s remark to the Americans in 1932: ‘Our material inferiority we will balance by our moral superiority ... you are big, but we are better: you are great.

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130 Sarty suggests a distinction can be made in that “multilateralism – collaboration with others – is the only means by which a power of Canada’s size can achieve the normative ends [Canadians] associate with internationalism.” Sarty employs Michael Tucker's definition of internationalism as “an exercise in collaboration on the part of Canadian governments, groups or individuals with like-minded governments or peoples everywhere, aimed at the enhancement of interests or values commonly shared with others outside Canada, with a view to helping create or sustain a better world order,” where “‘better’ means a world governed by the rule of law arrived at in concert with others rather than by the rule of the strong, a world in which a country of Canada's great wealth and nominal defences can prosper without fear of encroachment.” Sarty, “Sunset Boulevard Revististed?” 754. See also Tucker, Canadian Foreign Policy, 2.
but we are good.” Canadians thus came to believe that their part in fostering multilateralism was not merely the inevitable lot of a well-positioned but extremely vulnerable power but a response to a higher calling on behalf of the international community. This helps to explain the troublesome ‘rear-view mirror’ tendency in Canadian thinking about contemporary international change. Pride in a purportedly selfless commitment to internationalist principles has become an integral part of the Canadian character, one of the few things that still binds the country together in … difficult times.

This idealist impulse intrinsic to the oft perceived natural Canadian foreign-policy orientation towards selfless Pearsonian internationalism would appear at odds with the concept of national interest.

As evident in the words of Barbara McDougall, Secretary of State for External Affairs from 1991 to 1993, this apparent preference for idealism over self-interest has often been portrayed as the distinctive Canadian contribution to international affairs:

The very existence of Canada – its languages, its cultures, its values, its tolerant spirit, its standards of behaviour – has represented an independent voice and has constituted something different, something special, for the larger world. By freely forging a united nation based on respect for diversity, Canadians bring a special sensitivity to other problems in the world.

Haglund challenges that “[s]o strong has been the myth of samaritanism that it can blind observers to some obvious realities of Canadian policy.” He argues Pearsonian internationalism is simply “enlightened self-interest” by contextualizing that “it is important that, rather than think of ‘internationalism’ as an obligation to disregard one’s interest, we more

133 See Andrew Cohen, “Canada in the World: The Return of the National Interest,” Behind the Headlines 52.4 (Summer 1995), 15.
sensibly construe it as a preference for tapping bilateral or multilateral means, or both, in order to
*advance* one’s self-interest – and in the bargain, to protects one’s ideals and values as well.”\(^{136}\)

This theme of achieving the ends of internationalism through the means of multilateralism was aptly described by the Royal Commission on the Economic Union and Development Prospects for Canada in 1985 as a convenient convergence between altruism and enlightened self-interest:

The minor- and middle-power states of the global community have a particularly strong interest in promoting multilateral procedures and institutions for resolving international problems. This interest derives partly from the general advantage that accrues when nations can pursue economic and other goals abroad in a secure, stable and predictable environment. It stems also from the fact that if multilateral institutions and procedures are effective, they can help to weaken the ability of the greater powers to act entirely on their own, either singly or together. At the same time, they create opportunities for smaller countries to increase their influence by co-operating to achieve their common objectives. Just as anarchy sometimes works to the particular advantage of the strong, so maintaining order among members of institutions can especially benefit the weak.

We Canadians are geographically isolated on the North American continent, in the close company of a dynamic super-power which has at its disposal unprecedented military, economic and cultural resources. In these circumstances, Canadians have been preoccupied historically with the problem of maintaining the freedom of manoeuvre we need to preserve a separate and satisfying political identity. For these reasons, we have been exceptionally open to arguments in favour of conducting international relations multilaterally, particularly since the end of the Second World War. These arguments were all the more attractive because they offered a happy way of combining altruism and enlightened self-interest. These motives unite Canadians’ genuine and praiseworthy desire to contribute constructively to maintaining a peaceful international environment for all nations, with a political and diplomatic strategy clearly calculated to strengthen Canada’s hand in world affairs.\(^{137}\)


In the economic sphere, Canada’s adherence to multilateralism encourages an international system regulated by “general compromise and general compliance” as opposed to “lawlessness in which the prizes go to the powerful and the predatory.”¹³⁸ Hence, multilateralism serves Canada’s national economic interests.¹³⁹

This economic interpretation of national interests is important in that Canada is at its fundamental core an economic union. As Frank Underhill observed:

The essential work of the Fathers of Confederation was to weld the scattered British possessions in North America into a unity within which Canadian capitalism could expand and consolidate its power, to provide for the capitalist entrepreneurs of Montreal and Toronto a half-continent in which they could realize their dreams and ambitions. The dynamic drive which brought Confederation about had its centre in Montreal among the railway and banking magnates who were dreaming of new fields to conquer. It was for this purpose, and not merely to illustrate the abstract beauties of brotherly love, that Macdonald and Cartier built up their Anglo-French entente; it was for this purpose that Galt and Head and Monck drafted their paper schemes of British-American union and carried on their obscure negotiations behind the scenes. Federalism was only an accident imposed by the circumstances of the time; union was the essential achievement.¹⁴⁰

Since Confederation, the struggles of interest for Canada have been about balancing competing economic interests. As Underhill noted in 1935:

Dominion and provinces are not entities existing per se. The root conflicts which divide our ten million people are not between national and provincial

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governments, or between central provinces and outlying provinces. They are conflicts between various economic interest groups all of whom strive with varying success to use the political machinery of federal and provincial governments to assist them in achieving their purposes, *i.e.*, in staking out for themselves vested claims to a special share of the collective income. And in this competition of group interests each competitor does his best to identify his own special interest with that broader comprehensive national interest to which all profess allegiance but which no one since Confederation has ever successfully defined.  

As evidenced by contemporary debates regarding balancing competing economic interests, such as inter-provincial pipelines for market access or bailouts for manufacturers in Eastern Canada, this situation is as true in 2017 as it was in 1935. However, the difference today is likely that the ideological aspect that was traditionally reserved for the international domain is perhaps more ingrained in domestic affairs as a result of globalization. It may be argued that not only is there a need to balance competing economic interests of provinces, but also the ideological influence of the “Nine Nations of North America” – Joel Garreau’s contention of the way North America “really works” as a continent of “Nine Nations” categorized by their own views of the world and “distinctive web of power and influence” rather than state borders  – and the influence of global interests that have unprecedented direct access to the Canadian populous through information and communications technology.

While it is perhaps helpful to illuminate enduring national interests, these characterizations are in fact of limited value beyond broad policy generalizations. Since the Supreme Court of Canada has deemed that a Minister of the Crown can be “entitled to deference as regards [to the] implied interpretation of the term ‘national interest’” and have allowed “a

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broader reading of the term ‘national interest’ rather than one which would limit its meaning to the protection of public safety and national security,”143 Canadian national interests are – at least in a legal sense – whatever the Ministers of the crown of the day say they are.144 National interest is thus a dependent variable in Canadian policymaking. This tends to contradict the general prerequisite for grand strategy, that the national interest maintain the characteristics of an independent variable. Without consensus on the national interest, the “national interest approach,” arguably the core concept of centripetal grand strategy, has little utility.

As ardent political pragmatist Helmut Schmidt intimated, “[t]he more a politician allows himself to be led by a fixed theory or ideology, by his party’s interests in power, the less he will weigh up all the discernible factors and all consequences of his decision in each individual case.”145 Centripetal grand strategy’s offer of a “school solution” for complex and ambiguous policy problems contrasts with Schmidt’s caution that such problems are worked rather than

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143 Agraira v. Canada (Public Safety and Emergency Preparedness), 2013 SCC 36, [2013] 2 S.C.R. 559, 561. The Immigration and Refugee Protection Act was amended in 2013; however, it continues to makes reference to “national interest” in s.42.1 (1) without specifically defining the term. Within the Agraira v. Canada decision the Court noted that in the absence of a finite definition of the term “national interest,” case-specific ministerial interpretation of “national interest” must be inferred based on the Minister’s “express reasons” and the scope and context provided in existent “guidelines” such as Chapter 10 of CIC’s Inland Processing Operational Manual dealing with processing national interests exclusions. Such guidelines do not explicitly define “national interest”, however, they do indicate that the program for determining inadmissibility on grounds of national security seeks to achieve the objectives of: 1) protecting the safety and security of Canadians; 2) denying access to Canada to persons who are security risks or involved in organized crime; and 3) ensuring that Canada does not become a safe haven for persons who have been involved in war crimes or crimes against humanity. Citizenship and Immigration Canada, Inland Processing Operational Manual, Chapter 10, “Refusal of National Security Cases/Processing of National Interest Requests”, 30 April 2012, 3.

144 In accordance with the “Declaratory Power” in s.92(10)(c) of the Constitution, the Parliament of Canada is empowered to legislate on “[s]uch works as, although wholly situated within the Province, are before or after their Execution declared by the Parliament of Canada to be for the general Advantage of Canada or for the Advantage of Two or more of the provinces.” Parliament is the sole judge as to whether or not a “work” is of “a general advantage (to) Canada.” The role of the courts is limited to determining whether or not the Parliament of Canada is dealing with a “work” in the sense of s.92(10)(c). Claude Bélanger, “The ‘Declaratory Power’ in the Canadian Constitution,” Studies on the Canadian Constitution and Canadian Federalism, 19 February 2001.

145 Schmidt, “On a Politician's Ethics,” part VI.
solved.\textsuperscript{146} Such a grand strategy may in fact increase the dangers of miscalculation in national policymaking by supplanting reason and conscience with a faulty decision making oracle.\textsuperscript{147} Although the term grand strategy has brought coherence to the intricate task of pursuing political aims through a broader range of state instruments during both war and peace,\textsuperscript{148} it remains a deceptive and dangerous oversimplification with respect to the realities of Canadian policymaking. A centripetal grand strategy is not the magic tonic for long term Canadian survival and prosperity that it may seem.

\textsuperscript{146} Drew and Snow, \textit{Making Strategy}, 209.
\textsuperscript{147} Schmidt, “On a Politician's Ethics,” part VI.
\textsuperscript{148} Heuser, \textit{Evolution of Strategy}, 27.
CHAPTER 6: CENTRIFUGAL NATIONAL SECURITY STRATEGY

There is a line among the fragments of the Greek poet Archilochus which says: ‘The fox knows many things, but the hedgehog knows one big thing.’ Scholars have differed about the correct interpretation of these dark words, which may mean no more than that the fox, for all his cunning, is defeated by the hedgehog’s one defence. But, taken figuratively, the words can be made to yield a sense in which they mark one of the deepest differences which divide writers and thinkers, and, it may be, human beings in general. For there exists a great chasm between those, on one side, who relate everything to a single central vision, one system, less or more coherent or articulate, in terms of which they understand, think and feel – a single, universal, organising principle in terms of which alone all that they are and say has significance – and, on the other side, those who pursue many ends, often unrelated and even contradictory, connected, if at all, only in some de facto way, for some psychological or physiological cause, related to no moral or aesthetic principle. These last lead lives, perform acts and entertain ideas that are centrifugal rather than centripetal; their thought is scattered or diffused, moving on many levels, seizing upon the essence of a vast variety of experiences and objects for what they are in themselves, without, consciously or unconsciously, seeking to fit them into, or exclude them from, any one unchanging, all-embracing, sometimes self-contradictory and incomplete, at times fanatical, unitary inner vision. The first kind of intellectual and artistic personality belongs to the hedgehogs, the second to the foxes.¹

Canada has always been predisposed towards a unique form of national security strategy. It is unique because its international component has been at variance with Basil Henry Liddell Hart’s orthodox conception of grand strategy as the belief that condition B is better – or at least no worse – than current condition A.² Since Canada is not in a position to seek an independent condition B based solely on its own interests, it need not declare grand strategic objectives which seek to impose its will within the international arena. The external element of Canada’s pursuit of survival and sovereignty is grounded in the need to adapt to changing circumstances with a

² In differentiating between strategy and grand strategy, Hart suggested that later transcends the conduct of war by its goal of seeking a better peace. Hart, The Decisive Wars of History, 150-51.
view to ensuring the continuance of a status quo strategic position. In the context of Sun Tzu, to maintain a shih (strategic configuration of power) condition that is not absolute, but relative to changes in its external environment.\textsuperscript{3} Canada’s external grand strategic objectives can therefore be said to be positional rather than aspirational. Preservation of the ability to operate as a sub-strategic actor is the external component of Canada’s national security strategy. This is the underlying strategic logic that both Haglund and McDonough’s interpretations of Canadian grand strategy appear to be established upon. Neither is directed towards an independent condition B. They are principally descriptions of activity directed at maintaining the most beneficial version of condition A.

Canada’s sub-strategic character is evidenced by the manner in which the country utilizes its military power. Consistent with a 1936 statement by the Minister of National Defence that “Canada’s defence policy is not in the slightest degree based upon aggression; it is essentially a policy of defence”,\textsuperscript{4} and James Eayrs’ statement to the House of Commons Standing Committee on External Affairs and National Defence in 1969,\textsuperscript{5} the Canadian military establishment has historically never served a strategic role. In Eayrs’ view, “[w]here a military establishment is maintained primarily to attack one or more states, or to deter one or more states from attacking the homeland, or to defeat the attacker if it is not deterred, it may be said to serve its country in a

\textsuperscript{3} Sun Tzu, \textit{The Art of War} (1994), 187-88, 314n.


\textsuperscript{5} Eayrs described the “Six Purposes a Military Establishment May Serve” as a strategic role, insurance, law and order (foreign and/or domestic), modernization and development, ceremonial, and a diplomatic role. His analysis suggested that the Canadian Armed Forces served primarily a diplomatic role as an adjunct to various non-military techniques of statecraft in the pursuit of influence, propaganda, political argument, and economic warfare. James Eayrs, “Foreign Policy Review – I: Future Roles for the Armed Forces of Canada,” \textit{Behind the Headlines} 28.1-2 (April 1969). Notes prepared by James Eayrs for the House of Commons Standing Committee on External Affairs and National Defence, Ottawa, 6 February 1969.
strategic role.”

This has never been the case for Canada and remains true today as evidenced by the nation’s current expeditionary contingency planning.

The Canadian Armed Forces (CAF) do not serve a strategic role in that the entire force is not conceived to ever be employed on full-scale attacks against an adversary. Instead, Canada’s military resources are deployed in limited liability forays primarily for the purposes of conveying political messages. Whereas sub-strategic in the orthodox Cold War context of nuclear deterrence was about creating room for escalation as an alternative to an all-out strategic strike, sub-strategic in a Canadian sense is a rather unique domain in which there is little need to translate tactical action into strategic or grand objectives. This is essentially why post-Second World War Canadian defence policy is characterized using catchphrases such as “seat at the table”, “commitment-capability gap”, “how much is just enough?”, and “defence against help” rather than discussion of military strategy. Many of these descriptors of Canadian defence policy are neatly summarized by James Eayrs observation that “[w]hen the military establishment exists to procure prestige for the homeland, rather than to defend the homeland, it

6 James Eayrs defined a strategic role as: “Where a military establishment is maintained primarily to attack one or more states, or to deter one or more states from attacking the homeland, or to defeat the attacker if it is not deterred, it may be said to serve its country in a strategic role.” Eayrs, “Future Roles,” 2.


8 These phrases have all been used within differing contexts of military alliance politics, military ends and means calculations, and Canada-US relations. Philippe Lagasse, “Nils Orvik’s ‘defence against help’: the descriptive appeal of a prescriptive strategy,” International Journal 65.2 (Spring 2010), 643. See also E.L.M Burns, A Seat at the Table: The Struggle for Disarmament (Toronto: Clarke Irwin, 1972); R.B. Byers, “Canadian security and defence: The legacy and the challenge,” Adelphi Papers 214 (1986), 10-12; Joel J. Sokolsky, “Realism Canadian-style: National security policy and the Chretien legacy,” IRPP Policy Matters 5.2 (2004), 10; and Ørvik, “Defence Against Help.”
is exceedingly difficult to determine with any precision what should be spent on it, what it should be equipped with, and where it should be deployed.”

Canadian defence policy is subject to the rather unique paradox that Canada produces and maintains military capabilities to serve national objectives by contributing to multi-lateral strategies for which it holds no responsibility for formulating. As R.J. Sutherland suggested to an Ad Hoc Committee on Defence Policy in 1963:

With comparatively minor exception, the purpose of Canadian defence programs and activities is to support an alliance policy. In terms of Canadian national interests, the rationale of Canadian defence is to maintain influence with our allies. The immediate purpose of Canadian defence is to serve as an effective support of Canada’s intra-alliance diplomacy…The primary purpose of Canada’s defence programs is to enable her to participate in a system of alliances…There is, perhaps, no other nation which is so much dependent upon the art and science of alliancemanish.

Dismissing an exclusively Canadian defence focus as unrealistic, Sutherland perceived Canada’s national objectives – chiefly to pursue peace and security with the lowest possible defence expenditures – could only realistically be achieved through a multilateral defence infrastructure.

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10 Nicholas Tracy suggests that the “Canadian concern about the paradox of constructing a national force to serve national needs by participating in multi-lateral strategies is enduring.” Nicholas Tracy, Corbett Paper No 15 – Canada’s Naval Strategy: The Strategy of a Client State (London: The Corbett Centre for Maritime Policy Studies, 2014), 1.
12 Tracy, Two-Edged Sword, 144.
13 Howard Peter Langille, Changing the Guard: Canada’s Defence in a World in Transition (Toronto: University of Toronto Press, 1990), 80.
14 Response by Nicholas Tracy to Phillippe Lagassé review of Tracy, Two-Edged Sword. See also Phillippe Lagassé, “The Siren Song of Independence: Why Canada doesn’t need a navy that can go it alone,” Literary Review of Canada 21.2 (March 2013).
A combination of factors, such as geostrategic position, geopolitical constraints, population density, and sociopolitical fault lines, manifest in the issue linkage, functionalism, and national interest constraints that prohibit any independent centripetal grand strategy for Canada. Conveniently isolated from the “pivot” regions of world politics, Canada has generally had little existential need to perform independent military activities, a logical antecedent to a requirement to practice of Newtonian strategy. This has fortified Canada’s enduring preference to “abandon any pretense of national sovereignty and distinct military autonomy, and [be] content simply to be absorbed as a few brigades, squadrons, and vessels into grand coalitions.”

For Canada, the representational act of deploying an expeditionary force often delivers the desired political objective (see Appendix C for an illustration of this in relation to recent Afghanistan deployments). Actual performance is immaterial when mere presence achieves the political objective. Canada is thus a sub-strategic actor because its behavior, at least in terms of the application of military force, is predisposed to the antitheses of strategy: reactive opportunism and crisis management. Due to a favorable geostrategic position effectively eliminating the need to physically defend its own territory against external aggression, Canada has had the luxury of substituting a “commitment to political consultation” for most “attempts

16 Bill McAndrew employed this phrase within the context of Canada’s preference to adopt foreign military doctrines rather than uncover sovereign doctrines from first principles. William McAndrew, “Operational Art and the Canadian Army’s Way of War,” in The Operational Art: Developments in the Theories of War, ed. B.J.C. McKercher and Michael A. Hennessy (Westport, CT: Praeger, 1996), 98.
18 Harry Yarger makes the distinction between strategy being “proactive and anticipatory, but not predictive” and crisis management where there is “no strategy or the strategy fails to properly anticipate.” Yarger, Strategic Theory for the 21st Century, 6.
19 In reviewing Canada’s association with NATO’s 2010 Strategic Concept, the Standing Committee on National Defence observed that “NATO is both a political and a military alliance and invoking Article 5 [collective defence]
to think about actions in advance, in light of [national] goals and [national] capacities” – otherwise known as strategy.20

The characterization of Canada as a sub-strategic military actor could logically lead to the deduction that if strategy is not practiced, higher levels of strategy must also be absent. This would appear to validate Jack Granatstein’s argument that “the God of Grand Strategy is only found on the side of the big battalions,”21 since if there is no need for strategy, then there can be no rational need for grand strategy. But this is not necessarily the case. Just as policy may exist

remains a political decision that requires consensus among NATO member states. That is to say, allies would need to agree that an attack has occurred, they then would need to agree that collective action is warranted, and finally, they would need to agree on what collective action they would take, which could include the use of force. One could argue that perhaps one of NATO’s more important features is its commitment to political consultation on threats to Alliance security, enshrined in Article 4 of the North Atlantic Treaty. The effectiveness of such political consultation was displayed in December 2012, when at the request of Turkey, NATO allies agreed to bolster that country’s air defence capabilities in reaction to repeated violations of Turkish territory. The provision of PATRIOT missile batteries, a surface-to-air missile defence system, by Germany, the Netherlands and the U.S. not only serve to defend Turkey’s territory and population, but also contribute to de-escalating the crisis at the Turkish-Syrian border. While not contributing to this deployment, Canada, as part of the North Atlantic Council, would have participated in the discussions and the decision-making process that led to it.” Standing Committee on National Defence, NATO’s Strategic Concept and Canada’s Role in International Defence Cooperation (Ottawa: House of Commons, 2013), 20. This is effectively a description of crisis management. In November 2010 the North Atlantic Treaty Organization (NATO) adopted the 2010 Strategic Concept which outlined NATO's values and strategic objectives within the “essential core tasks” of collective defence, crisis management, and cooperative security. The concept states: “[t]he lessons learned from NATO operations, in particular in Afghanistan and the Western Balkans, make it clear that a comprehensive political, civilian and military approach is necessary for effective crisis management. The Alliance will engage actively with other international actors before, during and after crises to encourage collaborative analysis, planning and conduct of activities on the ground, in order to maximise coherence and effectiveness of the overall international effort.” North Atlantic Treaty Organization, Active Engagement, Modern Defence: Strategic Concept for the Defence and Security of the Members of the North Atlantic Treaty Organization (Brussels: NATO Public Diplomacy Division, 2010), 19.

20 Lawrence Freedman notes that the modern usage of the term ‘strategy’ is inherently ambiguous, “[y]et strategy remains the best word we have for expressing attempts to think about actions in advance, in light of our goals and our capacities. It captures a process for which there are no obvious alternative words, although the meaning has become diluted through promiscuous and often inappropriate use. In this respect strategy is not much different from other related words, such as power and politics. While their exact meanings are explored, rarely to conclusion, in scholarly texts, their adaption in everyday speech tends to be imprecise, loose, and lazy.” Freeman offers a common contemporary definition of strategy as “being about maintaining balance between ends, ways, and means; about identifying objectives; and about the resources and methods available for meeting such objectives.” Freedman, Strategy: A History, x-xi.

independent of coherent strategy or strategies for realization, a necessity for national security strategy continues to exist even for a nation void of military strategy.

Reconciling the significant divide between the Pratt and Granatstein interpretations of the applicability of the term to Canada, national security strategy in a Canadian context is neither overarching policy or a strategy with grand objectives, it is the space in-between them. The intent of national security strategy is to produce a degree of synergistic co-adaption in the sub-agents of the complex adaptive system of Canadian policymaking; to ensure that emergent behaviour of decentralized actors is steered towards some form of overall adaptive advantage that may subsequently be enhanced, risk managed, or exploited by centralized intended strategies.

Canada’s natural approach to pursuing national security can be described as a “centrifugal” national security strategy. *Centrifugal national security strategy* is a distinct approach that seeks adaptive advantage through the pursuit of many ends. Analogous to the intellectual approach of Berlin’s fox, this approach involves “moving on many levels, seizing upon the essence of a vast variety of experiences and objects for what they are in themselves, without, consciously or unconsciously, seeking to fit them into, or exclude them from, any one unchanging, all-embracing, sometimes self-contradictory and incomplete, at times fanatical, unitary inner vision.” It is a form of national security strategy where the *emergent mode* can be more active and the *intended strategy mode* remains relatively passive under conditions of uncertainty, becoming engaged only as change signals are detected and decoded in accordance with a bounded rationality. This is a form lending itself to the *emergent grand strategy-resilience*

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model in which the orientation phase of the Observe-Orient-Decide-Act is emphasized over the decision phase. Adaption is steered and shaped through Boydian implicit guidance and control mechanisms, which are constructed, dissolved, improved, and reformed as part of the co-evolution process of agents and aggregates within a complex adaptive system.

**Canada’s Centrifugal Inclination**

Canada has traditionally maintained a unique form of centrifugal national security strategy within which policymakers choose to pursue interests by remaining responsive to external events and curtailing the desire to seek defined objectives perhaps inconsistent with actual ability or resources. This type of behaviour fits more closely with the centrifugal fox-like form of grand strategy and is perhaps consistent with the essence of Edward Luttwak’s argument that “all states have a grand strategy, whether they know it or not.”23 By overlooking this alternate form of grand strategic behaviour, the discourse of Canadian grand strategy has framed the central problem as being merely about whether or not to adopt the great power form. There is arguably a third option, that of appreciating and optimizing Canada’s natural tendency towards centrifugal national security strategy.

Rather than a proactive aspiration towards a particular end state, an underlying strategic logic has acted to regulate Canadian behavior in the international arena. This is akin to defining “strategic concept” as “[t]he course of action accepted as a result of the estimate of the strategic situation. It is a statement of what is to be done in broad terms sufficiently flexible to permit its use in framing the military, diplomatic, economic, and psychological and other measures, which

stem from it.”24 As indicated in Canadian doctrine, “[t]he estimate of the situation (the estimate) is the orderly analysis of a problem leading to a reasoned solution.” The estimate is a “flexible tool that can vary in format from a commander’s mental process, to a few notes jotted on paper, to a complete study of possible branches and sequels resulting in a contingency plan.”25 Seeking to remove extraneous detail and allow focus on issues of critical importance to the accomplishment of a mission, the estimate is a reasoned consideration of what must be done, along with an analysis of the circumstances affecting how it is to be done, with the intent of arriving at a sound course of action.26 To illustrate of the effectiveness of the estimate, Canadian doctrine offers the historical examples of Field Marshall Eric von Manstein’s “Appreciation of the Situation at Stalingrad” on 9 December 1942, French Foreign Legion Colonel Philippe Erulin’s assessment for an airborne assault on a Corsica during the 1978 Zaire crisis, and General George Patton’s contingency staff estimate for the switch of Third Army’s Main Effort North and three division relief of Bastogne within 48 hours.27

Canada’s traditional centrifugal national security strategy has relied upon a ‘grand strategic concept’ that is itself the resultant of the lingering ‘estimate of the grand strategic situation’ which has, with the exception of the early Cold War, remained relatively untouched. Previous attempts to characterize or illuminate a Canadian grand strategy have overlooked this strategic logic as a result of two factors: a general refusal to concede, that in relative terms, Canada lacks the martial capacity to independently execute even a strategic role in the

24 Emphasis added. DND, CFJP 01, Glossary.
25 DND, CFJP 01, Glossary.
26 DND, B-GL-300-003/FP-000, 123.
international arena; and a tendency to gravitate towards strategic theories which have no utility for the Canadian reality.

Sun Tzu and Clausewitz, the primary classical theorists who provide the foundational texts for contemporary considerations of strategy, were principally concerned with the application of armed force as the decisive arbitrator of inter-state conflict.²⁸ For Sun Tzu, war was “a matter of vital importance to the State; the province of life and death; the road to survival or ruin. It is mandatory that it be thoroughly studied.”²⁹ For Clausewitz, war was “an act of force to compel our enemy to do our will.”³⁰ With rare exception, the prosecution of war for Canada has never been about continued existence or compelling an adversary to an exclusively Canadian will. As a result of a combination of factors such as geostrategic position, geopolitical constraints, population density, and sociopolitical fault lines, the Canadian reality does not rest upon the nation’s ability to translate military force into grand strategic objectives. Visions of grandeur based on the classical teachings of strategy from Sun Tzu, Jomini, Clausewitz, or their adherents may in fact be inconsistent with a sub-strategic actor’s real challenges.

An expression of military strategic thought that appears to have real utility for Canada derives from Sir Julian S. Corbett’s adaptation of the territorial or frontier-centric outlook of Clausewitz to a broader perspective of maritime strategy. Corbett’s discussion of “conditions of strength in limited war” within Some Principles of Maritime Strategy can be extrapolated from a maritime context to form an overall strategic logic consistent with the unique strategic situation of Canadian defence.³¹ Corbett argues that:

²⁹ Ibid., 63.
³⁰ Clausewitz, On War (1984), 75.
³¹ Corbett, Some Principles, 72-87.
It is that limited war permits the use of the defensive without its usual drawbacks to a degree that is impossible in unlimited war. There drawbacks are chiefly that it tends to surrender the initiative to the enemy and that it deprives us of the moral exhilaration of the offensive. But in limited war...this need not be the case, and if without making these sacrifices we are able to act mainly on the defensive our position is exceedingly strong.32

Corbett is specifically referenced in Canadian defence doctrine, albeit incorrectly, as a disciple of Sun Tzu.33 His ideas were actually built upon the theories of Clausewitz, Jomini, and Moltke using the perspective of a nation seeking to maximize strength through favourable geographic conditions. Corbett utilized Moltke’s adaptation of Clausewitz’s idea of the strength of the defence, which contended that “the strongest form of war – that is, the form which economically makes for the highest development of strength in given force – is strategic offensive combined with tactical defensive.”34 The further modification required for adaptation to the Canadian context is that limited war permits a position of strength through the tactical offensive and the strategic defensive – or in the framework of Corbett, strength for Canada is derived from the condition of *minor strategy*35 being offensive and *major strategy*36 being defensive.37

33 Canadian defence doctrine states “[i]n many ways, Corbett’s approach to maritime theory was based on the writings of Sun Tzu more than Clausewitz.” DND, *CFJP 01*, Section 0224. As written, this is technically incorrect. The first available English translation of Sun Tzu was Lionel Giles’ 1910 translation. While Corbett’s *Some Principles of Marine Strategy* was published in 1911, it does not reference Sun Tzu and it is clear the seeds of this publication – illustrated in his 1906 “Green Pamphlet” issued as a Royal Naval War College student handout under the title “Strategical Terms and Definitions Used in Lectures on Naval History” – were already present well before a Sun Tzu translation was available. While it is unlikely that Corbett’s theories were informed by Sun Tzu, it is quite true that in terms of the primary objective of military or naval activity, Corbett is similar in outlook. As Ralph Sawyer notes, the primary object for Sun Tzu was “to subjugate other states without actually engaging in armed combat, thereby realizing the ideal of complete victory.” Sawyer, *Seven Military Classics*, 154. This is indeed parallel to Corbett’s view of “Naval Strategy” as “the art of conducting the operations of the Fleet. Such operations must always have for their object ‘passage and communication’; that is, the Fleet is mainly occupied with guarding our own communications and seizing those of the enemy.” Corbett, *Some Principles*, 316.
34 Corbett, *Some Principles*, 73.
35 Minor strategy is defined by Corbett as follows: “Minor Strategy has for its province the plans of operations. It deals with – (1) The selection of the “objectives,” that is, the particular forces of the enemy or the strategical points to deal with in order to secure the object of the particular operation. (2) The directing of the force assigned for the operation.” Corbett, “Strategical Terms and Definitions,” 308.
The modification made here is to reverse Corbett’s idea of the “nature of the object in view”. Objects were defined as either “immediate” (or “primary”) or “ulterior.” Immediate objects dealt with the ends of a particular operation or manoeuvre. Ulterior objects were those that were steps towards the conclusion of a campaign or war. For Corbett, objectives in war were either positive or negative. Corbett made four key statements regarding the nature of the object in war:

A positive object is where we seek or acquire something for ourselves.
A negative object is where we seek to deny the enemy something or prevent him from gaining something.

Where the object is positive, Strategy is offensive.

Where the object is negative, Strategy is defensive.

The Offensive, being positive in its aim is naturally the more effective form of war (i.e., it leads more directly to a final decision), and, as a rule, should be adopted by the stronger Power.

The Defensive, being negative in its aim, is naturally the stronger form of war; i.e., it requires less force, and, as a rule, is adopted by the weaker power.

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36 Major strategy is defined by Corbett as follows: “Major Strategy (always regarding the ulterior object) has for its province the plan of the war, and includes: (1) Selection of the immediate or primary objects to be aimed at for attaining the ulterior object; [and] (2) Selection of the force to be used, i.e., it determines the relative functions of the naval and military forces.” Corbett also clarifies “[m]ajor Strategy in its broadest sense has also to deal with the whole resources of the nation for war. It is a branch of statesmanship.” Corbett, “Strategical Terms and Definitions,” 308.

37 This is an adaption of Corbett’s method suggested as the strength of British maritime strategy: “The actual situation which this method of procedure sets up is that our major strategy is offensive – this is, our main movement is positive [i.e. we seek to assert or acquire something for ourselves], having for its aim the occupation of the territorial object. The minor strategy that follows should be in its general lines defensive, designed, so soon as the enemy sets about to dislodge us, to develop the utmost energy of counter-attack which our force and opportunity justify. Now if we consider by universal agreement it is no longer possible to draw a line between tactics and minor strategy, we have in our favour for all practical purposes the identical position which Moltke regarded as constituting the strongest form of war. That is to say, our major strategy is offensive and our minor strategy is defensive.” Corbett, Some Principles, 74.

38 Ibid., 307.

39 Ibid., 309.
In the context of the Canadian reality, it is apparent that in terms of Canada’s military instruments, the objects in relation to the offensive and defensive are inverted from those of Corbett and Moltke. Based on a preference to maintain a status quo defence position (i.e. no offensive intent to force our will upon an adversary), the offensive effectively has taken on the negative aim (i.e. we seek to deny a change to our position) while the defensive tends towards the positive aim (i.e. to be left alone to utilize resources of the nation for purposes other than defence). In this way, Canada’s offensive strategy is limited to the realm of minor strategy and thus can be characterized as a tactical offence. It follows that Canada’s major (or grand) strategy is – or should be – a defensive strategy with the character of a strategic defensive. This inversion accounts for the fundamental difference in the Canadian national security problem from the traditional logic and pedigree of Western strategic thought identified in Chapter 5. It is this condition that requires a form of national security different from the customary centripetal grand strategy of great powers.

