THE MISSING GLUE TO THE PRACTICE OF MILITARY STRATEGY IN CANADA: INTRODUCING A STRATEGY FORMULATION MODEL

Brigadier-General David Abboud

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Abstract

        This paper proposes a novel strategy formulation model for use within the Canadian Armed Forces (CAF), which is based on five dominant characteristics of military strategy and a comparative analysis of three existing models. The interpretation of findings from the literature review and the comparative analysis substantiates and informs a novel strategy formulation model for the CAF that is contextually aligned, up-to-date, and integrates fundamental elements and contemporary best practices of military strategy formulation. The proposed model is intended to successfully address complexity and emergence in the strategic environment, in a non-linear and iterative manner. This contribution fills an important gap in the current literature on strategy formulation as no comparable study can presently be found on the matter. As well, the institutionalization of a shared conceptual model would formalize and promote the practice of strategy and its formulation. In turn, this would enable the CAF to make consistently better strategic choices, increase the probability of success in war and conflict, and generate more favourable outcomes against an adversary or when confronting a wicked problem. Indeed, strategy and its formulation are especially relevant today in the context of grey zone conflict. This paper seeks to stimulate the discourse on military strategy formulation. In this regard, the proposed model is only a first step in a long journey that seeks to capitalize on strategy to safeguard Canadian values and interests.

The Missing Glue to the Practice of Military Strategy in Canada:
Introducing a Strategy Formulation Model

CHAPTER 1 INTRODUCTION

Strategy without tactics is the slowest route to victory.
Tactics without strategy is the noise before defeat.
- Often attributed to Sun Tzu

Strategy is imperative to the practice of high command, and possibly the most important condition for success in war, conflict, and contemporary operations. British scholar Lawrence Freedman posits that strategy allows one "to look up from the short term and the trivial to view the long term and the essential, to address causes rather than symptoms, to see woods rather than trees."[1] He argues that operating without a strategy is negligence. Historian Hew Strachan notes that "the real danger for democracies is the failure to develop coherent strategy."[2] Indeed, intervening militarily with an incoherent strategy or without one altogether can fail to establish successful long term conditions and have disastrous consequences at home in terms of public support, legitimacy and national unity, among others.

While strategy can be practiced at various levels and in many domains, this research focuses exclusively on military strategy. "Strategy" is derived from the Greek terms *streatēgike episteme* and *stratēgōn sophia*, which respectively mean a General's knowledge and wisdom. The two reflect the objective knowledge and subjective skill of strategic foresight essential in generalship and admiralship.[3] Military strategy combines art and science to translate policy goals into action by relating ways and means, making valid assumptions, and assessing risks.[4] Failure to formulate, implement and adjust viable

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[1] Lawrence Freedman, *Strategy: A History* (New York: Oxford University Press, 2013), ix.
[2] Hew Strachan, *The Direction of War: Contemporary Strategy in Historical Perspective* (Cambridge: Cambridge University Press UP, 2013), 97.
[3] Antulio J. Echevarria, *Military Strategy: A Very Short Introduction* (New York: Oxford University Press, 2017), 3.
[4] Ibid., 7.

strategies explain most military blunders experienced since the Cold War, including the lasting stalemate of the 'Long War' in Afghanistan. While the Canadian campaign in Afghanistan from 2001 to 2014 successfully contributed to broader international efforts, it ended before achieving capacity-building, stabilization, and political reconciliation objectives. As highlighted through Afghanistan, military endeavours committing national treasure should only be allowed if a coherent military strategy is established and nested within a broader coalition strategy. Strategic theory and practice within the Canadian Armed Forces (CAF) have failed to evolve sufficiently in those regards.

The formulation of strategy underpins its practice, and a strategy formulation model enables the formulation of strategy. Thus, the CAF should adopt a doctrinal strategy formulation model, a shared conceptual model, which would be formally taught and applied, when and where required, in order to enhance strategic thought and practice, similar to how the operational planning process was institutionalized.[5] Benchmarking best practices in a strategy formulation model would anchor its practice and enable our practitioners with possibilities and tools. I recently graduated from the CAF National Security Programme (NSP) at the Canadian Forces College (CFC) where strategy formulation was only briefly discussed, using the United States (US) Army War College model. The CAF does not have a doctrine on strategy nor a designated strategy formulation model, despite its aspiration, or perhaps claim, to produce military strategists and practice strategy. This research project will therefore scrutinize the field of strategy and its formulation, and make recommendations on the adoption of an applicable strategy formulation model for the CAF. The institutionalization of a strategy formulation model

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[5] Canada, Department of National Defence, B-GJ-005-500/FP-000, *The Canadian Forces Operational Planning Process* (Ottawa: DND Canada, April 2008), 4-1 to 4-16.

within the CAF would undoubtedly contribute in instilling a mindset of strategy in our senior and general officers, which in turn would enhance CAF operational and institutional outcomes for the greater benefit of Canada.

Primary and Secondary Research Questions

The primary research question that this paper seeks to answer is what strategy formulation model stemming from which elements of existing models should be taught and applied within the CAF? The following five secondary research questions will assist in answering the primary one:

1. What is military strategy in a contemporary context?

2. Why is strategy important for Canada and the CAF?

3. What is the current scope of strategic theory and practice within the CAF?

4. How is strategy formulation articulated?

5. What strategy formulation models exist?

Limitations

The limitations of this study are twofold. First, no available literature directly discusses this topic as it pertains to Canada and the CAF, therefore this study is in many ways pioneering and not envisioned to establish firm recommendations. Second, the research only includes information which is generally available and unclassified. For example, the strategy formulation models that are being examined and compared are those that are in the public domain.

Scope and Delimitations

   Strategy is a broad area, so this research project must be restrained. Despite the enormous literature about strategy, the research conducted and interpreted was limited to the particular elements of strategy and its formulation that were deemed meaningful to this project, especially given the prescribed limited length of approximately 14,000 words. Therefore, the analysis and comparison of strategy formulation models will be limited to three models. Finally, this study does not seek to be all encompassing and offer conclusive findings, but rather seeks to stimulate the discourse on strategy formulation and offer areas for further research in the matter.

Significance of Research Project

   If strategy is about gaining and maintaining an advantage over an adversary, as we will establish from a literature review in chapter 2, then the CAF should be teaching and practicing strategy formulation. Formulating strategy is not achieved in a vacuum. It begins with the use of a shared conceptual model. But which one should the CAF select, teach and apply? There are very few strategy formulation models in existence and this project will examine three that are being taught at national defence colleges. There are no studies that provides a thorough justification for their respective design and even less so a comparison between them.

   Canada has a unique culture and faces unique challenges. A strategy formulation model would provide a framework to promote strategic thinking and the practice of strategy, as opposed to strategic planning, at the strategic level. This would in turn better inform and guide policy and strategic-level decisions. Articulating and institutionalizing a strategy formulation model through the CAF's existing learning infrastructure (training,

education, practice, research and doctrine) would set in motion the transformation of senior and general officers into strategy practitioners, by stimulating reflection and action, and learning over time.[6]

The recommendations and conclusion of this research project will inform various organizations such as CFC, Chief Force Development and the Strategic Joint Staff, and various principals such as the Chief of Defence Staff and his Director of Staff to review the need to adopt a strategy formulation model and examine existing strategy formulation models. In the eventuality that strategy is recognized as essential and doctrine is developed on the matter, the recommendations and conclusion of this research project would inform the adoption of a bespoke CAF strategy formulation model.

Structure

This research project argues that a strategy formulation model is essential to enable the practice of military strategy and set advantageous conditions in war and conflict. Indeed, a formulation model would enable strategy practitioners to share a common language and point of reference, and facilitate further and deeper reflection on the matter. This research project culminates with the proposal of a novel strategy formulation model for the CAF that satisfies the modern requirements of military strategy.

Chapter 2 will review the available literature to frame military strategy and its formulation in a modern context, establish its importance through the lens of Canadian and multinational operations in Afghanistan, and examine the CAF's current strategy framework and scope. Chapter 2 will also establish the framework for comparative

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[6] Peter Senge, *The Fifth Discipline* (New York: Crown Business, 2006), 312-316.

analysis that was applied to critically evaluate three subsequent strategy formulation models. Chapter 3 will present a comparative analysis of the following three strategy formulation models using the framework established in the previous chapter: the US Army War College strategy formulation model; the US National War College national security strategy model; and Naveh and Graicer's Strategic Operational Design model. Chapter 4 will provide an interpretation of the findings of the previous chapter, introduce a bespoke military strategy formulation model for the CAF, and make recommendations for further research and lines of inquiry. Finally, chapter 5 will offer a conclusion to this research project.

CHAPTER 2 ON MILITARY STRATEGY: TOWARDS A FRAMEWORK FOR COMPARATIVE ANALYSIS

This chapter will review the available literature to frame military strategy and its formulation, examine the lack and incoherence of military strategy in Afghanistan, and scrutinize the scope and practice of strategy within the CAF. Finally, this chapter will establish a framework for comparative analysis that will be applied in the next chapter to critically evaluate and compare three strategy formulation models.

The first section of this chapter will explain and situate military strategy, clearly distinguishing it from policy and planning, both strategic and operational planning. The section will then establish five dominant characteristics of military strategy from a literature review. These characteristics and their enabling criteria will form a framework for comparative analysis that will be presented at the end of this chapter. Hence, instead of simply offering opinions or comments on the efficacy and relevance of strategy formulation models, their evaluation will be grounded by a framework established through the fundamental and universal principles of military strategy and its formulation.

Framing Military Strategy

Strategy can be perceived as enigmatic to the uninitiated. The word has been used widely over the years. Lawrence Freedman defines it as "the art of creating power,"[7] or in other words, as shifting the balance of power in one's favour. Everett Dolman calls it "a plan for attaining continuing advantage."[8] In a business context, Henry Mintzberg labels strategy as a plan, a pattern, a position, a perspective, and a ploy.[9] Strategy has been

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[7] Freedman, *Strategy: A History*, xii.
[8] Everett C. Dolman, *Pure Strategy: Power and Principle in the Space and Information Age* (London: Frank Cass, 2005), 6.
[9] Henry Mintzberg, *The Rise and Fall of Strategic Planning* (New York: The Free Press, 1994), 23-29.

defined and viewed in many ways based on its application. There is consensus however that having a strategy is preferable than not having one at all, especially when one is required to steer through the inherent unpredictability of human affairs. This section will attempt to give meaning to the concept in a military context.

Defining Military Strategy

Colin S. Gray offers one of the most accurate and meaningful definitions of military strategy as "the direction and use made of force and the threat of force for the purposes of policy as decided by politics."[10] He further describes it as a great enabler that should serve as a bridge between the military instrument and the political purpose. Likewise, Strachan explains that strategy is "the tool that enables us to understand (war) and gives us our best chance of managing and directing it."[11] The planning for, direction and consequent exploitation of action at the operational and tactical levels occur at the strategic level.[12] Strategy lies below the political level, or the realm of statecraft and its policies. Military strategy is nestled between a national security strategy (sometimes referred to as grand strategy) which typically incorporates diplomatic, information, military and economic (DIME) instruments, and the operational level characterized by operational art and campaign planning.[13] Military strategy applies both at the national and theatre levels. It is comprehensive, hierarchical, and overlapping. A military strategy may also be supplemented by subordinate strategies, as well as nested or tiered within bi- or

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[10] Colin S. Gray, *The Future of Strategy* (Cambridge, UK: Polity Press, 2015), 21.
[11] Strachan, *The Direction of War: Contemporary Strategy in Historical Perspective*, 23.
[12] Colin S. Gray, *The Strategy Bridge: Theory for Practice* (New York: Oxford University Press, 2010), 81.
[13] Harry R. Yarger, "Toward a Theory of Strategy: Art Lykke and the U.S. Army War College Strategy Model", Chap. 3 in *U.S. Army War College Guide to National Security Issues Volume 1: Theory of War and Strategy* (Carlisle, PA: Strategic Studies Institute, June 2012), 46-48.

multilateral strategies, as required. Figure 2.1 provides a depiction of where military strategy is situated.[14]

Figure 2.1 – Levels of War and Hierarchy of Strategy

Arthur F. Lykke Jr. is credited with formalizing within the US Armed Forces the conceptual understanding that military strategy equals military objectives plus military strategic concepts plus military resources.[15] Correspondingly, Richard Yarger defines it as "the calculation of objectives, concepts, and resources within acceptable bounds of risk to create more favourable outcomes than might otherwise exist by chance or at the hands of others."[16] William Rapp expands on the notion of risk, affirming that risk should be "clearly and specifically outlined in terms of the alignment of military objectives to the political objectives sought, potential 2nd and 3rd order effects, the time requirements, the potential for casualties and collateral damage, the risk of escalation, and, importantly, the risk of inaction."[17] Gray contends that a fourth element, assumptions, should be added to

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[14] This framework was inspired by many sources including: Harry R. Yarger, *Strategy and the National Security Professional* (Westport, Connecticut: Praeger Security international, 2008), 21-23.