Corbett applied Clausewitz’s dual nature of warfare to Elizabethan and Jacobian politician and philosopher Francis Bacon’s observations on the significance of command of the sea to Great Britain’s prosperity.\(^{40}\) In further pursuing Clausewitz’ reflections on limited war,

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\(^{40}\) Bacon’s essay “Of the True Greatness of Kingdoms and Estates,” first published in 1612 and enlarged in 1625, touched on the theme of ‘limited war’ later discussed by Clausewitz: “To be master of the sea is an abridgment of a monarchy ["A monarchy in miniature"]. Cicero writing to Atticus of Pompey his preparation against Cæsar, saith, Consilium Pompeii plane Themistocleum est; putat enim, qui mari potitur, eum rerum potiri [Pompey is going upon the policy of Themistocles; thinking that he who commands the sea commands all]. And, without doubt, Pompey had tired out Cæsar, if upon vain confidence he had not left that way. We see the great effects of battles of sea. The battle of Actium decided the empire of the world. The battle of Lepanto arrested the greatness of the Turk. There be many examples where sea-fights have been final to the war; but this is when princes or states have set up their rest upon the battles. But thus much is certain, that he that commands the sea is at great liberty, and may take as much and as little of the war as he will. Whereas those that be strongest by land are many times nevertheless in great straits. Surely, at this day, with us of Europe, the vantage of strength at sea (which is one of the principal dowries of this kingdom of Great Britain) is great; both because most of the kingdoms of Europe are not merely inland, but girt with the sea most part of their compass; and because the wealth of both Indies seems in great part but
Corbett suggested that it could convey full meaning to Bacon’s “famous aphorism” that “he who commands the sea is at great liberty and may take as much or as little of war as he will, whereas those that be strongest by land are by many times nevertheless in great straits.”

Acknowledging the unfinished nature of Clausewitz’s doctrine, Corbett suggested “the full comprehensiveness” of Clausewitzian doctrine can be seen through Bacon’s eyes with the clarification that “limited wars do not turn upon the armed strength of the belligerents, but upon the amount of that strength which they are able or willing to bring to bear at the decisive point.”

Incorporating a maritime element, Corbett observed:

A war may be limited not only because the importance of the object is too limited to call forth the national force, but also because the sea may be made to present an insuperable physical obstacle to the whole national force being brought to bear. That is to say, a war may be limited physically by the strategical isolation of the object, as well as morally by its comparative unimportance.

Corbett’s suggestion that “for a true limited object we must have not only the power of isolation, but also the power by a secure home defence of barring an unlimited counterstroke” is perhaps the best description of the strategic logic that has traditionally underwritten Canadian security.

What an interpretation of Corbett provides is the idea that the logical national security objective for Canada in the global domain is to maintain the preference to act only towards limited objects. Canada’s foreign and defence policies have traditionally been guided by

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41 Corbett, Some Principles, 58.
42 Ibid.
43 Ibid., 59.
44 Ibid., 57.
45 ‘Limited object’ is used here in the sense of Julian Corbett’s description of the “Nature of the Ulterior Object,” which classified wars according to their object: “War with limited object (‘limited war’) is where we merely seek to take from the enemy some particular part of his possessions, or interests…War with an unlimited object is where we
limited objectives rather than a grand vision. This denotes a realism akin to Otto von Bismarck’s statement that “[o]ne cannot oneself create anything; one can only wait till one hears the footsteps of God resounding through events; then leap forward and seize hold of the hem of his coat — that is all.”\textsuperscript{46} Due to a unique combination of geostrategic, geopolitical, demographic, and sociopolitical factors, Canada has had little need to engineer for itself an artificial state of \textit{national security} in the traditional sense of freedom from military attack or coercion.

While Canada has contributed to the grand strategy of others and thereby achieve some influence, it remains preconditioned to remain a \textit{sub-strategic} actor within the domain of global affairs; an actor operating and employing its limited resources in a style analogous to the level below full strategic nuclear warfare where a ‘sub-strategic’ strike would involve use of limited nuclear capabilities against an adversary for purposes of conveying a political message, warning or to demonstrate resolve. Canada lacks the scale of military and economic resources required to exert \textit{control} on the international environment through brute force. Canada more sensibly attempts to \textit{shape} global affairs towards favorable conditions, a task considerably different from attempting to exercise \textit{control}. Canadians do not serve their self-interest as an architect, but by acting as “…the industrious tailor of the international system, stitching together workable compromises out of rather patternless and (often) threadbare material.”\textsuperscript{47}

This centrifugal national security strategy, characterized by the realities of linkage, functionalism, and minimal consensus on interests, has actually served Canada quite well. Canada has had little need to develop practices for effectively translating tactical expeditionary

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\textsuperscript{46} Quoted in Krasner, “An Orienting Principle,” 3.

\textsuperscript{47} Andrew F. Cooper, \textit{Canadian Foreign Policy – Old Habits and New Directions} (Scarborough: Prentice Hall, Allyn and Bacon, 1997), 36.
actions into made-in-Canada grand strategic objectives as its activities in the “gray zone” between strategy and tactics occur under a limited liability clause. As James Eayrs phrased it, “[t]he armed forces of Canada are to work for the maintenance and enhancement of Canada’s prestige and influence in the world.” 48 This idea corresponds to the Corbettian strategic logic that the logical national security objective for Canada in the global domain is merely to maintain the preference to act only towards limited objects.

Malcolm McDonald perceived elements of this protracted condition in 1946 as constituting the “Reasonableness of Canadians”:

In spite of their various attachments in this or that direction most Canadians are not emotional. Sentiment plays little part in their judgments on public affairs. They are dispassionate. No doubt exposure for several months every year to temperatures many degrees below zero helps to make them so. I never met a group of Ministers and officials more ready to judge issues on the strict merits of the case, by a process of reason to the exclusion of sentiment. Their policy, like that of every other people, is of course based primarily on Canadian self-interest. But it is an enlightened self-interest. They have qualities of sanity, wisdom and far-sightedness which are uncommon. No doubt because of their long training in British methods of government and their long association with us (as well as because life has been tougher for them than for the Americans) they are more mature than the Americans. They are the leaders neither of a small nation uncertain of itself, and therefore inclined to be bumptious, nor of a great nation tempted to play power politics. They represent a “middlesized” nation whose security and prosperity depends on an orderly and peaceful international system, and, having no other axe to grind, they can the more easily take an objective and rational view of external problems. 49

While incorporating the ability to contribute to the complementary objectives sought by others, Canada pursues its survival and sovereignty through the ability to defend a particular strategic condition – the ability to take an objective and rational view of external problems – within which the nation can freely operate as a sub-strategic actor.

49 UK Cabinet (MacDonald), “Canada in 1946”, 8.
The maintenance of the privileged position of sub-strategic actor benefiting from discretion to pursue purely limited objects in the extraterritorial domain is the fundamental aim of Canadian foreign policy. Hence, it may be argued that Canadian foreign policy is a rather tactical affair in that the objectives sought are related more to risk management and opportunism activities seeking to enhance and maintain *prestige* and *influence* than some grandiose strategic aim. This is not to say that national interests do not factor into Canadian foreign policy. “Security policy” for Canada is shaped by “traditional geopolitical considerations” rather than ideology, although the calculus of power and national interest is carefully controlled. Canadian diplomacy follows a “cautious and pragmatic pursuit of the national interest” with an understanding of the “limits of its influence.”

As Lester Pearson stated, “[t]o a great extent, Canada’s foreign policy has been determined for her by circumstances and conditions which she did not create and some of which she cannot alter.” Adam Chapnick observes that one of the key speeches that truly defined Canada’s international role was Pearson’s “Some Principles of Canadian Foreign Policy” address to the Vancouver Branch of the Canadian Institute of International Affairs in January 1948. Pearson, then Undersecretary of State for External Affairs, remarked:

> When we talk of Canadian foreign policy...we are not talking of clear-cut, long-range plans and policies under national direction and control. We are certainly not without power to influence our own external policies – and in many matters the influence is of course decisive. But we needn’t exaggerate our power, or deceive ourselves about it, by talk of sovereign rights and unrestricted independence.

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51 Ibid., 22.
A Canadian government is not only restricted by domestic factors in its external plans; it is limited also by the policies and attitudes of other governments. Of course we are independent now, constitutionally. But that independence is only relative. The pride at being able to cast a vote at Lake Success,\textsuperscript{54} which counts as much as the vote of the US or of Liberia, should not obscure the fact that decisions can be taken in Washington, or in London, which often have as important, and sometimes almost as immediate, an effect on the well-being and security of our people as a Canadian act of Parliament or an order-in-council.

Foreign policy, after all, is merely “domestic policy with its hat on.” The donning of some head-gear, and going outside, doesn’t itself alter our nature, our strength, and our quality very much. If we are weak and timid and disunited and jumpy at home, we will be the same away from home. Canada’s foreign policy, in so far as it is Canadian policy at all, is, in fact, largely the consequence of domestic factors, some of which remain constant and others which are not easily altered. Geography (especially air geography), climate, natural resources, the racial composition of our population, historical and political development, our dependence on foreign trade, our physical and economic relationship to the United States, our historical association with Britain in a commonwealth of nations – these are the factors that influence, and often determine, the decisions which the Canadian government has to make on individual problems which require action. It is the collectivity of these decisions, made in a variety of ways, with great thought or little thought, for good reasons or for no reasons, which make up what we call foreign policy.

Few of [the objectives of Canadian foreign policy] are concrete or positive, except in the realm of international economic policy. We have no territorial desires, having already quite as much geography as we need. We certainly have no expansionist political ambitions. When from time to time it is suggested, for instance, that we enlarge our sphere of influence and accept certain responsibilities in connection with the British West Indies, we become very modest and timid. We are satisfied with our present boundaries – even though we have lost more territory than most countries by unjust international arbitrations.\textsuperscript{55} We can leave terra irredenta\textsuperscript{56} foolishness to other countries. No British

\textsuperscript{54} Lake Success, New York was the temporary home of the United Nations from 1946 to 1951.
\textsuperscript{55} This is a reference to the Alaska boundary dispute, whereby the British member of the 1903 international arbitration tribunal, Lord Alverstone, supported American territorial claims over those of Canada. This was seen as a betrayal of Canada’s interests and illustrated a growing divergence in political interests between Canada and the United Kingdom. See Iestyn Adams, \textit{Brothers Across the Ocean: British Foreign Policy and the Origins of the Anglo-American ‘special relationship’ 1900-1905} (London: Tauris Academic Studies, 2005), 107.
\textsuperscript{56} “Terra irredenta,” meaning “unredeemed land,” is a concept originating from the Italian nationalist movement (c.1878), referring to a nation-states or sub-national group’s attempt to ‘recover’ or ‘redeem’ land and peoples that are considered their natural possession as a result of some historical, linguistic, ethnic, or cultural attachment. Paul A.B. Clarke and Joe Foweraker, eds., \textit{Encyclopedia of Democratic Thought} (New York: Taylor & Francis, 2001), 374.
Columbian schoolboy need spring to attention, turn north, and salute the flag whenever the Pan-Handle is mentioned. We have inherited no legacies of hatred or distrust with which to excite and inflame our people. We are, of course, worried about the ability of our neighbour to use its great new power in a way which will ensure peace and security for the world and will not infringe our own legitimate national rights. But this is not a worry which we express in any positive way. At best, we adopt an “on guard” posture.

We can most effectively influence international affairs not by aggressive nationalism but by earning the respect of the nations with whom we cooperate, and who will therefore be glad to discuss their international policies with us. This principle is based on both political and economic considerations. We instinctively know that Canada cannot easily secure and maintain prosperity except in the broadest basis of multilateralism – which is another name for internationalism.57

As Chapnick observes, Pearsons status as a “non-partisan civil servant” enabled him to speak about the actual limitations to and sources of friction influencing Canadian foreign policy to an extent that elected officials maintain a political agenda could not.58 While much of the speech championed a multilateral role for Canada in the interest of resisting communism, Pearson’s direct quote of Edward Crankshaw is perhaps an appropriate summary of Canada’s enduring foreign policy position:

Being strong and healthy is not the same as beating our chests and staging war-dances in front of the iron curtain. Being strong and healthy means keeping our own house in order and arranging the life within it so that all the members of the household are proud to belong to it and do not look elsewhere for their salvation from oppression.59

59 Excerpt from Edward Crankshaw, Russia and the Russians (New York: The Viking Press, 1948), 218-9. The complete context reads: “We need fear no deliberate aggression from Russia, so long as we in the West keep ourselves strong and healthy. Being strong and healthy is not the same as beating our chests and staging war-dances in front of the “iron curtain.” Being strong and healthy means keeping our own house in order and arranging the life within it so that all the members of the household are proud to belong to it and do not look elsewhere for their salvation from oppression. There is no need for heresy-hunts in a strong and healthy society. And, as I have said, so long as we can keep strong and healthy, Russia is not to be feared. It is against the Russian tradition and it is against the Bolshevik tradition to make a frontal attack on a strong fortress. But once the fortress is weakened by internal strife, then Russia will show her hand. And, believing in the ultimate incompatibility of the capitalist and communist
This theme of unity was also the basis of political discourse at the time, but from a differing perspective. Paul Martin (Sr.) expressed in the House of Commons in 1946 that:

[If there is] one thing from which we in Canada have suffered, to the detriment of this magnificent country, it is from a feeling of divisiveness – lack of that fervent and urgent unity that can make a people work together as a great community with the conviction that the welfare of all is the goal of their effort.\(^{60}\)

Although dealing with a similar theme of unity, the underlying intent differs in its political aspect. Pearson appears to have intended the keeping of one’s own house in order in a sense similar to Sun Tzu’s teaching of making oneself “unconquerable in order to await [the moment when] the enemy could be conquered.”\(^{61}\) In contrast, the Martin version – contextualized in the Lord Durham’s idea of “two nations warring in the bosom of a single state”\(^{62}\) – was more concerned about restraining the political impacts of this divisiveness. This theme was central to the Louis St. Laurent’s 1947 “Gray Lecture.”\(^{63}\)

systems, believing, as I have already said, that some kind of conflict is inevitable, she will do her best to avert a head-on conflict by stirring up internal strife; and at the same time, fearing that the capitalist West – and particularly America – will, in the throes of dissolution, turn to overseas adventures in order to shore up her own tottering domestic structure, she will strain herself to the utmost in the effort to equip herself to fight if she feels forced to fight – as she strained herself to the utmost to be ready for the Nazis.” Quoted in Pearson, “Some Principles of Canadian Foreign Policy,” 75.


\(^{61}\) The full phrase is as follows: “In antiquity those that excelled in warfare first made themselves unconquerable in order to await [the moment when] the enemy could be conquered. Being unconquerable lies with yourself; being conquerable lies with the enemy. Thus one who excels in warfare is able to make himself unconquerable, but cannot necessarily cause the enemy to be conquerable. Thus it is said a strategy for conquering the enemy can be known but yet not possible to implement.” Sun-Tzu, Art of War, Chapter 4 - Military Disposition, in Ralph D. Sawyer, The Seven Military Classics of Ancient China (New York: Basic Books, 2007), 163.

\(^{62}\) John George Lambton’s (1st Earl of Durham) 1839 Report on the Affairs of British North America was an investigation into the causes of the twin rebellions of 1837 in the colonies of Upper and Lower Canada. Durham stated: “I expected to find a contest between a government and a people: I found two nations warring in the bosom of a single state: I found a struggle, not of principles, but of races; and I perceived that it would be idle to attempt any amelioration of laws or institutions until we could first succeed in terminating the deadly animosity that now separates the inhabitants of Lower Canada into the hostile divisions of French and English.” J.M. Bliss, ed., Canadian History in Documents, 1763-1996 (Toronto: Ryerson Press, 1996), 49-62.

\(^{63}\) Chapnick, “The Gray Lecture,” 446.
Acknowledging the perpetual influence of the ideals of political liberty, respect for the rule of law, and human values in guiding Canada’s activities, St. Laurent expressed that Canada’s demonstration of a willingness to accept international responsibilities in pursuit of these ideals constituted the vital national interest in foreign affairs. More perceptively, St. Laurent also expressed the key reality in domestic affairs that characterizes and limits the pursuit of this vital national interest: the need to ensure that external policies would not destroy national unity. Diverse regional interests, none more important than the traditional Anglo-Franco fault-lines, therefore constitute the determining factors of geography and history that underlie Canadian foreign and defence policy formulation.\(^{64}\)

Adam Chapnick argues that the popular consensus that St. Laurent’s Gray Lecture “established Canada as an important player in world affairs and an active contributor to the western alliance during the Cold War” is incomplete in that the chief intent of the lecture was in fact part of a wider campaign to “promote the new Canadian Citizenship Act – an act that made qualified residents ‘citizens of Canada’ as opposed to just nationals or British subjects – and to increase the interest and involvement of Canadian youth in political affairs.”\(^{65}\) The idea of national unity within this context is in the political interpretation, which is a subtle reversal of the “house in order” view of the Canadian role of international affairs that Pearson expressed. The political interpretation is essentially a caveat; an acceptance of the divisiveness of Canadian polity as a justification to modify foreign policy objectives. What this has done is add an ideological screen to obscure the already limited choices available in Canadian foreign policy.

\(^{64}\) St. Laurent, “The Foundations of Canadian Policy.”

The principles outlined by St. Laurent were a description of a political interpretation of interests rather than a true representation of the national interest.

Nonetheless, following David Haglund’s assertion that grand strategy is defined by “fundamental foreign policy principles adapted to evolving realities”, David Pratt suggests that the best statement of such principles comes from the St. Laurent’s Gray Lecture. He further contends that St. Laurent’s principles can help in understanding Canadian grand strategy. It is here that this call for a Canadian grand strategy to guide the nation’s foreign affairs perhaps runs aground. As the fundamental principles from which a grand strategy is to be drawn are political modifiers to justify a limitation of foreign policy objectives, it is hard to see what grand objectives could be sought by such a Canadian grand strategy. An alternate proposition is that the strategic logic of maintaining the privileged position of a sub-strategic actor – thereby benefiting from discretion to pursue purely limited objects – already provides a sufficient framework to guide Canadian foreign policy. A grand strategy – in the centripetal sense advocated by Pratt – directed towards foreign policy is therefore not required. A form of more tactically-reactive foreign policy seeking incorporating risk management, opportunism, crisis management, and functionalist approaches is a better option for Canada. This is consistent with the model presented in Chapter 4, in which the more adaptive emergent mode is merely complemented by an intended strategy mode, not led entirely by it. The preceding characteristics represent the nation’s Boydian orientation, which has acted to sustain implicit guidance and control in matters of defence and foreign affairs.

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67 Pratt, “Grand Strategy in Canadian Foreign Policy?” 11.  
68 Ibid., 14.
Orientation Atrophy?

Geography and strong alliances continue to provide Canada with the power of isolation from Mackinder’s pivotal regions of world politics and preclude an “unlimited counterstroke” in the traditional force-centric sense. These are essentially the “invariants of Canadian strategy” described by R.J. Sutherland as Geography, Economic Strength, Natural Alliances and Alignments, and the Policy of Opening towards Europe. Sutherland suggested that these determinants:

…shed a great deal of light upon the foundations of Canada’s national existence and her place in the world community. They determine, to some very considerable extent, the agenda of Canadian national policy – that is, those major questions with regard to which there is some genuine choice. And they also reveal important areas where there is no choice, however much we as Canadians might like to believe that there is. 69

Defence against military or violent threats may no longer dominate as the major element of concern for national security orientation. Just as technology fundamentally changed the dynamics of war, similar fundamental changes are occurring in the domestic strategic environment that will reduce Canada’s isolation and increase its vulnerability to domestic counterstrokes, thereby flanking the decades-old signal/boundary constructs that have traditionally underwritten Canada’s natural (albeit unconscious) national security strategy. As the utility of force is replaced by greater ability of states and non-state actors to conduct non-violent activities to influence the domestic conditions of their political opponents, ideological adversaries, and economic competitors, the domestic environment is quickly becoming a more complex and uncertain battleground of competing interests.

69 R.J. Sutherland, “Canada’s Long Term Strategic Situation,” International Journal 17.3 (Summer 1962), 201-6.
Built on the Corbettian logic, Canada’s natural national security strategy has built orientation mechanisms that have worked rather effectively to guarantee “freedom from military attack or coercion” in a manner “acceptable to the Canadian people and compatible with the needs and legitimate aspirations of others.”\(^7\) But as the security environment evolves, non-violent mechanisms to challenge “freedom from internal subversion, and freedom from the erosion of the political, economic, and social values which are essential to the quality of life in Canada” are becoming more readily available in the abyss of complexity.\(^7\) Domestic national security orientations prejudiced towards state-sponsored influence and violence may be no match in a battle of interests where bounded rationality is based on trigger signals such as criminal acts or use of violence. The growing centrality of force-weary ‘influence operations’ within the rhizomatic/rodízio security environment falls within the gap between the traditional law enforcement focus on public order and the military’s role as a final arbitrator using lethal force.\(^7\) Just as policing came from the military, resilience now needs to penetrate these domestic gaps as it is here that the contemporary dialectics of wills is likely to occur in the future.

Although significant limitations in the nature of a democratic society will likely hinder full realization, a centrifugal approach offers significant prospect of reforming orientational resilience. This sets the foundation for subsequent analysis of Canada’s implicit guidance and control mechanism as they might relate to increasing challenges in a domestic context. This starts with the hypothesis that the adaptive advantage mechanisms within Canada’s national

security architecture have atrophied, representing a critical vulnerability in Canada’s ability to co-evolve within a rhizomatic/rodízio security environment. To test this hypothesis, it is necessary to assess the relative influence of intended and emergent strategy modes. As a supporting element to the national security strategy, defence policy – characterized by Macnamara as being “about the ways and means that are chosen to defend Canada's interests”73 – offers the most illustrative case study. Although similar assessments should also be conducted for law enforcement, intelligence agencies, federal departments and agencies, provincial public safety architecture, and a host of other agents and aggregates that comprise the Canadian complex adaptive (security) system, space constraints limit such treatment here. What follows is therefore admittedly an illustrative foothold rather than a conclusive proof.

73 Macnamara, *Standing Senate Committee 2004*. 297
CHAPTER 7: OPTIMIZING ORIENTATION FOR DEFENCE

...in order to understand signal/boundary systems we must consider the formation of boundaries and signals, not just their existence.¹

The Canadian Defence Problem

The decidedly “unmilitary people” of Canada have had little need to construct robust orientation mechanisms for military defence of the homeland.² Various commentators have advanced claims that strategic thought in post-WWII Canada has principally been reliant on the importation of foreign theories and models.³ While Adrian Preston, John Gellner, and Colin Gray instigated a mild trickle of scholarly work focusing on the practice of strategic thinking in Canada,⁴ most arguments in support of home-grown strategic thinking focus on the contributions of a single defence scientist.⁵ The common starting point for any discussion of Canadian

¹ Holland, Signals and Boundaries, 99.
² The “unmilitary people” descriptor originates with the title of George Stanley’s work Canada’s Soldiers: The Military History of an Unmilitary People (Toronto: Macmillan, 1960). Canadian military historian C.P. Stacey had previously observed “Canada is an unmilitary community…Warlike her people have often been forced to be, military they have never been.” C.P. Stacey, Six Years of War: The Army in Canada, Britain and the Pacific (Ottawa: Queen’s Printer, 1955), 3. During the Second World War, Prime Minister W.L. Mackenzie King spoke of transforming the “least military peoples on earth into a nation organized for modern war.” W.L. Mackenzie King, “The Message of Canada,” Hutchinson’s Pictorial History of War, No. 1, Series 13, July-December 1941, 199.
strategic thought – or lack thereof – continues to be Colin Gray’s 1971 description of the legacy of Canada’s military past as “strategic theoretical parasitism”. 6

Although the notions of national strategy, military strategy, and operational art are indeed present in Canadian military doctrine, it does not actually mean this doctrine is being applied. 7 Bernd Horn has observed that Canada’s military tradition has not generally involved unilaterally deciding on ways to best translate military means into political ends:

…as effective as the nation’s soldiers have been, they have largely been used at the tactical level of war. As the junior member in alliances and coalitions, Canada has rarely been able to have a great impact at the operational and strategic level of decision making. But then again, militarily Canada’s leaders have always seemed content to perch under the protective wing of a senior ally and allow the arduous task of determining strategy to be addressed by someone else. After all, as a small player in big alliances, the nation could reap the security benefits of its more powerful protector and needed only to react to the doctrine of its primary ally, first Britain and later the United States. At the same time, it could always use its junior position, lack of economic and military resources, as well as its independence and sovereignty, to plead exemption to the larger strategic decisions that did not resonate well with Canadians. 8

At least within the narrow military sphere, Canada has been a tactical contributor to the expeditionary strategies of larger alliances. In the modern military lexicon, Canada is a force generator rather than a force employer. The nation’s orientation towards national defence is

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6 Gray argued that the long-term effectiveness of Canada’s national defence and foreign policies were being mortgaged as a result of “dependence for intellectual nourishment upon the debates of others.” Gray, “Independent Canadian Strategic Thought,” 7. Andrew Richter has observed that “[o]nly a handful of scholars have even approached the subject of Canadian strategic thinking since the early 1970s, and not one has directly addressed Gray’s thesis.” Richter, Avoiding Armageddon, 165n.

7 John English has referred to operational art as “pertaining to that gray area between strategy and tactics” and operations as the “art of campaigning.” John English, “Operational Art: Developments in the Theories of War,” in The Operational Art: Developments in the Theories of War, ed. B.J.C. McKercher and Michael A. Hennessy (Westport, CT: Praeger, 1996), 7.

therefore not principally concerned with the application of armed force as the decisive arbitrator of inter-state conflict in the fashion that would have been familiar to Sun Tzu or Clausewitz.

Responsibilities for survival and effectively compelling another state to Canada’s will bear little resemblance to what Douglas Bland has described as the “first reality” of Canadian defence policy: the fact that “effective” defence policy and “coherence between ends and means” are not issues that Canada’s political leaders have generally had cause to debate or even concern themselves with. ⁹ As Minister of National Defence Ian Alistair Mackenzie stated in the House of Commons in 1936, “Canada’s defence policy is not in the slightest degree based upon aggression; it is essentially a policy of defence.” ¹⁰ Bland has observed:

…defence policy will come to Cabinet as distinct issues, such as major spending projects. Then the discussion will probably turn around the presumed “benefits” of the project to local interests. So-called strategic matters, if they ever reach the Cabinet agenda, will most likely be decided in terms of buying influence with allies at the lowest possible cost. Emergencies and international crises may prompt some political debate, but usually they will be addressed in isolation and once resolved, they will disappear from the table. Nevertheless, when real defence and internal security crises appear, prime ministers often turn to their chiefs of defence staff and generally accept their advice so long as it is reasonable and consistent with short term policy requirements. ¹¹

This highlights a principal determinant of defence policy formation and execution in Canada: that short-term budget making processes drive defence policy to a greater degree than logical defence planning processes based on strategic assessments. In Bland words, “[Canadian] political leaders direct and manage defence policy sporadically from crisis to crisis and issue by

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⁹ This observation was based on results of a 1998-99 survey of Senators and Members of Parliament intended to glean insight into their perceptions of defence management. Douglas L. Bland, Claxton Papers I: Parliament, Defence Policy and the Canadian Armed Forces (Kingston, ON: Queens University School of Public Policy, 1999), 14.
issue, free from the fetters of any national strategy.” Bland describes this condition as the “little Canada club”, a mindset whereby defence activities are not worth significant concern as the purpose of Canada’s limited military power is not to “win the nation’s wars”.

To illustrate the astrategic nature of Canadian defence policymaking, Bland offers two notable quotes: Sir Wilfred Laurier’s 1902 comment to incoming Militia Commander Lord Dundonald that “[y]ou must not take the militia seriously, for though it is useful for suppressing internal disturbances, it will not be required for the defence of the country, as the Monroe Doctrine protects us from enemy aggression”; and Canadian defence scientist Robert J. Sutherland’s advice to reformist Defence Minister Paul Hellyer in 1963 that “while it would be highly advantageous to discover a strategic rationale which would impart to Canada’s defence programmes a wholly Canadian character, such a rationale does not exist and one cannot be invented.” Although nuclear deterrence during the Cold War required convincing the Soviets “that the consequences of coercion or armed conflict would outweigh the potential gains” and this required “the maintenance of a credible military capability and strategy with the clear political will to act”, Canada retained a limited liability position of tactical contributor.

15 Quoted in Stanley, Canada’s Soldiers, 924. The term ‘militia’ refers to the entirety of Canada’s military organization.
17 North Atlantic Treaty Organization (NATO), European Union (EU), And United Nations (UN), Informal Interorganizational Military Glossary of Abbreviations, Terms And Definitions Related to Conflict Prevention (CP)
Eayrs effectively summed up this reality in his blunt assessment for the House of Commons Standing Committee on External Affairs and National Defence in 1969, noting roles a military establishment may serve: strategic; insurance; law and order (foreign and/or domestic); modernization and development; ceremonial; and diplomatic.\(^\text{18}\) His analysis suggested that the Canadian military establishment has historically never served a strategic role “[w]here a military establishment is maintained primarily to attack one or more states, or to deter one or more states from attacking the homeland, or to defeat the attacker if it is not deterred.”\(^\text{19}\) In Eayrs view, the Canadian Armed Forces served primarily a diplomatic role as an adjunct to various non-military techniques of statecraft in the pursuit of influence, propaganda, political argument, and economic warfare.

Bill McAndrew has observed that, even with an expeditionary Army in the field, Canada’s military commanders have never functioned within a framework where clear strategic direction from its own political leaders and an application of operational art has manifested in a national military strategy or campaign plan.\(^\text{20}\) With the notable exceptions of the First Canadian Army’s operational planning and execution of the Battles of the Scheldt (September-November 1944) and the Rhineland (February-March 1945),\(^\text{21}\) Canadian land force commanders have rarely practiced above the tactical level:

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\(^{18}\) Eayrs, “Future Roles.”

\(^{19}\) Ibid., 2.


Arguably, Canadian army commanders have never been in a position either to plan a campaign or to practice operational art. Count Frontenac\(^\text{22}\) was on the fringe in his time, but, possibly, the closest anyone came to independent command of a campaign was Major General Sir Fred Middleton\(^\text{23}\) in the Canadian northwest, if he can be appropriated as a temporary Canadian. During the wars of [the twentieth century] Canadians functioned only at the tactical level, under British commanders who may or may not have exercised operational art.\(^\text{24}\)

Just as Otto von Bismarck’s characterization of politics as “the art of the possible”, McAndrew suggests that Canadian commanders have thought of military affairs with a realistic sense of the nation’s limitations.\(^\text{25}\) This realism has checked aspiration to assume or plan for anything but a sub-strategic role.

As a tactical contributor that dabbles in the “grey area between strategy and tactics”\(^\text{26}\) under a limited liability clause, Canada has had little need to develop practices for effectively translating tactical actions into strategic objectives. Jonathan Vance aptly describes how Canada’s strategic-level activities need not be synchronized with its operational and tactical-level activities:

> The classic theory provides for an operational level commander to practice the operational art such that he achieves the strategic objectives of his state. Modern interpretations allow for the operational art to be practiced in the achievement of coalition or alliance strategic objectives, but there remains a moral and fiduciary link between a nation and its tactical forces such that tactical action ought to have a basis in national strategy. The doctrine of operational art is ill suited to Canada for all but reasons of interoperability because Canadian strategic objectives appear more concerned with tactical presence in operations as opposed to tactical action.

\(^{22}\) French soldier Louis de Buade de Frontenac was Governor General of New France from 1672-1682. He is acknowledged as the architect of French expansion in North America and for his defence of New France against attacks by British colonies and the Iroquois confederacy. W.J. Eccles, “Buade, Louis de, Comte de Frontenac et de Palluau,” in Dictionary of Canadian Biography, Vol. 1 (Toronto: University of Toronto/Université Laval, 2015).


\(^{24}\) McAndrew, “Operational Art,” 87.

\(^{25}\) Ibid., 88-89.

\(^{26}\) John English has referred to operations as the “art of campaigning” and operational art as “pertaining to that gray area between strategy and tactics.” English, “Operational Art,” 7.
Canada does not take responsibility for the design and command of campaigns, although Canadian officers participate at this level occasionally. Thus the Canadian strategic level is at arm’s length to the tactical actions of its forces. Operational art demands that tactical results mean something to a nation’s strategic interests. If, in the case of Canada, strategic interests are largely met by contributing forces, then operational art is eclipsed by virtue of having met strategic interests by deployment. Thereafter, tactical forces meet strategic interests by protecting them through their behavior vice pursuing them through tactical results. Canadian strategic objectives are met, therefore, without practicing operational art in the classic sense.  

Canada’s envious geostrategic position of being able to rely on “contribution warfare” has essentially removed the need to independently develop and implement military strategy and placed an operational level doctrine imported from the United States as a question of interoperability rather than execution. Without the requirement to independently execute strategy and operational art “because mission success for Canada is defined by its tactical presence in a theatre of operations rather than its tactical performance in achieving Canadian strategic objectives,” the Canadian military establishment – and the successive governments who are ultimately responsible for military exploits – have historically been able to sidestep most responsibility for exercising operational art and strategy. Lawrence Freedman’s observation of nuclear strategy, “C’est magnifique, mais ce n’est pas la stratégic,” is surely applicable to the Canadian defence orientation.

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27 Vance, “Canada’s departure from classic doctrine,” 2.
29 Vance, “Canada’s departure from classic doctrine,” 6.
30 Lawrence Freedman, The Evolution of Nuclear Strategy (London: Macmillan, 1983), 400. This is a modification from French General Pierre François Joseph Bosquet’s “C’est magnifique, mais ce n’est pas la guerre. C’est de la folie” [It is magnificent, but it is not war. It is madness] in response to Lord Cardigan’s charge of the Light Brigade against Russian forces during the Battle of Balaclava on 25 October 1854. Robert Debs Heinl, Dictionary of Military
A notable exception may be apparent in the post-First World War “War Book studies” for a potential conflict with the United States based on an overly ambitious 300,000 strong militia organization of 11 Infantry Divisions, 4 Calvary Divisions, and auxiliary formations. Colonel James “Buster” Sutherland-Brown’s work in the 1920s on Defence Scheme Number 1 arguably included an element of operational art by aggressively countering the anticipated American flying columns with the proactive capture by a mobilized militia of key invasion bases and bridgeheads within the United States. This concept was potentially advantageous in contrast to the opposing American “War Plan Red,” updated as late as 1935, which assumed:

The location of Canada’s industry and population along a narrow extent front facing the northern United States border and her relatively weak military and naval forces, widely dispersed, will necessitate a defensive role until Red [British Empire] forces are landed. The promptness and effectiveness of British aid must depend upon suitable debarkation points on Canada’s east coast. The West Coast does not favor overseas operations unless Red controls the Pacific, and even then is too remote from critical Blue [United States] areas.

...Crimson [Canada] cannot successfully defend her territory against the United States (Blue). She will probably concentrate on the defense of Halifax and the Montreal-Quebec line in order to hold bases of operation for Red [the British Empire]. Important secondary efforts will be made to defend her industrial area and critical points on her transcontinental railroad lines.

\[end\]

As the Canadian defence plan was built upon dubious assumptions of adequate strategic warning and adept preemptive mobilization, rather than being a solid exception to sidestepping operational art and strategy, Defence Scheme No. 1 can be considerable simply a flourish or imaginary embellishment on the de facto strategic concept which limited the Canadian militia to vanguard defence tasks needed to set conditions for a main body of land and air reinforcements from the British Empire.

Another limited exception could potentially be suggested in the 1\textsuperscript{st} Canadian Army Headquarters involvement in “high level strategical planning” for Operations JUPITER, ROUND-UP and TONIC during 1942. The proposed objective of JUPITER was to seize and retain territory in northern Norway suitable for use as airfields from which to defend Allied shipping supporting Russia. ROUND-UP was an early incarnation of planning for the invasion of continental Europe through France. TONIC was an operational safeguard aimed at landing in the Canary Islands if the Germans invaded Spain and seized Gibraltar.\textsuperscript{35} But rather than being an independent exercise in strategy, the Canadian involvement in these cases was more correctly in the context of subsidiary review and comment on operational plans already conceptualized by the British Chiefs of Staff. This Canadian role as a provider of supplementary review, often stimulated by British Machiavellian motives which sought additional advocacy within the alliance for their preferred position, is also evident within the context of John Brebner’s triangle.\textsuperscript{36} Such behaviour is evident in the UK Cabinet’s efforts in 1955 to influence and leverage the Canadian government to convince President Eisenhower and U.S. Secretary of State


John Foster Dulles that American views on the dividing line between “small and precise nuclear weapons…and large thermo-nuclear weapons” was against their own interest as it reduced the deterrent value of such weapons.\textsuperscript{37} Certainly within the context of UK Cabinet discussions, Canada’s part in these activities was perceived as playing the role of dependable auxiliary rather than a contributor of independent strategic thought and design.

This perception endures. A persistent theme in security and defence literature is that absence of strategic thought in Canada.\textsuperscript{38} Since the late 1960s, there has been a tendency to portray “a Canadian government that is in general much less well-versed in either strategic planning or strategic thought.”\textsuperscript{39} The notion of a “strategically impotent” Canada has been endorsed – or at least acknowledged without significant challenge – as a prevalent theme in numerous studies of Canadian foreign and defence policy.\textsuperscript{40} The customary anomaly has been the portrayal of R.J. Sutherland as a deserving but solitary Canadian post-war strategist.\textsuperscript{41} Sutherland is principally noted for his suggestion that during times of “drastic and revolutionary

\textsuperscript{37} UK Cabinet, Memorandum by the Secretary of State for Foreign Affairs and Minister of Defence, “Distinction Between Large and Tactical Nuclear Weapons,” 5 April 1955, C.(55) 95, TNA CAB/129/74.

\textsuperscript{38} Richter, “The Sutherland Papers,” 32.


\textsuperscript{41} Andrew Richter notes that “[t]his belief has since become so widespread that it now represents one of the canons in Canadian security literature, and is accepted as a virtual article of faith by scholars in the field.” Richter, “The Sutherland Papers,” 33n. See Gray, “Independent Canadian Strategic Thought”; Lee and Bellamy, “Sutherland: A Retrospective,” 41-46; and Paul Buteux, “Sutherland Revisited: Canada’s Long-Term Strategic Situation,” \textit{Canadian Defence Quarterly} 24.3 (September 1994).
change” it was possible to find “stable foundations for national security policy” in the “invariants” of Canada’s strategic situation: geography, economic potential, and broad national interest.  

Andrew Richter disputes this lonely strategist interpretation, suggesting that there is evidence of a “community of strategists” working within the Joint Ballistic Missile Defence Staff, the Defence Research Board (DRB), and several committees of the Chiefs of Staff who did indeed interpret key security and defence issues in the context of Canadian interests. Richter noted independent strategic thought on issues such as nuclear strategy, nuclear balance, strategic stability, and military technology developments “was not a simple copy of the thinking that emerged in the United States. Rather, it was independently oriented and largely reflected Canadian defence interests and concerns.”

James Lee and David Bellamy have noted that post-Second World War Minister of National Defence Brooke Claxton’s decision to seek technical expertise in modern defence through generous funding to the DRB provided Canada with the capability to question the technical grounds of American strategy doctrine. A significant example of expertise of Canada’s defence scientists is Harold Lardner’s little-known role in distinguishing between first and second strikes capabilities and the key deduction that a Soviet first strike would likely target U.S. Strategic Air Command assets versus cities. However, beyond acknowledging these

42 Sutherland, “Canada’s Long-Term Strategic Situation,” 201.
43 Richter, “The Sutherland Papers,” 32.
44 Although the DRB gained considerable capability under the generous budgetary conditions of the Fifties and Sixties, its ability to credibly criticize American strategy decayed as a result of funding cutbacks and loss of independent staffing controls by 1974. Lee and Bellamy, “Sutherland: A Retrospective,” 44.
45 In contrast to conventional wisdom that credits RAND analyst Albert Wohlstetter with recognizing the defence significance of first and second strike, Ladner is acknowledged by Lee and Bellamy to be “the Canadian responsible for pointing out the importance of first and second strikes in the modern context.” Lee and Bellamy, “Sutherland: A

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significant but rather isolated contributions of a handful of obscure scientists as valuable for the Canadian ego, the Canadian military tradition favours tacticians overs strategists. John Gellner notes:

Although twice in this century Canada has acted as a major military power, fielding powerful land forces and, in the Second World War, naval and air forces as well, it organized, trained, equipped, and used them throughout in accordance with foreign patterns, plans, and strategic and tactical concepts. In fact, in two world wars Canada did not produce a single military strategist of any consequence….Canada furnished the allied side not with thinkers but only with excellent doers – able tacticians, competent administrators – such as Sir Arthur Currie of the Canadian Corps of the First World War or General H.D.G. Crerar of the First Canadian Army of the Second World War, to name only the commanders of the biggest all-Canadian formations.46

This reality is not surprising, as the Governments of Robert Borden and William Lyon Mackenzie King played only supporting roles within the context of coalition decision making. Any subsequent incentive for independent Canadian strategy thought was essentially removed with the creation of the North Atlantic Treaty Organization in 1949, which provided non-sovereign regional defence guidance within a collective “Strategic Concept for the Defense of the North Atlantic Area.”47 The key principle underlying this concept was “[t]o compensate for

the numerical inferiority of the armed forces of the North Atlantic Treaty Nations by establishing and maintaining technical superiority, by developing and using modern combat methods, and by achieving coordination of effort.”

Due to intrinsic resource and geographic limitations, Canada was not in any position to assume a strategic lead in any of these areas. With allocations of areas of responsibility for planning purposes favouring a Canadian-United States Regional Planning Group, Canadian strategic thought was literally in a state of slumber beside an elephant. This required being merely reactive to “every twitch and grunt” of American military planning and strategy.

The present perception of a lack of strategic necessity within Canada’s defence establishment is evident from the curriculum used to develop senior defence officials and the contingency plans in place to shape their future employment. The Canadian Armed Forces’ Joint Command and Staff Programme (JCSP), the senior training and professional development vehicle to prepare senior Canadian officers for command and staff appointments within national and international operating environments, does not actually involve the practice of military strategy.


49 The Canadian-United States Regional Planning Group was initially assigned responsibility for planning the defence of the territories of Canada, the United States, Alaska and Greenland. “Report by the Ad Hoc Committee on Strategic Guidance,” 9.

50 In a 25 March 1969 address to the Washington Press Club on Canadian policy and the United States, Prime Minister Pierre Elliott Trudeau stated: “Living next to [the United States] 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 affected by every twitch and grunt.” Audio recording available from CBC digital archives: http://www.cbc.ca/archives/entry/trudeaus-washington-press-club-speech.

51 The major JCSP curriculum emphasizes military operations, operational planning, leadership and command. A recent reworking of the program structure also incorporated Advanced Joint Warfighting Studies, Institutional Policy Studies, and Defence and Security Studies as three streams of minor curriculum. Canadian Forces College,
security, foreign and defence policies, and the internal and external factors that influence them” and develop “comprehension of the relationship between strategic-level planning and objectives, and campaign planning”, but the foremost program goal is to sharpen joint and combined operational-level planning skills.52

That the highest level of training and professional development of senior officers is focused at or below the operational-level is an indicator that this is the level at which the senior echelons of the Canadian defence establishment sets its conceptual ceiling. But as the bulk of military staff would in fact be employed within the processes of converting a strategy provided from above into tactics, this is quite understandable as the best return on investment. This focus up to an operation-level ceiling is further evidenced by the declared assumption in the post-Afghanistan Canadian Joint Operations Command Contingency Plan (CONPLAN) JUPITER53 that future Canadian expeditionary contributions will be constrained to the tactical contribution of a Joint Task Force (JTF) within a multinational (MN) framework.54 Modelled on the force

Syllabus: Joint Command and Staff Programme Residential (JCSP RESID) and Joint Command and Staff Programme Distance Learning (JCSP DL) (Toronto: Military Personnel Generation, 2015), i.
53 While the reasoning behind the moniker “Jupiter” for the Canadian Armed Forces’ Expeditionary CONPLAN is uncertain, it is interesting to note the historical significance of Operation “JUPITER,” the rejected combined operations project in northern Norway intended to protect Russian resupply convoy routes that Commander First Canadian Army General Andrew McNaughton was asked to review in July 1942 by the British Prime Minister and War Cabinet. CMHQ Historical Section, “Report No. 167,” 1-10.
54 According to Canada doctrine: “A task force (TF) is a generic name for a temporary grouping of units, under one commander, formed for the purpose of carrying out a specific operation, mission, or task. A TF can therefore be of
structures utilized for Bosnia Herzegovina and Afghanistan, the main combat element of a Canadian JTF is generally assumed to be based on a tactical-level formation of a Battle Group (about 1,300 personnel) and a Multinational Joint Integrated Task Force (MJITF) Headquarters.  

This amplifies the reality that even the Canadian defence establishment perceive themselves as a sub-strategic or limited operational liability instrument. If there is no plan to deploy independently at a level beyond a Battalion or Battle Group, there is logically no need for training or preparations in the practice of strategy. Canada makes the assumption that strategy will be available to it, but does not plan to assume responsibility for developing it. Canada therefore remains a sub-strategic actor in the military domain because it need not select strategic or grand strategic objectives (other than the power of isolation to act through the limited object as suggested in Chapter 6) and determine how to exercise force with utility in pursuit of those ends. As such, Canada need not dwell on achieving physical utility from its instruments of force, an undertaking that “implies an understanding of the context in which one is acting, a clear definition of the result to be achieved, an identification of the point or target to which the force is being applied – and, as important as all the others, an understanding of the nature of the force any size and composition and can be employed across the continuum of operations at either the operational or tactical level of conflict. When the TF is composed of elements from more than one environment, the adjective “joint” is added to describe all aspects of the operation.” Department of National Defence, Canadian Forces Joint Publications 3.0: Operations (Ottawa: Joint Doctrine Branch, 2010), 4-1.

55 As was the experience in Afghanistan, the main combat element of Canadian Joint Task Forces is generally assumed to be based on a tactical-level formation of a Battle Group of about 1,300 personnel. The provision of a Multinational Joint Integrated Task Force (MJITF) Headquarters is also considered in this CONPLAN. CAF, CONPLAN Jupiter, 2.
being applied.” Simple awareness of strategic practices is a necessity only to ensure interoperability.

This sub-strategic reality reinforces the inappropriateness of trying to superimpose Newtonian strategic thought, with subsequent progression into the domain of centripetal grand strategy, on the Canadian defence reality. This is only partly due to what Hew Strachan notes as the easily identified holes in Clausewitz’s preeminent classical work On War – its Eurocentricity, its lack of economic or naval considerations, and its assumption of a state’s “unfettered right to resort to war” that is wholly inconsistent with post-Second World War internationalism. It perhaps lies more evident in Sun Tzu’s council “[i]f a general who heeds my strategy is employed he is certain to win. Retain him! When one who refuses to listen to my strategy is employed, he is certain to be defeated. Dismiss him!” These theories were directed at princes and generals with a level of independent influence in world affairs that no contemporary entity in Canada could credibly wield.

While the Canadian military establishment acknowledges strategy as “[t]he art of moving or disposing forces so as to impose upon the enemy the place, time and conditions for fighting preferred by oneself,” the necessity to apply this art or develop strategists does not exist within Canadian defence establishment orientated for tactical expeditionary contributions constrained to a Joint Task Force (JTF). This validates Jack Granatstein’s argument that “the God of Grand Strategy is only found on the side of the big battalions,” as there is no need to perform

56 Smith, Utility of Force, 8.
Newtonian strategy and, therefore, there is logically no need for Canadians to formulate and execute centripetal grand strategy – at least in the limited sense of applying the nations instruments of force within the international domain. This acknowledges Denis Stairs’ argument that even in a wartime context the Canadian prime minister need only assume a subordinate role in the major decisions to the will of those actors with greater instruments of power.61 This lack of a substantial military problem has greatly influenced the nation’s defence policy orientation, which has in turn sustained an inconspicuous centrifugal-style policy.

Adaptive Defence Policy

What is nominally tagged as Canadian defence policy or strategy does not actually involve setting objectives or strategizing against an intelligent and adaptive adversary. Regardless of titles, formal Canadian defence policy statements often represent more of a resource planning or road mapping exercise, and often exploit the absence of a tangible Canadian defence problem to justify short-term budgetary preferences.62 There is a general tendency of governments to misrepresent ad hoc statements as policy or strategy and to downplay differentiations between strategy and mere planning, whether capability, contingency, budgetary, or otherwise. This has generated a perception of a lack of higher vision and strategic culture at the political level and an emphasis on process versus intent; what Norman Dixon has described

61 Stairs, “Realists at Work,” 97. Prime Minister Mackenzie King is reported to have remarked in May 1943 that he recognized that World War II strategy “had to be left in the hands of the British and American Combined Chiefs of Staff, with Churchill and the President giving the ultimate decisions.” Citing J.W. Pickersgill, The Mackenzie King Record, Volume I – 1939-1944 (Toronto: University of Toronto Press, 1960), 503-04.
62 Citing the statement “[t]he Canada First Defence Strategy provides a detailed road map for the modernization of the Canadian Forces”. Layton argues that the 2008 Canada First Defence Strategy was merely a plan. Layton, “Canadian National Security Strategy,” 40n.
as a predilection to emphasize events rather than ideas, thereby becoming “wrapped in cocoons of catastrophic ignorance.”\textsuperscript{63}

As Layton offers, problems of strategy are “those that firstly involve interacting with intelligent, adaptive adversaries and secondly where a particular objective can be defined. If the first factor is missing, a plan as opposed to a strategy is needed.”\textsuperscript{64} In the context of Canadian national security strategy, Donald Macnamara has suggested:

Policy is really a statement of a chosen action or direction, or for that matter inaction, by a government organization in response to a perceived impact of events, issues or trends that may have some significance to their interests. Hence, policy is about choices about what is to be done and why it is to be done.\textsuperscript{65}

In further exploring policy formulation and execution, Macnamara posits that:

There is one other aspect of policy that is often forgotten, and that is the plan or the ultimate policy statement. That is the detail, the means by which the policy will be implemented. This should clearly identify the aims, the resources, the responsibilities and timing, the how, the who, the where and the when of the policy implementation. It defines the problem, the issues, the goals, the instruments and the means.\textsuperscript{66}

Defence policy, characterized by Macnamara as being “about the ways and means that are chosen to defend Canada's interests”, is therefore a supporting element to the broader national security strategy.\textsuperscript{67}

In terms of conceptualizing defence policy, Macnamara outlined to the Standing Senate Committee on National Defence:

If one were going to be assessing what a defence policy should look like, one would be able to go through a policy example and tick it off and say, “Well, first

\textsuperscript{63} Dixon, \textit{On the Psychology of Military Incompetence}, 293.
\textsuperscript{65} Macnamara, \textit{Standing Senate Committee 2004}. Emphasis added.
\textsuperscript{66} Ibid.
\textsuperscript{67} Ibid.
of all, we should see a statement of the country’s interests, the national interests, founded in the fundamental values and goals of the country.”

The second thing one would look to see is an overall review of the trends and issues or events, nationally and internationally, that can affect or threaten those interests. Notice that I say “affect” or “threaten,” because people are often caught up in the term “threats” when, in fact, things that can affect us can be perhaps not threatening, but something that we do have to deal with.

One would then look for the policy, and the policy should be a clearly identified set of choices of what interests are to be defended by military means, in particular, and why. Finally, the plan, that is, the how, the where, the when and the who, which is a clear statement of the military instruments and resources, that is, the overall capabilities that are perceived necessary to apply force up to and including the use of lethal force in the defence of Canada’s interests.68

Much of Macnamara’s aspirational “policy” indeed muddies the traditional distinction between policy and strategy.69 This deviation from the classical military interpretation of strategy is acknowledged in Canadian military doctrine (see Appendix A),70 which discerns that the term strategy in a wider government context “more often serves to describe the practical orientation undertaken by the GoC [Government of Canada] or its departments towards the fulfillment of policy.”71

A survey of Canadian defence policy from 1945-2005 (see Appendix B)72 bears little resemblance to Macnamara’s vision. This is not particularly surprising, as his description of

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68 Macnamara, Standing Senate Committee 2004.
70 Military doctrine is defined by the Canadian Armed Forces as: “the fundamental principles by which military forces guide their actions in support of objectives.” Defence Terminology Bank, record #1761, cited in Department of National Defence, Canadian Forces Joint Publication A1: Doctrine Development Manual, A-GJ-025-0A1/FP-001 (Ottawa: Joint Doctrine Branch, 2010), v.
71 DND, B-GL-005-500/FP-000, section 120.5.
72 Detailed descriptions of the key elements of formal defence policy statements since 1945 are appended. The 2008 Canada First Defence Strategy is effectively an organizational and procurement strategy rather than defence policy per se. It is not included in this review of Defence policy for that reason. Appendix A summarizes: Department of National Defence, “Report of the Ad Hoc Committee on Defence Policy,” Department of National Defence, 30 September 1963; Department of National Defence, White Paper on Defence (Ottawa: Queen’s Printer, March 1964); Department of National Defence, Defence in the 70s: White Paper on Defence (Ottawa: Queen’s Printer, August
policy is noticeably influenced by a centripetal conception of grand strategy akin to Goldwater-Nichols. As noted in Chapter 3, the national security strategy model advocated by Macnamara closely mirrors the American approach based on the strategic planning model of Ascher and Overhold. Under the Ascher-Ocerhold model for strategic forecasting, interests are identified along with the possible future environments within which they must be pursued. Decision-makers subsequently seek to develop core strategies that will be viable in various environments, basic strategies that seek to bring about preferred environments, and hedging strategies as contingencies to the possibility of non-ideal future environments. Macnamara notes that “this model says simply that a country’s strategy is a set of policies, a product of understanding the impact that perceived political, economic, socio-cultural and military environments (both domestic and international) have on the nations interests – which are the country’s assets, fundamental values and its national goals.”

That Canadian defence policy has consistently differed from Macnamara’s aspiration version is not unexpected given the absence of a tangible defence problem and the co-evolution (linkage), contribution (functionalism), and objective (national interest consensus) constraints identified in Chapter 5. A further constraint not captured in the aspiration model of defence

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73 Macnamara is influenced by the U.S. doctrine for formulating national security as illustrated in Macnamara, “Canada’s National and International Security Interests,” 47; Macnamara and Fitz-Gerald, “A National Security Framework for Canada.”

74 Macnamara, “Canada’s Domestic Strategic Interests,” 13.


76 Macnamara, “Canada’s Domestic Strategic Interests,” 13.
policy is acknowledgement of the optimal forecasting limits detailed in Chapter 2. Advocacy for a centripetal (or centrally focused) approach based on a point-in-time subjective characterization of national interests tends to overstretch through an impractical reliance on “expert political judgement” and “superforecasting” well beyond Tetlock’s “goldilocks zone of difficulty”.

National defence for Canada is a complex adaptive system with persistent signal/boundary mechanisms built around a number of key interdependent factors. Major defence determinants include: defence relations with the United States; indeterminate cost-benefit analysis for budget making processes; military cultural divergences between founding demographics; philosophical divergences between defence and external affairs departments; the favourable geostrategic position of Canadian territory; the “self-actuation” and “esteem needs” of Canadian sovereignty; multilateral collective security responsibilities; and personality traits of senior defence officials. The character of Canadian defence policy has been formed as a

77 Tetlock and Gardner, Superforecasting, 277-85.
result of efforts to continually balance these factors with the need – as expressed in Louis St. Laurent’s principles for the conduct of relations abroad – to ensure that external policies remain cognizant of fissures of domestic affairs.\(^8^0\) Just as Thomas Hammes’ observation about discourse on the Afghanistan ‘strategy’ actually being more about appropriate goals for Afghanistan,\(^8^1\) a lack of consensus on national interests and policy goals is the source of an enduring Canadian foreign and defence policy orientation that is rather neutral and reactive. Macnamara’s vision of progressing to prescriptive matching of instruments and means is unfeasible in the absence of an existential change signal of sufficient strength (i.e., a re-convergence of policy and strategy) to impose a temporary consensus. At all other times the balancing of the main determinants of defence is more a result of emergent behaviour rather than a centrally controlled process.

As would be expected, there are variations in the formulations for determining the relative priority and depth to which each objective is sought, and an ebb and flow of funding and organizational reforms dependent on variations of government ideology or point-in-time economics. Force structure, major equipment procurements, funding formulations, and organizational modifications consistently appear principally as attempts to capitalize on

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\(^{80}\) St. Laurent, “The Foundations of Canadian Policy.”

optimistic readings of current trends rather than some greater strategic interpretation. These tend to coincide with a pendulum-like alternation between generalization and specialization of forces. This is arguably a form of emergent behaviour consistent with bounded subsystems (or agents) within the defence cas adapting and learning in accordance with a sequence of rules that guide interactions with the environment.\textsuperscript{82} The importance of such adaptive behaviour was noted in the 1964 \textit{White Paper on Defence}:

Many of the basic principles that govern Canada’s defence policy are constant because they are determined by factors, such as geography and history, which are specific. Others, such as the nature and magnitude of the threat to peace and security and the development of weapons and weapons technology, change rapidly and drastically. Therefore, defence policy must adapt itself to such changes, while principles remain constant.\textsuperscript{83}

Emergent behaviour is also evident in shifts between mobilization and forces-in-being approaches. During the Cold War, Canadian defence policy was based on a short-war philosophy characterized as follows:

Since the 1950s, it has been widely recognized that a war between the superpowers would be of short duration, that a direct military conflict would either be quickly resolved in political forums after a conventional attack was slowed or that there was high probability it would escalate to nuclear war and mutually assured destruction. Defence preparedness came to be viewed according to the requirements of nuclear deterrence. To retain a relevant role in the nuclear age, conventional military forces would have to be ready and deployed at all times, a condition known as ‘forces in being.’ This was a new scenario with marked differences from the period preceding both world wars. There would be very little time for the extensive mobilization of troops or industry, and it was recognized that reserve forces would be unlikely to contribute to any conflict. Rather than prepare for sustaining a long war, planners concentrated on the lesser requirements of augmentation. Given the implications of nuclear war, ‘war avoidance’ became a declared, if not operational, priority. At the time, it was clear that total war was an irrational prospect.\textsuperscript{84}

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{82} Holland, \textit{Signals and Boundaries}, 281.
\item \textsuperscript{83} Department of National Defence, \textit{White Paper on Defence} (Ottawa: Queen’s Printer, March 1964), 5.
\item \textsuperscript{84} Langille, \textit{Changing the Guard}, 82.
\end{itemize}
\end{footnotesize}
As defence preparedness had traditionally been synonymous with mobilization,\textsuperscript{85} this short-war change-signal had significant ramifications for Canada.\textsuperscript{86} A forces-in-being doctrine in line with doctrinal preferences of the United States military that emphasized operationally ready forces over mobilization potential was adopted from the mid-1950s.\textsuperscript{87} As Minister of National Defence Paul Hellyer noted in 1964, “[f]orces in being which traditionally have been low priority [were now] at the top of our list and reserve forces which [had] been the backbone of our mobilization in two world wars, [were] moved down the scale proportionately.”\textsuperscript{88} By the 1970s, the Reserve Force (or Militia) was even designated – at least politically – as an element of Canada’s forces-in-being.\textsuperscript{89} The short-war philosophy provided the strategic justifications to limit longer-term defence preparations (i.e., creating the conditions for effective national mobilization), thereby effectively satisfying defence policy objectives asymmetrically weighted towards economics.\textsuperscript{90}

\textsuperscript{85} Mobilization is defined as “[t]he act of preparing for war or other emergencies through assembling and organizing national resources.” Economic mobilization is defined as “[t]he process of preparing for and carrying out such changes in the organization and functioning of the national economy as are necessary to provide for the most effective use of resources in a national emergency. North Atlantic Treaty Organization Standardization Agency, \textit{NATO Glossary of Terms and Definitions}, AAP-6 (2008).

\textsuperscript{86} Dan Middlemiss, “Canada and Defence Industrial Preparedness: A Return to Basics?” \textit{International Journal} 42 (Autumn 1987), 707. As Howard Langille notes, “[w]ithin a short period [after the 1950s], however, it was recognized that the political endorsement of the short-war thesis would have a profound impact on the military, altering its traditional role and challenging its relevance, and an equally profound effect on the industries involved in arms supply. If there was no need to maintain forces over an extended period of combat operations, then there would be little sense in supporting the type of defence industrial base capable of the timely resupply required for protracted fighting. Moreover, the role of the armed forces, particularly the army stationed in Europe, would be largely to act as front-line hostages to a nuclear trip-wire. Once the line had been crossed, alliance leaders would have to assess whether to negotiate or to escalate. For the armed forces this was a new and somewhat discomforting role. It was not easily supported within services that had been oriented by military tradition and training towards the pursuit of victory.” Langille, \textit{Changing the Guard}, 83.


\textsuperscript{89} Department of National Defence, \textit{Defence in the 70s: White Paper on Defence} (Ottawa: Queen’s Printer, 1971), 45.

\textsuperscript{90} Langille, \textit{Changing the Guard}, 80.
The 1987 Defence White Paper attempted to reintroduce a more traditional attitude towards defence preparations with a long-war philosophy requiring increased capability for manpower and industrial mobilization. But as Howard Langille argues, this shift was perhaps influenced more by political and economic forces rather than security considerations:

There was a close relationship between the shift to a long-war policy, defence preparedness, industrial mobilization, a total force concept, the reserves, and the planned acquisition of new equipment. These seemingly diverse defence policies were integral components of a new strategy that sought to prepare the armed forces and a defence-industrial base for protracted conventional war and to build support for military-industrial interests. The formulation of defence policy in 1987 reflected the culmination of efforts on behalf of sectors within the defence industry, recent Liberal and Conservative governments, the Department of Defence, the federal bureaucracy, and the various interests represented under the umbrella of organizations such as the Business Council on National Issues, the American Defense Preparedness Association (Canadian chapter), the Canadian Institute of Strategic Studies, and the Conference of Defence Associations. Close relations have developed between these sectors and organizations. Their relations are based upon common interests. The formulation of the 1987 defence white paper implicitly signaled the emergence of the military-industrial complex into the Canadian political process.

With the end of the Cold War, the underlying strategic logic of preparations for protracted war was lost. In the absence of an external threat actor with conventional warfare capabilities, Canada quickly defaulted to a minimalist forces-in-being outlook.

This minimalist approach is fully consistent with maintenance of an overall sub-strategic character. With defence expenditures averaging 6.9 per cent of federal government expenditures over the last 30 years, Canada is not allocating the quantity of resources to defence to realistically play anything but a tactical role. This isn’t necessarily a problem as the level of

91 Langille, Changing the Guard, 80. See also Department of National Defence, Challenge and Commitment – A Defence Policy for Canada (Ottawa: Queen’s Printer, June 1987).
92 Langille, Changing the Guard, 81.
93 Office of the Parliamentary Budget Officer, Fiscal Sustainability of Canada’s National Defence Program (Ottawa: 2015), 5.
expenditure needed to move beyond a sub-strategic role is not at all apparent. Joel Sokolsky has observed:

…Canada’s political leaders have been able to answer the question “How much is enough?” with the answer, “How much is just enough?” In other words, how much is just enough to keep the Canadian Forces (CF) roughly compatible with other allied forces? How much is just enough to demonstrate just enough support for allied calls for greater defence spending? How much is just enough to make a contribution when Washington rounds up the posse for its “coalitions of the willing”? And how much is just enough to send? How much is just enough to maintain close participation with the US in North American aerospace defence? And … how much is just enough to assure the Americans that Canada is not a “haven for terrorists,” so that the border can be kept open for the over 80 percent of Canadian exports that go to the US and upon which Canadian prosperity and its social programs depend.94

“Just enough” budgetary calculations represent a prudent form of adaptive advantage.

A review of defence expenditures as a percentage of total expenditures (Figure 7.1) shows three significant peaks associated with the World Wars and the early Cold War. As even these levels of expenditures arguably do not correspond with attaining the level of a strategic actor, it would perhaps be logical to deduce that a “how much is enough” calculation for Canada to aspire to be an independent strategic or grand strategic actor in international military affairs is not within reason. On a macro scale, the relatively stable trend in expenditures since the 1970s (Figure 7.2) and the level of expeditionary deployment since the mid-1990s – associated with the defence policies of both Liberal and Conservative governments – is a clear indicator that a strategic or grand strategic role based on military instruments of power is not perceived by policy makers as being in Canada’s national interest.

Figure 7.1: Percent of Federal Expenditures on Defence (1867-2011)\(^{95}\)

Figure 7.2: Percent of Federal Expenditures on Defence (1970-2011)\(^{96}\)


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From a purely military capability perspective, it is perhaps relevant to reiterate an observation Russel F. Weigley made of the U.S. Army: “In an army still lacking, as it had since birth, enough junior officers competent to instruct the rank and file in elementary tactics, the most basic rudiments of war had to consume a large share of attention.”97 Christian Jaekl and David Bellamy have suggested that the essence of this argument applies to Canada as well in that a small military needs to concern itself primarily with the “nuts and bolts” of tactical preparedness.98 To suggest that the level of resources provided to the Canadian defence establishment is adequate to sustain activity beyond that of a “nuts and bolts” tactical contributor is delusional. Canada need not aspire to be anything but a sub-strategic actor.

All Canadian defence policy statements therefore frame present problems, projected issues, and three enduring abstract policy objectives of: preservation of peace through support for collective defence measures intended to deter military aggression; support to foreign policy within the context of Canadian participation in international organizations; and protection of, and surveillance over, Canadian (or more broadly North American) territory, air-space, and coastal waters.99 The lack of a tangible defence problem allows objectives to remain inherently subjective. While customary doctrine suggests strategic level programming (ways and means) needs to be built to achieve government policy (ends), strategic level planning in Canada is in

99 These are the “objectives” of Canadian defence policy contained in the opening comments of Minister of National Defence Paul Hellyer’s 1964 White Paper on Defence. These three extremely broad objectives form the customary framework for flexibility for all post-World War II Canadian defence policy. DND, 1964 Defence White Paper, 5.
fact more about finding military strategic goals (i.e., the desired defence capabilities) that are consistent with more pressing elements of government policy, most of which have very little to do with actual defence. James Eayrs neatly summarized this situation as follows:

The armed forces of Canada are to work for the maintenance and enhancement of Canada’s prestige and influence in the world. Therefore, the armed forces are to have such strength, composition and state of preparedness that…That What? One may read thousands of pages of testimony, millions of words of testimony, by our ministers of national defence, chiefs of the defence staff, commanders of mobile brigade, expert witnesses of every kind, without finding a satisfactory answer to this question. It is not surprising, for to answer it satisfactorily one would need to know the rate of exchange between arms and influence…The price of influence resembles that of the favours of a lady of easy virtue…The rate of exchange between outlay and influence is fluctuating and uncertain, the medium of exchange shifting and evanescent. But that is not all. Influence acquired in one capital may diminish influence in another…To the complexities of calculating the cost of influence must accordingly be added the complexities of calculating the ratio of power.  

As these defence capability requirements flow from strategic assessments built on subjective political interpretations of the existing arms-to-influence exchange rate, it follows that such assessments must be interpreted with the overall government policy in mind in order to maintain a level of policy coherence. The process of developing and implementing Canadian defence policy could thus be described more as policy reverse engineering than a process consistent with the essence of customary strategic thought.

This reverse engineering process is illustrated by the degree to which Canadian engagement in Europe through commitments to NATO has been a theme holding priority in post-Second World War policy pronouncements. As bi-lateral commitments to North American defence generally took second place due to Canada’s eternal role as the junior partner, governments consistently considered global influence and economic prosperity as being

inextricably tied to the vital ground of potential battlefields in Western Europe. With the collapse of the Soviet threat, the transition from ‘cash’ back to ‘credit’ provided governments greater flexibility to base policy on economic, rather than strategic, or allied, concerns. This further reinforced Canada’s preference to remain fully defensive and forgo any capability of independent offensive action. While this preference fit well with the policy of maintaining balance of power during the Cold War, its continuance as an underlying concept in policy formulation beyond the early 1990s suggests that governments have attempted to fit their Cold War orientation to a new environment, rather than trying to reformulate their signal/boundary system. Although there is some evidence that bi-lateral cooperation with the U.S. has recently taken de facto priority over engagement to purchase influence through NATO, the absence of an alternate international venue for influence which counteracts the grossly uneven relationship between Canada and the U.S. appears to be the reason why NATO still permeates Canadian defence policy decades after the withdrawal of Canadian forces from Germany. The perceived multilateral advantages of NATO remain a key component of the “mental patterns or concepts of meaning” Canadians have constructed to “comprehend and cope with our environment.”

That Canada has efficaciously resisted adoption of something like Macnamara’s aspiration conception of defence policy suggest that his linear centripetal model is at odds with the Canadian reality. As a component of the overall national security strategy, the natural Canadian form of defence policy has much more of a non-linear centrifugal character. It has traditionally relied upon the adaptive balancing of determinants in response to minor fluctuations

101 Evidence of this is seen in the Canadian support to the United States during Operational Apollo from October 2001 to October 2003, which was conducted outside of a NATO structure.
in environmental signals. This has occurred as ongoing orientation: the “interactive process of many-sided implicit cross-referencing projections, empathies, correlations, and rejections that is shaped by and shapes the interplay of genetic heritage, cultural tradition, previous experiences, and unfolding circumstances.”

When necessary, the bounded subsystems of defence have adapted and learned through interaction with other agents in accordance with this unique sequence of rules, or “program”, that guides environmental interactions. This has provided a sufficient sense of Boyd’s implicit guidance and control to minimize the need for a robust decision phase. Hence, the intended strategy mode for Canadian defence has needed to exercise only minor influence. It has only been stimulated when an uncommon change-signal of momentous magnitude (i.e., fat-tailed shocks such as the need to transition from mobilization to forces-in-being) has required a major course correction – an adjustments to the nation’s bounded rationality.