[15] Arthur F. Lykke Jr., "Defining Military Strategy." *Military Review* 77 (Jan/Feb 1997): 183-184.

[16] Yarger, *Strategy and the National Security Professional*, 4.

[17] William E. Rapp, "Civil-Military Relations: The Role of Military Leaders in Strategy Making." *Parameters* 45, no. 3 (Autumn 2015): 22.

the triptych of ends, ways and means, arguing that making false or flawed assumptions is the greatest cause for the failure of strategic endeavours.[18]

There is confusion between policy, strategy and planning. Since the end of the Cold War, strategy seems to have lost its identity, having been subsumed by policy and by operational thought.[19] Gray states that "because strategy generally is so ill-understood in comparison with the intellectual grasp that people have upon the meaning and purpose of policy and tactics, it is apt to be neglected."[20] The meaning of strategy has become diluted as a catch-all term used in everyday speech and in all types of circumstances, inaccurately and inappropriately. Freedman expounds:

> Many strategy documents deliberately avoid the topic, lack focus, cover too many dissimilar or only loosely connected issues or themes, address multiple audiences to the satisfaction of none, and reflect nuanced bureaucratic compromises. They are often about issues that might have to be addressed rather than ways of dealing with specific problems. Consequently, their half-lives are often short.[21]

Military strategy is not a document or a product but rather an iterative intellectual process used at the strategic level to yield consistently favourable outcomes. These intended favourable outcomes, the ends of the triad, is what policy informs through appropriate guidance. Yet, politicians and senior bureaucrats routinely and mistakenly label policy statements as strategies.

Military strategy is also often confused with planning in terms of purpose, scope and time horizon.[22] Strategy is not a lengthy action plan but rather the evolution of a central idea through continually changing circumstances, a sort of continuing practice.

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[18] Gray, *The Future of Strategy*, 10.
[19] Strachan, *The Direction of War: Contemporary Strategy in Historical Perspective*, 20-21.
[20] Colin S. Gray, *Fighting Talk: Forty Maxims on War, Peace, and Strategy* (Westport, Connecticut: Praeger Security International, 2007), 51.
[21] Freedman, *Strategy: A History*, 610-611.
[22] Yarger, *Strategy and the National Security Professional*, 23.

Quite simply, "the strategy needs a plan, but the plan is not the strategy."[23] Strategy focuses on root causes and the long-term while planning predominantly centers around the symptoms and the short-term. Strategy seeks to define the problem while planning seeks to solve it. Strategy seeks to navigate the complexity and unpredictability of the strategic environment to create possibilities, while planning seeks to simplify and clarify them to enable linear and deterministic action. Planning processes are often falsely employed to develop strategy, resulting in strategic effects failing to support stated policy goals or other interests.[24] Clearly, strategic planning is not the same as strategy formation.[25] It is therefore imperative to buttress the practice of strategy with a formulation model that can function as an institutional linchpin. Yarger asserts that "the serious-minded should … remain focused on strategic thinking proper – never confusing policy, strategy, and planning, and recognizing the validity and role of each."[26] It is generally accepted that strategy is more difficult to devise and execute than policies, operations and tactics. Strategy must harmonize the other levels and their distinctiveness in order to produce an overall integrated effort that is more valuable than the sum of its parts.[27]

Strategy formulation is very difficult, usually because of a lack of time and capacity, the challenge of making valid assumptions, the ability and willingness to change the strategy as required, and the coordinated implementation of strategy in the face of an adaptive adversary.[28] Gray recognizes eight problems with strategy as figure 2.2 shows.

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[23] Dolman, *Pure Strategy: Power and Principle in the Space and Information Age*, 11.
[24] Yarger, *Strategy and the National Security Professional*, 52.
[25] Mintzberg, *The Rise and Fall of Strategic Planning*, 29.
[26] Yarger, *Strategy and the National Security Professional*, 160.
[27] Gray, *The Strategy Bridge: Theory for Practice*, 62-65.
[28] Rapp, *Civil-Military Relations: The Role of Military Leaders in Strategy Making*, 14-16.

> - Existential understanding
> - The inconvenient, but necessary, enemy
> - Currency conversion without a stable exchange rate, from assets and prowess – with transaction costs – into net benefit
> - Lack of expertise and process
> - Culture, personality, biology, and circumstance
> - Complexity, disharmony, and range of domain
> - Friction, the climate of war, and prediction
> - Culture clash: civil-military relations

Figure 2.2 – Gray's Problems with Strategy

Source: Gray, *The Strategy Bridge: Theory for Practice*, 127-154.

A strategy formulation model should seek to mitigate these problems. Heuser suggests that because of various interplays, strategy in practice is manifested more by compromise that balances the vested interests of stakeholders, than by coherence that stems from first principles.[29] The nesting and tiering of various strategies complicates formulation even further.[30] Strategy appears thus as a bungled assemblage rather than a pure manifestation of intent.

Strategy formulation is a process that should be guided by a model that allows the practitioner to: frame the current and future environments while recognizing outside perspectives; foster a dialogue that shapes policy and builds consensus and commitment; prioritize goals; align ends, ways and means; communicate strategic direction to subordinate elements; craft and adjust a strategic narrative; and build support with multiple external audiences.[31] Mintzberg views strategy formation as an impenetrable

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[29] Beatrice Heuser, *The Evolution of Strategy* (Cambridge, United Kingdom: Cambridge University Press, 2010), 493-498.

[30] Echevarria, *Military Strategy: A Very Short Introduction*, 5.

[31] Cancian et al., *Formulating National Security Strategy* (Washington, DC: Center for Strategic and International Studies, June 2017), 4-5 and 152.

'black box' around which, rather than inside of which, planning is done.[32] In a military context, this 'black box' represents the domain of strategy and is characterized by five dominant characteristics, namely the primacy of purpose and aims, the changing character of war and conflict, a dialectic of opposing wills, the complementarity of deliberate and emergent approaches, and the strategy bridge. These characteristics will collectively form a framework for the comparative analysis of three strategy formulation models.

The Primacy of Purpose and Aims

Strategy must be guided by an overarching purpose and aims that are expressed by policy. The purpose and aims of going to war or committing the military instrument in other circumstances must be legitimate and unambiguous from the onset. Clausewitz famously stated that war is merely the continuation of policy by other means, and its object is to compel our enemy to do our will.[33] Other authors have argued otherwise. For example, John Keegan offers an opposing narrative that culture is as powerful as politics and that war may be, among other things, the perpetuation of a culture by its own means, highlighting the importance of cultural factors in human affairs and in the nature of warfare.[34] Beatrice Heuser exposes that the purpose of war should be long term peace, and its object, particularly in asymmetric conflict and limited warfare, is persuasion.[35] Dolman suggests that the purpose of war is to attain a better condition for peace, its political object is a continuing advantage, and its military object is an advantageous

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[32] Mintzberg, *The Rise and Fall of Strategic Planning*, 26 and 330-331. Strategy formation is called thus because in the case of emergent strategy, strategies can form without being formulated.
[33] Carl von Clausewitz, *On War*, edited and translated by Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1989), 75 and 87.
[34] John Keegan, *A History of Warfare* (New York: Vintage Books, 1994), 3-60.
[35] Heuser, *The Evolution of Strategy*, 436-437 and 456-460 and 472-480.

peace.[36] There are a myriad of purposes and aims that could justify the application of the

military instrument. Regardless, they must be clearly established by policy for the

military to develop an applicable strategy.

Informed by purpose and aims, the strategy practitioner can then propose an

envisioned state as the strategic aim.[37] The term envisioned state, rather than end state, is

more insightful and suitable to the endless, challenging and complex nature of the

strategic environment.[38] Indeed, Dolman argues that strategy should seek a favourable

continuation of events, or continuing advantages, rather than a culmination per se. In

other words, acknowledging that the end of something is the beginning of something else,

a strategy seeks advantage as a dynamic condition, not conclusion as an end state.[39] Thus,

military strategy is applied to a state of affairs with the intent of gaining and maintaining

an advantage and creating favourable outcomes to manifest a desired envisioned state.

Once the envisioned state is achieved, another one must take its place. Freedman is a

strong advocate of the notion that strategy is about getting to the next stage rather than to

an illusory destination:

> Strategy is best understood modestly, as moving to the next stage rather
> than to a definitive and permanent conclusion. The next stage is a place
> that can be realistically reached from the current stage. That place may not
> necessarily be better, but it will still be an improvement upon what could
> have been achieved with a lesser strategy or no strategy at all. ... This does
> not mean that it is easy to manage without a view of a desired end state.
> Without some sense of where the journey should be leading it will be
> difficult to evaluate alternative outcomes. … The ability to think ahead is
> therefore a valuable attribute in a strategist, but the starting point will still
> be the challenges of the present rather than the promise of the future. With
> each move from one state of affairs to another, the combination of ends

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[36] Dolman, *Pure Strategy: Power and Principle in the Space and Information Age*, 15 and 28.

[37] Ben Connable, *Redesigning Strategy for Irregular Warfare* (Santa Monica, California: RAND Corporation, 2017), 10-17.

[38] Jeremiah R. Monk, *End State: The Fallacy of Modern Military Planning* (Air War College, Air University, 6 April 2017), 11-20.

[39] Dolman, *Pure Strategy: Power and Principle in the Space and Information Age*, 5-11.

and means will be reappraised. Some means will be discarded and new ones found, while some ends will turn out to be beyond reach even as unexpected opportunities come into view. Even when what had been assumed to be the ultimate goal is reached, strategy will not stop. Victory in a climactic event will mean a move to a new and more satisfactory state but not the end of struggle. What has gone before will set the terms for the next set of encounters.[40]

Strategy must therefore navigate through successive and iterative stages and transitions toward a desired envisioned state. To do so, the strategy practitioner must determine military strategic objectives, the ends of the ends, ways and means triad, that when realized create favourable outcomes. The objectives should be achievable, or in other words the more dynamic and uncertain a situation is, the more immediate the objectives should be in order to attain the next stage.[41] Gray used the term *strategic effect*, defined as the cumulative and sequential impact of strategic performance upon the course of events, to express how strategy serves politics instrumentally.[42] In theory, achieving strategic objectives creates favourable outcomes which generate net strategic effect.

Does victory create favourable outcomes and generate strategic effect? History demonstrates that victory in battle does not necessarily lead to victory in war, and conversely, that victory in war does not necessarily depend on victory in battle. Heuser reveals how victory has often been sought for its own sake rather than to generate decisive or strategic effect.[43] Strategic effect can be produced in countless other ways than through kinetic victory. Dolman contends that victory in battle and war belongs to the tactical and operational realms as culminating events, but not in the strategic realm where victory is but a point of reference in time and space, and where victory and defeat

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[40] Freedman, *Strategy: A History*, 611-612.
[41] Ibid., 570-571.
[42] Gray, *The Strategy Bridge: Theory for Practice*, 18 and 31-33.
[43] Heuser, *The Evolution of Strategy*, 139-142.

are transitory conditions. Moreover, Clausewitz highlighted that the ultimate outcome of a war is never final, as the defeated party may merely consider it a transitory evil.[44] Winston S. Churchill enunciated that "success is not final, failure is not fatal: it is the courage to continue that counts." These prominent individuals were both signifying that neither victory nor end states are enduring, as the world keeps on turning. Strategy must therefore adapt and evolve accordingly.

The practice of determining an envisioned state and corresponding strategic objectives is more of an art than a science, and not necessarily accomplished through a linear mechanistic process. In fact, it is probably the most difficult aspect of strategy formulation. As General Georges C. Marshall once said, "If you get the objectives right, a lieutenant can write the strategy." Strategic objectives must be directly tied to the problem that the strategy is trying to solve. Accordingly, the strategy should aim to "comprehensively and continuously understand the problem … and convey a grand, system-level, conceptual overview."[45] Only by doing so can a strategic objective be directly connected to an underlying condition that, when altered, would improve the situation to one's advantage. Hence, understanding the essence, or root cause, of a problem or situation, is critical to the design of a sound strategy. This understanding however is only achieved iteratively as one transitions through multiple layers of differing frames and perspectives. Finally, strategic objectives must remain closely aligned or at

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[44] Clausewitz, *On War*, 80.
[45] Jeremiah Monk, "Strategic Design for the Complex Realm." *The Strategy Bridge* (November 18, 2018).

least reconciled often with the objectives of allies and coalition partners to ensure unity of effort.[46]

In short, policy-driven purpose and aims inform the proposition of a desired envisioned state, as the strategic aim. The envisioned state, in turn, informs the determination of strategic objectives that, when achieved, manifest favourable outcomes and create net strategic effect, positively and iteratively progressing the situation towards the envisioned state.