This natural condition of weighting implicit orientation over decision (or emergent-over-intended strategy mode) accounts for Bland’s observations of Canadian political leaders activating the intended strategy mode only during crisis, and otherwise remaining “free from the fetters of any national strategy.” It also acknowledges Sutherland’s position of the unfeasibility of inventing a strategic rationale for a wholly Canadian defence program. The catchphrases of Canadian defence policy – E.L.M. Burns’ “seat at the table,” R.B. Byers’ “commitment-capability gap,” Joel Sokolsky’s “how much is just enough?”, and Nils Ørvik’s

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104 Holland, Signals and Boundaries, 281.
“defence against help” 107 – in essence all point to this greater relative importance of the emergent mode for co-evolving with changing environmental conditions. Canadian defence policy naturally tends to be an emergent behaviour rather than the product of some intended design. The power of isolation allowing the pursuit of limited objects has effectively firewalled Canadian defence from most strategic considerations, allowing the practice of blending defence into a broader whole-of-government policy and strategic (or departmental) level programming context. This natural orientation produces a type of equilibrium that is seen outwardly as a neutral posture that tends to react only under the impetus of shocks or ‘fat-tailed’ risks.

Much of the discourse on Canadian defence policy, as represented by Macnamara’s comments to the Standing Senate Committee on National Security and Defence,108 focuses on amplifying the role of the intended strategy mode. This would be a mistake, as it is rather insensitive to the importance and complexity of the adaptive balancing of determinants that is continually taking place in response to minor fluctuations in environmental signals. As discussed in Chapter 2, there are significant pitfalls in adopting Martel’s ideological form of strategy in which a subjective interpretation of why becomes a lens of convenience to filter assumptions and institutionalize justification for certain preferences.109 Such a structure may not truly identify the most appropriate direction for the nation. It may force a form of centre-directed ideological adaption incompatible with the actual evolution of the environment. This affect may be particularly acute for Canada, as being firewalled from tangible strategic considerations removes the moderating limits other nations must incorporate.

107 Philippe Lagasse, “Nils Ørvik’s ‘defence against help’: the descriptive appeal of a prescriptive strategy,” International Journal 65.2 (Spring 2010), 643. See also Burns, A Seat at the Table; Byers, “Canadian security and defence,” 10-12; Sokolsky, “Realism Canadian-style,” 10; and Ørvik, “Defence Against Help.”
108 Macnamara, Standing Senate Committee 2004.
Rather than adoption of an entirely different structure, a more productive discourse would be to ask whether the natural centrifugal system is in fact optimized for adaptive advantage. As John Holland suggests, the way to steer complex adaptive systems is to modify signal/boundary hierarchies.\textsuperscript{110} As signals and boundaries represent the mechanisms by which adaptions occur, this involves asking whether mental concepts (i.e., orientations) are being adjusted within an appropriate time scale to match “a changing and expanding universe of observed reality.”\textsuperscript{111} The corporate world’s effort to accelerate business model innovation (BMI), basically the corporate operationalization of Boyd’s “fast transients” and Sun Tzu’s \textit{cheng/ch’i} interaction, provides a useful set of metrics. Developing adaptive capacity through signal, experimentation, organization, systems, and eco-social advantage could be just as relevant to optimizing the emergent mode of Canadian defence policy.\textsuperscript{112}

The BMI adaptive advantages described in Chapter 4 are reiterated below and adapted to a defence context. \textit{Signal advantage} is characterized as the ability to recognize change signals and act on them. For example, the defence architecture attunes itself to its external environment by constructing defence intelligence systems to acquire and decode relevant change signals, allowing it to rapidly adjust its orientation or even attempt to reshape the information landscape of its defence ecosystem. An ability to experiment represents \textit{experimentation advantage}. This involves changing the manner in which defence agents generate and test innovative ideas, broadening the scope of innovation from technological enablers, capabilities, and force employment constructs to the entire defence models, and increased cultural tolerance to failure.

\textsuperscript{110} Holland, \textit{Signals and Boundaries}, 2.
\textsuperscript{111} Ibid.
\textsuperscript{112} Reeves \textit{et al.}, “Sustainability as Adaptability,” 15-6.

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Organization advantage denotes the ability to build the leadership, culture and structure necessary to facilitate signal and experimental advantage. Rather than the top-down approach of traditional strategy, organizational structures may successfully “follow” and exploit localized (i.e., theatre-level) adaption as decision making authority is devolved to deployed peripheral groups in a better position to recognize and act on environment changes more quickly. This requires the development of “environments that encourage the knowledge flow, diversity, autonomy, risk-taking, sharing, and flexibility on which adaption thrives.” The capability to maintain influence within complex multi-national coalition ecosystems could be described as systems advantage. This involves pushing strategies beyond the boundaries of single entities and thinking in terms of ecosystems of co-dependent defence architectures, which involves devising system-level strategies that account for the traditional control mechanisms. Eco-social advantage recognizes the need for adaptation beyond merely the defence environment and accounts for change related to social and ecological interactions. This involves ongoing tuning of the defence architecture to account for changing dynamics in the domestic and global ecological, economic, and social spheres.\textsuperscript{113}

The ability to generate these types of adaptive advantages are intimately tied to the presence of characteristics such as heterogeneity, modularity, redundancy, responsiveness, feedback loops, adaptive mechanisms, trust, and reciprocity within orientation nodes.\textsuperscript{114} Heterogeneity involves ensuring a sufficient “reservoir” of diversity amongst individuals, philosophies, innovations, and endeavors for new variations and combinations of adaptive units.

\textsuperscript{113} Characterizations of adaptive advantages have been transposed into a defence context based on Reeves et al., “Sustainability as Adaptability,” 15-6.

\textsuperscript{114} Reeves et al., “The Biology of Corporate Survival,” 47-55.
to emerge. This characteristic allows the agent to mitigate “collapse risks” that cause abrupt obsolescence of defence architectures as a result of ecosystem failures caused by unanticipated adaptive interactions in other parts of the system. *Modularity* refers to the presence of firewalled or loosely linked modular components that minimize the “contagion risk” of environmental shocks in one part of a defence system perpetuating throughout the entire ecosystem. *Redundancy* involves the overlapping of roles between components, such as the multiple lines of defence inherent to an immune system. This characteristic provides a buffer against “fat-tailed risks” associated with low probability/high consequence events. *Responsiveness* acknowledges the fact that the emergent behaviour or properties of a complex adaptive system cannot be accurately forecasted. However, agents can anticipate plausible outcomes by gathering signals and deducing patterns of transformation, thereby allowing “precautionary action” to be taken to decrease likelihood of disadvantageous consequences. *Feedback loops* are critical as a means of detecting environmental changes and identifying advantageous adaption corridors by facilitating *adaptive mechanisms* that encourage “variation, selection, and propagation of innovations” through “iterative experimentation.” *Trust* characterizes the need to foster cooperation between agents and aggregates within a complex adaptive system that has no central command and control mechanism. As illustrated by the “collective action problem” in the context of common-pool resources, trust interacts with critical mass, leadership, and knowledge to encourage sustainable self-organization. Acting in a manner that provides value to other agents or aggregates within the ecosystem encourages the development of *reciprocity* norms and enforcement mechanisms.\(^\text{115}\)

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\(^{115}\) Reeves *et al.*, “Biology of Corporate Survival,” 50-55.
Efforts to assess and optimize levels of heterogeneity, modularity, redundancy, responsiveness, feedback loops, adaptive mechanisms, trust, and reciprocity throughout the emergent mode of the Canadian defence architecture have greater potential utility than attempting to reinforce the intended strategy mode. This will facilitate new patterns of meaning to comprehend and cope with an evolving environment being created in a timely manner and obsolete patterns being refined or discarded. This subsequently sets the conditions for the development and maintenance of adaptive capabilities.

Comprehensive assessment of each of the aforementioned characteristics and the presence of types of adaptive advantage within Canada’s past and present defence architecture represents a significant undertaking. Each characteristic would require its own thesis-length treatment well beyond the scope of this study. However, it is feasible within the space limitations of here to highlight some of the inherent vulnerabilities of Canada’s natural centrifugal defence policy architecture that could benefit from further scholarship. The current orientation for defence is not optimized in at least two areas: the predilection of the mainly dormant intended strategy mode towards crisis management; and an orientation drag that occurs within the emergent mode as a result of borrowed centripetal-based doctrine.

Fat-Tailed Risk Vulnerability

Maintaining “just enough” or “defence against help” as a core orientation does create an inherent vulnerability: that of ideological shocks or fat-tailed risks causing great reactive shifts once the intended strategy mode becomes engaged. Insulating the generally dormant intended strategy mode from such potentially disruptive behaviour relies on having a relatively active and resilient emergent mode to absorb, or at least reduce, fat-tailed risks. The emergent/adaptive
mode provides the initial orientational foundation from which outcomes are enhanced or exploited through the intended strategy mode. When this resilience is absent or the signal/boundary mechanisms of the emergent mode have been allowed to atrophy, the “intended strategies” emanating from centralized strategic management and planning processes may tend towards crisis management in the presence of an approaching geopolitical storm or a radical shift in government ideology.

Rather than the decentralized aggregate interactions of actors being complimented or supplemented by intended strategies, crisis management can result in fundamental shifts of direction. The ship-of-state could quickly lash itself to a great power’s flag ship, break from the allied fleet and navigate towards calmer seas or a safe haven port, risk riding out the storm on its own by motoring into the wind and waves, or attempting to run off downwind. Each option has its own potential benefits and ramifications. As discussed in Chapter 5, the ultimate course of action should be influenced by the crew’s capabilities to effectively integrate, prioritize, and balance inboard and outboard considerations – their ability to achieve adaptive advantage over the complexity of their environment.

The danger comes from a tendency for the centralized strategic management and planning processes to become disconnected from, or overestimate, the defence architecture’s actual capabilities to adapt: to choose a course of action incompatible with the level of robustness and resilience of the bounded subsystems (or agents) that need to adapt to and learn

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116 A military-security crisis has been defined as: “a situation with three necessary and sufficient conditions, deriving from a change in its external or internal environment. All three conditions are perceptions held by the highest level of decision-makers: (1) threat to basic values, with a simultaneous or subsequent (2) high probability of involvement in military hostilities, and the awareness of (3) finite time for response to the external value threat.” Brecher, Decisions in crisis, 1.
118 Reeves et al., “Sustainability as Adaptability,” 16.
from the evolving environment. An abruptly awakened intended strategy mode may attempt to impose an unrealistic “program” for guiding subsequent interactions with the environment.\textsuperscript{119} Bland’s observation that emergencies and international crises are usually addressed by Cabinet in isolation and within the context of short term policy requirements highlights this potential vulnerability.\textsuperscript{120} There is significant potential for “behaviour which is destructive to the [defence] organization and seriously limits its viability.”\textsuperscript{121} The “commitment-capability gap” of Canadian defence policy through the 1970s and 80s is illustrative of potential impacts of fat-tailed shifts by a suddenly active centralized strategic management mode.\textsuperscript{122} The drastic ideological shift inward towards domestic agendas commenced by the Trudeau government in 1969 sent mixed signals as to Canada’s reliability as a NATO partner.\textsuperscript{123} Trudeau’s 1971 policy of minimum absolute commitment is a striking example of an inherent self-interest in perception of the impacts of Canadian policy on alliances, although ultimately not particularly injurious as a result of the nation’s power of isolation preventing any true test of policy weaknesses. However, a significant gap in the ability of Canada’s military to meet objectives fully and effectively did result from this shift.\textsuperscript{124}

Major ideological and budgetary shifts require a full reworking of force employment and capability planning processes by abruptly invalidating previous strategic assessments (see Appendix A for a description of current doctrine relating to CF Force Employment Processes and

\textsuperscript{119} Holland, \textit{Signals and Boundaries}, 281.
\textsuperscript{121} Hermann, “Some Consequences of Crisis,” 61-82.
\textsuperscript{122} Byers, “Canadian security and defence,” 10-12.
strategic assessment) and programing lifecycles. These major course corrections tend to reduce resilience in the overall defence architecture as planning levels below government policy – strategic (or departmental), operational, and tactical – revise determinations of the most effective use of resources within the new policy framework.

As discussed in Chapter 3, one of the primary goals of strategic behaviour is to anticipate crisis triggering events and proactively prepare highest level decision-makers’ perceptions with a view to minimizing the impacts of surprise and truncated reaction time. The conditions under which the perceptions of the highest level decision-makers are formed are important. Advantageous decisions are sought through the elimination of the influence of stress-inducing elements of crisis acting on decision-makers’ perceptions of their strategic environment, thereby enhancing the level of objectivity in judgements regarding threats to high-priority values and interests. Low-probability triggers naturally tend towards crisis management as resources for permanent, long-range planning for such eventualities are rarely prioritized. This creates a unique dialectic whereby the triggers most closely associated with surprise are the ones that most often escape proactive efforts to prepare and manage adverse perceptions, while the element of surprise is often the very catalyst required to form the degree of consensus prerequisite to any effective security strategy or policy. This process involves a continual attempt to push policymakers’ frame of reference from l’historie événementielle (individual time) towards the

\[125\text{ DND, B-GL-005-500/FP-000, section 117.}\
\[126\text{ Ibid., 1-8. Strategic Level Planning is interpreted as departmental planning, based on national policies and objectives established by the Government of Canada, for diplomatic, informational, military and economic courses of action in order to respond to domestic or international crises. Operational Level Planning, the preparation of plans and orders for CF operations that seek to translate strategic direction into missions and tasks for tactical commanders, utilizes the CF Operational Planning Process (CF OPP). Tactical Level Planning involves the preparation of orders governing “the deployment and employment of forces and the conduct of battles, engagements or specific tasks in support of the mission.” DND, B-GL-005-500/FP-000, sections 114-16.}\

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deeper context the *longe durée* (geographic time). To be effective, such a process requires a number of undertakings: proactive collection and analysis of information to identify threats, issues, trends, and opportunities; effective communication of strategic analysis to decision-makers; receptiveness of decision-makers to strategic assessments; an interest in avoiding crisis conditions rather than using them to further alternate interests; an ability and willingness to make decisions influencing events; and a capability to actually implement decisions made. This is essentially a form of crisis prevention and mitigation through building resilience.

Reducing the fat-tailed risk vulnerability of Canada’s natural adaptive defence policy does not involve increasing the relative role of the intended strategy mode. The process indicated above represents reinforcement of the emergent mode. It is a process of optimizing heterogeneity, modularity, redundancy, responsiveness, feedback loops, adaptive mechanisms, trust, and reciprocity within signal/boundary mechanisms. This type of effort has greater potential utility for insulating the generally dormant intended strategy mode from fat-tailed risks.

*Borrowed Doctrine Orientation Drag*

The strategic doctrine utilized by the Canadian defence establishment has been adapted from the national security strategy processes taught at U.S. military institutions (see Appendix A for a brief summary of current Canadian doctrine). While this appears logical for a middle

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127 The Strategy and Policy Course offered at the U.S. Naval War College is representative of the approach to national security strategy taught as part of senior profession military education. The Strategy and Policy Course covers two broad topics: 1) the process of formulating and executing strategies that support national policies: and 2) the environment in which that process takes place. United States Naval War College, *Joint Professional Military Education Phase II Senior Level Course: Strategy and Policy*, Course Syllabus, February-June 2017, 8. The U.S. doctrine for formulating national security strategy is illustrated in Drew and Snow, *Making Twenty-First-Century Strategy*. 
power concerned primarily with the “nuts and bolts” of tactical preparedness,\textsuperscript{128} it creates an orientation towards a centripetal-style system with a relatively strong intended strategy mode. This creates an \textit{orientation drag}: a condition in which the Canadian military establishment tends to expect change signals to originate in the centralized strategic management mode. As this mode is generally dormant in Canada, this can cause a significant delay in effective adaptation.

A prudent example of this orientation drag is apparent in Canada’s tactically fixated campaign pattern in much of the Kandahar engagement (see Appendix C for a brief review of the Canadian Kandahar mission). Following centripetal doctrine adopted from the U.S., the Canadian Forces on the ground waited over three years for Ottawa to provide some top-down strategic guidance. This guidance never came, as the intended strategy mode remained in its customary inactive condition. It was only when incoming International Security Assistance Force (ISAF) Commander General Stanley McChrystal reassessed NATO operations and strategy and significantly more American resources were deployed to Kandahar province that conditions changed in the later-half of 2009. Adaption emerged as a result of this change in the overall strategic situation, which provided the framework within which Brigadier-General Jonathan Vance was at last able to salvage Canada’s Kandahar mission by consolidating Canadian efforts in a single district and initiating focused counterinsurgency (COIN) operations at the village level.\textsuperscript{129}

\textsuperscript{129} The Canadian Key Villages Approach (KVA) commencing in the village of Deh-e Bagh south of Kandahar City has been hailed as a template for effective COIN operations; however, it is critical to note that such efforts were only possible once the Canadians handed off responsibility for much of Kandahar province in 2009 to elements of the US 4\textsuperscript{th} Infantry Division. Carl Forsberg, \textit{Afghanistan Report 3: The Taliban’s Campaign for Kandahar} (Washington: Institute for the Study of War, 2009), 52.
As has been noted by Richard Livingstone in his introduction to the writings of Thucydides, “Athens was ruined by bad leadership. It was her politicians who lost the war.”\footnote{Richard Livingstone, ed. \textit{Thucydides: The History of the Peloponnesian War} (New York: Oxford University Press, 1960), xxi.} In a modification of this theme, that the Canadian military became tactically fixated and subsequently failed to maintain the initiative in its fight for Kandahar province from 2006 to 2009 is attributable not to the decisions of Canadian or Coalition policymakers, but their complete absence of tangible engagement above the operational level. With an absence of political direction to drive strategic level objectives, the Canadian Task Force’s Operational Planning Processes lacked the internal engine allotted in their doctrine. Without this central driver, the internal gears that should have been energizing the nation’s imbedded OODA Loops were essentially in neutral. This in turn allowed the friction interface at the tactical level to impart a negative momentum in the system, thereby forcing the Tasks Force’s tactical decision making cycle to function in reverse, or in a reactive manner. This subsequently imparted reactive decision making momentum upon the operational, strategic, and political levels. The orientation drag was the delay in recognizing and rectifying this situation.

Admittedly, what is recorded in doctrine and what is actually understood or practiced within a military establishment do not necessarily correspond. A common lighthearted phrase notes, “[o]ne of the serious problems in planning against American doctrine is that the Americans do not read their manuals nor do they feel any obligations to follow their doctrine.”\footnote{This statement is commonly attributed to an informal observation by a Russian or German officer. Quoted in Major James M. Kimbrough, \textit{Examining U.S. Irregular Warfare Doctrine} (Wright-Patterson Air Force Base, Ohio: U.S. Air Force Institute Of Technology, 2008), 14.} Howard Coombs has observed that Canada adopted its ‘operation level of war’ doctrine – “that

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gray area between strategy and tactics”\(^{132}\) – through the transposition of ideas and concepts from the United States Army between 1987 and 1995.\(^ {133}\) Coombs notes how American methodologies and conceptual approaches were often used by the Canadian military to address themes in which Canadian concepts and procedures were deficient.\(^ {134}\) But as noted by Bill McAndrew, the embracing of foreign doctrines, essentially formed as a crisis response to the American experience in Vietnam, was significantly flawed due to the absence of a parallel catalyst to underpin institutional learning in Canada.\(^ {135}\) As such, Canada’s strategic doctrine can be seen as largely an exercise in imitating American ideas and initiatives rather than a deliberate development process based on first principles.

In the mid-1990s, McAndrew cautioned that the Canadian institutional structures – ingrained since World War II with a pattern of top-down bureaucratic doctrine emphasising management of process rather than objectives – were inconsistent with the culture required to realize the operational art model.\(^ {136}\) Characterizing the deep-rooted doctrine utilized by Canadian and British forces in World War II, McAndrew noted its “essentially static” nature in comparison to the German’s more dynamic “mission-directed way of war” with an emphasis on the exercise of initiative through the delegation of responsibilities.\(^ {137}\) Canadians employed a set-piece

\(^{133}\) Coombs, “Educating the Canadian Forces”; Coombs, “In the Wake of a Paradigm Shift.”
\(^{134}\) Coombs, “Educating the Canadian Forces,” 8.
\(^{135}\) Ibid., 13.
\(^{136}\) Jonathan Vance has noted that operational art is “the skill set needed to make the operational level effective” and “governs the successful use of tactical forces to achieve strategic objectives.” Vance, “Canada’s departure from classic doctrine,” 4.
\(^{137}\) McAndrew defines doctrine as “the shared premises, assumptions, and procedures that allowed soldiers, units, and formations to function as a coherent whole,” the “chain linking the tactical to the operational levels.” McAndrew, “Operational Art,” 90.
doctrine favouring rigid and centralized control of deliberate attacks against limited tactical objectives.\textsuperscript{138} This doctrine was historically employed as follows:

Higher-level staffs carefully crafted plans for others to implement. Divisions, brigades, and battalions were routinely assigned limited tactical objectives, invariably a geographic feature which was usually an enemy strong point. Start lines, report lines, boundaries, and timed artillery barrages gridded the battlefield, confining tactical mobility, let alone operational maneuver, and leaving unit commanders little opportunity to respond flexibly.\textsuperscript{139}

While in theory Canadian doctrine could incorporate flexibility and allow for the exercise of initiative, in actual practice this doctrine became more about coordinating the multiple layers of staff separating the planners from those that actually executed plans. This required a bureaucratic system of top down direction through rigid orders and exceedingly detailed plans – a doctrine system quite different from the ideal of “synchronizing tactics with operational insights.”\textsuperscript{140} The existence of such a bureaucratic system is well illustrated in Brian Reid’s work on Operation TOTALIZE, the first Canadian attempt to penetrate the German defenses between Caen and Falaise during the 1944 Normandy Campaign. Reid suggests that TOTALIZE “ultimately floundered on indecision and hesitation” due in part to “cumbersome doctrine, inferior equipment and an unwieldy plan.”\textsuperscript{141}

McAndrew noted the danger of adopting imported ideas and concepts without an associated cultural paradigm shift:

Without a profound institutional shock, an army is unlikely to change its style. The U.S. Army was shocked out of its Second World War rut by Vietnam and, while searching for its collective soul, rediscovered the operational level of war. The stimulating search through historical precedents now seems to have entered a

\textsuperscript{138} McAndrew, “Operational Art,” 90-91.
\textsuperscript{139} Ibid., 91.
\textsuperscript{140} Ibid.
\textsuperscript{141} Brian A. Reid, No Holding Back: Operation Totalize, Normandy, August 1944 (Mechanicsburg, PA: Stackpole Books, 2009), 366.
new stage, in which insights congeal into antithetical conventional wisdom. Axioms codify into principles, and principles to checklists, which surreptitiously replace thought. If so, it seems likely that the urge to conformity will defeat the intent that gave the original quest its legitimacy. It is anything but clear that the vitality of this provocative intellectual revolution will be continually regenerated, or it will degenerate, as usual, into bureaucratic impasse.\textsuperscript{142}

Noting Canada’s enduring doctrinal patterns created a “disjunction between the operational and tactical levels of war,” McAndrew argued:

The Canadian Forces [had] not experienced that vital intellectual search for first principles. Instead of stimulating an exchange of ideas on which to construct a sound intellectual base, a bureaucracy arbitrarily directed that Operational Art was to be adopted. Unfortunately, this came at a time when, elsewhere, categories were hardening and insights were being engraved in doctrinal manuals. Accepting those manuals without having experienced or really understood, the essential first phase builds on a precarious foundation. “Armies, like nations,” Richard Hooker has remarked, “have cultures which profoundly influence their behavior. To change the way armies fight, one must begin not with field manuals, but with the way an army thinks about itself.” It is doubtful that a way of thinking can be changed by fiat, nor is it likely that the way an army thinks about itself can be imported. Trying to absorb foreign doctrines secondhand will be as fruitless as transplanting tropical plants in the tundra.\textsuperscript{143}

McAndrew counselled that “[u]nless the Canadian Forces abandon any pretense of national sovereignty and distinct military autonomy, and are content simply to be absorbed as a few brigades, squadrons, and vessels into grand coalitions, a serious search for first principles is overdue.”\textsuperscript{144} However, this caution had little resonance due to its reliance on the assumption that Canada actually needed to employ the imported operational level doctrine. Canada embraced American doctrine without any intent or ability to actually practice it, since the doctrinal intent of translating tactical actions into strategic objectives did not actually need to be practiced by

\textsuperscript{142} McAndrew, “Operational Art,” 97.
\textsuperscript{143} Ibid.
\textsuperscript{144} Ibid., 98.
As then Lieutenant-Colonel Jonathan Vance\textsuperscript{145} noted, the primary Canadian strategic objective of mere \textit{presence} can be met without actually practicing operational art doctrine.\textsuperscript{146}

As has previously been indicated, Canada’s reliance on “contribution warfare” has essentially removed the need for a strong intended strategy mode. While McAndrew’s comments regarding top-down bureaucratic doctrine were directed at a lower military hierarchy, this concern is paralleled in relation to the notion of a borrowed doctrine orientation drag. There is a paradox in the Canadian Armed Forces’ definition of strategy as “the application of national resources to achieve policy objectives” and the lack of signals from the central node that provide tangible objectives. What results is a brave attempt to implement formal doctrine without the foundational component. Officers carry-on trying to implement inconsistent doctrine, and as Minister of National Defence Brooke Claxton once warned, “they are apt to draw up plans that are utterly unrealistic and impossible of fulfilment.”\textsuperscript{147} The persistence of a tactically-fixated pattern of “whack-a-mole” against IED cells in Afghanistan is perhaps illustrative of this.\textsuperscript{148} Significantly, it appears that when adaption finally occurred it was driven mostly from the theatre level Canadian leadership against a reluctant Ottawa that required positive attention from NATO and ISAF leadership to concede that a mid-course correction was required.\textsuperscript{149}

\textsuperscript{145} General Jonathan Holbert Vance was appointed the Canadian Armed Forces Chief of the Defence Staff in July 2015.
\textsuperscript{146} Vance, “Canada’s departure from classic doctrine,” 2.
\textsuperscript{148} US Embassy Kabul staff reported that Representative of Canada in Kandahar (RoCK) Ken Lewis acknowledged to Kandahar Provincial Reconstruction Staff (KPR) on 8 Aug 2009: “We’ve been playing whack-a-mole for years”; US Embassy Kabul (Afghanistan) Cable 09KABUL2335, “Canada’s Revised COIN Strategy in Kandahar,” 12 Aug 2009.
\textsuperscript{149} Ibid.
Coombs notes how Canada’s adoption of the “American vision for organizing war” without Canadian historical providence has significantly influenced the “intellectual approaches utilised by its senior leaders and commanders when putting together military activities in response to national direction and, in effect, determining the Canadian Way of War in the postmodern era.”¹⁵⁰ What is perhaps most concerning is that post-Afghanistan expeditionary planning has not become cognisant of the potential vulnerability of maintaining a borrowed doctrine inconsistent with the natural centrifugal Canadian style of policymaking. Canadian Joint Operations Command Contingency Plan Jupiter (CONPLAN Jupiter) maintains the same intellectual approaches that will undoubtedly lead to the continuance of an orientation drag and impede peripheral adaption.¹⁵¹

As with the fat-tailed risk vulnerability, increasing the defence establishment’s capability to adapt does not involve increasing the relative role of the intended strategy mode. It involves identifying and challenging the top-down bureaucratic elements of borrowed doctrine that favour the intended over the emergent mode. It involves adjusting Canadian doctrine to maximize heterogeneity, modularity, redundancy, responsiveness, feedback loops, adaptive mechanisms, trust, and reciprocity within lower level signal/boundary mechanisms. Efforts to optimize the periphery with doctrines needing less top-down direction to initiate adaption are where the greatest utility will be found.

Canadians must be realistic about what can be achieved within the limits of their ability to generate military, diplomatic, and development resources. Scenarios in which ‘a presence in the line’ or ‘a presence in the area’ will by itself achieve tangible influence among allies are

¹⁵⁰ Coombs, “Educating the Canadian Forces,” 15.
¹⁵¹ CAF, CONPLAN Jupiter, 2.
likely to become the exception rather than the rule. Being tactically fixated while being present can have counterproductive consequences in terms of influence. As influence becomes tied more closely to actual performance, greater attention will need to be paid to the ability to adapt patterns of meaning within the emergent mode in order to understand and cope with evolving environments.

As a tactical level contributor, it is unrealistic to suggest that Canada should or could ever be adept at employing strategy in the centripetal style. To suggest that Canadian policymakers will even be in a position to unilaterally provide strategic objectives as input into Coalition campaign design and operational planning is inconsistent with the Canadian defence position as a tactical contributor to larger alliances. Strengthening Canada’s ability to translate tactical action into operational and strategic effects is more about optimizing capacity for timely adaption, which can subsequently be enhanced rather than directed by a relatively dormant intended mode.
CHAPTER 8: HOMETOWN SECURITY

*Homeland security begins with hometown security.*

**Barring a Counterstroke**

Canada’s unconscious centrifugal national security strategy of sub-strategicness and limited objects has an emerging vulnerability in the need to keep the “house in order”. As per the Corbettian strategic logic, Canada’s lack of necessity to seek grand strategic objects in the foreign domain is underwritten by the power of isolation. This isolation is not absolute. Citing Edward Crankshaw, Lester Pearson’s early Cold War warning on understanding an adversary’s potential ability to alter the environment remains prudent:

> Unless we…realize that they stand for a faith, a faith which is transforming the face of Russia and has the power to transform the face of the world, unless we do this we shall soon find ourselves transformed or liquidated. The great mistake of many pagan societies blotted out by the Christians was that they never found out what it was that was hitting them until it was too late. At the moment most of us in the West have not the faintest idea of what is hitting us.

As Pearson observed, “[t]here is no effective Maginot Line against ideas.” In a similar vein, it is worth asking whether Canada’s power of isolation is being challenged today? How strong and healthy is the Canadian household?

Defences against a domestic counterstroke should be a primary focus of national security strategy. By way of an analogy, Canada may be seen as a self-contained fortified city that need only send out the occasional raiding party and scouts to maintain alliances and keep potential threats at bay.

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3 Pearson, “Some Principles of Canadian Foreign Policy,” 76.
adversaries at bay. A grand design for the external environment is not required, provided there is no challenge to the means of isolation (the city walls). A grand design for the defence of the city need only be applied should a siege train that cannot be interdicted by allies or small expeditionary manoeuvres begin to advance on the city walls. Should a determined enemy appear at the city gates without warning, the chances of long term survival would be proportional to efforts placed in preparing and executing a defensive plan. And as it may be expected that “[s]trategic planning can be no better than the intelligence upon which it is based,” the integrity of estimates of the potential enemies that may appear at the gates may dictate the effectiveness of the defensive plan.5

This is a particular signal/boundary problem of the form discussed in Chapter 4. What should be concerning is the realization that Canada’s signal/boundary (or orientation) mechanisms for dealing with the domestic domain are geared towards an enemy approaching the gates from abroad. With the exception of the early Cold War air defence organization, little thought on robustness and resilience for the defence of Canadian territory against a foreign military threat has occurred since copies of Colonel James “Buster” Sutherland-Brown’s Defence Scheme Number 1 were ordered burned in 1931. Even this scheme for the remote possibility of an Anglo-American war, despite the deep-seated interests and values growing out


5 The reference to an Estimate here is within the loose context of the U.S. Central Intelligence Agency’s National Intelligence Estimate (NIE). An innovation of the fourth Director of Central-Intelligence General Walter Bedell Smith (October 1950 - January 1953), The NIE was designed to be an authoritative interpretation and appraisal to guide policymakers and planners in accordance with the requirement for correlation, evaluation, and dissemination of intelligence relating to the national security stated in s.102(d)3 of the 1947 National Security Act. Sherman Kent, “The Law and Custom of the National Intelligence Estimate,” February 1979, DCI Miscellaneous Studies MS-12, RG 263 Records of the Central Intelligence Agency, Historical Review Program No. 94-5, 1-9.
of the Ghent, Rush-Bagot, 1818, Oregon, and Washington Treaties, was out of sync with thinking within the Department of External Affairs and the Royal Canadian Air Force. The conventional military threat to Canadian territory has arguably never exceeded the design basis threat of late December 1941, which envisioned the viable forms of attack as:

Bombardment by one capital ship; by two 8-inch cruisers; or by one merchant raider mounting medium guns; Attack by minelaying craft, submarines, small surface craft and small underwater craft; Attack by small raiding parties, seaborne or airborne; Light-to-medium scale bombing attack by shore based or ship-borne aircraft on sea-borne, coastal and inland objectives; and Slight risk of torpedo and gas attack from aircraft. For internal security purposes, two Infantry Battalions were allocated for guard duties at Hydro Electric installations in the Niagara area.

Due to the convenience of isolation from the spot fires of global conflict, Canada has had the privilege of assuming the role of a sub-strategic state in regards to its instruments of military power. This sub-strategic role has ingrained orientations within Canadian institutions that provide implicit guidance and control mechanisms biased towards the convenience of buffet-style engagement with elements of the environment. Limited objects are chosen by convenience or ideology rather than necessity.

The consistency of these ingrained orientations need to be questioned in light of the emergent effects of globality and globalization. Globality refers to the developing “social condition characterized by tight global economic, political, cultural, and environmental......
interconnectedness and flows that make most of the existing borders and boundaries irrelevant.”

Globalization is the “set of processes that appear to transform our present social condition of conventional nationality into one globality.”\(^9\) While traditional beyond-the-gates orientations have served the nation well throughout the last century and a half, they perhaps no longer provide the level of adaptive advantage required to effectively understand and cope with the contemporary rhizomatic/rodízio-style security environment.

This vulnerability is particularly important as contemporary threats that may undermine the security of Canada have little resemblance to traditional military threats for which much of the nation’s institutions developed their orientation mechanism. The principal role of the Canadian Armed Forces continues to be stated as the rather improbable defence of Canada from foreign military threat, yet the Department of National Defence and the Canadian Armed Forces have limited influence in relation to domestic defence.\(^10\) With the exception of a lead in the defence-of-Canada role, the Canadian military establishment plays merely a supporting role in domestic operations – activities principally directed at emergency or crisis management – as a result of the jurisdictional boundaries established in the Constitutional Act of 1867, the Emergencies Act, the Emergency Management Act, and the National Defence Act (NDA).