The Changing Character of War and Conflict

Strategy must be calibrated to the contemporary character of war and conflict. War has an enduring nature, but an ever-changing character. Gray explains that strategy, like war, has an enduring nature but an ever shape-shifting character as well. Strategies therefore must be elaborated for their unique context and adapted to dynamic circumstances.[47]

The character of war and conflict has evolved in significant ways. First, war and conflict are being waged amongst people.[48] Second, the pervasiveness of information and pace of technological change are encouraging the use of non-traditional ways and means, such as information and cyber operations, espionage and intellectual property theft, economic inducement, and proxies and deniable paramilitary forces.[49] Third, these non-traditional ways and means are applied in emerging domains and in covert or non-attributable manner in what is termed a grey zone conflict, defined as adversarial

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[46] North Atlantic Treaty Organization, *Allied Joint Publication-01 Edition E Version 1, Allied Joint Doctrine* (NATO Standardization Office, February 2017), 1-13.

[47] Gray, *The Strategy Bridge: Theory for Practice*, 3 and 41-43.

[48] Heuser, *The Evolution of Strategy*, 450-453.

[49] Canada, Department of National Defence, *How We Fight Brief* (Presented to NORAD, Ottawa, 13 January 2020).

competition through means other than war, with an intensifying risk of escalation and miscalculation.[50] Fourth, today's strategic environment is a complex adaptive system, characterized as volatile, uncertain, complex, and ambiguous (VUCA).[51] Finally, war's benefits may have exceeded its costs in the past, or appeared to do so, but in this day and age the costs of going to war, in material, human, cultural and reputational terms, greatly exceed its perceived benefits, in all scenarios unless a threat is deemed existential. Today, nations confront each other and compete with one another with all available instruments of national power using the military one mainly for deterrence and coercion.

Wars, conflicts and military interventions are all unique, and strategy is contextual. Gray has defined 17 dimensions of strategy, embracing every aspect of the preparation for and the conduct of war and conflict, as figure 2.3 shows.[52]

• People	• Strategic theory and doctrine
• Society	• Technology
• Culture	• Operations
• Politics	• Command
• Ethics	• Geography
• Economics and Logistics	• Friction/Chance/Uncertainty
• Organization	• Adversary
• Administration	• Time
• Information and intelligence	

Figure 2.3 – Gray's Dimensions of Strategy

Source: Yarger, *Strategy and the National Security Professional*, 41 and 130.

Gray suggests that time is the least forgiving of these dimensions.[53] Time is consequential in every strategic decision. It is not neutral and should be co-opted at every

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[50] Canada, Department of National Defence, *How We Fight Update* (Presented to Army Council, Ottawa, 28 November 2019).

[51] Yarger, *Strategy and the National Security Professional*, 18.

[52] Yarger, *Strategy and the National Security Professional*, 41 and 130.

[53] Gray, *Fighting Talk: Forty Maxims on War, Peace, and Strategy*, 70-72; Gray, *The Strategy Bridge: Theory for Practice*, 74-75.

opportunity. Delaying or making haste can influence the strategic environment or pressure an adversary. Finally, staying power, in psychological, political, and material terms, can become the decisive advantage in a military intervention. Likewise, the institutionalization of strategic theory and doctrine would help deliver strategic effect, as strategic theory guides and disciplines the formulation of an effective strategy.[54] The effective appraisal of the strategic environment through these 17 interrelated dimensions, or systems, allows the formulation and adjustment of a coherent strategy.

War has been described as a "complex encounter between complex systems in complex environments."[55] Complexity theory offers that despite the absence of predictable patterns, order emerges out of interactions of elements, without any pre-established plan or design. Emergence means that the creation of new forms of behavior as the system evolves and events occur. Within such a system of bounded instability, the future cannot be predicted, controlled or directed by predesigned aims.[56] The probability of deliberate actions generating unintended consequences is extremely high given the unpredictable and uncontrollable nature of complex adaptive systems. Dietrich Dorner explains:

> We must learn that events have not only their immediate, visible effects but long-term repercussions as well. We also must learn to think in terms of systems. We must learn that in complex systems we cannot do only one thing. Whether we want it or not, any step we take will affect many other things. We must learn to cope with side effects. We must understand that the effects of our decisions may turn up in places we never expected to see them surface.[57]

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[54] Colin S. Gray and Jeannie L. Johnson, "The Practice of Strategy", Chap. 20 in *Strategy in the Contemporary World* (New York: Oxford University Press, 2016), 368 and 370.

[55] Yaneer Bar-Yam, *Complexity of Military Conflict: Multiscale Complex Systems Analysis of Littoral Warfare* (Cambridge, MA: New England Complex Systems Institute, 21 April 2003), 1.

[56] Robert C.H. Chia and Robin Holt, *Strategy Without Design* (New York: Cambridge University Press, 2009), 51-56.

[57] Dietrich Dorner, *The Logic of Failure: Recognizing and Avoiding Error in Complex Situations* (Cambridge, MA: Perseus Books, 1996), 198.

Not only are war and conflict subject to complexity, emergence and unintended consequences, but they are also the realm of *wicked problems*, a "class of social system problems which are ill-formulated, where the information is confusing, where there are many clients and decision-makers with conflicting values, and where the ramifications in the whole system are thoroughly confusing."[58] Wicked problems cannot be defined, have no end state, cannot be classified as right or wrong, are unique, and any action taken will change the problem. War and conflict are wicked problems evolving within a complex adaptive system.

Wicked problems and complex adaptive systems necessitate non-linear, tailored and novel approaches. Peter Senge asserts that systems thinking, which he termed the fifth discipline, empowers one to understand the fundamental root cause of a problem, not simply its symptoms. Systems thinking is a conceptual framework that facilitates a deeper understanding of an issue, by comprehending the whole rather than just fragments, realizing its complex and interconnected nature, and recognizing the impact of actions.[59] In complex adaptive systems such as the strategic environment, David Snowden's *Cynefin framework* advises the "application of a probe-sense-respond methodology that seeks to discover and capitalize upon emergent, novel solutions."[60] Finally, emergence can be better addressed at the strategic level by building possible scenarios instead of forecasting, thus circumventing the fallacy of predetermination.[61] The practice of systems thinking, a probe-sense-respond methodology, and scenario-building would enable one to

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[58] Richard Buchanan, "Wicked Problems in Design Thinking." *Design Issues*, 8:2 (Spring 1992): 15.
[59] Senge, *The Fifth Discipline*, 3-12.
[60] Monk, *Strategic Design for the Complex Realm*.
[61] Mintzberg, *The Rise and Fall of Strategic Planning*, 227-239 and 248-251.

understand the character of war and conflict and address its complexity and emergence dynamically, rather than linearly.

A Dialectic of Opposing Wills

Strategy is adversarial in nature – it requires one or more adversaries and elements of actual conflict, vice latent, to manifest its function. In other words, strategy is applied when one is in conflict or competition against an adversary.[62] The adversary, of course, has a vote, and a mind of his own. Freedman explains that "strategy is required when others might frustrate one's plans because they have different and possibly opposing interests and concerns."[63] To be successful, strategy must not be static but rather reactively and proactively dynamic and responsive to the actions of the adversary.[64]

Military strategy is fundamentally about defeating an adversary in a psychological contest. The analogy of a game of chess is often used to describe this dynamic. While amateurs would endeavour to capture enemy pieces on the board, the more experienced players would craft and execute a strategy based on positions and pace of moves, thinking ahead and upsetting opponents in order to checkmate their king, regardless of the number of pieces that would remain on the board. Military strategy should always seek to defeat an adversary as quickly and as economically as possible. The method to be employed is subordinate, since every situation is unique and the method to be used will vary and be adapted to each situation. Moreover, Basil Liddell-Hart was adamant that the real target

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[62] Gray, *The Strategy Bridge: Theory for Practice*, 33-34.
[63] Freedman, *Strategy: A History*, xi.
[64] Heuser, *The Evolution of Strategy*, 17.

in war should be the mind of the enemy commander, and that operating against enemy troops is only advantageous to the extent that it affects the former's mind and will.[65]

In military strategy, the human dimension should be emphasized, as human psychology often makes the physical destruction of an adversary unnecessary. The history of warfare reveals that the dynamics of morale, excitement, surprise, shock, isolation and fear are decisive yet intangible factors that are often misunderstood or trivialized. War and conflict are ultimately a clash of human wills. An adversary is not beaten when his means are weakened but rather when his will to fight is shattered. This outcome is better achieved by maneuvering in the psychological and informational realms, rather than only in the physical one.[66]

Liddell-Hart established that success in war was best achieved when an indirect approach was used against an adversary, as opposed to one of attrition. The term indirect approach describes strategic, operational and tactical moves designed to defeat an adversary by avoiding his strength, deceiving him, and attacking his geographical, functional and psychological vulnerabilities. The indirect approach seeks to exhaust an adversary on our terms rather than confront him on his terms.[67]

Robert Leonhard describes the term maneuver, applied at the strategic level, as movement toward an objective in order to gain a positional or psychological advantage over an adversary.[68] He advocates that the highest form of maneuver is to preempt an adversary, or in other words neutralize him before a conflict. It implies an appreciation for the value of time and tempo to seize opportunities before the adversary does. If

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[65] Ibid., 184-188.
[66] Robert Leonhard, *The Art of Maneuver* (Novato, California: Presidio Press, 1991), 44-46.
[67] Ibid., 46-48.
[68] Ibid., 18-19.

preempting is not possible, maneuver theory seeks to dislocate an adversary, to render him irrelevant during a conflict. Finally, lacking the ability to preempt or dislocate, an adversary should be disrupted, by applying strength against his critical vulnerabilities. Ultimately, maneuver aims to break the opponent's will to fight.[69]

Military strategy is therefore applied in a dialectic of wills between adversaries, in a psychological contest where success is best achieved quickly and economically through an indirect approach and maneuvering towards vulnerabilities identified within the various dimensions of strategy.

The Complementarity of Deliberate and Emergent Approaches

The field of strategy typically recognizes two types of approaches to strategy formulation: deliberate and emergent. Deliberate approaches seek to methodically craft and then implement a strategy but may be deficient in adapting to changing circumstances or when core assumptions are proven false. Emergent approaches on the other hand are less rigid in formulation and more flexible in implementation but may also generate more random and less consistent strategies, especially if the goals are ambitious and many stakeholders are involved.[70]

Military strategy formulation usually defaults to a deliberate and linear approach, as a byproduct of military professional education that stresses operational planning. Gray affirms that purposeful, or deliberate, strategy is decidedly feasible for four broad reasons: our adversary is also beset by unsolvable problems including an adversary; the compounding effect of diversified and compensating methods and means; adaptation

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[69] Ibid., 19-24.
[70] Mintzberg, *The Rise and Fall of Strategic Planning*, 23-27.

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stemming from education, doctrine, training, and experience; and hedging against unpredictability with mass.[71]

Conversely, Robert Chia and Robin Holt make a strong case for emergent strategy, in a generic way, by arguing that direct and deliberate, or purposeful, action tends to eventually undermine its own aspiration, because it inevitably generates resistance, confrontation and unintended consequences. They explain that strategies emanating from the top often overlook changes, outliers and unpredictable forces and tend to ignore the elements of surprise, randomness and uncertainty in the environment. Extoling the virtue of patience and non-interference, they suggest that the bottom-up, indirect, relational and non-linear approach of an emergent strategy can prove more effective in the long term because it leverages local and spontaneous coping actions giving rise to the emergence of pattern to achieve desirable and sustainable outcomes.[72]

Chia and Holt introduce two interesting notions of emergent strategy. First, the notion of "dwelling" rather than "building," which implies that a strategy practitioner first immerses himself within a nested system to gain awareness of how things are in relation to others before opportunistically engaging and ordering it.[73] Second, the notion of strategy-making as a process of "wayfinding" rather than "navigating," where the strategy practitioner is immersed in the unknown rather than detached from a bird's-eye point of view, is making sense of a situation prospectively rather than retrospectively, and is determining and adjusting a strategy iteratively as a process of discovery in unfolding circumstances rather than in a pre-established fashion.[74]

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[71] Gray, *The Strategy Bridge: Theory for Practice*, 154-156.
[72] Chia and Holt, *Strategy Without Design*, 1-24.
[73] Ibid., 133-158.
[74] Ibid., 159-185.

Mintzberg specifies that strategies can be formulated and can form, equally. He argues that all strategies are bound to be emergent to some degree and that good strategy formation allows for both deliberate and emergent approaches concurrently. He also argues that formulating strategy should be a fluid process of learning and interacting, should acknowledge unpredictability, and seek to increase odds of success rather than eliminate risk.[75] Likewise, Freedman believes that the common view of strategy as *grand design* should change in favour of strategy as a fluid and flexible process governed by the starting point, thus embracing emergent strategy.[76] Ultimately, all strategies rest somewhere along a continuum between purely deliberate and purely emergent strategy formulation. A strategy should allow us to cope with uncontrollable situations as much as enabling us to assert a degree of control over them. Therefore, deliberate and emergent approaches to strategy formulation should be viewed as complementary to one another.

The Strategy Bridge

Gray uses the term *strategy bridge* to express the bridging function of strategy, linking the political to the tactical, ultimately connecting policy purposefully with the military instrument, thus linking purpose and action.[77] The different demands of the three levels of war, the strategic, operational and tactical, are often in competition, but strategic level objectives should always have precedent over any divergence stemming from operational planning or tactical engagements.

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[75] Mintzberg, *The Rise and Fall of Strategic Planning*, 23-25; Mark F. Cancian et al., *Formulating National Security Strategy*, 143-144.
[76] Freedman, *Strategy: A History*, xi.
[77] Gray, *The Future of Strategy*, 24-28.

Strategy always involves communication, negotiation, and compromise. Throughout strategy formulation, a *strategic dialogue* must occur between the political and strategic stakeholders to ensure a viable strategy. Strachan clarifies that while strategy and policy are distinct in theory, in practice strategy is dependent on a dialogue with policy.[78] Emile Simpson defines strategic dialogue as "the reciprocal interaction between policy … and how policy is articulated as actual operations: the interaction between what is desired and what is possible."[79] The dialogue should be perpetual as a strategy is simultaneously a sustaining force and the output of said dialogue.[80] The fact that strategy is typically made through a process of dialogue and negotiation between civilian and military stakeholders, internally within a government and externally with allies and partners, exposes it to a degree of irrationality borne of particular interests, loyalties and cultures.[81]

The strategy bridge also involves formulating a rational *strategy statement*, to convert the elaborated strategy into operational output.[82] This statement is usually expressed in best practice as a statement of ends, ways, and means in a balanced construct. The balancing construct juxtaposes success with risk, which is defined as the discrepancy between the objectives sought and the constrained concepts and limited resources available to achieve them. The balance is reached when the probability of success in achieving strategic goals is met at politically acceptable costs.[83] Risk is inherent in all activity and mitigated by symmetrically and synergistically balancing the

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[78] Strachan, *The Direction of War: Contemporary Strategy in Historical Perspective*, 19.
[79] Emile Simpson, *War from the Ground Up: Twenty-First-Century Combat as Politics* (New York: Columbia UP, 2012), 91.
[80] Ibid., 116.
[81] Gray, *The Strategy Bridge: Theory for Practice*, 56.
[82] Mintzberg, *The Rise and Fall of Strategic Planning*, 340-341.
[83] Rapp, *Civil-Military Relations: The Role of Military Leaders in Strategy Making*, 21.

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ends, ways, and means. Expressing the strategy in a commonly understood language enables the strategic dialogue and influences political and strategic decision-makers, both internal and external.

Unity of effort is paramount. A complex military endeavour involves various stakeholders. Public opinion also matters more than ever before. These actors must be shaped accordingly by a *strategic narrative*, which is an explanatory story of actions before, during and after a conflict, which seeks to unify the understanding and will of various stakeholders through rational, emotional, and moral rhetoric. It generates a sense of legitimacy and buttresses staying power in the case of an armed intervention, particularly during protracted conflict.[84] Strategy must be expressed meaningfully through a narrative ideally made of metaphors and stories.[85] The narrative is challenged when it encounters reality and when it needs to address multiple audiences, requiring adjustments.[86] Moreover, adversaries also operate in the information domain with a dueling narrative comprised of the same actors and plot in order to influence the perceptions of stakeholders.[87] Likewise, the narrative must also mobilize and convince colleagues and allies, who each have different interests and perspectives.

Lastly, a strategy must be continuously monitored and adjusted as the strategic environment evolves due to emergence, competing wills, uncertainty, chance, and friction, among other factors.[88] *Strategic assessments* must be conducted at all levels to validate if the strategy is achieving strategic objectives, manifesting favourable outcomes,

[84] Simpson, *War from the Ground Up: Twenty-First-Century Combat as Politics*, 179-206 and 207-226.
[85] Freedman, *Strategy: A History*, 612-615.
[86] Ibid., 621-622.
[87] Ben Zweibelson, "Three Design Concepts Introduced for Strategic and Operational Applications." *PRISM* 4, no. 2 (2013): 90.
[88] Clausewitz, *On War*, 100-102 and 121.

and generating strategic effect. Of course, the adversary's strategy and actions must be appraised continuously. So must the other nested and tiered strategies and the overall multilateral unity of effort. Time is another important dimension to appraise. Indeed, a coherent strategy could fail because of the opponent's refusal to concede, even in the face of overwhelming odds. Continued resistance can "drive up the costs of a conflict until they exceed its anticipated benefits, causing political division and disillusionment, and perhaps ultimately wearing down an adversary's resolve,"[89] as the CAF and the international community experienced firsthand in Afghanistan.

This section established five dominating characteristics of military strategy. The first one is that strategy must be guided by an overarching political purpose and aims which are translated into an envisioned state and strategic objectives. The second dominating characteristic is that the changing character of war and conflict must be thoroughly understood and addressed. The third one is that strategy seeks to defeat an adversary in a contest of wills through an indirect approach. The fourth one is that strategy should capitalize concurrently on deliberate and emergent approaches. The last dominant characteristic is that strategy serves as a bridging function between policy, operations and tactics. These five dominant characteristics will be used as a framework throughout this paper, reinforcing the notion that a strategy formulation model should consider all of these fundamental, and perhaps universal, aspects of military strategy.

A Case Study: The Lack and Incoherence of Military Strategy in Afghanistan

This section will demonstrate the consequences of acting with a flawed strategy or without one by discussing the ongoing intervention in Afghanistan. This section will be

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[89] Echevarria, *Military Strategy: A Very Short Introduction*, 114.

structured using the same five dominant characteristics identified above. The conflict in Afghanistan is the longest conflict in US and Canadian history. Its combined toll since 2001 is enormous with an estimated 157,000 people killed including 64,124 Afghan National Security Forces (ANSF) members and 3,445 NATO and coalition members, at the estimated inflation-adjusted cost of approximately $1 trillion. How might we explain this seemingly colossal failure? Recently published documents describe fatally flawed warfighting strategies, policies and programs not tailored to the Afghan context, ever changing goals and missions, and botched attempts to curtail runaway corruption, establish a democratic central government, diminish the opium trade, and build a competent Afghan National Security Forces (ANSF).[90]

The main shortfalls seem to indicate that the dissimilar and changing purpose and aims of various stakeholders did not set favourable conditions. The US and NATO strategy in Afghanistan were intertwined but not unified. Following 9/11, the overarching US goal for Afghanistan was to prevent Al Qaeda and its allies from using it as a base of operations, which required a strategy of "mutually reinforcing political, economic, and military efforts."[91] The military objective was to provide security to enable political and economic development to progress. Conversely, the United Nations (UN) mandated NATO International Security Assistance Force (ISAF) had a broadened obligation that included security and reconstruction assistance throughout Afghanistan. There was dichotomy of purpose and aims between the US and NATO.

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[90] Craig Whitlock, *At War with the Truth* (The Washington Post, 9 December 2019).

[91] Deborah Hanagan, *The Changing Face of Afghanistan, 2001-08* (Carlisle, PA: Strategic Studies Institute, July 2011), 3.

There was also no common strategy within ISAF between 2001 and 2008. As

Schreer notes, for nearly a decade partnering nations "were often at odds about the nature

of the mission and about the means required to meet the goals set. There was also a

mismatch between defined ends and available resources."[92] NATO's strategy-making (or

lack thereof) was impacted by the growing post-Cold War heterogeneity of the alliance

and the fragmented contributions of NATO allies failing to meet operational

requirements.[93] The continued separation of the effort between the US and NATO,

through Operation Enduring Freedom (OEF) and ISAF, prevented unity of command as

both organizations conducted operations concurrently but seldom cohesively.[94]

In March 2009, a new strategy for Afghanistan and Pakistan was announced by

the US, based on the position that the war involved both countries, was one of necessity

rather than choice, and its aim was counterterrorism against al-Qaeda.[95] However, a lower

than envisioned troop surge only lasted two years as there was no political appetite for

what could become a significant decade-long commitment.[96] NATO allies began gradual

troop withdrawals in 2010.[97] The strategy was revised toward a gradual transfer of

responsibility for security to the ANSF by 2014. NATO-led Operation Resolute Support

replaced ISAF on January 1, 2015, and continues to build the capacity of the ANSF in

2020. Ultimately, coalition military strategy shifted from "decapitation" to "divide-and-

conquer" to "search-and-destroy" to "clear-hold-build-and-transfer" and finally back to

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[92] Benjamin Schreer, "The Evolution of NATO's Strategy in Afghanistan", Chap. 7 in *Pursuing Strategy: NATO Operations from the Gulf War to Gaddafi* (UK: Palgrave Macmillan, 2012), 142-143.

[93] Ibid., 141-142.

[94] Sean M. Maloney, *War in Afghanistan: Eight Battles in the South. Kingston* (Ontario: Canadian Defence Academy Press, 2012), 25.

[95] Strachan, *The Direction of War: Contemporary Strategy in Historical Perspective*, 223.

[96] Ibid., 228.

[97] Schreer, *The Evolution of NATO's Strategy in Afghanistan*, 148-151.

"decapitation" and "targeted killing."[98] There was no unified purpose and aims nor a shared envisioned state for the intervention in Afghanistan across the substantial and lengthy multinational and multilateral effort.

Canada's limited engagement in Afghanistan also evolved iteratively without clear and unambiguous purpose and aims. It began under an "early in, early out" commitment completed in summer 2002.[99] In January 2003, the Canadian government elected to join ISAF, despite CAF leadership warning that Afghanistan would become a quagmire for its forces.[100] Canada assumed the lead of ISAF for one year to placate its closest ally while remaining out of Iraq. As Stein and Lang note, "few realized at the time that the assignment to Kabul, and Canada's efforts to bring NATO into Afghanistan, would draw Canada into a long-term military operation in a country where security was deteriorating."[101] In 2005 the Canadian contribution expanded and returned to Kandahar under a renewed commitment, until 2011. An independent panel, convened in 2007 to assess the future of the mission, identified "an absence of a comprehensive strategy directing all ISAF forces in collaboration with the Afghan government."[102] The Panel recommended "concerted diplomatic action to establish clearer, more comprehensive strategies and better coordination of the overall effort in Afghanistan by the international community, Afghan authorities and other governments in the region."[103] In response,

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[98] Antulio J. Echevarria, "Rediscovering US Military Strategy: A Role for Doctrine." *Journal of Strategic Studies*, 39:2 (2016): 239.

[99] Jean-Christophe Boucher and Kim Richard Nossal, *The Politics of War: Canada's Afghanistan Mission 2001-14* (Vancouver, BC: UBC Press, 2017), 6.

[100] Janice Gross Stein and Eugene Lang, *The Unexpected War: Canada in Kandahar* (Toronto, Ontario: Penguin Group, 2007), 41.

[101] Ibid., 71-72.

[102] John Manley et al., *The Independent Panel on Canada's Future Role in Afghanistan* (Ottawa, 2008), 13.

[103] Ibid., 34.

Canada published a policy statement in June 2008 which, yet again, failed to produce a strategy to enable the strategic dialogue and narrative, and guide the Canadian campaign.[104] For lack of strategy, Canada's engagement was misguided and subjected to other flawed policies and strategies. No clear and unambiguous purpose and aims were established, no envisioned state was fashioned, and strategic objectives remained tactical in nature.

The character of the conflict in Afghanistan was subject to pronounced misunderstanding on the part of allies. For example, the US was late to evolve its strategy to account for the change in insurgent tactics, the destabilizing nature of the sanctuaries in Pakistan, the need for greater military and police capacity building, and endemic corruption within Afghanistan.[105] As well, the US' 2009 strategy employed an operational approach based on COIN operations.[106] COIN, described by Gray as an "acronymic description of a basket of diverse activities intended to counter an insurgency,"[107] was often falsely praised as strategy, yet remained disconnected from broader policy objectives.[108] The character of the conflict also involves the allied effort. ISAF had many constraints to cope with including significant cultural differences, varying national caveats and risk tolerance, and disunity in campaign goals and methods. The intervention in Afghanistan unfolded in a complex adaptive system characterized by complexity,

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[104] Canada. "Canada's Engagement in Afghanistan - Setting a Course to 2011." A Report to Parliament, Ottawa, June 2008.

[105] Hanagan, *The Changing Face of Afghanistan, 2001-08*, 18-19.