Beyond a relatively improbable foreign military threat, the Security of Canada Information Sharing Act has only recently defined “activity that undermines the security of Canada” as:

…any activity, including any of the following activities, if it undermines the sovereignty, security or territorial integrity of Canada or the lives or the security of the people of Canada:


(a) interference with the capability of the Government of Canada in relation to intelligence, defence, border operations, public safety, the administration of justice, diplomatic or consular relations, or the economic or financial stability of Canada;

(b) changing or unduly influencing a government in Canada by force or unlawful means;

(c) espionage, sabotage or covert foreign-influenced activities;

(d) terrorism;

(e) proliferation of nuclear, chemical, radiological or biological weapons;

(f) interference with critical infrastructure;

(g) interference with the global information infrastructure…;

(h) an activity that causes serious harm to a person or their property because of that person’s association with Canada; and

(i) an activity that takes place in Canada and undermines the security of another state.

For greater certainty, it does not include advocacy, protest, dissent and artistic expression.11

It is acknowledged in the preamble to the Security of Canada Information Sharing Act that defence against activities that undermine the security of Canada “often transcends the mandate and capability of any one Government of Canada institution.”

It is significant to note that the activities associated with undermining the security of Canada are much broader than the interpretation of “threats to the security of Canada” provided in the Canadian Security Intelligence Service Act.12 While the threats described in the CSIS Act correlate closely with serious offences in the Security Offences Act, Security of Information Act,

11 Security of Canada Information Sharing Act (S.C. 2015, c. 20, s. 2), s.2.
12 Canadian Security Intelligence Service Act (R.S.C., 1985, c. C-23), s.2.
and the *Criminal Code of Canada*, activities such as interference with critical infrastructure, global information infrastructure, or the economic stability of Canada do not constitute offences in current legislation that is considerably biased towards acts of violence. As legislation and jurisprudence is a fundamental element of implicit guidance and control, this orientation does not adapt itself well to the growing utility of Information Operations (IO), defined as “actions taken in support of political and military objectives which influence decision makers by affecting other’s information while exploiting (fully utilizing) and protecting one’s own information.” IO is an integration of Electronic Warfare, Computer Network Operations, Psychological Operations, Deception, and Operations Security tactics, techniques, and procedures.

As denoted in Canadian doctrine, Offensive IO can have two principle objectives:

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16. Lieutenant-Colonel Roger Vandomme, “From Intelligence to Influence: The Role of Information Operations,” *Strathrobyn Papers No. 6*, Centre for National Security Studies, 2010, 10-13. Vandomme defines these main components of IO as follows: Electronic Warfare is a set of military actions using electromagnetic energy to determine, exploit, reduce, or prevent hostile use of the electromagnetic spectrum, while allowing its use by friendly forces; Computer Network Operations are meant to attack, corrupt, disrupt, deny, exploit and defend electronic infrastructure information. They include Computer Network Attacks, Computer Network Defence, and Computer Network Exploitation; Psychological Operations are planned with the aim of communicating indicators and selected information to foreign audiences in order to influence their emotions, motivations, and objectives, and thus ultimately the behaviour of governments, organizations, groups and individuals. Influence is often associated with Psychological Operations; Deception involves actions that are deliberately executed with the aim of deceiving the adversary in his assessment of friendly capabilities, intentions and actions, thus leading him to make decisions conflicting with his interests and contributing to the success of the friendly mission; and Operations Security is the process of identifying critical information, and analysing the operations, of friendly forces with a view to identifying those actions observable by adversary information systems, determining indicators that these adversary systems could obtain and interpret to draw useful conclusions, selecting and executing measures aimed at eliminating to an acceptable level, and the vulnerability of friendly operations.
1) To attack the adversary commander’s perception of the situation, undermining his will and weakening his resolve, painting the inevitability of defeat while offering plausible alternative options for action; essentially persuading the adversary commander to think what you want him to think and making him choose what you want him to do.

2) The disruption of the adversary commander’s ability to exercise command; paralyzing him and preventing him from taking the initiative.\(^\text{17}\)

The goal of IO is to generate “information superiority,” or the “capability to acquire, exploit and disseminate an uninterrupted flow of information while denying an adversary’s ability to do the same.”\(^\text{18}\) Canadian doctrine notes:

IO is not a concept which is exclusive to the military. Instead, it must be embraced as a government-wide strategy. However, a strong IO capability is one of the many components offered by the Canadian military. IO can support overall Canadian Government strategic engagement policy throughout a range of military operations. The effectiveness of deterrence, the projection of national influence, and other strategic concepts is greatly facilitated by the ability of Canada to affect the perceptions and decision making of others. In times of crisis, IO can help deter adversaries from initiating actions detrimental to the interests of Canada or its allies or to the conduct of friendly military operations. If carefully conceived, coordinated and executed, IO can make an important contribution to defusing crises; reducing the period of confrontation and enhancing the impact of informational, diplomatic, economic, and military efforts; and forestalling or eliminating the need to employ forces in a combat situation. Thus, IO in peacetime, crisis and conflict, at both the national strategic and theatre-strategic levels, require close coordination among a wide variety of elements of the Canadian Government to include DND.\(^\text{19}\)

Information itself is becoming a strategic resource vital to national security. Information and its flow is fundamental to the sovereignty of a nation. Modern societies are dependent on a sophisticated civil/military information infrastructure that underpins every aspect of society in most developed countries. Defence, commerce, transportation and communications are just a few examples of key sectors which now depend heavily on information technology to function effectively. However, this dependency and its ensuing vulnerability has created a

\(^{17}\) Department of National Defence, B-GL-005-200/FP-000: Joint Intelligence Manual (Ottawa: Chief of Defence Staff, 2003), s.411.

\(^{18}\) Department of National Defence, CF Information Operations, B-GG-005-004/AF-032 (Ottawa: Chief of Defence Staff, 1998), para. 102.1.e.

\(^{19}\) Ibid., para. 101.1.a.(7).
double-edged sword. Armed with an effective means of acquiring, exploiting and affecting another nation’s information, advantages can be gained ranging from political, industrial, commercial, to defence.\textsuperscript{20}

Implications of this type of influence in the domestic domain, facilitated by the acceleration of global communications and information technology,\textsuperscript{21} highlight the growing importance of an orientation accounting for IO. As much of what is occurring is a soft battle of competing interests, the traditional avenue of legislation is potentially ineffective.

That the domestic security orientation is lagging behind environmental evolution is not particularly surprising, given that the Canadian Armed Forces have had challenges employing Information Operations despite having a doctrine in place since the late 1990s. An evaluation of CAF and DND participation in the Canadian-led Provincial Reconstruction Team (PRT) in Kandahar Province, Afghanistan has indicated an “apparent lack of general understanding of what is necessary for an IO campaign as part of a larger counterinsurgency mission.”\textsuperscript{22}

If the defence establishment lacks sufficient understanding after possessing detailed doctrine for two decades, it would be dangerous to assume that the assortment of Government of Canada institutions tasked with defence against undermining activities have optimized their orientation towards IO activities. This highlights a significant vulnerability given the Canadian government’s acknowledgement that “Critical infrastructure is the backbone to modern society and it is essential to national prosperity.”\textsuperscript{23} The accepted ‘Five-Eyes’ narrative notes:

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\textsuperscript{20} DND, \textit{B-GG-005-004/AF-032}, para. 101.1.a.(3).
\textsuperscript{21} Department of National Defence, \textit{Land Force Information Operations, B-GL-300-005/FP-001} (Ottawa: Chief of Defence Staff, 1999), 6.
\textsuperscript{22} Department of National Defence, Chief of Review Services, \textit{Evaluation of CF/DND Participation in the Kandahar Provincial Reconstruction Team} (Ottawa: 2007), 19.
\textsuperscript{23} Critical 5, \textit{Role of Critical Infrastructure in National Prosperity: Shared Narrative} (2015), 5. This is a narrative promulgated by the Critical 5 member nations of Australia, Canada, New Zealand, the United Kingdom, and the United States.
\end{flushright}
Cyber infrastructure is vital to growing and sustaining national economies. The economic reliance on digital infrastructure to prosper, however, does create challenges and creates new avenues for threats to critical infrastructure. While cyber systems may not be a critical infrastructure sector as defined by each Critical Five nation, each country uses these cyber systems and they are closely intertwined with infrastructure resources. The integrated and networked character of national and international infrastructures, such as electricity, gas and water grids, telecommunications networks, air, rail and shipping services, and the extent to which daily life depends upon their efficient functioning, has created new points of potential vulnerability. The increasing number and sophistication of cyber incidents has the potential to impact economic competitiveness and threaten the public’s ability to access and obtain basic services.\(^{24}\)

These new avenues of threat are characteristic of an increasingly complex rhizomatic/rodízio-style security environment.

The IO capabilities allowing potential adversaries to undermine Canada’s traditionally secure homeland are now easily accessible. Adversaries can now remain obscured within the complexity of the environment and intentionally exploit existential thresholds based upon use of force. Canada’s primary national security interest is no longer embodied as a military threat at the gates. Just as Hannibal of Carthage employed ‘undermining’ as a technique for breaching fortifications\(^{25}\) during his siege of the Sicilian city of Himera in 409 B.C.E.,\(^{26}\) there are now viable domestic concerns that are not so transparent. Such threats can be misjudged as not having the potential to develop towards a truly existential threat because they do not demonstrate the


\(^{26}\) Hannibal’s engineers would tunnel under the city’s walls, shoring up the chambers with wooden supports, and then set the supports ablaze, thereby collapsing the walls. By 304 B.C.E. countermines were also in use, consisting of tunnels and chambers dug under the likely locations where the attacker would place his siege engines. The earliest use of mine warfare of this type, based on a tomb drawing, may actually date to the Fifth Dynasty of Egypt (circa 2498-2345 BC). The earliest written record appears to originate from Babylon around 2225 BC. The Assyrians appear to have organized the first dedicated Corps of Engineers by approximately 850 BC. Siege mining, as practiced by the engineers of Alexander the Great (c.330 BC) and Julius Caesar (c.49 BC) did not change significantly until the appearance of black powder. See “The Origins of Land Mines”, *Jane’s Mines and Mine Clearance*, Online Edition, updated 18 August 2010.
familiar violent nexus defining a traditional national security threat. Just as technology influences the characteristics of military threats, it may also influence the domestic threat environment and undermine the traditional assumptions of homeland defence.

As discussed in Chapter 4, globalization involves the stretching of activities across political boundaries, intensification of interconnected trade flows, intensification in the velocity of global interactions, and deepening global impacts of local developments.27 Territorial boundaries can now be breached in an instant from anywhere in the world with access to an internet connection. Martin Van Creveld’s observation that “war is completely permeated by technology and governed by it” can be applied equally as well to the broader scope of contemporary national security.28 This realization is not particularly novel, as commentators have recognized a transition in the national security strategy agendas for several decades.29 Something akin to Rupert Smith’s suggestion of war experiencing a paradigm shift from “interstate industrial war” to “war amongst the people” is also occurring within domestic environments as the power of isolation is being eroded both physically and metaphysically.30 Adversaries now have the capability to target interests without direct attribution.

Just as Smith argues that military force is still being applied in a manner designed to have utility in an expired paradigm, national security systems have a tendency to resist revisions of mental patterns, or concepts of meaning, to cope with a rapidly evolving environment.31 Increased complexity has been met by various national policies and strategies intended to

27 Held et al., “Global Transformations,” 7.
28 Van Creveld, Technology and War, 1.
30 Smith, Utility of Force, 5.
31 Ibid., 6.
support three Canadian national security interests: protecting Canada and the safety and security of Canadians at home and abroad; ensuring that Canada is not a base for threats to our allies; and contributing to international security.\textsuperscript{32} So-called national strategies for counter-terrorism, critical infrastructure protection, and cyber security have been circulated, yet these follow the traditional interest-risk management approach in which the core assumption is that adaptation can be driven from Ottawa.\textsuperscript{33} In a security environment where complexity rules, the centripetal approach is fatally flawed in its lack of sensitivity to the growing criticality of local resilience. Effective national security is shifting from macro (national), through the meso (regional), to the micro (local) level; from homeland security to “hometown security.”\textsuperscript{34} This has significant ramifications for a nation of Canada’s geographic scale.

Canada’s wider national security architecture suffers from the variations of the same orientation optimization problems identified for defence: minimal insulation of the mainly dormant intended strategy mode from fat-tailed risks; and a persistent centripetal outlook within the emergent mode that imposes an orientation drag. These are the manifestation of the “centralization-decentralization conundrum” of Canada’s administrative legacy.\textsuperscript{35} As Gow and Hodgetts have noted, “administrative centralization and bureaucratization were responses to expanding public expectations of what governments should do, accompanied by a growing demand for political control and efficiency in a context of parliamentary democracy and

\textsuperscript{32} Privy Council, \textit{Canada’s National Security Policy}, 4-5.
\textsuperscript{34} Napolitano, “Homeland Security Begins with Hometown Security.”
industrialization.” This has naturally created a centralization mentality with respect to national security architecture. Unfortunately, the domestic security environment is evolving towards a condition in which some of the expectations of what government should do must be redistributed amongst public and decentralized institutions. Architectures for domestic counterterrorism, critical infrastructure protection, cyber security, and economic security need to shift towards an “inoculation” or “public health” orientation (this will be explained in greater depth later in this chapter). This represents a shift from centripetal towards centrifugal national security strategy.

**Centrifugal Counter Terrorism**

Significant atrophy in the emergent mode of Canada’s counterterrorism architecture is evident in the fat-tailed behaviour observed in the immediate aftermath of the 2014 lone actor attacks in Ottawa and Saint Jean sur Richelieu. Reactive changes were made. For example, the House of Commons and the Senate adopted the following motion in February 2015:

That [the Senate / this House], following the terrorist attack of October 22, 2014, recognize the necessity of fully integrated security throughout the Parliamentary precinct and the grounds of Parliament Hill, as recommended by the Auditor General in his 2012 report and as exists in other peer legislatures; and call on the Speaker, in coordination with his counterpart in the [House of Commons / Senate], to invite, without delay, the Royal Canadian Mounted Police to lead operational security throughout the Parliamentary precinct and the grounds of Parliament Hill, while respecting the privileges, immunities and powers of the

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36 Gow and Hodgetts, “Where are we coming from?” 186-7.
37 Caleb Barlow has proposed an inoculation model for cybersecurity. Caleb Barlow, “Where is cybercrime really coming from?” TED@IBM, San Francisco, 15 November 2016. Public health models have been advocated as being more effective than counterterrorism approaches grounded in the criminal justice system. Kamaldeep S. Bhui, Madelyn H Hicks, Myrna Lashley, and Edgar Jones, “A public health approach to understanding and preventing violent radicalization,” *BMC Medicine* 10.16 (2012).
respective Houses, and ensuring the continued employment of our existing and respected Parliamentary Security staff.³⁹

While the issue of high risk travellers (HRTs) and radicalization to violence had been on the security services radar for some time, these had been part of a wider national security agenda including cybercrime, cyberespionage and threats to critical infrastructure.⁴⁰ While the 170 officers allotted to the RCMP-led Integrated National Security Enforcement Teams (INSETs) had been “fully mobilized to address the threat of high-risk travelers”, these had to be reinforced in late-October 2014 with more than 300 additional officers being transferred from other federal policing priority areas such as organized crime and financial crime.⁴¹ By the spring of 2015, the allotment of officers to INSETs and National Security Enforcement Sections had increased to over 600 in order to sustain increased training, intervention and outreach efforts.⁴² However, as RCMP Deputy Commissioner Mike Cabana noted:

Even with all of these efforts, [the RCMP] still face challenges in countering and managing the threat posed by terrorism. For example, there is no single path to radicalization to violence and, as illustrated by the attacks of last October [2014], there is often little advance warning that someone intends to act violently. In the context of high-risk travellers, some individuals make travel plans without notifying family or friends, and law enforcement only becomes aware after they have left Canada. Fundamentally, there is no linear threat trajectory. Each case presents a unique circumstance, and every enforcement action must be considered carefully to prevent the threat from shifting or escalating.

Within this context, the large-scale redeployment of RCMP personnel to counterterrorism files, while necessary, is negatively impacting our capacity to manage other risks, such as those posed by serious and organized crime and

espionage. As a result, the RCMP recognizes that it needs to find a longer term solution to be able to respond to the breadth of its federal policing mandate.\textsuperscript{43} This is representative of a form of tactical fixation on terrorism occurring within the Government of Canada. Although Canada’s 2004 National Security Policy (NSP) had created the Integrated Threat Assessment Centre (ITAC) that became operational in fall 2004,\textsuperscript{44} by 2011 this instrument was refocused exclusively on terrorist threats.\textsuperscript{45} This corresponded with the emergent assessment of the principal terrorist threat to Canada [being] posed by violent extremists inspired by the violent extremist ideologies espoused by terrorist groups like Daesh and al-Qaida.\textsuperscript{46}

Terrorism and extremism also became the investigative priority of the Canadian Security Intelligence Service (CSIS), although other threats to Canada's national security, such as espionage, foreign interference and cyberattacks, persisted.\textsuperscript{47} As the CSIS Director has stated:

> Canada continues to be the target of malicious cyberattacks by foreign entities. These attacks have become a tool of choice for a range of hostile actors including both state and non-state actors because they are efficient, cost effective, and most importantly deniable.

> A number of foreign states continue to be involved in traditional espionage and foreign interference activities as they attempt to gather political, economic, and military information in Canada through clandestine means. Such states will pursue their own national interests through covert means, targeting Canadian businesses, political institutions, and members of the diaspora. And Canada also remains a target for illicit procurement efforts by those pursuing advanced technology including weapons of mass destruction.

\textsuperscript{43} Cabana, 20 April 2015 Proceedings.  
\textsuperscript{44} Privy Council, Canada’s National Security Policy.  
\textsuperscript{45} ITAC was rebranded the Integrated Terrorism Assessment Centre in June 2011.  
\textsuperscript{47} Canadian Security Intelligence Service Director Michel Coulombe, Comments before the Standing Senate Committee on National Security and Defence, Proceedings of the Standing Senate Committee on National Security and Defence. Issue 2, Evidence - Meeting of March 7, 2016.
In short, national security threats are increasing across the spectrum. And while the immediacy of the threat of terrorism requires the focus of a significant portion of our resources, we must be vigilant against other long-term threats.\(^\text{48}\) Similar to the RCMP, this concern for tactical over strategic risks resulted in the shifting of resources away from other programs and allotting budgetary increases being directed towards the “capacity to fight terrorism.”\(^\text{49}\) As of June 2016, 50 to 55 per cent of CSIS resources were focused on counterterrorism, with espionage being the secondary priority.\(^\text{50}\) This has been justified as follows:

Despite the fact that the number of resources allocated against other files, other than terrorism, might have gone down, we have again refined the way we work, partnerships, and the net outcome in terms of collecting the intelligence that is required, that our clients are looking for. I would say we haven’t really seen a degradation of the value of our different programs, be it China or any others.

What I’ve said is espionage is a serious threat. It’s our number two priority, but despite the fact that we have possibly less or the same level of resources for those programs, we have refined the way we work in those programs in terms of a more focused collection through our regional offices and a better leveraging of the capacity of partners, be it domestic or foreign, in order to meet the requirement of the client, which is the government.\(^\text{51}\)

This outsourcing of the Service’s foundational counterintelligence role to domestic and foreign partners received little notice, even though it is rather contradictory that a nation would rely upon foreign states to address their internal espionage concerns. The primary focus of Canadian security intelligence was historically Communist subversion and espionage, as well as separatist violence in Quebec. In 1991, a Cabinet intelligence directive refocused CSIS’ efforts on a wider spectrum of threats deemed detrimental to the national interests of Canada, such as international

\(^{48}\) Coulombe, 7 March 2016 Proceedings.
\(^{49}\) Ibid.
\(^{50}\) Ibid.
\(^{51}\) Ibid.
counter-terrorism, economic espionage, weapons of mass destruction, and foreign influenced activities.\textsuperscript{52}

Greater tactical fixation on terrorism has been aided by the refocusing of the nation’s only integrated assessment body to this single threat vector. This was facilitated by a lack of a national intelligence system which integrates policy-makers as participants. While various agencies conduct their own intelligence cycles, most go adrift at the initial stage due to apathy of their clients with respect to the initial direction/tasking stage. Intelligence analysis in Canada is process orientated rather than needs (or client) driven. Theoretically:

Intelligence analysis is driven by the needs of clients, i.e. consumers of the analytical product. The analytical effort is thus often directed through tasking by these clients. They take the initiative at this stage of the cycle, but the principle of partnership requires that both they and the providers share a responsibility for working together to ensure that the requirements for the analytical product are clearly defined and understood by both sides.\textsuperscript{53}

In this client-based intelligence system, clients communicate a specific requirement for intelligence products on an issue, or a range of issues, of concern, or the client expresses general interests or information requirements regarding areas of risk, threat or opportunity. From this customer interface intelligence providers anticipate and steer collection efforts.\textsuperscript{54}

Established in 1946 and reconstituted in 1963, a ‘Security Panel’ of selected deputy ministers traditionally held the mandate to “advise on the coordination of the planning, organization and execution of security measures which affect government departments, and to

\textsuperscript{54} UN Office on Drugs and Crime, \textit{Criminal Intelligence Manual}, 11.
advise on such other security questions as might be referred to it.” This organization eventually became the Interdepartmental Committee on Security and Intelligence (ICSI), which was chaired by the Clerk of the Privy Council Office (PCO) and recommended annual intelligence priorities to government. These requirements would then be approved by the Meeting of Ministers on Security and Intelligence, chaired by the Prime Minister. This committee subsequently became the Ad Hoc Committee on Intelligence Priorities. Since November 2015, the role of setting intelligence priorities is now held by the Cabinet Committee on Intelligence and Emergency Management, chaired by the Prime Minister.

As former National Security Advisor Stephen Rigby has described, in the current process:

Cabinet establishes the intelligence priorities for the community, and that is done annually. I prepare those priorities, present them to cabinet, and they are approved accordingly…Cabinet meets and establishes the [the government’s intelligence] priorities. Those are given out individually to the security agencies in government. They are converted into ministerial directives, so they are disaggregated from a broad-brush direction for something, and you can probably guess what one or two of them might be. From there, those directives are then placed into the work plans of the individual organizations.

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56 This role has now been assumed by the National Security Advisor. Privy Council Office, The Canadian Security and Intelligence Community: Helping Keep Canada and Canadian Safe and Secure (Ottawa: Privy Council Office, 2001), 13.
58 Member of this committee include: Chair: Prime Minister; Vice-Chair: Minister of Justice and Attorney General of Canada; Members: Ministers of Public Safety and Emergency Preparedness, Foreign Affairs, Leader of Government in House of Commons, Public Services and Procurement, Health, and Defence. Note there is also a Cabinet Committee on Canada in the World and Public Security that “Considers issues concerning Canada’s engagement with and participation in the international community, the promotion of Canadian interests and values abroad, the management of bilateral and multilateral relations, and international assistance.” The Committee is responsible for issues related to domestic and global security. “Cabinet Committee Mandate and Membership,” Prime Minister Office, 22 March 2016, http://pm.gc.ca/sites/pm/files/docs/Cab_committee-comite.pdf.
While such processes have existed in one form or another since 1946, Martin Rudner notes that the Cabinet did not actually issue any directive on intelligence priorities until the post-Cold War period:

In 1991, following the end of the Cold War, the federal Cabinet issued for the first time a directive on intelligence priorities setting out its urgent requirements for foreign intelligence collection.\(^{60}\) These priority requirements have been updated almost annually since then. Among the current priorities are international terrorism, ethnic and religious conflict, proliferation of weapons of mass destruction, illegal migration, transnational organized crime, economic (counter-) espionage, and trade intelligence. These priority requirements have been given operational expression in the tasking assigned to the Canadian intelligence community. National Requirements for Security Intelligence are determined annually, including a general direction from Cabinet given direction as to where CSIS should focus its efforts and setting out guidelines for its intelligence collection, analysis and advisory functions. These priority requirements have been given operational expression in the tasking assigned to the Canadian intelligence community. As regards foreign intelligence collection, the contemporary priorities imply the targeting of neutral and friendly countries.\(^{61}\)

But as noted by the Special Senate Committee on Security and Intelligence in 1999:

The previous Senate Special Committees on Terrorism and Public Safety noted that the Cabinet Committee on Security and Intelligence had fallen into disuse and it rarely, if ever, met. Those Committees expressed concern, therefore, that there was no active, formal mechanism by which the Prime Minister and Cabinet exercised on-going control, direction and accountability over the security and intelligence community. The Cabinet Committee on Security and Intelligence no longer exists, even on paper. Instead the Ministers Meeting on Security and Intelligence (‘MMSI’) chaired by the Prime Minister meets as needed and at least once each year. The essential function of the Ministers Meeting on Security and Intelligence is to establish priorities for the security and intelligence community, meaning the foreign and defence intelligence priorities as well as the national requirements for security intelligence. Ministers may also meet on an \textit{ad hoc} basis at the call of the Prime Minister when specific policy or operational issues arise pertaining to the security and intelligence sector.\(^{62}\)

\(^{60}\) Office of the Auditor-General of Canada, \textit{The Canadian Intelligence Community: Control and Assessment} (Ottawa, 1996).

\(^{61}\) Rudner, “Contemporary Threats,” 141-171.

\(^{62}\) Special Senate Committee on Security and Intelligence, \textit{The Report of the Special Committee on Security and Intelligence} (Ottawa: 1999), Chapter IV.
As the Auditor General of Canada more recently found, intelligence management across the Canadian government continues to be deficient.\(^63\) Although the Government of Canada theoretically sets intelligence priorities,\(^64\) the engagement of policy-makers in such activity is limited. As noted in a recent review of Defence Intelligence, “[w]hile the Minister of National Defence provides Ministerial direction to DND/CAF on the Government’s intelligence priorities each year, strategic direction for DI [Defence Intelligence] activities is otherwise weak, outdated or ad hoc.”\(^65\)

This is particularly concerning in that a lack of participation at the highest levels in deliberating on intelligence priorities is potentially limiting the ability to realize interdepartmental policy-strategy matching processes, leading to a level of tactical fixation within individual ministry program areas, which in turn manifests as a lack of resilience. That a holistic balance of intelligence coverage across the entire spectrum of potential threats to Canada’s interests is not occurring is evident in the Security Intelligence Review Committee’s observation that:

The end of the Cold War and the subsequent rise of the threat of terrorism have led to fundamental changes in intelligence priorities. In its most recent Public Report, CSIS confirmed that terrorism remains its “greatest preoccupation,” while at the same time reminding Canadians that the threat of espionage continues to be


very real and that Canada “is a highly attractive target for hostile intelligence agencies.”

The inference that CSIS is becoming preoccupied on terrorism at the expense of monitoring other potential, more costly longer-term threats to national interests should concern Canadians. While threats to life are serious, terrorism arguably falls within the *l’historie événementielle*. Canadians should question whether this focus has placed Canada at greater risk from the forces of the *longe durée*.

The proceeding highlights a signal/boundary system inconsistent with an evolving domestic security environment. The fat-tailed behaviour of the RCMP in reinforcing INSETs at the expense of other federal policing priorities originates in the growing obsolescence of key legislation, in particular the 1985 *Security Offences Act (SOA)*. Under this Act, the RCMP has primary responsibility for offences constituting a threat to Canada, as defined in the *CSIS Act*. While there are provisions for arrangements with provincial and municipal police forces, the SOA effectively displaced any responsibility for national security at provincial and municipal levels. While this outlook was logical for investigating threats of international counter-terrorism, WMD proliferation, and espionage that were generally isolated from the public, this centripetal model is ill-suited for the diffuse nature of contemporary threats such as radicalization to violence, cyber-attack, and interference with critical infrastructure. The evolving domestic threat environment is closer to Rupert Smith’s “war amongst the people” paradigm, yet the national security architecture is designed for an “interstate industrial war”.

The need to shift orientation towards a “hometown security” model that seeks to build resilience at the periphery (i.e., local level) is evident in the requirement for a holistic approach to counterterrorism. In viewing counterterrorism as crime prevention, Tore Bjørgo suggests:

A broad holistic approach to preventing terrorism can be based on nine preventative mechanisms: building normative barriers against terrorism, reducing radicalization and recruitment, deterrence, disruption, incapacitation, protecting vulnerable targets, reducing benefits to terrorists, reducing harm, and facilitating disengagement from terrorism. Counter-terrorist policies which are based only on a narrow range of repressive mechanisms and military measures tend to become overly heavy-handed, producing serious negative side effects which serve to enhance the problem rather than reducing it. A more holistic approach, making use of the entire range of preventative mechanisms, may lighten the impact of the “hard” measures by relying more on the impact of the “softer” and more positive means to build moral barriers, reduce recruitment, and facilitate exit from terrorist movements.  

What is immediately apparent is that these preventative mechanisms employ a diverse set of actors in addition to national security and intelligence services, most of which are at the local (i.e., municipal) and regional (i.e., provincial) levels. Principal actors will include local police, prosecutors, courts and prison authorities, youth and social workers, religious leaders, teachers, employers, political authorities, news media, military, general public, community groups, and NGOs. An Ottawa-centric framework cannot expect to actively manage this complex array of activity across a nation as vast as Canada. A public health approach to counterterrorism, defined as “[t]he science and art of promoting and protecting health and well-being, preventing ill health and prolonging life through the organized efforts of society,” offers a useful framework. In essence, the primary goal is to inoculate society against extremism. This requires a centrifugal

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71 Ibid.
72 Bhui et al., “A public health approach.”
national security strategy that seeks to build resilience in the emergent mode and utilizes the intended strategy mode for optimization rather than control.

The current terrorism and extremism focus of CSIS is actually an inefficient use of scarce resources. As per the CSIS Act, the Service is mandated to advise and report to one client: the Government of Canada.\textsuperscript{73} Its intelligence priorities are set by the centre for the narrow needs of the centre. This tends to reinforce the assumptions and priorities of the centre rather than the periphery that is actually in a better position to initiate adaptive action. Thus the intelligence efforts become rather self-serving and susceptible to fat-tailed behaviour. Under the current orientation, the tactically fixated national security law enforcement and intelligence architecture remains isolated from the diverse array of local actors that are in a position to take more strategic action. Outdated legislation, such as the SOA, prevents effective leveraging of the condition that “local law enforcement outpaces government and domestic intelligence agencies on sharing relationships with the private sector and the perceived quality of the information and intelligence shared.”\textsuperscript{74} Legislative mandates effectively firewall the direction phase of national-level intelligence cycles from the requirements of peripheral clients, ultimately resulting in a reinforcement of tactical fixation.\textsuperscript{75}

\textit{Self-Help Economic Security}

Canada’s long-term economic security has been jeopardized by the perception of the necessity for the RCMP and CSIS to maintain a primary tactical focus on counterterrorism. This

\textsuperscript{73} \textit{Canadian Security Intelligence Service Act} (R.S.C., 1985, c. C-23), s. 12(1).
\textsuperscript{74} Ruben Vroegop, \textit{The State of Information and Intelligence Sharing in Canada} (Ottawa: Conference Board of Canada, 2016), 22.
\textsuperscript{75} Ibid., 21.
tactical orientation has overshadowed awareness of the fact that “[e]conomics is coming to occupy a more prominent position in determining the capacity of Canada and other nations to maintain their relative positions in the international system.”

National prosperity has always been acknowledged to be tied to the interchange of commodities with other countries. During the time when Canada was at risk of physical invasion, the determination of what was in the “best interests of the country's welfare” was rather straightforward. Military interests once coincided with national development:

Military considerations arising out of the War of 1812, inspired the selection of the more secluded, triangular, and restricted route of the Ottawa river and the Rideau lakes as a line of communication between Upper and Lower Canada, and the work, carried through at the expense of the Imperial Government, and completed in 1832, for a time diverted much of the through traffic from the St. Lawrence. The completion of the post-road from Montreal to Kingston, utilized in conjunction with the navigable reaches of the river as a composite route partly by land and partly by water, restored much of this traffic to the St. Lawrence even before the difficult work of canalization was completed; and when, in 1841, the union of the provinces made possible a complete canal system nine feet in depth on the direct route of the Upper St. Lawrence, the issue was placed beyond doubt. Henceforth the tortuous, small-scale route of the Rideau system continued steadily to decline in importance, while the St. Lawrence continued to expand.

As the threat of invasion subsided, the economic interests of the fledgling nation were synonymous with the public interest:

A new transportation problem arose with the settlement of the Prairie Provinces, where the land is devoted chiefly to raising grain and livestock. Owing to the long hauls that intervene between the producer and consuming markets, freight charges absorbed a considerable part of the proceeds. The Great Lakes afforded the least

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76 Potter, *Economic Intelligence*, 10.
expensive route to the East and tidewater. But these lakes are open only part of
the year, and navigation closes before the season's crops can be moved from the
lake ports. With the filling up of the country and consequent increase in
production, came a general demand for additional means of transportation. While
land speculation probably had no little influence, the farmer felt the effect of
inadequate facilities, and any project that promised relief appears to have found
approval among citizens who were able, through their legislatures, to bring public
aid to the development of these enterprises. Railroads, therefore, were not only
actively in demand, but railroad builders were popular and had little or no
difficulty in obtaining public support for proposed new lines.\textsuperscript{80}

Similar public support can be said to have existed after the discovery of the Leduc oil field in
1947.\textsuperscript{81} Given the current climate of uncertainty in relation to obtaining market access for
Canadian crude oil and liquefied natural gas (LNG),\textsuperscript{82} it is somewhat ironic that continental
defence considerations during the Korean War facilitated the one Canadian tidewater pipeline
that is currently in existence. As the \textit{Royal Commission on Energy} noted in 1959:

\begin{quote}
Following the outbreak of the Korean War in 1950, the United States Petroleum
Administration for Defense took action, on occasion, to assist in the maintenance
of a high level of oil exploration and development in Western Canada. For
example, it helped to obtain priority in the allocation of steel and other scarce
materials produced in the United States. The Canadian oil industry had been
studying, since 1950, the possibilities of new markets on the Pacific Coast. The
possibility of using Canadian crudes in the refineries of British Columbia and the
favourable competitive position of Alberta crudes in the Pacific Northwest
markets, when compared to California and overseas oils, were considered to
justify the building of a pipe line from Alberta to the Pacific Coast. The outbreak
of the Korean War and defence considerations hastened the decision to build the
pipe line. Trans Mountain Oil Pipe Line Company commenced construction of
this second major venture in oil pipe lines in Canada in 1952. This involved the
construction of a pipe line from Edmonton to Vancouver and the Puget Sound
\end{quote}

\textsuperscript{80} Privy Council Office, \textit{Report of the Royal Commission to Inquire into Railways and Transportation in Canada}
\textsuperscript{81} Privy Council Office (Henry Borden, J. Louis Levesque, George Edwin Britnell, Robert D. Howland, Leon J.
\textsuperscript{82} As of 2017, the two main crude pipelines – Energy East, and Trans Mountain – proposed for gaining market
access to world oil prices remain uncertain. So too are the LNG projects proposed for the Kitimat, BC region.
area. In view of its importance in terms of continental defence, steel was allocated to the project from United States sources.\textsuperscript{83}

Similar to Rupert Smith’s contention of a paradigm shift in war, the dynamics of national infrastructure are experiencing significant evolutions. Practitioners of unconventional warfare have noted the growth of resistance movements that “span the breadth of organized opposition from reform-oriented social movements to social revolution, to insurgency, and on to larger armed revolutionary movements.”\textsuperscript{84} It is noted that “movements choosing to follow a nonviolent strategy attract a much larger domestic support base than armed and violent movements.”\textsuperscript{85} For democratic systems in which legislation and intelligence triggers are predicated on the use of violence, this is a significant development.\textsuperscript{86}

Largely ascribed as being inspired by the ‘Battle in Seattle’ at the 1999 World Trade Organization ministerial meeting, there has been a recent emergence of activism on a global scale targeting transnational, non-state targets such as corporations and trade systems.\textsuperscript{87} As CSIS noted prior to its refocus towards terrorism, the internet continues to play a significant role in

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\textsuperscript{83} PCO, Royal Commission on Energy: Second Report, 29-30.
\textsuperscript{85} Votel \textit{et al.}, “Unconventional Warfare in the Gray Zone,” 106.
\textsuperscript{86} See for example the “threats to the security of Canada” in s.2 of the \textit{Canadian Security Intelligence Service Act}.
facilitating the pursuit of such objectives. Social networking tools have provided “microphones for the masses,” leading to an explosion of “grassroots expression” and “interactive, horizontal networks” characterized by “self communication.”