[106] Stanley A. McChrystal, *COMISAF's Initial Assessment* (Headquarters International Security Assistance Force, Kabul, Afghanistan, 30 August 2009), 1-1 to 1-4.

[107] Colin S. Gray, "Concept Failure? COIN, Counterinsurgency, and Strategic Theory." *PRISM* 3, no. 3 (June 2012): 17.

[108] Simpson, *War from the Ground Up: Twenty-First-Century Combat as Politics*, 144.

emergence and unintended consequences, as well as uncertainty, chance and friction, hence the interminable struggle.

There was and remains many opposing wills in Afghanistan, intra- and inter-state, and competing interests. Within Afghanistan the Taliban insurgency is the main rival. The Taliban managed to mount a steady resistance which resulted in coalition forces being stretched thin and facing the possibility of defeat in 2006, especially in the south.[109] ISAF also coped with problems outside its span of control such as sluggish central government growth, lack of national unity among the populace, and interference by external state and non-state actors.[110] NATO lacked sufficient troops and failed to sustain tactical successes and convert them into strategic effect. NATO allies also failed to agree on a combined COIN doctrine, resulting in a further mismatch between ends, ways, and means. The period between 2006 and 2009 was described as a series of 'locally designed' national campaigns across the Afghan area of operations.[111] The multinational and multilateral effort failed to cohere against a smaller and less capable opponent. It also dueled for the hearts and minds of the local populace, in an effort to leverage the human dimension, to varying degrees of success. Ultimately, one could argue that it is the Taliban who succeeded at weakening the coalition and national resolves by exploiting time and applying strategic patience. The strategic environment was and remains subject to the opposing will and continued resistance of the Taliban and other actors.

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[109] Strachan, *The Direction of War: Contemporary Strategy in Historical Perspective*, 11.
[110] Schreer, *The Evolution of NATO's Strategy in Afghanistan*, 146.
[111] Howard G. Coombs and Lieutenant-General Michel Gauthier, "Campaigning in Afghanistan: A Uniquely Canadian Approach", Chap. 5 in *No Easy Task: Fighting in Afghanistan* (Toronto: Dundurn, 2012), 107-108.

It seems that allied strategies were deliberate in nature, despite the expanse of emergence that could have guided strategic choices. The conflict essentially unfolded at the tactical level in a series of ill-coordinated actions addressing the misjudged character of the conflict while trying to achieve inconsistent and disjointed policy aims.[112] Although the effort deployed in Afghanistan was unprecedented, the various national and multinational strategies at play were never adequately synchronized or coordinated, exacerbating complexity and ambiguity.[113] The security situation in various parts of the country was different, yet instead of leveraging those local and regional realities by dwelling and wayfinding to inform a more applicable emergent strategy, the approach was persistently maintained as deliberate, imposing external or centrally devised solutions instead of embracing and promoting internal or locally emerging solutions.

The strategy bridge seeks to connect the political with the operational and tactical levels. For Canada, a 2006 strategic intent expressed that the CAF's "commitment to Afghanistan is all about helping Afghans: help them move towards self-sufficiency in security, stabilize their country, develop their government and build a better future for their children."[114] The newly-formed Canadian Expeditionary Forces Command (CEFCOM) was charged with developing a multi-year military campaign plan to implement the strategic intent. CEFCOM became the CAF "focal point for translating strategic policy into military operational guidance, for ensuring alignment with other government departments, and for coordinating internationally with sister headquarters …

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[112] Strachan, *The Direction of War: Contemporary Strategy in Historical Perspective*, 218.
[113] Hanagan, *The Changing Face of Afghanistan, 2001-08*, v.
[114] Howard G. Coombs and Lieutenant-General Michel Gauthier, "Campaigning in Afghanistan: A Uniquely Canadian Approach", Chap. 5 in *No Easy Task: Fighting in Afghanistan*, 112.

and Afghan operational authorities."[115] CEFCOM created a campaign plan with limited

guidance consisting of Canada's overarching strategic objectives for the mission and a

military strategic intent. Lacking a strategy, CEFCOM had to provide a shared vision for

the mission within the military and coalesce the efforts of other government departments,

while national policy and international policy and strategies were shifting, and allied

theatre level plans were evolving.[116] Howard Coombs and Michel Gauthier assert:

> The complex Afghan mission context required Canadian operational-level
> leaders and planners to weave together a number of disparate strands into
> their campaign planning and ongoing guidance; the sometimes conflicting
> imperatives of national whole-of-government policy and practices and
> international military, primarily NATO and the United States, operational
> direction; an exceptionally fragile Afghan government and security
> apparatus; an insurgency, the strength of which has consistently been
> underestimated by the international community; evolving international and
> national views of best practices in both counter-insurgency and nation-
> building operations.[117]

These strands should have been reconciled at the strategic level through a

Canadian military strategy, before and during the campaign. The Commander of Joint

Task Force Afghanistan and his staff, operating at the tactical level but interfacing

continuously with operational level headquarters, was also required to reconcile the often

divergent CEFCOM and NATO/ISAF campaign plans and directives, iteratively. The

unexpected Taliban resurgence further complicated the situation.[118] The strategic intent

expressed in 2006 was only partially achieved for a limited period of time nearly five

years later with increased Afghan and ISAF forces. The restricted means available were

insufficient to achieve the stated ends. Canada withdrew most of its troops from

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[115] Ibid., 112.
[116] Ibid., 113-115.
[117] Ibid., 106-107.
[118] Stein and Lang, *The Unexpected War: Canada in Kandahar*, 289-290.

Afghanistan in 2011 following a US troop surge, while committing to the NATO training

mission until its 2014 mission termination. In the end, 162 Canadians lost their lives in

Afghanistan and thousands more were injured.[119]

In short, it seems that the lack of allied and coalition strategy-making prevented

the strategy bridge from enabling a productive and continuous strategic dialogue based on

strategic assessments, in order to establish realistic policy goals and achievable strategic

objectives, and establish a persuasive strategic narrative able to convince Afghans,

insurgents, and the populations of ISAF troop-contributing countries.[120] The security

situation in Afghanistan has been in a relative stalemate. Afghan government control of

its territory declined from 71.7% in November 2015 to 53.8% in October 2018, when this

metric was discontinued.[121] A political dialogue to achieve an intra-Afghan peace

agreement is ongoing between the US and the Taliban. The international community's

engagement in Afghanistan drags on, 19 years later, hopeful for a lasting political

reconciliation between the Afghan government and the Taliban. The failed outcome and

the toll of the conflict in Afghanistan is a clear and present cautionary tale sanctioning the

practice of strategy and its formulation.

Strategy in the Canadian Armed Forces

Despite the importance of strategy, as confirmed through the Afghanistan

experience, there is very little doctrine or other guidance within the CAF in developing

and formulating it. This section will describe the status of strategy in the CAF by

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[119] Howard G. Coombs, "The Evolution of a New Canadian Way of War", Chap. 5 in *Coalition Challenges in Afghanistan*, edited by Gale Mattox and Stephen Grenier (Stanford, California: Stanford University Press, 2015), 65.

[120] Simpson, *War from the Ground Up: Twenty-First-Century Combat as Politics*, 75.

[121] Special Inspector General for Afghanistan Reconstruction, *Quarterly Report to the United States Congress* (January 30, 2019), 65-66.

examining doctrine, policy, and ongoing efforts to address current challenges, complexity and emergence.

The leadership doctrine *Leading the Institution* manual offers cursory information on systems thinking, the policy-strategy interface, and dimensions of strategy.[122] It presents a strategic planning cycle composed of four parts: analysis; strategic visioning and plan; implementation; and controlling, evaluating and re-assessing.[123] However, this cycle confuses the practice of strategy with strategic planning. The latter is an institutional methodology to allocate resources to priorities, not a process to defeat an adversary and prevail in war and conflict by maintaining an advantage and creating favourable outcomes.

Moreover, the CAF institutional leadership doctrine misleadingly bounds strategic theory and doctrine as conflict resolution, the integration of the defence, diplomacy and development framework, and the "Three-Block War" concept, and falls short of providing the essential components and parameters of military strategy and a formulation model.[124] Finally, CAF institutional leadership doctrine specifies that "all institutional leaders have a responsibility to be expert in the field of their contribution to the making of strategy … and master the full subject of strategy in all its other dimensions."[125] It mandates institutional leaders "to maintain a system of professional development that can produce military strategists of the first order."[126] Yet the system clearly fails to equip

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[122] Canada, Department of National Defence, *Leadership in the Canadian Forces - Leading the Institution* (Canadian Defence Academy, Canadian Forces Leadership Institute, 2007), 22-49.
[123] Ibid., 50-57.
[124] Ibid., 54.
[125] Ibid., 57.
[126] Ibid.

leaders to become strategists, given the lack of doctrine, education and practice in the matter.

The CAF capstone *Canadian Military Doctrine* joint publication briefly discusses the relationship of military strategy to doctrine and offers a strategic planning process comprised of ends, ways, and means.[127] The CAF keystone *Operations* joint doctrine publication only briefly discusses the strategic level within the conceptual framework for joint operations.[128] The CAF keystone *Operational Planning Process* joint doctrine publication provides guidance on planning at the strategic and operational levels and describes a process of strategic-level planning entirely based on operational planning (e.g. initiation and orientation, course of action development, plan development, and plan review).[129] This linear process may produce strategic-level guidance and direction for subordinate elements but fails to serve as a primer for developing and formulating a military strategy.[130]

Douglas Bland remarks that a national conceived strategy is a rare item in Canada, and that Canadian military doctrine, like strategy, has been overpowered by foreign and allied ideas. He adds that strategy is particularly difficult in Canada as officers "must cope with a national way in warfare characterized by political indifference, disharmony between policy and objectives, an uncertain commitment horizon, a national skepticism about the utility of Canada as a military actor, and a growing complexity of technologies

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[127] Canada, Department of National Defence, B-GJ-005-000/FP-001 *Canadian Military Doctrine* (Ottawa: DND Canada, April 2009), 3-2 to 3-4.

[128] Canada, Department of National Defence, B-GJ-005-300/FP-001 *Operations* (Ottawa: DND Canada, September 2011), 1-1 and 1-2.

[129] Canada, Department of National Defence, B-GJ-005-500/FP-000 *The Canadian Forces Operational Planning Process*, 1-9 to 1-18.

[130] United States, National War College, *A National Security Strategy Primer* (Washington, DC: National Defense University, 2018). This is a document that provides such an example.

and international politics."[131] Bland shared those observations before 9/11. He posits that

the lack of strategic thinking in Canada occurs because Canada rarely, if ever, operates on

its own; instead, it aims to act under someone else's direction and strategy.[132] The

Canadian campaign in Afghanistan illustrated the weakness of this model and highlights

how Canada must not only establish its own military strategy but influence the strategies

of others. Strachan upholds that "if wars are to be waged in the twenty-first century, those

waging them will need a firm grasp of strategy … so it is beholden on service personnel

to embrace a sense of strategy … The first step in this process is a clear articulation of

what strategy is; the second is its application in the machinery of the state."[133]

Canada's 2017 Defence Policy *Strong, Secure, Engaged* highlights key global

trends including the evolving balance of power, the changing character of conflict, and

the technological advancements that threaten Canadian security, prosperity, and values.[134]

It also specifies operations and core missions that the CAF must be able to conduct

simultaneously.[135] The future operating environment will remain characterized by VUCA,

and diverse threats and challenges not only on the physical plane but also on the moral

and cognitive planes, underlining the requirement for a comprehensive approach (DIME)

to operations.[136] As such, effective strategy formulation is paramount to ensuring the

success and sustainability of CAF operational commitments aimed at protecting our way

of life and national interests.

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[131] Douglas L. Bland, "Military Command in Canada", in *Generalship and the Art of the Admiral* (Toronto, Vanwell Publishing, 2000), 123-124 and 127.

[132] Ibid., 134.

[133] Strachan, *The Direction of War: Contemporary Strategy in Historical Perspective*, 25.

[134] Canada, Department of National Defence, *Strong, Secure, Engaged – Canada's Defence Policy* (Ottawa, 2017), 49-57.

[135] Ibid., 81-84.

[136] Canada, Canadian Army, *Close Engagement* (Kingston, Ontario: Army Publishing Office, 2019), 11-13.

More recently, the *How We Fight* effort by the Canadian Joint Operations Command to catalyze discussions regarding how the CAF fights and responds to contemporary challenges examines the strategic environment and emerging threats, clearly articulating our adversaries' reach and capabilities as well as our own risk and vulnerabilities. The solution proposed, the *Pan-domain Force Employment Concept* (PFEC), makes no mention of strategy but rather focuses on an integrated operational approach to these challenges.[137]

A previous position paper on *How We Fight* supports then Colonel John Vance's argument that, despite subscribing to the concept of campaigning, the CAF has no need for it in reality because it does not conduct major operations independently but rather achieves strategic objectives through contribution warfare.[138] If this is the case, military strategy becomes even more indispensable to Canada as it ensures the coherence of strategic objectives and the reconciliation of means through strategic dialogue. The practice of military strategy would promote a better alignment between the policy objectives required to assert Canadian national interests and the ways and means required to achieve those goals, in collaboration with allies and partners. Strategy offers the answers to many questions the paper highlights regarding how the CAF will fight and maintain relevance in the future.

Various trends suggest that the character of war and conflict will continue to evolve in unpredictable ways and present new and complex problems which will not be

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[137] Canada, Department of National Defence, *How We Fight Update* (Presented to Army Council, Ottawa, 28 November 2019).

[138] Canada, Department of National Defence, *How We Fight* (Reading package to the General and Flag Officer Symposium, Ottawa, April 2019), 1-10; John H. Vance, "Tactics Without Strategy or Why the Canadian Forces Do Not Campaign", Chap. 8 in *The Operational Art: Canadian Perspectives Context and Concepts* (Kingston: Canadian Defence Academy Press, 2005), 271-274.

resolved through battlefield victory. The Canadian experience in Afghanistan reminds us that our adversary has a vote, and can also avoid our strengths, attack our vulnerabilities and contest our narrative. As Ben Zweibelson explains, traditional planning methods will not generate the solutions required:

> Detailed planning uses a teleological approach where the entire process is purpose driven; the ends is determined first and then directed by action (ways) with means. … Working from the desired end-state back to the present is such a pervasive concept that it is both a constant process and generally an accepted 'root metaphor' that defies critical introspection. … This type of thinking often oversimplifies complex systems and sets up the military organization for tactical success with strategic failure because the world is not as malleable as the detailed planning expects it to be.[139]

Design thinking seems to be the potent answer to increased complexity and unpredictability. This field of practice demonstrates the potential to unravel the Gordian knots of today and tomorrow. Design is about changing our way of thinking about a problem in order to generate better solutions, through self-disruption, creativity and innovation. Design seeks to create that which does not yet exist. Design thinking is necessary to adapt to VUCA environments and prevent tactical successes from turning into strategic failures. Design thinking may be leveraged to address complex challenges at any level of war.[140] Design thinking incorporates various trans-disciplinary methods and tools, such as reflective practice, systemic thinking, interplay, empathy, narratives, divergence, frame awareness and reflection, and probing. One of its building blocks is systems thinking, by depicting key actors, institutions, discourses, and structures, mapping their relationships, and discerning tensions, interdependencies and feedback

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139 Ben Zweibelson, "Design Theory and the Military's Understanding of Our Complex World." *Small Wars Journal* (August 7, 2011): 9.

140 Philippe Beaulieu-Brossard and Paul T. Mitchell, "Challenge-Driven: Canadian Forces College's Agnostic Approach to Design Thinking Education." *The Archipelago of Design* (13 January 2019): 2-7.

loops. Some of design thinking's guiding principles include allowing the solution to emerge over time from the context, taking actions to learn about the environment, or probing, and reframing when the environment changes substantially.[141]

Military design thinking emerged in the 1990s with an Israeli approach called Systemic Operational Design. In 2005, the US Army began developing design thinking through its School of Advanced Military Studies and an assortment of military publications. Military design thinking has thrived in the last decade owing to a cabal of passionate and dedicated academic and military authors.[142] CFC recognized the potential of military design and started formally incorporating it to military professional education curriculum in circa 2013. Understanding design as a collection of approaches, diverse perspectives and loosely connected ideas to address wicked problems and complex systems, and recognizing the limits in how strategy and operations are traditionally conceived, CFC branded and projected its approach as epistemologically agnostic, providing education on many design methodologies.[143] Still, military design thinking, however powerful and compelling, remains ambiguous, conceptual, and controversial. According to the literature review, design thinking has largely only been applied within operational planning efforts at the operational and tactical levels, in support of very specific planning activities such as mission analysis. It has certainly not yet breached the gates of strategy. Ultimately, it seems to fail at converting its output, a novel approach, into an outcome, or in other words a rationally expressed actionable strategy that is

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[141] Celestino Perez Jr., "A Practical Guide to Design: A Way to Think About It, and a Way to Do it." *Military Review* (March-April 2011): 46-48.

[142] Aaron P. Jackson, "A Brief History of Military Design Thinking." *Medium*, 6 February 2019.

[143] Paul T. Mitchell, "Stumbling into Design: Action Experiments in Professional Military Education at Canadian Forces College." *Journal of Military and Strategic Studies*, 17:4 (2017): 84-102.

approved by decision-makers. In this regard, design thinking methodologies need to be complemented by other activities to assist and culminate the process of strategy formulation.

This section explored the current scope of strategy and its formulation in the CAF, determining that the institutionalization of the practice of strategy, complemented by design thinking at the strategic level, would provide a competitive advantage against the diverse threats and challenges confronting Canada. The next section will present the research methodology that was used to evaluate and compare the three selected strategy formulation models.

A Framework for Comparative Analysis

The literature review conducted earlier in this chapter allowed us to frame strategy by identifying five dominant characteristics, namely the primacy of purpose and aims, the changing character of war and conflict, a dialectic of opposing wills, the complementarity of deliberate and emergent approaches, and the bridging function of strategy. The literature review also established why strategy is important for Canada and the CAF, and the current (deficient) scope of strategic theory and practice within the latter. So far, the literature review answered four of the five secondary research questions, namely what is military strategy in a contemporary context, why strategy is important for Canada and the CAF, what its current scope within the CAF is, and how strategy formulation is articulated. The literature review however, did not provide the answer to the primary research question, specifically what strategy formulation model should be taught and applied within the CAF.

To query what strategy formulation model stemming from which elements of existing models should be taught and applied within the CAF, one must qualitatively evaluate selected models against a framework for comparative analysis. This section will establish the framework that was used to answer the primary research question as well as the one remaining secondary research question, and discuss the value and significance of this methodology as well as its limitations.

The following framework for comparative analysis is based on the dominant characteristics of military strategy and their specifics identified at the beginning of this chapter. These characteristics can also be interpreted as fundamental and universal to the practice of military strategy.

Table 2.1 – Framework for Comparative Analysis

Dominant Characteristic of Strategy	Description and Enabling Criteria
The primacy of purpose and aims	Develop an envisioned state and strategic objectives, expressed as desired favourable outcomes, from policy-driven purpose and aims and a systemic design inquiry.
The changing character of war and conflict	Understand the strategic environment and address its complexity and emergence by examining the dimensions of warfare and applying systemic thinking, a probe-sense-respond approach and

	scenario-building to minimize unintended consequences.
A dialectic of opposing wills	Defeat an adversary by targeting his will, leveraging the human dimension, and applying an indirect approach and maneuver.
The complementarity of deliberate and emergent approaches	Formulate a strategy using deliberate and emergent approaches concurrently, in a flexible process of learning and interacting that embraces unpredictability by dwelling and wayfinding.
The strategy bridge	Connect the policy, operational and tactical levels by fostering a strategic dialogue, articulating a rational statement, establishing and adjusting a strategic narrative, and conducting strategic assessments.

This framework summarizes the findings from the literature review and offers a homogenous approach of evaluating and comparing different strategy formulation models. The three strategy formulation models which will be analyzed and compared in the next chapter are the US Army War College (AWC) strategy formulation model, the US National War College (NWC) national security strategy model, and Naveh and Graicer's Strategic Operational Design (SOD) model.

These models are the only ones that could be found. Indeed, the doctrine manuals of NATO, the US, the UK, and France do not offer any strategy formulation model.[144] Just like in Canada, they only briefly discuss the dynamic between policy and strategy, the ends, ways and means methodology, and the instruments of national power, but fall short of presenting a theory of strategy and a strategy formulation model. The evaluation

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[144] North Atlantic Treaty Organization, *Allied Joint Publication-01 Edition E Version 1, Allied Joint Doctrine;* The United States, Chairman of the Joint Chiefs of Staff, *Joint Doctrine Note 1-18 Strategy* (25 April 2018); United Kingdom, Ministry of Defence, *Joint Doctrine Publication 0-01 (5th Edition) UK Defence Doctrine* (Swindon: Ministry of Defence Shrivenham, November 2014); France, Ministry of Defence, *Joint Doctrine 01, Doctrine for the Employment of the French Armed Forces* (Paris: Joint Centre for Concepts, Doctrine and Experimentation, 12 June 2014).

of these three models using the established framework will inform a qualitative comparison that will highlight their best practices and deficiencies.

This methodology was deemed both feasible and suitable for this research project. The research was deemed feasible because it was conducted using unclassified material from credible professional sources available in the public domain, such as books and professional journal articles from renowned authors, scholars, and academic and governmental institutions. The CFC physical and virtual library enabled access to the documents required. This methodology was also deemed suitable to critically evaluate three different strategy formulation models. A common point of reference had to be developed for this specific purpose, given the nonexistence of similar frameworks that could act the part in this domain. The framework is based on fundamental elements of military strategy that are apparent in most contemporary documents on the matter, as written by authorities in this field of study. The content of the framework is therefore, in the author's humble opinion, a rational and genuine synthesis intended to provide a common point of reference for analysis and comparison.

However, this methodology also exhibits limitations. The first one is acknowledging that different characteristics of military strategy could have been identified by other researchers in similar or different circumstances. The second limitation of this unique framework for comparative analysis is that it fails to fully consider the respective school of thought, prevailing context and potential prejudice of each model. Indeed, every strategy formulation model was developed by (biased) individuals in different institutions evolving in different contexts, and for related but not entirely similar purposes. This framework is not all-encompassing, as it is based only on fundamental aspects of military strategy rather than also on cultural and contextual ones.

This chapter reviewed a relevant portion of the existing literature on military strategy and its formulation with a view to advocate that a strategy formulation model is essential to enable the practice of strategy and set advantageous conditions in war and conflict. This chapter framed military strategy by first defining it in terms of what it means, where it is hierarchically situated, how it differs from policy and planning, and how complicated it is to formulate and implement. This chapter then identified five dominant characteristics of military strategy which were subsequently used to establish a framework for comparative analysis. This chapter also presented a case study on the lack and incoherence of military strategy in Afghanistan, demonstrating the disastrous consequences of not practicing strategy. Finally, this chapter examined the current scope of strategy-making within the CAF, determining that military strategy could provide the CAF a competitive advantage against diverse threats and challenges, especially if complemented by design thinking. The next chapter will provide a comparative analysis of three strategy formulation models.

CHAPTER 3 COMPARATIVE ANALYSIS OF
STRATEGY FORMULATION MODELS

This chapter will examine and evaluate three strategy formulation models using the framework established in chapter 2. This chapter will conclude with a qualitative comparison of the models examined.

US Army War College Strategy Formulation Model

The US AWC strategy formulation model claims to offer guidelines for strategy formulation that can apply equally to all formal national security documents as well as military strategies. These guidelines are "intended for strategists attempting to achieve the coherence, continuity, and consensus that policymakers seek in designing, developing, and executing national security and military strategies."[145] The model was published in 2012 within Volume II of the *US Army War College Guide to National Security Issues* for the benefit of students at the US AWC and for use within the US national security apparatus. However, it is also being taught and applied at CFC within NSP. The model is fundamentally linear and must not be construed as a formula but rather as a strategic thought process.[146]