As journalist Viviane Krause has observed:

For more than a decade, there has been a complex international effort to stymie the oil industry in Canada. It’s called the Tar Sands Campaign and the main sources of funding for this campaign are the Rockefeller Brothers Fund, the William and Flora Hewlett Foundation, the Oak Foundation, the Sea Change Foundation, the Tides Foundation and other charitable foundations, most of which are based in California… these foundations have provided at least $75-million for campaigns and land use planning initiatives that thwart the development and export of Canadian oil.

As one group records in their U.S. tax return in relation to their “Climate Campaign,” their objectives are significant in terms of political and potential economic impacts:

The US-and-Canadian governments need to adopt climate and energy policies to achieve a shift to a green energy economy that dramatically reduces our use of fossil fuels and invest in the development of clean energy technology. While this transition is occurring, the impacts of the extraction of dirty fuels like tar sands and coal bed methane need to be minimized. Across the world the debate is raging about how to best deal with this massive challenge – and ForestEthics has an important role to play. The key elements of our successes to date – communications, corporate engagement, government and industry negotiations, coalition building and grassroots organizing – will serve as the foundations of our efforts in the climate arena – Alberta’s Tar Sands and Coal Bed Methane mining in the Sacred Headwaters – but it will also contribute more broadly to making these types of projects unacceptable. By stigmatizing ‘dirty’ sources of energy, we can make it difficult to finance and sell these products, while building awareness of the need to make energy choices with low climate change impacts.

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The momentum we will create through this work can be leveraged into corporate and government policies that phase out carbon intensive energy sources and phase in low-carbon energy technologies.\footnote{ForestEthics “Return of Organization Exempt from Income Tax,” \textit{US Department of Treasury Internal Revenue Service Form 990 (2008)}, Schedule O – Supplemental Information to Form 990 or 990-EZ, 2.}

Although such tactics are generally foreign to corporations and domestic agencies more comfortable dealing with physical threats, in essence what is occurring is a concerted IO campaign against economic interests. Yet Canada’s orientation for national security has not effectively adapted to account for the threat of non-state IO. Distinct from economic espionage,\footnote{For a discussion of economic espionage in Canada see Samuel D. Porteous, “Economic Espionage,” \textit{Commentary} (Ottawa: Canadian Security Intelligence Service, May 1993).} this type of IO might more appropriately be termed \textit{economic subversion}. This is despite the fact that “freedom from internal subversion and freedom from the erosion of the political, economic, and social values which are essential to the quality of life in Canada” are clearly stated as Canada’s national security objectives.\footnote{Adopted by the Canada’s National Defence College in 1980, this definition is attributed to Major-General L.V. Johnson, Commandant of the National Defence College 1980-83. Cited in Barry Buzan, \textit{People States & Fear: An Agenda for International Security Studies in the Post-Cold War Era}, 2nd ed. (Boulder Colorado: Lynne Rienner Publishers, Inc., 1991), 17.}

Complex ideological cleavages that were traditionally reserved for the international domain are now becoming more ingrained in domestic affairs as a result of globalization. It may be argued that not only is there a need to balance competing economic interests of provinces, but also the ideological influence of the “Nine Nations of North America”, Joel Garreau’s contention of the way North America “really works” as a continent of “Nine Nations” categorized by their own views of the world and “distinctive web of power and influence” rather than state borders.\footnote{As described by Peter Newman, the nine nations of Garreau’s reshuffled geography: THE FOUNDRY – described by Garreau as “the declining industrial areas of the Northeast that tend to view the other eight nations as subservient, tribute-paying colonies, shrugging off their inexorable slide of population and ambition to other places as temporary aberrations, susceptible to some quick fix.” As well as southern Ontario, the Foundry included half a dozen U.S. states stretching from New York to Illinois; NEW ENGLAND - The New England states and the Maritime...}
Aggravating these factors is the growing influence of global interests that now have direct access to the Canadian populous through information and communications technology.

The term ‘economic subversion’ had previously been part of the national security lexicon. It was used by T. D’Arcy Finn, the first director of CSIS, in describing “the rules of operation” for foreign intelligence that offend the rule of law, the Charter, and the Canadian value system.  

Finn noted that the rules of operation for foreign intelligence were “not particularly close to the norms that most [Canadians] would deem to be acceptable.” However, acknowledging the potential use of political and economic subversion, bribery, coercion and, “at the outer limits, even the use of force” against Canada, Finn saw the protection Canada’s economic competitiveness as a national interest:

That we might not be able to rely implicitly on our friends and allies not to take advantage of us in circumstances where they might have an opportunity is also a part of the new reality of economic intelligence and economic security; whether because of the disintegration of political-military-security alliances or whether because of the perceived need in almost every country to maintain market share, competitive advantage and technological superiority; this phenomenon, I think, will become more and more critical as we move further through the 1990s toward the turn of the century. In times when economic stability, particularly among the major industrialized nations, has been suspect, I believe that we must, in spite of political, economic, or trade, alliances, be ever more vigilant in the protection of our own interests than we may have been in the past.

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provinces, as well as Newfoundland and Labrador; DIXIE - Most of eastern Texas and the southern states, as well as Florida, down to Fort Myers; THE ISLANDS - The Caribbean, parts of Venezuela and the Miami-Fort Lauderdale boot of southern Florida; MEX AMERICA - Mexico, Arizona and New Mexico, as well as Southern California; THE EMPTY QUARTER - Most of Alaska, Northern Canada, parts of Alberta and the Rocky Mountain trench down to Denver; THE BREADBASKET - Southern Saskatchewan and Manitoba, as well as Iowa, Nebraska, Oklahoma and northern Texas; QUEBEC - The only chunk of territory that remained the same in reality as in Garreau's imaginary atlas; ECOTOPIA - The thin coastal strip stretching from Alaska in the north to just south of San Francisco. Newman, “The Nine Nations of North America,” 48; Garreau, Nine Nations of North America.

97 T. D’Arcy Finn, “Does Canada Need a Foreign Intelligence Service?” Canadian Foreign Policy 1.3 (Fall 1999), 160. T. D’Arcy Finn was the first director of the Canadian Security Intelligence Service (1984-1987).

98 Ibid.

99 Ibid.

100 Ibid., 155.
These comments were, however, expressed a decade after subversion had effectively been expunged from Canada’s national security orientation.

As evident in the McDonald Commission’s attention to the differentiation between subversion and dissent, there has been an underlying uncomfortableness with the concept of subversion in Canada. The Security Intelligence Review Committee (SIRC) notes in their 1986-7 Annual Report:

Counter-intelligence and counter-terrorism offer little room for disagreement. A given foreign nation either spies on us or it does not. No exception can be taken to counter-intelligence aimed at protecting our secrets from those that do.

Similarly, there is no place for terrorism in a country like ours with well-entrenched democratic means for gaining and using power. Any of us could be the innocent victim of a terrorist act. Clearly, those who would use violence to reach their political goals must be detected and stopped.

Counter-subversion is different. The right of peaceful dissent is the bedrock of democracy. Yet there are a few Canadians who proclaim their belief in the need for violent revolution. And even peaceful dissent may be secretly perverted by foreign powers whose goals are not the goals of most Canadians.

**Grey Zones.** At what point does dissent make an individual or an organization a legitimate target for the Counter-Subversion Branch of CSIS? How much talking about violence does it take to raise a real threat of violent acts? When does contact with foreign powers become detrimental to the interests of Canada?

SIRC further stated:

We concluded that the Counter-Subversion Branch is primarily concerned with two things:

- The potential ability of foreign powers to manipulate Canadian policy through social institutions or legitimate protest groups.

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• The possibility that certain groups might undermine Canadian institutions and bring about the violent overthrow of the state.

In both cases, there appeared to be an underlying belief that the Canadian public was only too liable to be duped.

We think that the Counter-Subversion Branch over-estimates the influence and persuasive power of these groups. From our own reading of the media and our own personal knowledge of people in every walk of life, we know that Canadians are generally mature enough to resist the blandishments of the groups concerned.

**Over-estimated.** We also believe that CSIS over-estimates the likelihood of violence by some groups.  

Observing that the gray zone concerns of the counter-subversion branch intersected with the undue foreign influence and the risk of violence concerns of the Service’s counter-intelligence and counterterrorism branches, SIRC recommend that the counter-subversion role should be split between these two branches.  

The subsequent Osbaldeston Report agreed with SIRC that analysis “should have a dominant effect on all significant activities of a security intelligence agency, including the setting of reasonable collection priorities.” It was felt that analysis was required to determine the strategic threats posed by subversive activity and that open source analysis should take precedence over more intrusive investigative techniques. The Independent Advisory Team on the Canadian Security Intelligence Service recommended:

To the extent that the subversion threat originates in the domestic environment, it seldom brings with it the same danger and urgency as other types. Those domestic threats that do pose significant danger usually involve activities that can be more properly treated as terrorism or foreign interference, and can be dealt with as part of the CSIS counter-terrorism or counter-intelligence function. If individual rights are to be given proper consideration, threat analysis for domestic subversion must

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104 Ibid., 40.
use open sources in the majority of instances. Only infrequently will the seriousness of the threat demand more intrusive techniques. That option must be available as a last resort, but it must not be granted lightly.\textsuperscript{106}

Acting on the recommendations of SIRC and the Advisory Team, the Solicitor General disbanded the counter-subversion branch of CSIS in February 1987. While some files were assigned to the counter-intelligence and counterterrorism branches, the majority were reallocated to the Research and Analysis Production Branch for monitoring through open sources.\textsuperscript{107} By 1990 a special, all-party committee of the House of Commons established to review the \textit{Canadian Security Intelligence Service Act} and the companion \textit{Security Offences Act} recommended that the domestic subversion clause in section 2(d) be struck from of the \textit{CSIS Act}.\textsuperscript{108} This action was never executed, as removal of this section would hamper the ability of CSIS to provide advice on subversive threats to the government.\textsuperscript{109}

\begin{quote}
While the interpretation of the threshold differentiating domestic subversion from dissent requires a full study that is beyond the scope of this work, it is clear that the nature of subversive activity is evolving. Interference with the economic stability of Canada need not involve “activities directed toward undermining by covert unlawful acts, or directed toward or intended ultimately to lead to the destruction or overthrow by violence of, the constitutionally established system of government in Canada.”\textsuperscript{110} Rather than targeting government, subversion is evolving to target the economic system that underwrites the state. This presents a critical concern, as Sun
\end{quote}

\begin{footnotes}
\textsuperscript{109} Fluke, “Section 2(D) In Question,” iv.
\textsuperscript{110} \textit{Canadian Security Intelligence Service Act}, s.2(d).
\end{footnotes}
Tzu’s *shih* (strategic configuration of power) becomes increasingly interdependent on adapting national infrastructure in order to establish and build on networks and commercial links in a dynamic global economy. Sun Tzu’s six questions for knowing victory and defeat need to be transposed into the economic domain.

As Sun Tzu’s *Tao*, or support for government policies and leadership, is shifted to the economic domain, it begins to correspond loosely to a version of the corporate social responsibility concept of *Social Licence to Operate* (SLO). Coined by Canadian mining executive Jim Cooney in a 1997 meeting with the World Bank, social licence emerged in the early 2000s due to the growing divergence around the expectations of minerals-led development. It was an industry response to opposition and a mechanism to ensure the viability of the sector.

A social license is said to exist when a project is “seen as having the broad, ongoing approval and acceptance of society to conduct its activities.” Neil Gunningham defines social licence as “the demands on and expectations for a business enterprise that emerge from neighborhoods, environmental groups, community members, and other elements of the surrounding civil society” and notes that these conditions may be stronger than those imposed by regulation, resulting in unprofitable “beyond compliance” corporate measures. Hence, social licence “governs the extent to which a corporation is constrained to meet societal expectations and avoid activities that

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112 Sun Tzu claims that one can “know victory and defeat” by estimation of: Which ruler has the Tao? Which general has greater ability? Who has gained [the advantages of] Heaven and Earth? Whose forces are stronger? Whose officers and troops are better trained? Whose rewards and punishments are clearer? Sun Tzu, *The Art of War* (1994), 167.
113 *Tao* is interpreted in the Sawyer translation to be “legal and administrative measures and policies”. Sun Tzu, *The Art of War* (1994), 303n.
115 Jason Prno and D. Scott Slocombe, “Exploring the origins of ‘social license to operate’ in the mining sector: Perspectives from governance and sustainability theories,” *Resources Policy* 37.3 (2012), 346.
societies (or influential elements within them) deem unacceptable, whether or not those expectations are embodied in law.”116

The roots of SLO can be found in the ‘social contract’ concept of corporate management theory.117 As Shocker and Sethi noted in 1973:

Any social institution – and business is no exception – operates in a society via a social contract, expressed or implied, whereby its survival and growth are based on:

1) [Relevance] the delivery of some socially desirable ends to society in general, and

2) [Legitimacy] the distribution of economic, social, or political benefits to groups from which it derives its power.

In a dynamic society, neither the sources of institutional power nor the needs for its services are permanent. Therefore, an institution must constantly meet the twin tests of legitimacy and relevance by demonstrating that society requires its services and that the groups benefiting from its rewards have society's approval.118

Caution must be applied to the use of social licence:

Speaking of a social license as granted by a community is a shorthand for a more complex situation. Thomson and Boutilier prefer to speak of stakeholder networks rather than communities. They adopt Freeman’s (1984) definition of stakeholders as those who could be affected by the actions of a company or who could have an effect on the company. The stakeholder network, therefore, could include many parties outside a geographic community, such as ethical investment funds, international human rights activists, international financial institutions, and national governments. The stakeholders may or may not agree on what level of SLO should be granted. Usually there are political differences of opinion within the network of stakeholders. An understanding of how the various levels of SLO

are proportionally distributed throughout the network provides the basis for strategies for changing the overall SLO (e.g., alliance formation, issue reframing, etc.). Anti-mining activists of various stripes (e.g., anti-capitalism, anti-development, anti-globalization, anti-mining) will use such knowledge to lower the SLO while mining companies will use it to try to raise their SLO.119

Other commentators note that the SLO more correctly describes social acceptance. As full consensus from all “communities” is unlikely, the tendency for fixation on the licence aspect being a specific permission is misleading. Social acceptance could logically be achieved as a result of “reluctant tolerance.”120 David Bursey and Venetia Whiting note that SLO shorthand:

…can confuse the public discussion because the complexity is lost in the discussion. SLO becomes an expression that misaligns expectations and focuses the debate on a vague concept of governance that defies definition and form, rather than focusing on improving performance where it matters.121

Beginning as a metaphor equating the ability of communities to stop development projects with that of governments,122 SLO has become a convenient method of shifting perceptions of responsibility for interest balancing out of the traditional government domain. Most concerning for Canada has been the crosspollination of the SLO concept with the obligation of free, prior, and informed consent (FPIC) contained within the United Nations Declaration on the Rights of Indigenous Peoples.123 An “FPIC” test that is inconsistent with the “duty to consult and

121 Ibid.
The result is a type of economic information operation that attempts to circumvent the balancing of interests that is foundational to democracy: the exercise of discretion by the Governor in Council (GIC) “based on polycentric considerations and a balancing of individual and public interests, including Aboriginal interests and concerns.” However, by using IO campaigns intent on manipulating perceptions of SLO and that target the relevancy and legitimacy of economic agents, the traditional tripwire thresholds for subversion directed against the system of governance can be skirted.

Vulnerability is thus created by the current national security orientation that has expunged economic subversion and security and intelligence agencies that are tactically fixated on narrowly defined counterterrorism efforts. The effect is to leave the nation’s economic actors in a self-help mode. This is likely to become a significant impediment to economic adaption.

*Cyber Inoculation*

The cyber protection of the nation’s critical infrastructure is another area that industry has essentially been left in a self-help mode by the combination of changing environment and the tactical fixation of the national security architecture. The Government acknowledges that:

Canada’s national security relies on the uninterrupted functioning of its critical infrastructure, disruptions of which can have a serious impact on lives, the safety of communities and the economy. Critical Infrastructure organizations use the vast array of interdependent networks and systems, including information technology (IT) and industrial control systems (ICS), to support their operations

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and ensure that Canadians have access to essential products and services. However, these systems are vulnerable to accidental disruption and intentional exploitation, both of which can create devastating consequences.\textsuperscript{126}

At the same time that Canada’s “Digital Economy” is becoming more integrated and dependent on technology, the number of threat vectors and vulnerabilities are growing exponentially.\textsuperscript{127} The range of threat actors and vectors currently include: industrial espionage;\textsuperscript{128} state-sponsored cyber espionage;\textsuperscript{129} hacktivist/recreational hackers;\textsuperscript{130} and organized criminals.\textsuperscript{131} Yet calls for intelligence capabilities to be “deployed to detect and prevent the targeting of critical infrastructure and ensure the pursuit and prosecution of the perpetrators,” are wholly inconsistent with the current centripetal national security orientation.\textsuperscript{132}

Cyber security for critical infrastructure protection incorporates that similar “centralization-decentralization conundrum” as the contemporary counterterrorism problem of homegrown violent extremists.\textsuperscript{133} As with counterterrorism and economic subversion, a full treatment is beyond the scope of this work. It is sufficient to note that a decentralized inoculation strategy offers greater potential utility for adaptive advantage.\textsuperscript{134} As Caleb Barlow suggests, the traditional orientation towards attribution and prosecution is unworkable. A most viable

\textsuperscript{126} Public Safety Canada, \textit{Fundamentals of Cyber Security for Canada’s Critical Infrastructure Community} (Ottawa: 2016), 5.
\textsuperscript{127} Ibid., 6.
\textsuperscript{128} Individuals or organizations who seek classified and proprietary information, including market and pricing strategies, corporate financials, client information, product designs or formulas, research data and corporate vulnerabilities.
\textsuperscript{129} Persons who are well-funded and supported by national programs with sophisticated capabilities to compromise and exploit vulnerable systems.
\textsuperscript{130} Hackers, both experienced and inexperienced, who operate using the latest techniques and tools to perform a network attack, sometimes for personal gain or as part of an organized group.
\textsuperscript{131} PSC, \textit{Fundamentals of Cyber Security}, 7.
\textsuperscript{133} Aucoin and Bakvis, \textit{The Centralization-Decentralization Conundrum}.
\textsuperscript{134} Barlow, “Where is cybercrime really coming from?”
approach involves changing “the economics for the bad guys.” A healthcare pandemic model is offered as an example of how this might be achieved:

SARS, Ebola, bird flu, Zika. What is the top priority? It’s knowing who is infected and how the disease is spreading. Now, governments, private institutions, hospitals, physicians – everyone responds openly and quickly. This is a collective and altruistic effort to stop the spread in its tracks and to inform anyone not infected how to protect or inoculate themselves.\(^{135}\)

Cyber inoculation would require a significant change to current centralized orientation:

Unfortunately, this is not at all what we see in response to a cyber attack. Organizations are far more likely to keep information on that attack to themselves. Why? Because they’re worried about competitive advantage, litigation or regulation. We need to effectively democratize threat intelligence data. We need to get all of these organizations to open up and share what is in their private arsenal of information. The bad guys are moving fast; we’ve got to move faster. And the best way to do that is to open up and share data on what’s happening. Let’s think about this in the construct of security professionals. Remember, they’re programmed right into their DNA to keep secrets. We’ve got to turn that thinking on its head. We’ve got to get governments, private institutions and security companies willing to share information at speed. And here’s why: because if you share the information, it’s equivalent to inoculation. And if you’re not sharing, you’re actually part of the problem, because you’re increasing the odds that other people could be impacted by the same attack techniques.\(^{136}\)

This style of peripheral information sharing is fundamentally different from the national-level intelligence cycles with priority intelligence requirements set by Cabinet. Incorporating the information needs of dispersed private sector clients was never envisioned in the drafting of the CSIS Act or the mandate of the Communications Security Establishment Canada.\(^{137}\) This is a considerable departure from the traditional paradigm of vital point protection of facilities, manufacturing plants and services critical to a nation-wide war effort. The now mothballed Vital

\(^{135}\) Barlow, “Where is cybercrime really coming from?”

\(^{136}\) Ibid.

\(^{137}\) Section 273.64 (1)(b) of the National Defence Act (R.S.C., 1985, c. N-5) does make provision for “advice, guidance and services to help ensure the protection of electronic information and of information infrastructures of importance to the Government of Canada.”
Points (War) Program beginning in 1938 and the Vital Points (Peace) Program implemented after the October Crisis of 1970 were designed for the rather simple task of protecting facilities against sabotage by means of an attack by a single well-armed adversary or a small similar group of 2 to 6 persons approaching from outside the facility. Modern cyber defence for critical infrastructure is a markedly more complex task due to the spectrum of co-evolving actors and technology involved.

Reinforcing the Emergent Mode

The contemporary challenges of counterterrorism, cyber security, critical infrastructure protection, and economic security converge around complexity. As discussed in Chapter 4, reinforcing the intended strategy mode has often been advocated as the means to overcoming this complexity; however, the issues identified in relation to defence and hometown security appear to indicate otherwise. The common theme of security decentralization reinforces previous arguments that efforts to optimize the intended strategy mode will have limited utility for dealing with complexity if the precursor emergent mode is not optimized for adaptive advantage. The inutility of Ottawa’s counterterrorism, cyber security, and critical infrastructure protection strategies for those actually in contact with the environment and able to take adaptive action would seem to confirm this.

Perceiving real-time national security as occurring within a complex adaptive system of systems assists in demonstrating that long-term sustainability is best addressed through enhancing one’s ability for adaption rather than impulsive pre-commitment to a future forecast,

or a grand strategy. Hometown security is about building adaptive advantage. This means building heterogeneity, modularity, redundancy, responsiveness, feedback loops, adaptive mechanisms, trust, and reciprocity into the orientation mechanisms of those emergent modes that are in closest contact with co-evolving agents and aggregates. Only by building robustness and resilience into the emergent mode will the nation ensure it can understand and cope with evolving environments. These are the metrics that offer the greatest utility for detailed studies of particular bounded subsystems. The model of centrifugal national security strategy provides a viable starting point.
CONCLUSION: BEYOND THE GRAND DELUSION

The public life of every political figure is a continual struggle to rescue an element of choice from the pressure of circumstance.¹

The common form of grand strategy is more myth than magic. Much of the discourse advocating grand strategy for Canada has assumed that a central grand vision, with a corresponding implementation strategy, is a panacea for ensuring national security. That national security objectives can be achieved without an attempt to design or declare a grand strategy seems absurd, yet the central theme developed in this work is based on such a paradox. The idea that Canadian grand strategy can be better understood as an emergent behaviour of aggregate agents within a complex adaptive system is a fundamental shift from the parameters of standard discourse. Yet, the evidence to reinforce this framework is all around us. The ‘wetness’ of the water we drink is an emergent property. Our ‘consciousness’ is a result of emergence. The human immune system, biological cells, weather, economic markets, and a host of other phenomenon all behave as complex adaptive systems where order emerges rather than being preordained. The introduction of ‘biological thinking’ to the study of grand strategy is precisely the type of ‘broadly integrative thinking’ advocated by Gell-Mann.

Emergence provides a novel means of synthesizing classical strategic thought based in the art and science of war with other fields such as biological sciences, economics, and business. The acknowledgment of emergence broadens the discourse towards the discovery within management science of the Anderson-Nielson adaptive strategy model, itself a variation of

¹ Henry Kissinger, White House Years (Boston: Little & Brown, 1979), 54.
Mintzberg’s patterns of strategy formation. The notion that strategy is *formed* rather than *formulated* further opens the discourse up to the relative roles of *emergent* and *intended* strategy modes. This fits nicely with Berlin’s identification of *centripetal* (i.e., seeking the centre) and *centrifugal* (i.e., centre-fleeing) intellectual personalities and Holland’s suggestion that the way to steer complex adaptive systems is to modify signal/boundary hierarchies.

Integrating these foundations, we can derive at least two forms of national security strategy: the customary centripetal form of grand strategy in which a dominant intended strategy mode seeks to force adaption at the periphery; and a decentralized centrifugal form of adaptive strategy in which the peripheral emergent mode initiates adaption and a more passive intended strategy mode complements it when and where appropriate. The customary grand strategy concept is actually a poor model for attempting to ‘steer’ outcomes within complex adaptive systems where prediction-defying, nonlinear co-evolution dominates. By way of analogy, a winding road can defeat the brightest headlights in a similar manner to grand strategy being overwhelmed by uncertainty and complexity. The alternate fox-like centrifugal form has greater utility for a middle power. This form focuses not on an inward projection of single vision, but on capabilities to effectively integrate, prioritize, and balance interactions with the external environment. Within the context of Boyd’s Observe-Orient-Decide-Act Loop, the implicit guidance and control emanating from the orient phase, rather than the decide phase, becomes the key enabler.

The centrifugal model enables policy-makers operating in real-time to shift their efforts away from forecasting around subjective national interest towards more tangible objectives. It facilitates a focus on assessing and optimizing *adaptive advantage* within the nation’s bounded subsystems (or aggregate agents). This can be done by facilitating the ability of the agents within
the emergent mode to continually adjust their patterns of meaning in order to orient themselves to their environment. Efforts to build robustness and resilience around the periphery increase long-term sustainability by insulating the system from shocks. The study of complex adaptive systems has identified the means to resilience: the maximization of heterogeneity; modularity; redundancy; responsiveness; feedback loops; adaptive mechanisms; trust; and reciprocity within the system agents. Building the capability to continually adapt and co-evolve with the environment is the means towards the emergence of Canadian grand strategy.

This study set out to explore the utility of the grand strategy within a Canadian context and found this utility in a particular form of national security strategy. As a full reconnaissance of the behavior phenomenon of grand strategy was conducted with a view to understanding its utility as a tool for real-time policy and strategy making, the overall scope has necessarily been extremely broad. While this has facilitated broadly integrative thinking on the phenomenon of grand strategy, it has meant that analysis of resilience and adaptive advantage factors identified had to be conducted at a qualitative, rather than, quantitative level. As has been identified in the closing chapters, this work suggests numerous avenues for further detailed study of the Canadian national security architecture. The model identified here is merely an initial foothold. Perhaps the most important contribution of this work is bypassing of the standard discourse on whether a Canadian grand strategy can or should exist. It is hoped the frame of reference that emerged from this study provides Canadian policymakers with a means of moving beyond the grand strategy debate. Shifting focus towards resilience and adaptive advantage will be crucial for Canada’s continued survival and prosperity in an increasing complex national security environment.
APPENDIX A: CANADIAN MILITARY DOCTRINE ON STRATEGY

Doctrine

Military doctrine is defined by the Canadian Armed Forces as: “the fundamental principles by which military forces guide their actions in support of objectives.”1 The Canadian Forces uppermost doctrine hierarchy includes Capstone, Keystone Joint, and Supporting Joint Doctrine.2

Instruments of Power

Canadian doctrine describes these primary instruments of national power as:

Diplomatic. Diplomacy is “the management of international relations by negotiation.” It is the first and most important instrument in seeking to avoid or limit hostilities and will continue even after the commencement of conflict. Diplomacy is dependent on the power of persuasion, i.e. convincing others to take actions that allow for the successful prosecution of a nation’s foreign policy. Principally through their role in deterrence and coercion, armed forces play a major part in diplomacy, and provide resources to counter hostility, build and maintain trust, and assist in international development;

Informational. Information itself is a strategic resource vital to pursuing national interests. The informational instrument of national power has a diffuse and complex set of components with no single centre of control. Decision making at the national strategic level is increasingly dependent on a reliable and real-time flow of relevant information. Military operations, in particular, are dependent on many simultaneous activities, relying on timely flow and dissemination of information to aid real-time effective decision making. Information readily available from multiple sources influences domestic and foreign audiences including citizens, adversaries, and governments;

Military. Military power is applied as appropriate to achieve national objectives. Military power is normally used only as a means of last resort when other

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2 Department of National Defence, Canadian Forces Joint Publication 01: Canadian Military Doctrine (Ottawa: Joint Doctrine Branch, 2009), Annex A.
instruments of national power have failed, or are at risk of failing, to protect national interests; [and]

**Economic.** The economic instrument of national power is multi-faceted and may be used in a variety of ways. Liberal or restrictive trade policies can open up or deny markets while the provision of foreign aid can be used to entice nations to behave in certain ways. Specific economic activities in support of national objectives may include disruption of trade, withdrawal of aid, or direct economic sanctions. The instrument of economics may require the application of military force to give it effect, as in the case of sanction enforcement operations.³

**Policy & Strategy**

Canadian military doctrine differentiates between policy and strategy as follows:

Strategy is a concept for linking means to ends. Policy defines the end state, while strategy outlines the plan. Strategy therefore links policy to specific activities. Policy is the province of national policy makers and involves the application and coordination of all elements of national power – diplomatic, informational, military and economic – toward the achievement of national aims and objectives. Strategy is the concept that links available national resources to government ends - over time, and as circumstances change. For the Department [of National Defence] and the [Canadian Armed Forces], strategy is about how to use our resources to best support the government’s aims.⁴

The terms policy and strategy are further delineated as follows:

Policy is a set of actions and conditions – prescribed by or on behalf of the Prime Minister and Cabinet – that governs decisions and activities of ministers and other officials in implementing the government’s agenda. For the purpose of force employment, national policy is defined as the expression of the desired end-state sought by the government and guidance for the employment of the instruments of power.

Strategy is the art and science of developing and using the political, economic, social-psychological, and military powers of the state in accordance with policy guidance to create effects that protect or advance national interests relative to other states, actors or circumstances.⁵

³ DND, *CFJP 01: Canadian Military Doctrine*, Section 0201.
⁴ DND, *B-GL-005-500/FP-000*, section 120.5.
⁵ Ibid., Chapter 1, 8.
Notably, the current Canadian doctrinal definition of strategy is clearly an adaptation of a 1984 American doctrinal version that reads:

The art and science of developing and using political, economic, psychological, and military forces as necessary during peace and war, to afford the maximum support to policies, in order to increase the probabilities and favorable consequences of victory and to lessen the chances of defeat.\(^6\)

Canadian Forces capstone doctrine portrays the nature of strategy as:

Strategy, in its broadest sense, is the art of devising and employing a plan or process to achieve an objective. At the national strategic level, strategy is the art and science of developing and employing the instruments of national power (including the armed forces) in a synchronized and comprehensive fashion to secure national objectives. The Canadian Forces’ (CF) definition of strategy is: “the application of national resources to achieve policy objectives.”

Strategies are plans, or ways, of achieving desired ends, utilizing defined means. Strategy is multi-dimensional and incorporates political, economic, military, technological, socio-cultural, legal, and moral components. The aim of strategy is to create desired effects to influence national and international events, achieving equilibrium between the ends and the means, which represents a combination of policy and doctrine designed to facilitate a coherent and timely national response to a prevailing strategic environment.\(^7\)

**Levels of Conflict**

Four “levels of conflict” – the national (or grand) strategic, the military strategic, the operational, and the tactical – are acknowledged in Canadian doctrine.\(^8\) Providing a “strategic

\(^6\) United States Department of Defense, *Joint Chiefs of Staff Publication 1: Dictionary of Military and Associated Terms* (Washington, DC: Joint Chiefs of Staff, 1984). The current version of this publication defines strategy in significantly different language as “A prudent idea or set of ideas for employing the instruments of national power in a synchronized and integrated fashion to achieve theater, national, and/or multinational objectives.” United States Department of Defense, *Joint Publication 1-02: Dictionary of Military and Associated Terms* (Washington, D.C.: Joint Chiefs of Staff, 2016).

\(^7\) DND, *CFJP 01: Canadian Military Doctrine*, sections 0301-0302.

\(^8\) Ibid., Section 0227. This is notably the only apparent reference to grand strategy in CF doctrine. As it is quoted at the commencement of Chapter 2 of this publication, it would appear that the synonymous use of national strategy and grand strategy is based on Edward Mead Earle’s description: “The highest type of strategy – sometimes called grand strategy – is that which so integrates the policies and armaments of the nation that resort to war is either unnecessary or undertaken with the maximum chance of victory.” Edward Mead Earle, “Introduction,” to *Makers of
framework for the planning and conduct of military campaigns and operations”, these levels are related to the intended outcome rather than distinct levels of command or force structure. Representing only a loose hierarchy since the boundaries between elements are not absolute, these levels are defined as:

- **National [or grand] strategic** is the level where the nature and quantity of a country’s resources dedicated to achieving national policy objectives are determined by the political leadership. It is at this level that the coordination of all instruments of national power occurs and military-political aims are established.

- **Military strategic** is the strategic level where military strategic goals consistent with the desired national policy end state of a conflict are determined. At this level, military strategies are formulated, resources allocated, and political constraints established. Military actions at the strategic level are frequently joint.

- **Operational** is the level that links the military strategic and tactical levels. At the operational level, major operations are planned, conducted, and sustained, to accomplish military strategic goals. Tactical events are coordinated in sequence by operational staffs and resources allocated in order to achieve operational objectives.