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[145] The United States, *U.S. Army War College Guide to National Security Issues Volume II: National Security Policy and Strategy*, edited by J. Boone Bartholomees Jr (Carlisle, PA: Strategic Studies Institute, June 2012), 413.
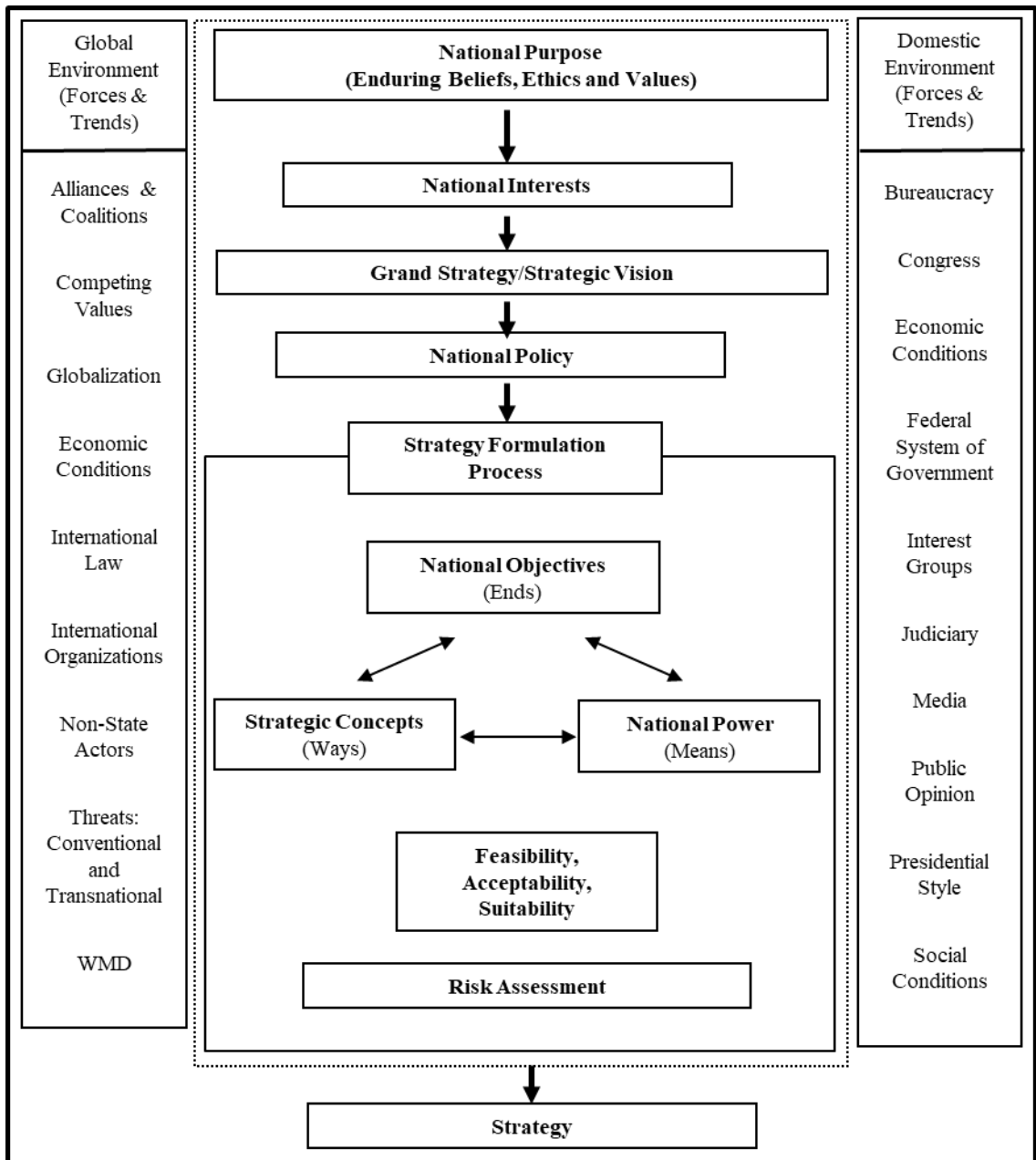[146] Ibid.

Figure 3.1 – US Army War College Strategy Formulation Model

Source: The United States, *U.S. Army War College Guide…,* 413.

The model places an emphasis on ends, stressing that it is the starting point for the entire process. It specifically highlights that the strategy must consider the national purpose, core national interests, the strategic vision (or grand strategy), and any national policy in the matter, in order to derive applicable interests. These interests must then be

categorized in terms of security of the homeland, economic well-being, and promotion of values. The interests are then prioritized by determining their respective degree of intensity, whether vital, important, or peripheral. This prioritization occurs while excluding any threat assessments. Once the interests are categorized and prioritized, objectives (ends) are determined by evaluating the related issues, trends and challenges, both foreign and domestic. The model fittingly situates strategy as driven by ends, emphasizing the primacy of purpose and aims. However, the model frames the problem requiring a strategy by using a top-down approach and traditional methods, instead of suggesting more recent and creative problem-framing and design thinking methods.[147] The model's emphasis on top-down hierarchical guidance driving the strategy formulation process indicates that the model was specifically developed for use within the US context where various strategy documents are published at regular intervals and nested within higher level ones.

The model outlines a series of considerations, from the global environment on one side and the domestic environment on the other. The list is relatively comprehensive; however, it lacks a few dimensions highlighted by Gray, namely strategic theory and doctrine, technology, operations, command, geography, and time. As well, the model fails to establish how complexity and emergence are addressed in any meaningful way. This incomplete list of considerations therefore seems to favour the ones that are predominant within the US national security apparatus, while dismissing others, especially ones that may be applicable to theater level strategies.

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[147] Ibid., 413-416.

The model barely recognizes the adversarial nature of strategy. It simply mentions conventional and transnational threats as an issue or challenge to consider in the global environment. The model seems to prioritize strategic guidance and national interests over any type of dialectic with and defeat of an adversary. Finally, the model does not discuss the human dimension nor ways that an indirect approach can be brought to bear. Therefore, the model disregards, or at best neglects, one of the main protagonists who justifies the development of a military strategy in the first place, an adversary.

The model is linear and exclusively deliberate. It does not allow for any type of emergence except in terms of monitoring for success, failure, or modification, only acknowledging that unforeseen changes may occur, and that national interests and policy can change over time. Finally, the model does not graphically depict any form of flexibility or learning or interacting within the process. The sub-text does specify however that a properly formulated strategy must be elaborated with inherent flexibility and adaptability in its statement.[148]

The model clearly values strategic guidance but portrays a one-way conversation instead of a strategic dialogue between policy and strategy. It situates the ends, ways and means triad in the center of the model. It specifies that means are usually restricted, therefore ways are necessarily resource constrained. It also discusses risk assessment as a final and essential test to assess the risk of failing to achieve strategic objectives, and the risk of second and third order effects of strategy implementation, or in other words unintended consequences. It specifies that where the risk is deemed unacceptable, the statement must be rebalanced by either rescoping the ends, changing the ways, increasing

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[148] Ibid., 418.

the means, or combining some or all these actions. However, the model does not mention assumptions. The model also does not specify the notion of strategic narrative. In terms of strategic assessment, the model states that the final step in the process is one of continuous monitoring or review of the strategy as it is being implemented.[149] Finally, the model uses the methodology of validating for feasibility, acceptability, and suitability to examine strategy options. Suitability determines if the strategy is accomplishing the desired objectives, feasibility ensures the means available are accomplishing the selected courses of action, and acceptability weighs the importance of the nation's purpose and aims against the multi-dimensional costs of executing the strategy.[150]

In short, the US AWC strategy formulation model establishes a linear depiction of strategy-making, driven by higher guidance and national interests. While it looks all-inclusive at first glance, the model is overly simplistic, especially if it is meant to stimulate strategic thought, and ignores important elements of strategy, among others the acknowledgement of a dialectic with an adversary as well as considerations for the implementation and the assessment of a strategy. The nature and design of this model seems to be highly influenced by Lykke's and Yarger's viewpoints and writings on strategy formulation. The model is clearly intended for the US context. In sum, the model appears to only partially satisfy three dominant characteristics of strategy, namely the primacy of purpose and aims, the changing character of war and conflict, and the strategy bridge.

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[149] Ibid., 416-418.
[150] Yarger, *Strategy and the National Security Professional*, 146-147.

US National War College National Security Strategy Model

The US NWC national security strategy model was published in 2018 as a primer to provide its students a common point of reference and a useful tool to develop a national security strategy. The primer is reviewed annually. The focus is on national security development, and not military strategy, however the model can also serve as a useful framework outside of its intended scope. The primer argues that thinking strategically entails applying five fundamental elements of strategic logic: analyzing the strategic situation (the challenge and context); defining the desired ends (the outcomes sought); identifying the means (the resources and capabilities); designing the ways (the approaches and modes of action) to use the means to achieve the desired ends; and assessing the costs and risks of the strategy.[151] These elements are described as relational and circular to one another. This model, depicted in figure 3.2, is more nuanced and sophisticated than the previous one.[152]

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[151] The United States, National War College, *A National Security Strategy Primer* (Washington, DC: National Defense University, 2018), iii-5.
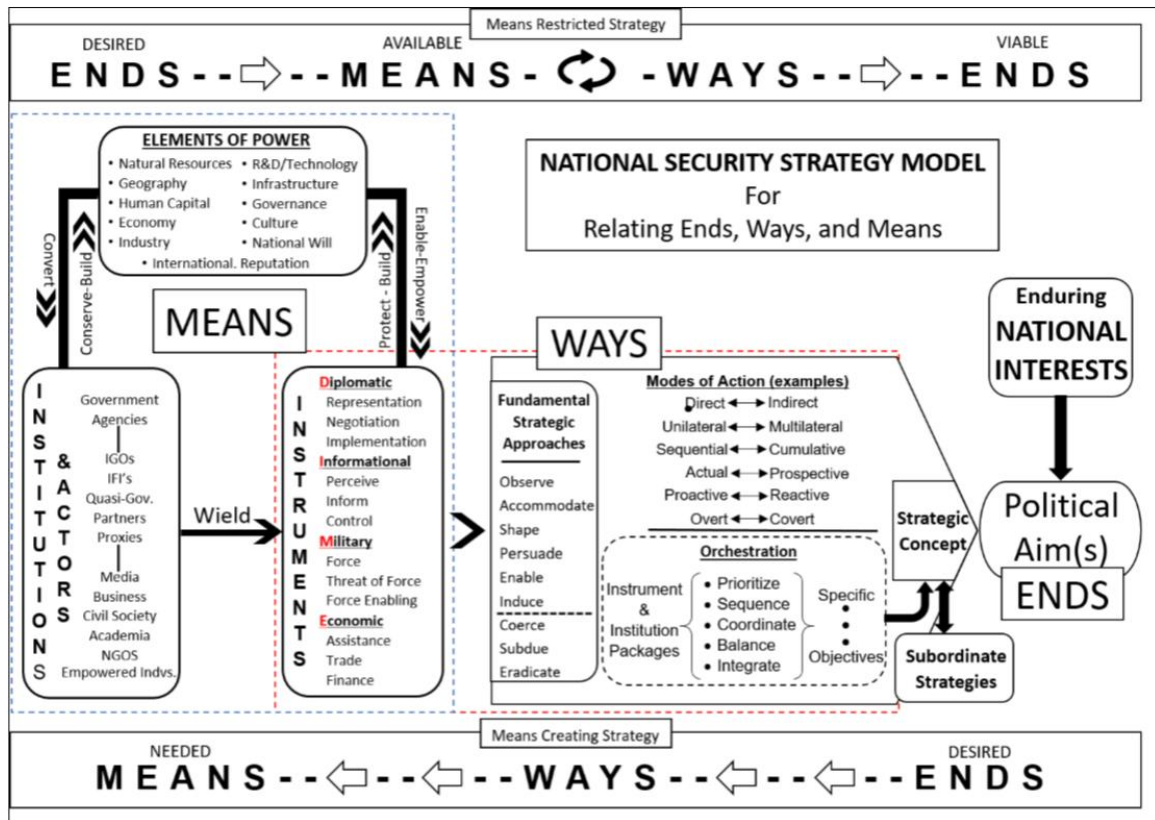
[152] Ibid., 36.

Figure 3.2 – US National War College National Security Strategy Model

Source: The United States, *A National Security Strategy Primer*, iii-5.

This model values the primacy of purpose and aims. The primer explains that as part of the first fundamental element of strategic thinking, analyzing the strategic situation, national interests are categorized and prioritized. These national interests inform the political aim, a desired outcome that is developed by the strategy practitioner or provided to him. If it is provided but is not feasible, it must be disputed. Then, as part of defining the desired ends, specific (strategic) objectives are developed to achieve this political aim, ideally just a few, broad yet concise objectives. Finally, the primer discusses the requirement to define a problem statement and cautions against personal and cognitive bias (worldviews).[153]

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[153] Ibid., 6-11.

The primer defines the strategic situation as a cloud, because of its amorphous, ever shifting and opaque nature. The primer stresses that the international and domestic contexts and conditions, or strategic environment, must be assessed for threats and opportunities, and any constraints identified, including time.[154] The primer and the model do not specifically list any dimensions of war and conflict, nor do they propose any specific method to address complexity and emergence other than simply assessing the strategic environment. The model seems somewhat deficient in determining the character of war and conflict and the complex adaptive system in which the strategy will unfold, especially considering its level of detail in presenting ways and means.

The primer acknowledges the inherent dialectic with an opposing will in strategy. It upholds that the strategy must "work against a thinking, proactive adversary who always has a vote in how events unfold,"[155] and highlights that the strategy will compete against the adversary's and his ability to adapt. The model also suggests ways that are indirect in nature, including strategic approaches that reside within the information domain and psychological and human dimensions such as persuading, inducing, coercing, and subduing, as well as indirect and covert modes of action. Lastly, the primer suggests red teaming the strategy, against the adversary's most likely and most dangerous courses of action.[156] The model's recognition that strategy is applied against an adversary is one of its strengths.