- **Tactical** is the level where battles and engagements are planned and conducted. Activities focus on integrating and applying the operational functions (Command, Act, Sense, Shield and Sustain) to achieve specific objectives within an established timeframe.

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9 DND, *CFJP 01: Canadian Military Doctrine*, Section 0226.

10 Ibid., Section 0227.
Strategic Estimate

The Strategic Estimate is an analytical tool in joint military doctrine used to facilitate the development of global campaign planning and theater strategies. A dynamic and continuous strategic estimate process is intended to result in “a better understanding and visualization of the complete security environment to include potential adversaries, friends, and neutrals.” The process involves broad analysis of policy goals, strategic end state(s) to be achieved, characteristics of the strategic environment, major strategic and operational challenges, potential opportunities to improve the strategic situation, and an assessment of risk.

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11 Reproduced from Figure 2-2: The Levels of Conflict and their Relationship to Military Operations, in DND, CFJP 01: Canadian Military Doctrine, Chapter 2, 11.
13 Ibid., Appendix B.
Levels of Planning

In addition to these four levels of conflict, Canadian doctrine also acknowledges the four levels of planning as government policy, strategic (or departmental), operational, and tactical. Strategic level planning is interpreted as departmental planning, based on national policies and objectives established by the Government of Canada, for diplomatic, informational, military and economic courses of action in order to respond to domestic or international crises. For the military establishment, strategic level (or departmental) planning is considered the determination of the most effective use of Department of National Defence (DND) and CF resources.

CF Forces Employment Planning Process

Strategic level planning is embodied in the CF Forces Employment Planning Process (CF FEPP) framework, which is indicated in doctrine to encompass “a constant interactive dialogue between actors at the policy, strategic and operational levels” with the intent of ensuring strategic and political control of plans developed for translating national objectives into CF objectives. This framework is described as follows:

The CF FEPP is the process by which future CF Force Employment is anticipated, assessed, approved by the Government of Canada (GoC), planned and direction for its preparation and commencement is issued. The CF FEPP involves a series of inter-related activities, which are conducted both sequentially, in that there are chronological elements to the process, and interactively, in that the implications and consequences of analyses and decisions cross-impact other ongoing initiatives. Force Employment Planning is also an adaptive and dynamic process.

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14 DND, B-GL-005-500/FP-000, pp. 1-8. Operational Level Planning, the preparation of plans and orders for CF operations that seek to translate strategic direction into missions and tasks for tactical commanders, utilizes the CF Operational Planning Process (CF OPP). Tactical Level Planning involves the preparation of orders governing “the deployment and employment of forces and the conduct of battles, engagements or specific tasks in support of the mission.” Ibid., sections 115-16.
15 Ibid., section 114.
16 Ibid., sections 115-16.
It requires dialogue among senior leaders; concurrent and parallel plan development, and collaboration across multiple planning levels. The process starts by identifying the salient considerations affecting CF Force Employment out three to five years. This analytical activity is informed by fundamental directions and constraints imposed by Government policy and available resources as well as by strategic intent derived from the national and international situation.  

The element of political control and moderation that is inherent in this description of the CF FEPP is a modern representation of the concerns underlying the warning about force development planning that Minister of National Defence Brooke Claxton issued to the Canadian Chiefs of Staff in 1950:

The great danger of planning activities of this kind is that the planners, generally very bright officers of the rank of colonel, major and captain, live and work without regard for the facts of national life. Unless they are very closely supervised, they are apt to draw up plans that are utterly unrealistic and impossible of fulfilment. Military planning on this scale sought ideal solutions; military programming invariably in Canada has to be aimed much lower.  

This blending of government policy and strategic (or departmental) level planning and programming within Canada’s defence establishment is traditionally viewed as a Capability Planning Process which begins with some form of strategic assessment and concludes with the discernment of appropriate defence capabilities relative to the projected international security environment. At least theoretically,

The first stage in the process, the Strategic Assessment, is a document which provides an appreciation of current and projected developments which are expected to affect the security of Canada over the next 15 years. It takes into consideration intelligence estimates and technology forecasts. The Assessment

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17 DND, B-GL-005-500/FP-000, section 117.
19 It is recognized that terminology used to describe this process has varied since the Second World War. As it may be argued that the fundamental nature of the process is constant regardless of adjustments in terminology, this 1980s description has been deliberately used to describe defence programming activity of in a broad sense. Colonel W.N. Russell, “The Making of Canadian Defence Policy,” Canadian Defence Quarterly 12.4 (Spring 1982), 19.
evolves from a series of detailed studies on specific aspects of the domestic and international environment. These studies, when amalgamated, provide the foundation upon which policy options can be based. It is important to note that the Strategic Assessment is “descriptive”, but not “prescriptive”, that is, it sets the scene and, where appropriate, shows trends, but it does not attempt to suggest what should be done as a result.\textsuperscript{20}

Tools used as part of the CF Force Employment Planning Process include:\textsuperscript{21}

Rolling Strategic Estimates. Output generated from the strategic analysis provides the nucleus for practical considerations of the potential ends, ways and means of CF Force Employment in the three to five year horizon. This is a continuous, iterative process, involving all strategic staffs in a variety of venues and processes such as Intelligence Indications and Warnings (I&W), Strategic Operations Planning Group (SOPG), strategic readiness, etc.\textsuperscript{22}

Strategic Outlook (SO). Informed by the deductions of the Rolling Strategic Estimate, the SO is a recurring opportunity to examine and shape the strategic environment. The focus of the SO is on achieving desired strategic effects during the following 12 to 36 months. Usually conducted as part of the CDS’ Commander’s Council or DMC, the SO provides the opportunity for full spectrum, joint effects to be discussed and for command direction/course correction to be imparted on contingency planning. Several SOs are held per year, each one focused on a selected, relevant topic. SOs are managed by SJS DGP.\textsuperscript{23}

Horizon Scanning. The monitoring and evaluation of external and internal environments for potential areas of Canadian involvement is called Horizon Scanning. This normally occurs at the operational level. It is restrained to the relevant Area of Responsibility (AOR) and conducted in concert with strategic I&W in order to anticipate events and cue activities with long lead-times (e.g., intelligence analysis). Horizon Scanning feeds back into the Rolling Strategic Estimate and provides a bottom-up complement to the alignment of planning effort, thus supporting a strong, common strategic unity of effort.\textsuperscript{24}

Intelligence and Operations Look Ahead (IOLA). Another output from the Rolling Strategic Estimate is the IOLA that provides the DM and the CDS, briefings at a classification higher than SECRET, on topics of a strategic nature/impact in a forum where they can ask questions and discuss the issues. Briefings alternate between a global scan and thematic or regional approaches.

\textsuperscript{20} Russell, “Making of Canadian Defence Policy,” 19.
\textsuperscript{21} For a graphical summary of this process see DND, \textit{B-GL-005-500/FP-000}, 1B-1.
\textsuperscript{22} DND, \textit{B-GL-005-500/FP-000}, 1-10.
\textsuperscript{23} Ibid., 1-10.
\textsuperscript{24} Ibid., 1-11.
They are often based on [Critical Information Requirements] CIRs from key decision makers and can help focus or initiate the strategic planning effort.\textsuperscript{25}

In actual practice, these strategic assessments are rarely as objective as may seem in theory and are only as good as the quality of the information and analysis underpinning the intelligence estimates and forecasts from which it is prepared.

\textsuperscript{25} DND, \textit{B-GL-005-500/FP-000}, 1-13.
APPENDIX B: SURVEY OF DEFENCE POLICY 1945-2005

Defence Policy 1945-1963

Canadian foreign and defence policies in the post-war period were characterized by a number of contextual conditions. These circumstances included: the continuation of bi-lateral military cooperation between the United States and Canada that had been formalized in the 1940 Ogdensburg Declarations; the international co-operation obligations created under the United Nations Charter for the maintenance of peace and security; the obligations for mutual territorial defence against aggression intrinsic to membership in the North Atlantic Treaty Organization; the 1951 development of NATO into a system of collective military forces; the advent of Soviet nuclear weapons and long-range delivery systems presenting a direct threat to North America resulting in a bi-lateral system of air defence (NORAD agreement in 1958); and the need to counter the destabilizing effects of the dissolution of pre-war empires with activities such as peacekeeping. In addressing these conditions, an inherent limitation in terms of means and ends for a ‘middle power’ has also been of critical importance in shaping Canadian policy.

Within this wider background environment, the strategies by which Canada’s interests and objectives have been pursued since 1945, as first indicated in the 1964 White Paper, were various combinations of Collective Measures for maintenance of peace and security, Collective Defence (as embodied through NATO), Partnership with the United States in North American defence, and National Measures to discharge responsibilities for the security and defence of Canada. These measures were means by which interests and objectives were pursued while

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2 Ibid.
simultaneously limiting military commitments and responsibilities to tolerable levels; hence, Canada’s deliberate choice not to develop nuclear armaments, to not become part of the inter-American defence system involving Latin American states (Inter-American Treaty of Reciprocal Assistance signed in Rio de Janeiro in 1947), to completely withdraw troops from Asia after Korea, and to refuse to assume regional defence obligations in the Pacific under South East Asia Treaty Organization (SEATO).³

Although there was a post-World War II recognition that a return to the traditional mechanisms generating military power in Canada – ambitious expansion plans which, lacking corresponding reserves and equipment, required a lengthy period of mobilization – were likely inconsistent with timelines of future wars, ⁴ military reorganizations from 1945-48 maintained this custom for ground forces. As indicated in the 1964 White Paper, “…the basic concept underlying the post-war reorganization was traditional: a mobilization base and a mobilization period. The primary aims of the post-war re-organization were to improve the mobilization base and to reduce the mobilization period.”⁵

The further recognition that Canada’s relatively strong and prosperous position amongst other United Nations members in the immediate post-war period carried with it new responsibilities provided some impetus for the underlying assumption that the Army should remain the principle service. The apparent lesson of the importance of sea and air power during the Second World War, coupled with a geography isolated from prospective battlefields and a domestic trepidation towards conscription, suggested that Canada’s more natural role would be

⁴ Ibid.
⁵ Ibid.
the provision of air and naval forces. Within the context of real mobilization potential (i.e., post-war stockpiles of arms and material and a substantial personnel reserve of individuals with military service), the immediate post-war period mobilization plans for a six division field Army with all supporting arms and services, a 100,000-man Navy, and a balanced Air Force were both logical and feasible since they provided sufficient flexibility during a time of considerable uncertainty and were – at least in theory – credibly underwritten.\(^6\)

From the early 1950s, acceptance of operational commitments in Korea, for the defence of Northwest Europe and the western Atlantic, for the air defence of North America, and the adoption of Mutual Aid and air training programs represented a fundamental shift in Canadian defence policy towards ‘forces-in-being’ rather than reliance on ‘mobilization potential’. The 1964 White Paper described this policy transition as “transference from credit to cash” in strategic terms.\(^7\) Additional significant change in Canadian defence policy occurred in 1959 with conversion of the R.C.A.F. Air Division in Europe to a strike and reconnaissance role and the assignment of the ‘national survival’ role to the Army.\(^8\) In military organizational terms, these policy transitions represented abandonment of any notion of holistic Canadian military forces and acceptance of the specialization and subordination – at least in terms capability for independence of action – of Canadian military assets within the total capabilities of collective alliance forces.\(^9\)

\(^7\) Ibid., 9.
\(^8\) Ibid.
\(^9\) Ibid.
1964 White Paper on Defence

Following on the finding of R.J. Sutherland’s 1963 Report of the Ad Hoc Committee on Defence Policy observing that Canada’s defence policies since 1959 were “grossly inefficient, and in need of revision”, the Pearson Government’s 1964 White Paper has been described as a “pragmatic and realistic approach to the Canadian defence policy conundrum”. In the 1964 White Paper, the government based its policies on recognition of a range of potential conflicts including all-out thermonuclear war, large-scale limited war, insurrection, guerilla activity, and political upheaval. The possibility of nuclear or major non-nuclear war was seen as “least likely” provided the “balance of deterrence” could be maintained. Significantly, the potential for détente between the West and the Soviet Union was acknowledged and the importance of foreign policy and diplomacy were confirmed as “vital instruments” for encouraging opportunities for “accommodation and relaxation”.

The assessed priorities of the 1964 White Paper were: 1) Forces for the direct protection of Canada which could be deployed as required; 2) Forces-in-being as part of the deterrent in the European theatre; 3) Maritime forces-in-being as a contribution to the deterrent; 4) Forces-in-being for UN peace-keeping operations which would be included also in (1); and 5) Reserve forces and mobilization potential. The corresponding procurement and expenditure strategy was therefore based on the intent to: a) re-equip the Army as a mobile force; b) provide an adequate air and sea lift for [the Army’s] immediate deployment in an emergency; c) acquire tactical...

aircraft; and d) maintain a relatively constant improvement of maritime anti-submarine capability.\(^{13}\)

The 1964 White Paper effectively stick-handled three unresolved issues relating to nuclear weapons: the question of joining the ‘nuclear club’; the characterization of Canada’s political responsibilities as a member of a nuclear-armed alliance; and the matter of provision of nuclear weapons to the Canadian armed forces. The Liberals confirmed directly that the national manufacture of nuclear weapons, an undertaking inconsistent with the limited resources of Canada and strategically irrelevant beyond simply giving an option for a national decision to launch nuclear weapons, was “not contemplated”. In confirming NATO as a nuclear-armed defensive alliance, the Liberals addressed the second issue by clearly affirming that “[o]ne cannot be a member of a military alliance and at the same time avoid some share of responsibility for its strategic policies.”\(^{14}\) On the question of nuclear weapons for Canadian military forces, Hellyer provided that “[h]aving accepted the responsibility for membership in a nuclear-armed alliance, the question of nuclear weapons for the Canadian armed forces is a subordinate issue. It depends on how we can most effectively contribute to collective strength.”\(^{15}\) Effectively, the Pearson government was successfully able to diffuse the responsibility for the subsequent armament of Canadian forces on the entire alliance, rather than the government of the day.

Addressing the disparity in opinion over NATO strategy was at the core of the 1964 White Paper. The government attempted to find common ground between the competing

\(^{13}\) DND, 1964 Defence White Paper, 24.
\(^{14}\) Ibid., 13.
\(^{15}\) Ibid.
doctrines of *massive retaliation* (i.e., immediate reliance on nuclear weapons) and *graduated defence* (i.e., reliance on conventional forces with the ability to trade territory for time). While acknowledging the continued need for both strategic and tactical nuclear capabilities as a backstop, the Canadian policy represented a reversal of the 1945 to 1963 period during which rapid technological change was essentially allowed to drive strategic concepts and therefore policy, an unsustainable situation for a nation with limited manpower and resources.\(^\text{16}\) The Liberal government therefore adopted the concept of *graduated or flexible response* as the foundation of their defence policy:

> In the belief that adequate force through a wide spectrum is essential to the deterrence of war, it is the policy of the government, in determining Canada’s force structure for the balance of the decade, to build in maximum flexibility. This will permit the disposition of the majority of our forces in Canada where they will be available for the deployment in a variety of peacekeeping activities.\(^\text{17}\)

The provision of the ‘disposition of the majority of our forces in Canada’ is somewhat akin to the ‘Canada First’ concept that would much later appear in the Harper government’s *Canada First Defence Strategy*,\(^\text{18}\) however, in defining those aspects of North American defence that defined the defence of Canada and must therefore be subject to Canadian control in the national interests, Pearson’s government provided a basis from which to organize defence. The *1964 White Paper* stated the minimum requirements for the defence of Canada are: “the ability to maintain surveillance of Canadian territory, airspace and territorial waters; the ability to deal with military incidents on Canadian territory; the ability to deal with incidents in the ocean areas off the


\(^{17}\) Ibid.

\(^{18}\) It should be noted that the 2008 *Canada First Defence Strategy* is effectively an organizational and procurement strategy rather than defence policy *per se*. It is not included in this review of defence policy for that reason.
Canadian coasts; and the ability to contribute, within the limit of our resources, to the defence of Canadian airspace.”

The future of North American air defence was discussed only briefly in the 1964 White Paper, and hinged primarily on the potential policy implication of an anti-ICBM system being deployed by the United States. Other than confirming that effective air defence required nuclear capabilities, the most noteworthy inclusion was the prediction of a “downward trend in continental air defence forces” and the subsequent calculation of a gradual decline in the portion of Canada’s resources directed towards air defence.

In the realm of maritime forces, the 1964 White Paper confirmed the continuance of the anti-submarine warfare role for the Canadian Navy as consistent with the strategy of flexible response.

In terms of peacekeeping, the 1964 White Paper acknowledged that the desire to establish a permanent United Nations military force was not likely to be accomplished. The paper noted:

The failure of the Great Powers to agree on the enforcement measures provided for in the Charter has led to improvisations as the practical demands for United Nations assistance arose. This situation, combined with the resistance of some other member states, has rendered impracticable for the time being the establishment of a standing United Nations force. In addition, experience has taught the need for flexibility in the organization, composition and mandate of United Nations military forces.

From this the Liberal government perceived the need for speed, mobility, and versatility for the deployment of peacekeeping forces; hence, the policy advocated the development of force structures that could provide highly mobile forces for ground observation, air surveillance, rapid

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20 Ibid., 14.
21 Ibid., 15.
22 Ibid., 16
transportation and reliable communications.\textsuperscript{23} Such roles would be separate from the ‘military and quasi-military’ roles in the defence of Canada, such as survival operations, search and rescue, communications, and aid to the civil power.\textsuperscript{24}

Having stated its position on what needed to be accomplished in the defence of Canada, the defence of North America, NATO, air operations, maritime affairs, and peacekeeping, the 1964 White Paper proceeded in Section IV to deal with the control measures of the defence forces of Canada required to most effectively and efficiently achieve these objectives. It was here that the Liberals heavily referenced the Royal Commission on Government Organization’s recommendations relating to “rigidities in the defence establishment.”\textsuperscript{25} Notably, the Liberals went beyond the recommendations of the Royal Commission for a “gradual transfer of executive control of common requirements to the Chairman, Chiefs of Staff”, and stated their opinion that the creation of a single unified command structure under a single Chief of Defence Staff and a single Defence Staff would more adequately address issues of operational control and effectiveness, decision making processes, and the desired reduction of overhead.\textsuperscript{26} This reorganization was proposed as the “first step toward the creation of a single unified defence force for Canada.”\textsuperscript{27} In briefly addressing the counterarguments to this policy, the Liberals dismissed concerns for weakening of “esprit de corps” and diminishing of inter-service competition as not standing up to careful scrutiny.\textsuperscript{28}

\begin{footnotes}
\textsuperscript{23} DND, 1964 Defence White Paper, 15.
\textsuperscript{24} Ibid.
\textsuperscript{25} Ibid., 17.
\textsuperscript{26} Ibid., 17-18.
\textsuperscript{27} Ibid., 18.
\textsuperscript{28} Ibid.
\end{footnotes}
Perhaps a more fundamental change than military command reorganization came with the policy elements designed to maintain effective civilian control. The Liberal’s acceptance of the Royal Commission’s recommendation that the Deputy Minister be given “greater responsibility for keeping under review the organization and administration methods of the Canadian defence establishment, and assisting the Minister in the discharge of his responsibility for the control and management of the Armed Forces” represented a considerable change.²⁹

Under the fundamental assumption that the major defence contribution of Canada would continue to be the participation in collective defence arrangements with emphasis on NATO, Section V of the 1964 White Paper provided the force structure that the government felt was most effective in achieving defence and foreign policy objectives. Most significant was the reaffirmation of the Canadian Brigade Group’s role on the central European front as a useful contribution at a vulnerable point, which by its “presence” was politically significant for both Canada and the Alliance.³⁰ Furthermore, the policy clearly stated Canada’s position that the provision of further forces to Europe to act as a reserve, or ‘mobile force’, on the European flanks was not contemplated. Positioning of ‘mobile reserve’ forces in Canada represented a more economical solution than positioning additional forces forward in Europe – as had been requested by Supreme Allied Command Europe – and provided justification for maintaining the relatively cheaper logistical option of keeping the current Brigade Group on the front.³¹ The conversion of the fourth Brigade into an air-portable lightly armed and equipped ‘special service force’ and the re-equipping and retraining of the two reserve brigades in Canada as ‘mobile

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³⁰ Ibid., 21.
³¹ Ibid.

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forces’ available for rotational service with the NATO Brigade or any other contingency represented a clear commitment to manage costs, and potentially more importantly, the expectations of allies.

In terms of air forces, the major change was the increasing emphasis on provision of support to Canadian ground forces, the elimination of requirements for specialized aircraft, and the provision to increase air transport capabilities to enable the visions of more versatile deployment capabilities.\(^{32}\) While the ‘possibility’ of procuring two or three nuclear-powered submarines was indicated in the 1964 White Paper, the principal naval organizational contents were a further affirmation of the specialized anti-submarine role within the greater context of other alliance contributions, and the potential for acquisition of additional sea-lift “either in conjunction with the anti-submarine force or independently”.\(^{33}\)

Other than submitting the question of the reorganization of Reserve forces to the Suttie Commission, the 1964 White Paper merely confirmed the primary role of the militia as to support the Regular Army by replacing Regular Army personnel on domestic duties in order to bring the field force up to establishment and by forming the framework for logistics and special units not provided for in peacetime. Secondary roles were defined as the “provision of a training force which would be required in an emergency to support the field forces; internal security including the provision of trained officers and men for guarding key points; and assisting the Regular Army in its national survival responsibilities.”\(^{34}\)

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\(^{33}\) Ibid., 23.

\(^{34}\) Ibid., 25.
Defence in the 70s: 1971 White Paper on Defence

The 1971 White Paper issued under Defence Minister Donald MacDonald was professed to be as a result of need for a fundamental reappraisal of Canadian defence policy in response to important international and domestic changes since 1964.35 International developments were identified as significant changes in the “nature of the strategic nuclear balance”, a “loosening of the bipolar international system”, and a more pessimistic outlook in the prospects for effective international peacekeeping.36 Coupled with these were national concerns such as the development of the North, an extension of Canada’s territorial sea, establishment of coastal fisheries control zones, heightened offshore mineral resource exploration, and, later, the domestic threats from violent revolutionaries as seen during the October 1970 Front de libération du Québec (FLQ) crisis.37

As a result of questions regarding Canada’s continuing contributions to the NATO alliance in light of the prominence of détente and the recovery of Western Europe, the Trudeau government had commenced a major foreign and defence review after coming to power in the spring of 1968. Trudeau was determined to change the middle power “helpful fixer” role that had characterized Pearson’s foreign policy.38 In March 1969, Cabinet had decided that Canada would remain in NATO, but under different stipulations. Trudeau announced this defence policy shift on 3 April 1969 when he indicated “a planned and phased reduction of the size of the Canadian

37 Ibid.
forces in Europe.”\textsuperscript{39} In addition, Trudeau announced the phasing out of Canada’s nuclear role and a realignment of Canada’s defence priorities to: 1) the protection of sovereignty; 2) the defence of North America; 3) participation in NATO; and 4) peacekeeping.\textsuperscript{40} The 1971 White Paper was intended to “explain in greater depth the decisions outlined in this policy statement, to provide a policy framework for the further decisions by the Government on questions of current force posture and strategy, and to indicate the future direction of policy.”\textsuperscript{41}

Reiterated in the opening section of the 1971 White Paper, the national foreign policy aims of Canada were defined as: secure continuance of Canada as an independent political entity; enjoyment and enlargement of prosperity in the widest possible sense for Canada and all Canadians; and “that all Canadians would see in the life they have and the contribution they make to humanity something worthwhile preserving in identity and purpose.”\textsuperscript{42} In order to achieve these aims, the underlying intent of Canada’s national policy was defined as seeking to: “foster economic growth; safeguard sovereignty and independence; work for peace and security; promote social justice; enhance quantity of life; and ensure a harmonious natural environment.”\textsuperscript{43}

The underlying assumption of the 1971 White Paper was that “[a] catastrophic war between the super powers [constituted] the only major military threat to Canada.”\textsuperscript{44} From this came the deduction that “Canada’s overriding defence objective must therefore be the prevention of nuclear war by promoting political reconciliation to ease the underlying causes of tension, by working for arms control and disarmament agreements, and by contributing to the system of

\textsuperscript{39} Department of External Affairs, Statements and Speeches 69/7, “A Defence Policy for Canada,” 3 April 1969.
\textsuperscript{40} DEA, “A Defence Policy for Canada.” Also summarized in DND, 1971 Defence White Paper, 16.
\textsuperscript{41} DND, 1971 Defence White Paper, 2.
\textsuperscript{42} Ibid., 3.
\textsuperscript{43} Ibid.
\textsuperscript{44} Ibid., 6.
stable mutual deterrence.” The policy put forward by the Trudeau government was therefore “to maintain within feasible limits a general purpose combat capability of high professional standards within the Armed Forces, and to keep available the widest possible choice of options for responding to unforeseen international developments.” One significant qualifying limitation was added to this intention, that “[w]ith a view to ensuring the protection of Canada and contributing to the maintenance of stable mutual deterrence, Canada’s resources, its territory, and its Armed Forces will be used solely for purposes which are defence in the judgment of the Government of Canada.” While this policy reaffirmed Canada’s commitment to collective security, it also maintained an unmistakable tone of minimum absolute commitment which, as noted by Minister of National Defence Perrin Beatty in his introduction to the 1987 White Paper, sent mixed signals as to Canada’s reliability as a NATO partner as Canada increasingly looked inward towards domestic agendas.

*Challenge and Commitment – A Defence Policy for Canada, 1987*

The introduction to the Mulroney government’s 1987 White Paper suggested that the optimism of détente and hope for resolution of disputes through negotiation, fundamental underlying themes in the 1971 defence policy, were “exaggerated”. Perrin Beatty promised a more “sober approach to international relations and the needs of security policy” from the Progressive Conservative (PC) party. The primary objective put forward in the PC policy was the promotion of a stable international environment in which Canadian values and interests could

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46 Ibid., 7.
47 Ibid.
flourish; a situation achievable only within the context of collective security which incurred the corresponding responsibilities of commitment.\textsuperscript{49} Three major components of Canadian security policy were described as defence and collective security, arms control and disarmament, and the peaceful resolution of disputes.

As a significant priority, the \textit{1987 White Paper} confirmed that Canada’s security was inseparable from that of Europe and that the PCs saw the presence of Canadian forces in Western Europe both as a direct contribution to the defence of Canada and as a means to maintain access to decision making circles.\textsuperscript{50} The policy position stated the principle Canadian security objective as:

[Canada’s] objective [was] to deter the use of force or coercion against Canada and Canadian interests and to be able to respond adequately should deterrence fail. Such deterrence requires standing and reserve forces equipped, trained and positioned to meet any likely threat. Canada’s population and resource base are not today, and in the foreseeable future could not become sufficient to defend, unaided, the second-largest country in the world. The Government believes that this objective can only be met within the collective security framework provided by the North Atlantic Treaty Organization.\textsuperscript{51}

The \textit{1987 White Paper} identified a significant “commitment-capability gap” in the ability of Canada’s military to meet objectives fully and effectively.\textsuperscript{52} The ‘root’ of the problem was seen to be consistent with trends in declining defence funding levels over the preceding twenty-five years, most alarming being the relatively low portion of defence spending allocated to the procurement of new equipment in relation to the NATO average of approximately twenty-five percent.\textsuperscript{53} The PCs resolution to this situation was to alter some commitments in order to

\textsuperscript{49} DND, 	extit{1987 Defence Policy}, 3.
\textsuperscript{50} Ibid., 6.
\textsuperscript{51} Ibid., 17.
\textsuperscript{52} Ibid., 43.
\textsuperscript{53} Ibid.
improve the effectiveness of priority commitments while increasing spending to provide a more steady and predictable level of funding.\textsuperscript{54}

The 1987 defence policy presented a continuance of collective security within the framework of NATO and continental defence cooperation with the United States. The policy’s intent was to: contribute to the maintenance of strategic deterrence and credible conventional defence in North America, in Western Europe and at sea; protect Canadian sovereignty; peacefully settle international disputes; and provide effective arms control.\textsuperscript{55} Major organizational initiatives included in the \textit{1987 White Paper} were the provision of equipping the navy with a three oceans capability and eventual procurement of nuclear powered submarines (SSNs), consolidation of Canadian air and land forces on the central front in Europe, and revitalization of the Reserves.\textsuperscript{56}

\textit{Canadian Defence Policy - 1992}

With the collapse of the Soviet Union as a political entity and a resultant reduction in the conventional threat to NATO in Europe, the Mulroney government announced a new framework for Canadian defence in the Fall of 1991.\textsuperscript{57} In April 1992, Minister of National Defence Marcel Masse issued a defence policy paper to provide a more detailed account of this policy. The policy pronouncements maintained the view of NATO as “an engine of peaceful change towards a new order of stability in Europe” and affirmed Canada’s willingness to remain engaged in European security and make forces available to NATO, although only in the event of crisis or

\textsuperscript{54} DND, \textit{1987 Defence Policy}, 47.
\textsuperscript{55} Ibid., 49.
\textsuperscript{56} Ibid.
war.\textsuperscript{58} It also offered optimism towards the apparent ‘renewed legitimacy’ of the United Nations as an apparatus of international engagement.\textsuperscript{59} The basis of the policy remained the previous commitment towards the interests of defence and collective security, arms control and disarmament, and peaceful resolution of disputes.\textsuperscript{60} Within the 1992 defence policy was also an increased interest in the use of National Defence resources for domestic concerns such as drug smuggling, environmental and natural resource management, illegal immigration, and terrorism.\textsuperscript{61}

Although the 1992 defence policy indicated that “Canada’s commitment to the NATO alliance and to collective defence of Europe and North America [remained] unchanged”, a significant change in the manner of support was announced as it was decided to cease maintaining Canadian land and air forces in Europe. In addition to defence of Canadian territory and maritime approaches, revised defence activities included: 1) contribution of a battalion group to the NATO Composite Force or the Allied Command Europe Mobile Force (Land) in northern Norway; 2) participation in the Standing Naval Force Atlantic and contribution of naval and air forces to NATO operations in the Atlantic; 3) the availability of a brigade group and two CF-18 squadrons for service in Europe in the event of crisis or war; 4) participation of approximately 150 personnel in the NATO Airborne Early Warning system; 5) contribution of approximately 200 staff personnel for various European headquarters; 6) contribution of resources for arms control verification in Europe; 7) participation in NATO common-funded programs; and 8) offer

\textsuperscript{59} Ibid., 4.
\textsuperscript{60} Ibid., 4-5.
\textsuperscript{61} Ibid., 6.
of opportunities for Allied forces to conduct training on Canadian territory on a cost recovery basis.\textsuperscript{62}

\textit{1994 White Paper on Defence}

Jean Chrétien’s Liberal government announced a comprehensive defence policy review in November 1993 and established a The Special Joint Committee on Canada’s Defence Policy in February 1994. David Collenette’s \textit{1994 White Paper} reaffirmed Canada’s vital interest in “doing its part to ensure global security”, but with an emphasis on the economics of the ability to freely trade with other nations.\textsuperscript{63} In its review of the international security environment, the \textit{1994 White Paper} focused upon concerns of global population and resource pressures, refugees, ‘failed states’, resurgence of old hatreds, proliferation, and the constraints of economic challenges and globalization on policy making.\textsuperscript{64}

In stating the objectives of the 1994 policy within the international stage, the Liberal government indicated that:

The Government is renewing Canada's traditional commitment to participate in the military dimension of international security affairs. Canada will remain an active participant in the UN and NATO, but will push for additional reform within these institutions to make them more relevant, timely, efficient, and effective. Canada will continue to participate in the CSCE, and, within the limits of available resources, more fully develop defence relations with the countries of Central and Eastern Europe, Latin America, the Asia-Pacific region, and Africa.\textsuperscript{65}

The maintenance of a multi-purpose, combat-capable force, was indicated as the means by which Canada would preserve the capability to “make a significant and responsible contribution to

\textsuperscript{64} Ibid., Chapter 2.
\textsuperscript{65} Ibid., Chapter 6.
international peace and stability, within a UN framework, through NATO, or in coalitions of like-minded countries.”

The assigned roles for the Canadian Forces therefore became: 1) the maintenance of a capability to assist the Department of Foreign Affairs and International Trade in the protection and evacuation of Canadians; 2) participation in multilateral operations anywhere in the world under the UN or in the defence of a NATO member state; 3) maintenance of specific peacetime commitments to NATO initiatives, standing air and naval forces, and headquarters; 4) with emphasis on peacekeeping, confidence-building measures, and civil-military relations, expand bilateral and multilateral activities with selected partners in Central and Eastern Europe, the Asia-Pacific region, Latin America, and Africa; and 5) provide support to the verification of existing arms control agreements and participate in the development of future accords. By 1999, these roles would be carried out by a reduced force posture of approximately 60,000 Regular and 23,000 Primary Reserve personnel, with the provision of approximately 3,000 additional soldiers to the army’s field force through reductions in headquarters, restructuring of the three services, and a reduction in the size of the Reserves.

Recognizing that the defence budget would continue to be pressured as the Government sought to bring a deficit under control, the 1994 White Paper sought to reduce the level of resources devoted to traditional missions in North America, reduce and refocus Regular and Reserve Forces, reorganize command and control systems, and procure ‘affordable equipment’ in order to ensure DND and the CF would operate more efficiently and make optimum use of

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67 Ibid.
68 Ibid.
infrastructure, equipment, skills, experience, and the professionalism of personnel. While the 1994 policy included the desire to remain engaged in the UN, NATO, and the CSCE, and become more actively involved in security issues in Latin America and the Asia-Pacific region, the fact that these commitments would be undertaken under an increasingly selective set of terms and conditions was evident.

Canada’s 2005 International Policy Statement: Defence

Minister of National Defence Bill Graham’s 2005 defence policy affirmed the traditional three roles for the Canadian military: protecting Canadians at home; defending North America in cooperation with the United States; and contributing to international peace and security through a multilateral collective security approach. However, Paul Martin’s Liberal government indicated that a renewed emphasis needed to be placed on the defence of Canada and North America and suggested that a strong Canada-U.S. defence partnership remained essential to Canada’s security. The Liberals further stated that recognition of the concept of forward defence (i.e., meeting security threats to as far away from Canada’s borders as possible) was a critical component of security at home and abroad. An integrated ‘all of government’ strategy of diplomacy, defence, and development was also added for dealing with complex conflict and post-conflict situations.

71 Ibid.
72 Ibid.
73 Ibid., 6.
In military terms, the 2005 policy provided that the Canadian Forces would focus its expeditionary capabilities on operations in failed or failing states and seek to include leadership roles in such activities when in Canada’s interest and ability to do so.\textsuperscript{74} The intent of this was to “enhance Canada’s status as a responsible and contributing member of the international community, including in key institutions such as the United Nations and NATO”.\textsuperscript{75} Coupled with this intent was the provision to expand the CF’s international “footprint” through the placement of added military personnel in allied headquarters.\textsuperscript{76}

The 2005 policy also included a commitment to be “selective and strategic” in the consideration of expeditionary operations. The conditions indicated for assessment of deployments were that: 1) the mission supported Canada’s foreign policy objectives; 2) the mandate was realistic, clear and enforceable; 3) the international political and financial support, as well as other resources, were sufficient to achieve the desired end; 4) the proposed forces were adequate and appropriate for the mandate; 5) an effective process of consultation between mission partners was in place; 6) there was a clear exit strategy or desired end-state; 7) there was a defined concept of operations, an effective command and control structure and clear rules of engagement; and 8) the mission did not jeopardize other Canadian Forces’ commitments.\textsuperscript{77}

\textsuperscript{74} DND, 2005 International Policy Statement – Defence, 2-3.
\textsuperscript{75} Ibid., 3.
\textsuperscript{76} Ibid., 28.
\textsuperscript{77} Ibid., 27.
APPENDIX C: TACTICAL FIXATION IN AFGHANISTAN

Pre-occupied with protection of our own forces, we have operated in a manner that distances us – physically and psychologically – from the people we seek to protect. In addition, we run the risk of strategic defeat by pursuing tactical wins that cause civilian casualties or unnecessary collateral damage. The insurgents cannot defeat us militarily; but we can defeat ourselves.¹

Canadians spent more than half of their Kandahar deployment fighting for their own lives because too few resources were committed over too large an area. This condition left Canadians perpetually focused on the tactics of mitigating physical threats. This threat-based focus promoted a form of tactical myopia, or strategic blindness. By late 2006, the Canadian Task Force became fixated on a tactical fight against an improvised explosive device (IED) threat and became conditioned to perceive short-term raids and company-level searches targeting IED cells as the means to ensure its personnel’s survival in Kandahar province. This tactically fixated campaign pattern in Kandahar did not change significantly until the later-half of 2009, when a reassessment of NATO operations and strategy was conducted by incoming International Security Assistance Force (ISAF) Commander General Stanley McChrystal and significantly more American resources were deployed to Kandahar province.² It was this change in the overall strategic situation that provided the framework within which Brigadier-General Jonathan Vance was at last able to salvage Canada’s Kandahar mission by consolidating Canadian efforts in a single district and initiating focused counterinsurgency (COIN) operations at the village level.³

² Ibid.
³ The Canadian Key Villages Approach (KVA) commencing in the village of Deh-e Bagh south of Kandahar City has been hailed as a template for effective COIN operations; however, it is critical to note that such efforts were only possible once the Canadians handed off responsibility for much of Kandahar province in 2009 to elements of the US
That a form of *tactical fixation* shaped Canada’s Kandahar operations from 2006 to 2009 is perhaps understandable within the context that, in comparison with British and American forces, Canada experienced a disproportionately high per capita number of casualties in Afghanistan from May 2006 to May 2009, and upwards of 60% of Canadian casualties were associated with IEDs.\(^4\) In comparison with relatively low-risk peacekeeping and peace enforcement missions, such casualty rates were certainly a new phenomenon for Canada and merited a serious response. Lacking sufficient troop densities in Kandahar to execute and sustain ISAF’s ‘clear, hold, build’ strategy over the entire 54,000 square kilometers of Kandahar Province, the counter-IED battle became the de facto *raison d’être* for Canadians in Kandahar until late 2009. Soldiers and their civilian counterparts naturally focused on the one mission objective that persisted regardless of limited manpower resource allocations: the fight to ensure their own survival.

A threat focused counter-IED battle was exactly the condition that the insurgents wanted to inflict upon Canadian and Coalition contingents because this predominantly tactical emphasis precluded any serious attention to strategy. It distracted focus away from the most critical driving factor behind the insurgency: the growing perception among Afghans that Coalition Forces were complicit in sustaining a corrupt and unjust Afghan government.\(^5\) Canada’s adversaries were using explosive devices to encourage the use of tactics, techniques, and procedures (TTPs) so fixated on force protection that tactical operations and effects would become disconnected from

\(^5\) McChrystal, “Commander’s Initial Assessment.”
political and strategic objectives. The Canadian contingent became caught in the untenable position of having to employ all available resources against a single insurgent capability – the IED – while simultaneously neglecting the strategic objectives for which they were ultimately deployed. Attacking the IED networks, defeating the individual devices on the ground, and training the force to survive in an IED environment were critical tasks for ensuring force protection, but did not in themselves generate the population-centric conditions requisite for the pursuit and sustainment of governance and development objectives. However, without the manpower density required to both clear and hold in the interests of providing a secure environment for the population of Kandahar province, the counter-IED battle became the means by which the Canadians could at least demonstrate some form of deliberate activity against a growing insurgency. While this tactical activity had tangible localized effects against insurgents, it could not automatically translate into real strategic effects against the underlying causes of the insurgency.

6 Considerable military efforts have been made by Coalition members to develop and implement effective counter-IED strategies. In response to the growing impact of IEDs in Iraq and Afghanistan, the U.S. Army Chief of Staff established an Army IED Task Force in October 2003. This organization was subsequently transformed into the Joint IED Task Force (JIEDTF) and then into the Joint IED Defeat Organization (JIEDDO) in February 2006. Allocated an annual budget of approximately $3.5 billion per year since 2006, the JIEDDO’s mission is to lead, advocate, and coordinate all U.S. DoD actions in support of Combatant Commanders’ and their respective Joint Task Forces’ efforts to “defeat IEDs as weapons of strategic influence”. The JIEDDO focuses on three lines of operation: defeat the device; attack the network; and train the force. “JIEDDO”, US DOD website, 22 April 2011, https://www.jieddo.dod.mil/about.aspx. The same lines of operation were adopted by the much smaller Canadian Forces Counter-IED Task Force established in 2007 to “coordinate efforts to attack the IED network, develop CF capabilities to defeat IEDs, and provide advice on preparing the force to operate in an IED environment.” “CIEDTF,” CAF Website, 12 November 2012, http://www.army.forces.gc.ca/land-terre/ciedtf-focdec/au-ns-eng.asp.

7 College basketball coach John Wooden has been credited with the remark that it is always important never to mistake activity for achievement.
Assessing Canada’s Legacy in Kandahar

Canada’s whole-of-government campaign planning and execution did eventually adapt and evolve to achieve a notable level of proficiency by the time the Canadian Kandahar mission concluded in 2011. Positive security, governance, and development gains at the village level were undoubtedly being realized by 2010-11 as a result of an important shift in military focus in 2009 and the subsequent revitalization and reinforcement of the development and governance lines of operations. However, these achievements occurred within the context of an extensively reduced area of operations in comparison to the 54,000 square kilometres that Canada originally assumed responsibility for. The hard-won lessons in terms of how successful whole-of-government activities must be conceived, coordinated, and resourced are indeed invaluable for future endeavours, but these lessons of organization and coordination must be continuously assessed within the wider coalition context. Recognition that Canadian successes at village and district levels were ultimately enabled by U.S. re-engagement and an enormous reduction of security responsibilities in Kandahar province is critical when interpreting Canada’s legacy.

Efforts after 2009 enjoyed significantly greater territorial focus and allowed for much more favourable allocations of limited resources. It was this fundamental change in situation that was able to be effectively exploited to produce more tangible effects with the implementation of a Key Villages Approach (KVA) and retooling of Counterinsurgency (COIN) efforts. Remarkably, it appears that this fundamental shift in focus was driven mostly from the theatre level of Canadian leadership against a reluctant Ottawa that required positive attention from

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NATO and ISAF leadership to concede that a mid-course correction was required.\(^9\) This background context has considerable relevance to future policy aspirations and formulation, as it may provide greater understanding of what is actually realistic and feasible in order to achieve strategic objectives within the context of Canada’s political will and resource limitations, regardless of how well the whole-of-government effort is organized and coordinated.

The period between late 2006 and late 2009 is perhaps the most illustrative period for understanding the limits of Canada’s ability to transform tactical performance into operational and strategic effects. This period represents a critical period during which government aspirations appear to have remained inconsistent with the Canadian contingent’s actual ability to gain control of the tactical balance within Kandahar province. Ottawa seemingly allowed Canadian blood and treasure to be committed and expended without a carefully considered strategy to synchronize available ends and means.\(^10\) This mismatch between policy aspirations, strategy, and resource allocation was exploited through the insurgents’ use of IEDs to continually manipulate the tactical balance in Kandahar province. An apparent acceptance of this situation has appeared through the development of a national narrative that has the undermanned Canadians bravely “holding Kandahar for more than three years” while waiting for

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\(^10\) The 2008 Manley Report observed that “stronger strategy, and more cohesive strategic direction, [were] essential” and that “Canada should press diplomatically, at the highest level, for a comprehensive political-military strategy”. Beyond simply observing the need for renewed interest in strategy, the report did not explicitly discuss Canada’s obligations and responsibilities in terms of developing a coherent national strategy or contributing to coalition strategy formulation. Defining such obligations and responsibilities is arguably the domain of the government-of-the-day rather than an Independent Panel and would therefore not be expected in such a report. The level of responsibility that the Government of Canada perceived it held in relation to Afghanistan strategy is unclear and perhaps requires further scrutiny. See Independent Panel on Canada’s Future Role in Afghanistan, \textit{Independent Panel on Canada’s Future Role in Afghanistan: Final Report} [“Manley Report”] (Ottawa: Minister of Public Works and Government Services, 2008).
reinforcements.\textsuperscript{11} That a tactically-fixated pattern of “whack-a-mole” \textsuperscript{12} against IED cells was carried on for years at considerable costs in lives and resources suggests that revisiting how IEDs impacted decision making is particularly relevant to understanding how well Canada is actually prepared to deal with the realities of contemporary conflict.

\textit{The Dangers of Tactical Fixation}

The insurgents’ use of IEDs against Canadians in Kandahar province was in essence an attempt to manipulate decision making processes.\textsuperscript{13} Western staff colleges train military officers to \textit{seize the initiative} through manoeuvre and surprise in order to get inside their adversary’s Observation-Orientation-Decision-Action [OODA] Loop.\textsuperscript{14} This is exactly what the insurgents did in Kandahar. John Boyd’s theory of conflict underpinning the OODA Loop concept suggested that all actions are reached by going through an imbedded hierarchy of OODA loops: “in order to win, we should operate at a faster tempo or rhythm than our adversaries - or better yet, get inside (the) adversary's OODA time cycle or loop and beat him by making more and faster decisions thereby seizing the initiative.”\textsuperscript{15} The ability of the insurgent IED campaign in southern Afghanistan to take the initiative away from the Canadians in Kandahar from 2006 to

\begin{itemize}
  \item [\textsuperscript{11}] Combs and Gauthier, “Campaigning in Afghanistan,” 120.
  \item [\textsuperscript{12}] US Embassy Kabul staff reported that Representative of Canada in Kandahar (RoCK) Ken Lewis acknowledged to Kandahar Provincial Reconstruction Staff (KPRT) on 8 August 2009: “We’ve been playing whack-a-mole for years.” US Embassy Kabul, “Canada’s Revised COIN Strategy.”
  \item [\textsuperscript{13}] Note that at least two distinct bombing campaigns, one perpetrated by the Taliban in Afghanistan and parts of Balochistan and another by Baloch separatists in Pakistan, had been observed in this conflict region. Alec D. Barker, “Improvised Explosive Devices in Southern Afghanistan and Western Pakistan, 2002-2009,” Counterterrorism Strategy Initiative Policy Paper, New America Foundation, April 2010, 16.
  \item [\textsuperscript{14}] Moulton, “Rethinking IED Strategies,” 28. Colonel John Boyd, a retired US Air Force pilot, developed the theory of the OODA loop after observing that certain pilots excelled in aerial dogfights and questioned why the US kill ratio over Korea was 10:1 when North Korean and Chinese aircraft were often superior in capability. See Major C.S. Oliviero, “Manoeuvre Warfare - Our Chance to Adopt a Winning Style,” \textit{Armour Bulletin} 20 (September 1987).
  \item [\textsuperscript{15}] Boyd, “Patterns of Conflict.”
\end{itemize}
2009 should be considered an example of insurgents neutralizing technological advantages at the tactical level by successfully getting inside the Canadian’s hierarchy of OODA Loops. In essence, the insurgents imposed sufficient *friction* for the Canadian’s OODA process to run in reverse.\(^1\) By forcing Canadians to react to IEDs, tactical decision making was preconditioned towards force protection, orientation became presupposed by reactive decisions already made, and observations become filtered through the lens of this orientation. Since the tactical OODA Loop is connected to a hierarchy of decision making processes at the operational, strategic, and political levels, the friction imposed by insurgents at the tactical interface transferred through the system and forced these OODA Loops to run in reverse as well [see Figure C.1].

![Figure C.1: The Friction Interface between Imbedded OODA Loops\(^{17}\)](image)

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\(^1\) Carl von Clausewitz relates the conduct of war to the workings of an intricate machine which generates tremendous friction. Clausewitz equates activity in war to movement in a resistant medium, such as walking in water. He observed that activities easily planned on paper are not so easily executed as a result of friction. Carl von Clausewitz, *On War* (1984), 119.

\(^{17}\) A representation of John Boyd’s concept of imbedded Observe-Orientate-Decide-Act Loops representing the idealized synergy between decision making at the political, strategic, operational, and tactical levels. Friction is
What is significant is that the IED is not a tactic or strategy in itself, it is merely a tool to increase the amount of friction applied to the adversaries’ decision process. Linking Boyd’s insights with David Kilcullen’s tactical level guidance for counterinsurgency in which he emphasizes fighting the enemy’s strategy and always maintaining the initiative, to recover the initiative requires sufficient ‘torque’ to be applied through an inherent synergy between imbedded OODA cycles. Canada was unable to achieve sufficient torque from 2006 to 2009 because its tactical interface in contact with the insurgent’s friction was not sufficiently robust to survive sustained exposure. This subsequently caused OODA loops at the operational, strategic, and political levels to run in reverse. As such, the need to react to IEDs influenced decisions, these decisions influenced force orientation towards counter-IED efforts, and this orientation influenced observations and assessments throughout the chain of command. Ironically, this further reinforced the original cause of this problem: the propensity to focus on tactical action against a mere source of friction, the IED.

The observation that too few resources committed over too large an area in Kandahar may have caused Canadian decision making processes to run in reverse and fixate on a mere source of friction for some three years suggests that the Canadian policy and strategy in Kandahar be further scrutinized. Was there a strong and synergetic core of policy, strategy, and operational level planning acting to drive tactical decision making processes in the proper

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direction? That Canadians were allowed to remain under-resourced and continue fighting essentially for their own survival for over three years would appear to provide evidence of a significant gap between policy and the tactical interface. The logical conclusion is that Canadians carried on in a state of tactical fixation for so long because the actual performance at the tactical interface was not directly linked to policy objectives. This could only have been the case if the strategic value of simply ‘being in Kandahar’ was perceived as enough to achieve the political objectives behind the Kandahar deployment.

A desire for ‘profile’ and ‘international visibility’ has indeed been cited as a prime motive behind Canada’s dismissal of NATO’s suggestion that Canada deploy a Provincial Reconstruction Team (PRT) to the remote Chaghcharan region of Afghanistan in early 2005.19 Ironically, this choice has been suggested to have been justified by the military on the basis of the Chaghcharan region being too operationally challenging and risky.20 If this were indeed the case, what possible justification could have existed for assuming responsibility for the even more operationally challenging and risky ISAF command in Kandahar? That the Canadians tactical OODA cycles were forced by insurgent friction to run in reverse appears to have been of little concern in Ottawa because the mere act of taking on such a high profile task was expected to achieve the desired political outcome of increased Canadian influence with the United States and the international community.

Ultimately, insurgents were able to exploit a weak Canadian policy-strategy match that tended to be expressed as a propensity to fill the void created by this mismatch with persistent,

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20 Ibid., 137.
but poorly sequenced, tactical activity. Whether by deliberate design, persistent luck, or probably some combination of both, insurgents forced a succession of revolving Canadian contingents in Kandahar into a classical dilemma of operational art.\(^{21}\) For much of its Kandahar deployment, the Canadian contingent was forced to choose between the dispersal of forces enshrined in the population-centric counter-insurgency (COIN) doctrine and the need to concentrate forces in order to achieve short-term tactical kinetic effects in the interests of their own force protection. A preference towards the latter persisted until the strategic context of operations in southern Afghanistan fundamentally changed in 2009 as a result of bolstered U.S. strategic leadership and reinforced U.S. troop commitments.

Since causing the small Canadian force to focus the majority of its resources on reducing IED attacks and casualties could prevent implementation of effective reconstruction, development, and counterinsurgency efforts, the IED simply became the perfect tactical means by which to attack a vulnerability created by the mismatch between Canadian foreign policy ambitions and its ability to generate and project real strategic power. An apparent ignorance of the considerable distance between ambition and ability made Canada relatively more vulnerable to manipulation through friction and placed the Canadian contribution to ISAF at considerable disadvantage in terms of attempting to seize the initiative in Kandahar province with an available Canadian force density of a meager 0.05 soldiers per square kilometer.\(^{22}\) It is in terms of this vulnerability that the fundamental lesson from Canada’s foray into southern Afghanistan is


\(^{22}\) In August 2005 Canada assumed leadership of the Kandahar Provincial Reconstruction Team (KPRT) and command over the Kandahar province with just 2,500 soldiers. Kandahar province is 54,000 km\(^2\), comparable in area to Nova Scotia.
perhaps to be found. Canada has considerable work to do in terms of making itself less vulnerable to manipulation by an adversary. Recognition that the IED was effectively utilized against Canadians as a tool to manipulate tactical decision making and disrupt the generation of Canadian strategic power is critical for turning the Kandahar experience from 2006 to 2009 into a constructive lesson for future whole-of-government expeditionary operations.

*Translating Tactical Contribution into Strategic Effect*

The initial policy context for Canada’s engagement in Kandahar flowed from the rationale underpinning *Canada’s [2005] International Policy Statement: A Role of Pride and Influence in the World.* Prime Minister Paul Martin expressed the Government’s desire to enhance Canada’s status as a responsible and contributing member of the international community, focus expeditionary capabilities on failed or failing states, assume a greater leadership role when in Canada’s interest (and ability to do so), explore new and innovative ways to enhance relations with the United States, and pursue an integrated strategy that draws on Canada’s diplomatic, development and defence resources. The Canadian ‘strategy’ in Afghanistan for achievement of the aims of status, leadership, and enhanced relations with the United States took the form of a pledge to take over a U.S. Provincial Reconstruction Team (PRT) in 2005 and subsequently assume command of ISAF forces in Kandahar Province.

It has been suggested that Canada simply slipped unexpectedly into war in Southern Afghanistan. Some observers have also suggested that through ignorance of its inherent

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24 Ibid., 1.
25 Stein and Lang, *Unexpected War*, 289.
military limitations in terms of manpower, equipment, and civil-military preparedness, Canada committed its limited resources to an undertaking that was well beyond its actual capabilities.\textsuperscript{26} This apparent inconsistency between expectations, aspirations, and objective self-assessment of abilities is not actually new, but the complexities of the Kandahar mission represented a set of conditions that were substantially different from previous peacekeeping and conventional expeditionary activities. An argument can be made that Canada’s primary strategic objective in Kandahar was to gain \textit{prestige} on the world stage and the initial thinking in Ottawa was that the mere \textit{presence} of a high profile Canadian deployment in Kandahar was the means to this end. Kandahar provided a considerable shock to a nation unprepared for anything beyond ‘contribution warfare’, a type of limited liability warfare whereby national strategic objectives are limited exclusively to those that can be met by the mere commitment, deployment, and presence of resources.

Canada’s inability to move defence planning beyond a ‘strategy of commitments’, or the belief that the mere \textit{participation} of Canadian tactical forces is sufficient to meet the national objective of being seen to be a responsible international actor, has long been part of Canadian thinking on defence.\textsuperscript{27} In 2000, Douglas Bland observed:

The essence of Canadian defence policy for the last 50 years has been to contribute to allied efforts – in effect “to lend troops” where needed. Within this framework, the size and capabilities of the contribution are never too important and neither is the credibility of the military force as defined in military terms. These factors hardly matter to politicians or mandarins. Getting there is the strategic objective.\textsuperscript{28}

\textsuperscript{26} Robert Murray and John McCoy, “From Middle Power to Peacebuilder: The Use of the Canadian Forces in Modern Canadian Foreign Policy,” \textit{American Review of Canadian Studies} 40.2 (2010), 178.
\textsuperscript{27} See Bland, \textit{Chiefs of Defence}.
\textsuperscript{28} Bland, “Everything Military Officers Need to Know,” 15-29.
Rather than measuring a tactical force’s *performance* in terms of its ability to translate tactical action into national strategic objectives, tactical *presence* in a theatre of operations would appear to have remained the fundamental measure of mission success for Ottawa on the eve of the Kandahar commitment. It is this precedence that arguably created a situation by which Canada’s blood and treasure was committed to Kandahar without much incentive for detailed examination of the real ends that were to be achieved within the full context of political, cultural, logistical, and geographic constraints.

While an authoritative narrative on the post-9/11 Afghanistan war is likely some years off, the increased stature for Canada that was thought to be inherently tied to the Kandahar deployment may not actually be materializing as envisioned. Assessment of *performance* has eclipsed the calculations of mere *presence* as allies attempt to distil the true lessons of Afghanistan. A theme that Canada’s contribution to Kandahar had little operational and strategic impact has begun to appear as a standard narrative in Afghanistan studies published by American and British observers such as Sandy Gall, Sheward Cowper-Coles, and Rajiv Chandrasekaran. While it must be acknowledged that attempts to shift responsibility for disappointments in Afghanistan may be part of any coalition landscape, it would appear that there is some basis to claims that Canada’s involvement was strategically ineffectual.

A key lesson from the Kandahar experience seems to be that the Canadian Government’s reliance on a ‘strategy of commitment’ left the Canadian contingent *tactically fixated* and at the mercy of an adversary that learned to effectively translate tactics into strategic effect using a

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29 Vance, “Canada’s departure from classic doctrine,” 6.
loosely sequenced campaign of friction. The employment of the IED as the insurgents’ weapon of choice went beyond its tactical kinetic effects. The IED allowed insurgents to manipulate the Canadians by saturating their sensors and overwhelming their limited resources with fleeting tactical objectives.

A 2009 report by the Washington-based Institute on the Study of War suggested, looking back on the first three years of Canada’s deployment in Kandahar, that the “[t]he IED campaign in Zhari and Panjwai [districts of Kandahar Province, Afghanistan] had the net effect of taking the initiative away from the Canadians, whose military resources were increasingly focused on force protection and targeting of IED cells, rather than on separating the Taliban from the local population through counterinsurgency operations.”\textsuperscript{31} The implication that the Canadian approach to countering the IED threat allowed insurgent groups to further a perceived operational objective of exerting control over Kandahar city has been stated by Carl Forsberg:

In the face of this growing enemy threat, the small Canadian force transitioned in 2008 from holding terrain and protecting the population in Taliban-controlled areas, to operations designed to disrupt the Taliban by targeting IED cells and their logistics through raids. But operations targeting IED cells did little to counter the Taliban’s control over the population, and as long as Taliban control persisted, ISAF operations had only marginal effects on the capabilities of the Taliban fighters.\textsuperscript{32}

The dilemma that the insurgent’s ultimately created for the Canadian contingent is aptly summed up in the following passage by Colonel Bernd Horn:

The nature of the conflict fuels a spiral of antagonism. In essence, it is a vicious circle. As coalition forces continue to be targeted by IEDs and suicide bombers, they have no choice but to take the necessary actions to protect themselves. This, however, comes with a cost. As convoys drive aggressively down the centre of the road, they force local Afghan traffic to scurry for the shoulder. As they

\textsuperscript{31} Forsberg, \textit{Afghanistan Report 3}, 29.
\textsuperscript{32} Ibid., 49.
physically bump traffic out of the way, or threaten vehicles who follow too close by pointing weapons, or create collateral damage due to attacks against them and/or defensive or offensive operations – they risk alienating Afghan nationals. With every action taken against the population at large, regardless of justification or cause, a cost is incurred. Coalition actions could potentially push Afghans to support the Taliban, or at least cause them to turn a blind eye to Taliban activities. Yet, to do nothing and continue to be hit without taking some action – feeds soldier disillusionment and the potential to lose Canadian public support for the conflict, if it appears that the country’s troops are put at risk without the ability to take the necessary steps to defend themselves. Moreover, if a safe and secure environment is not created for the local population, there is almost no hope of creating support for the new Afghan national government.33

**Insurgent Strategy?**

Canadian limitations in terms of manpower, equipment, and civil-military preparedness ultimately made ambitious and ever expanding tactical objectives of the Kandahar mission all but impossible to achieve without a coherent strategy to connect ends and means. Whether the actual strategic situation in Kandahar and the operational and strategic objectives towards which Canadians would be directed were seriously assessed is a subject for continued debate.34 Military commanders appear to have essentially been dictated a force structure justified on concerns of political palatability and comfortable sustainability rather than the detailed assessment that a coherent strategy would require. Even with the help of allied contingents under their command, Canadians lacked sufficient troop densities from 2006 to 2009 to adequately sequence all phases of the ‘clear, hold, build’ counterinsurgency (COIN) doctrine throughout Kandahar province.35

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35 Ibid., 19.
The insurgents quickly developed capabilities and plans to attack and manipulate this vulnerability.

Although it is difficult to superimpose Western concepts of strategy onto a complex insurgency composed of a variety of actors, issues, and causes, Afghan insurgents appear to have used the IED in a manner consistent with Boyd’s assessment of the overall goal of strategy: to “[c]ollapse [the] adversary’s system into confusion and disorder by causing him to over or under react to activity that appears simultaneously menacing as well as ambiguous, chaotic, or misleading”.36 The IED tactics used by insurgents also have remarkable consistency with Boyd’s vision of effective tactics being an ability to:

Observe-orient-decide-act more inconspicuously, more quickly, and with more irregularity as basis to keep and gain initiative as well as shape and shift main effort; to repeatedly and unexpectedly penetrate vulnerabilities and weaknesses exposed by that effort or other effort(s) that tie-up, divert, or drain-away adversary attention (and strength) elsewhere.37

The IED simply became the perfect tactical means by which to attack, since causing the small Canadian-led force to focus the majority of its resources on reducing IED attacks and casualties would prevent implementation of effective counterinsurgency efforts throughout Kandahar.

Boyd’s framework provides the impetus to conceptualize adversarial strategy beyond solely ‘device-centric’ or ‘enemy-centric’ approaches which arguably lead to tactical fixation and loss of initiative. Within southern Afghanistan, it is clear that the insurgent IED campaign against Canadians was not a means and ends to itself. The Quetta Shura Taliban (QST), whose campaign plans are allegedly formulated by the rahbari shura (leadership council) and the majlis al-shura (consultative council), have pursued a strategic aim of neutralizing the Kabul

37 Ibid., 134, 141.
government’s legitimacy and ability to govern in southern Afghanistan. Since 2004, all operations attempting to isolate, infiltrate, and eventually capture a legitimate seat of power in Kandahar City have essentially been part of this greater strategic framework.\textsuperscript{38} Insurgent IED campaigns have simply been a means to pursue this strategic aim. Canadian efforts to defeat devices and attack IED networks from 2006 to 2009 ultimately did little to defeat this strategy as they distracted critical resources away from applying their energies towards increasing the government’s legitimacy and ability to govern.

Allowing the IED threat to become the main focus for intelligence and military operations allowed the QST to increase tactical fixation on a mere weapons system and then subsequently outmaneuver the Canadian Forces in Kandahar Province at the operational and strategic levels. The Institute for the Study of War observed:

\begin{quote}
Because of the Taliban’s success in tying down the Canadians in Zhari and Panjwai, they were able to pursue two key goals in Kandahar. The Taliban were able to develop institutions of governance in Taliban-held areas of Kandahar, especially in Zhari and Panjwai, as a means of winning legitimacy for the Taliban movement. The Taliban were also to wage a successful offensive to move into Kandahar City from the north through the Arghandab District circumventing the ISAF deployment in Zhari and Panjwai.\textsuperscript{39}
\end{quote}

The initiative in relation to governance was allowed to remain with the insurgents. The QST ultimately achieved a level of operational and strategic success over Canada by preventing the Canadian contingent from implementing an adequate counter-strategy in Kandahar for almost three years.

In essence, the mission objectives quickly became secondary to force protection. Although similar consequences occurred for other coalition force members, unique Canadian

\textsuperscript{38} Forsberg, Afghanistan Report 3, p. 21.
\textsuperscript{39} Ibid., 31.
vulnerabilities (beyond obvious limitations in force numbers) made this dilemma more pronounced for the Canadian Forces, and therefore much more exploitable and apt for manipulation by the QST leadership. The overarching Canadian vulnerability is the overreliance on strategies of mere ‘commitment’ and the subsequent lack of civil-military experience in strategy formulation that this outlook nurtures. A second major Canadian vulnerability further contributes to Canada’s stale strategic culture: a lack of intelligence collection capability beyond the tactical level. As good situational awareness is key to coherent strategy formation, it is perhaps here that the path towards a stronger strategic culture in Canada commences.

*Intelligence Saturation*

In a study of Canadian Forces military intelligence organization and capabilities, David Charters suggests that the significant transformation and “adaptation-while-fighting” occurred during the various phases of engagement in Afghanistan and this enabled the Canadian Task Force to plan and execute successful intelligence-led-operations (ILO);\(^{40}\) however, it remains unclear whether these ILOs resulted in tangible strategic effects. Charters has observed that some anecdotal information exists to support a critique that the trumpeted Canadian All Source Intelligence Centre (ASIC) did not “serve the campaign overall, but [was] focused more narrowly on specific aspects of the tactical battle for control.”\(^{41}\) If the primary intelligence apparatus did indeed become tactically fixated, the trend towards tactical fixation of the entire contingent would have been extremely difficult to overcome.

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\(^{41}\) Ibid., 42.
David Kilcullen’s thoughts on the nature of victory in counterinsurgency provide the basis from which a mindset beyond tactical fixation must be established:

…combat victory depends on the enemy being stupid enough to present you with a clear-cut target, which is a rare windfall in counterinsurgency. Instead, you may achieve a victory by resolving long-standing issues your predecessors have failed to address, or by co-opting a key local leader who has resisted cooperation with our forces.\(^{42}\)

What is impeding this is what Norman Dixon would describe as “an almost total lack of information about the enemy”\(^{43}\), which subsequently causes an inability to perceive that the enemy may in fact have a strategy and campaign plans aimed at manipulating tactical behavior. Former British Ambassador Sherard Cowper-Coles certainly suggests that Canadians who briefed him and U.S. Secretary of State Condoleezza Rice in Kandahar appeared to live in a particular world of “cautious optimism” that was arguably detached from the operational and strategic realities of southern Afghanistan.\(^{44}\) This was perhaps not a uniquely Canadian problem as indicated by a January 2010 report by ISAF Deputy Chief of Staff, Intelligence (CJ2), U.S. Major General Michael T. Flynn and Paul Batchelor of the U.S. Defense Intelligence Agency, which concluded that the intelligence community had been baited into reacting to insurgents tactics such as IEDs and this preoccupation had caused a failure to identify “ways to strike at the heart of the insurgency.”\(^{45}\)

As highlighted in considerable detail in COIN doctrine, human intelligence (HUMINT) capabilities are considered critical in understanding and identifying ways to strike at the heart of

\(^{42}\) Kilcullen, “Twenty-Eight Articles”, p. 105.
\(^{43}\) Dixon, On the Psychology of Military Incompetence, 293.
\(^{44}\) Cowper-Coles, Cables from Kabul, 142.
an insurgency.\textsuperscript{46} Although Canadian human intelligence (HUMINT) collection and the Canadian military’s approach to intelligence fusion through the All Source Intelligence Centre (ASIC) concept have been praised for their tactical impact,\textsuperscript{47} Canada’s HUMINT collection resources appear to be remarkably thin.\textsuperscript{48} This undoubtedly leaves Canada vulnerable to ‘sensor saturation’, whereby field collectors become overwhelmed by the persistent information demands from tactical, operational, and strategic level consumers. This problem becomes even more critical once force protection is allowed to become the dominant objective and directing scarce assets to collect anything other than threat intelligence is extremely difficult to justify when personnel are perpetually in harm’s way. This is a significant hurdle to overcome for the astonishingly small cadres of HUMINT operators that Canada deploys.

With HUMINT, the number of collectors available is directly linked to the range, quantity, and quality of sources that can be effectively developed and managed. As limited collection assets are forced to react to tactical enemy-centric issues such as IEDs, almost no surplus HUMINT collection capability is available to direct towards non-tactical issues such as governance and development in support of efforts by agencies such as Global Affairs Canada (formerly DFAIT) and CIDA who lack sophisticated HUMINT collection assets of their own. Successful HUMINT is ultimately about asking the right questions to people who have access to the information being sought. If sources of corruption and other detrimental actors are to be recognized, understood, and countered, collectors must be available to identify, recruit, and

\textsuperscript{48} An organization chart of the Expeditionary-in-Theatre Generic All Source Intelligence Centre (ASIC) suggests that the number of actual operators actually engaged in field HUMINT collection activities could be as low as six. Ohlke, “The All Source Intelligence Centre,” 6.
systematically extract information of intelligence value in areas other than the tactical realm. If all HUMINT collection is tactically fixated, the commander’s (and Ottawa’s) overall situation awareness is necessarily limited.

A March 2010 study by the Kabul-based Stability Operations Information Centre suggested two risks associated with the flood of development aid into Kandahar after 2009: that the flood of additional aid dollars would fuel corruption and therefore undermine, rather than create, stability; and that the central government’s involvement in dictating staffing for district level development programs could have detrimental impacts at the local level.49 These kinds of problems are actually more vital strategically if ISAF is to achieve the mission of leaving behind a functioning and sustainable government. Although Canadian COIN doctrine clearly reinforces the importance of intelligence – and particularly HUMINT – in relation to these types of problems,50 it is not clear that this aspect of COIN has fully penetrated the cultures of DND, Global Affairs, or CIDA to the degree that may be necessary to break away from mere tactical fixation. IEDs and other sources of friction and uncertainty are destined to exist in any future theatre of expeditionary operations and these challenges will undoubtedly require a sufficient level of resourcing in order to be addressed and overcome. There must also be sufficient surplus capability, both in terms of boots-on-the-ground and field intelligence, to go beyond simply dealing with this friction. Ultimately, this is a signal/boundary orientation adaption problem set within the context of a coevolving complex adaptive system.

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