This strategy formulation model is also based on a linear strategic thinking process that is deliberate in nature. The model does not depict any process of learning and

[154] Ibid., 6-8.
[155] Ibid., 28.
[156] Ibid., 22-23, 27-28 and 35.

interacting or iterative improvement, apart from the material referencing strategic assessments and the need for course corrections stemming from adversary actions.

The model is very detailed in terms of explaining how to develop a rational strategy statement and how to conduct strategic assessments. It introduces the germane notion of *Means Restricted Strategy*, which is initiated by defining desired ends, then identifying available means and iteratively selecting applicable ways within these means, to finally produce viable ends. Given that all strategies must ultimately compose with restricted means, this notion is very relevant to strategy formulation. The model identifies and relates three components of the means, namely elements of power, institutions and actors, and capabilities of national instruments of power. The depiction of the model suggests that it is the combination of means within the three components that ultimately produces effect.[157]

The model also introduces a descriptive process of designing ways. It starts with selecting the most appropriate fundamental strategic approach to respond to the prevailing challenge, then choosing one or more modes of action, branded as strategy types by Gray,[158] that will best accomplish the strategy. It concludes with harmoniously orchestrating how each institution and actor wields which instrument of power through what actions, by prioritizing, sequencing, coordinating, balancing, and integrating those efforts. The model clearly emphasizes the articulation of a strategy statement.[159]

The model explicitly discusses assessment of costs, risks and results. The primer affirms that assessment is a continuous and iterative process. It recognizes costs, whether

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[157] Ibid., 12-20.
[158] Gray, *The Strategy Bridge: Theory for Practice*, 65-70.
[159] The United States, National War College, *A National Security Strategy Primer*, 21-24.

potential, physical, reputational, political, temporal, or opportunity, as something to evaluate through a cost-benefit analysis. It also introduces two additional factors to test the viability of a strategy: desirability, which assesses whether expected benefits outweigh the expected costs; and sustainability, which assesses whether the effort in terms of level of resources, political will and popular support can be sustained long enough for the strategy to achieve its objectives and the political aim. Moreover, the primer suggests constant adjustments to an adversary's moves and recognizes that upon implementation, the strategic situation changes in numerous ways. Finally, the model fails to incorporate the notions of strategic dialogue and narrative.[160]

The strength of this model is the sophisticated depiction it makes of the interactions within the ends, ways and means triad. The model introduces the significant notion of means restricted strategy and presents a very comprehensive process to articulate a strategy statement, particularly in terms of selecting means and designing ways, and their relations. The primer also discusses the requirement to assess the costs and risks of the strategy. The nature and design of this model seems to be directly related to the US NWC's curriculum on national security strategy emphasizing the joint and interagency approach. Finally, the model is described within a primer publication format that is very convenient and useful, and could serve as a specimen to emulate. Ultimately, the model only partially addresses four dominant characteristics of strategy.

Naveh & Graicer's Strategic Operational Design Model

Systemic Operational Design (SOD) was conceived as a non-linear form of inquiry promoting self-disruption to generate and navigate through cognitive frames that

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[160] Ibid., 25-27.

would eventually yield a novel operational concept. The first iteration was composed of three components, systems thinking, operational art, and design. The model has been adapted twice since first emerging in the 1990s. The second iteration, the Systemic Design Inquiry, emerged in 2006. This iteration integrated strategy within the model, as a system of tensions and a medium of thought with the potential to transform a current system into a desired one. The notion of drift was incorporated to mean the gap between our perception of the world and the world itself. Because drift inevitably occurs, the intent is to accept the drift as it emerges and leverage it faster than the opponent can. Finally, the third iteration of SOD, termed Systemic Inquiry in Operational Mediation (SIOM), *Strategic Operational Design*, or simply the 'Z' pattern, emerged in 2013. In this iteration, operations mediate between strategy as logic, and tactics as form. The notion of degrees of freedom was also incorporated to mean cognitive boundaries one must transcend at the onset of a design inquiry to expose a realm of possibilities.[161]

This latest iteration, a meta-methodology depicted at figure 3.3, provides guidelines of inquiry and comprises four iterative stages combining logic and form. The first stage, the drift, seeks to orientate by acknowledging the complex emergence, and understanding if and how policy has changed, what conceptual barriers may exist and what degrees of freedom can be employed to offer an alternate more relevant perspective. The second stage, the potential, seeks to understand the latent potential for strategy by mapping the current reality (its borders, perspectives, players, interests, and tensions), distinguishing the scope of the drift between the legacy system and the current one, and mapping an alternate desired system with the potential to serve one's interests better. The

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[161] Ofra Graicer, "Self-Disruption: Seizing the High Ground of Systemic Operational Design (SOD)." *Journal of Military and Strategic Studies*, 17:4 (2017): 21-37.

third stage, the strategy, seeks to transform by establishing the scope of the drift between the current and the desired systems, through four dimensions of change: one's way of thinking (knowledge structures), one's interpretation of reality, one's organization, and one's reality (the world). The fourth stage, the operation, seeks to explain how the strategy can be implemented by identifying sources of opposition (rival, friendly, oneself), articulating what must occur in each dimension of transformation, and generating a compelling and rallying story.[162]
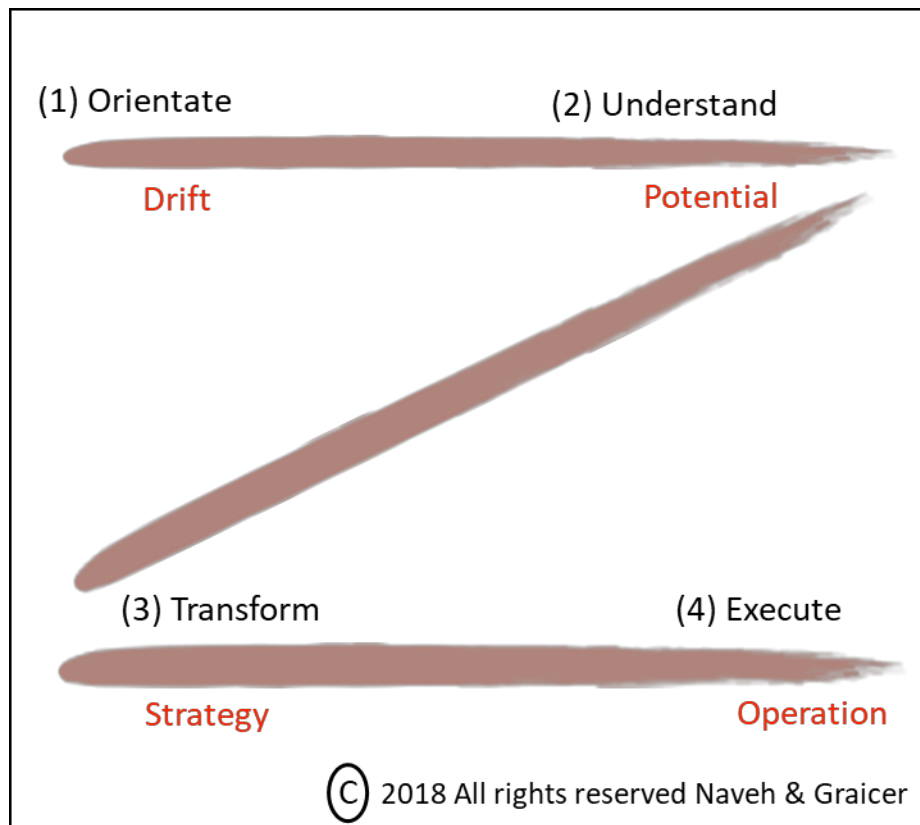

Figure 3.3 – Naveh and Graicer's Strategic Operational Design Model

Source: Ofra Graicer, *SOD Brief Plenary*, presented to CFC NSP (Toronto, April 2019).

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[162] Ofra Graicer, *SOD Brief Plenary*, presented to Canadian Forces College National Security Programme (Toronto, April 2019).

The model is focused on designing a novel response to a complex emergence that changes a system. The model enables a systemic design inquiry that includes problem-framing. It takes into consideration relevant policies during the first stage and derives strategic objectives in the third stage from establishing what must change through four dimensions in the current system to enable the desired one, which it further articulates in the fourth stage. However, the model does not clearly explain how national interests and values as well as political aims inform the design inquiry, nor does it emphasize these factors to guide the strategy formulation.

The model recognizes complexity and emergence. The model seeks to understand the strategic environment, as legacy and current systems, by applying systemic thinking and other applicable design tools to map reality and its interplay of tensions and dependencies. The model involves scenario-building however only one scenario is ultimately retained as the desired system, suggesting either that further emergence in the complex adaptive system will not impact the implemented strategy or that the strategy will become overcome by events. Finally, the outcome of the design inquiry remains at the mercy of the designer, and his (limited) expertise, perspectives, and cognition. The model's Achilles heel seems to be its deceptively unassertive method of evaluating the contextual dimensions of the strategic environment and the contemporary character of war and conflict.

The model examines the system of opposition including rivals. However, any consideration of targeting the will of the adversary, leveraging the human dimension, and applying an indirect approach as part of the strategy is wholly dependent on how the designer has considered these important factors within the design inquiry.

This model applies an almost totally emergent approach to strategy formulation, which is initiated by a complex emergence and promotes dwelling and wayfinding as part of the design inquiry. However, the model fails to present a process of learning and interacting that deals with emergence throughout strategy implementation, and it also seems to fail at creating a resilient strategy against unpredictability.

In terms of enabling the bridging function of strategy, the model suggests that it mediates between strategy, operations and tactics. However, it does not specify nor promote strategic dialogue with the political level. The model also fails at guiding the conversion of the outcome of the design inquiry into a rational strategy statement. It does specify in its guidelines that a story, a strategic narrative, must be produced but it does not reflect how the narrative is adjusted over time. Simply said, the model starts with a complex emergence and ends with a proposed novel approach that may manifest the desired system. The model does not mention how the strategy is assessed in terms of viability. It is also critically deficient in implementation, lacking the translation aspect required for the strategy to be approved or supported by decision-makers, as well as the assessment framework required to appraise the implemented strategy against adversary actions, further emergence and unintended consequences.

The Strategic Operational Design model applies an emergent approach to strategy formulation through a systemic design inquiry which seems to generate novel approaches to complex problems. However, unless the designer is very experienced, the model itself does not establish the conditions required to produce an actionable strategy, via an effective strategic dialogue and expression of a strategy statement, which can be implemented, assessed and adjusted through subordinate levels. This deficiency is recognized in most, if not all, design thinking methodologies as their aim is not to

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formulate strategy per say but rather to create a novel vision, one that does not yet exist, that can be implemented through a strategy, or a plan, in order to change the status quo into a more favourable state of affairs. The nature and scheme of this model seem to be inclined towards an operational-level design approach, within a more highly integrated civil-military environment, reflective of Israel's strategic culture and reality. Ultimately, the model only partially addresses four dominant characteristics of strategy.

Qualitative Comparison

The outcome of the critical evaluation of the three strategy formulation models is a qualitative comparison against the five dominant characteristics of strategy that have been established. As the next table shows, each model only partially addresses some of the dominant characteristics of strategy.

Table 3.1 – Comparative Analysis of Strategy Formulation Models

Dominant Characteristic of Strategy	US Army WC Strategy Formulation Model	US National WC National Security Strategy Model	Strategic Operational Design Model
The primacy of purpose and aims	Partially	Partially	Partially
The changing character of war and conflict	Partially	Partially	Partially
A dialectic of opposing wills		Partially	Partially
The complementarity of deliberate and emergent approaches			Partially
The strategy bridge	Partially	Partially	

No model satisfies every characteristic and no model satisfies any characteristic fully. Yet, every model presents novel concepts, methods or elements which seem highly effective for military strategy formulation. As well, many of these elements seem complementary to one another.

The US AWC model is linear, ends-driven, and ends, ways and means -centric. The model emphasizes the formulation of objectives as the starting point of strategy formulation. It categorizes and prioritizes national interests and considers applicable policies before determining objectives, however it does so in a linear process without the benefits of design thinking and whilst discounting the dialectic with an adversary. The model promotes the formulation of a rational strategy statement. It also discusses risk assessment and the evaluation of the viability of the strategy through the notions of feasibility, acceptability, and suitability.

The US NWC model is a linear strategic thinking process which focuses on relating the ends, ways and means of a strategy. Neither the primer nor the model provide guidance in terms of understanding the strategic environment and addressing complexity and emergence. The model does however acknowledge the dialectic of an opposing will in strategy and provides notions, strategic approaches and modes of action, to articulate ways that are aimed at an adversary using an indirect approach. The model's best practice is clearly establishing how to conceive a means restricted strategy, synergizing the ends, ways and means triad, and articulating a strategy statement. The primer also discusses risk assessment and introduces the notions of cost, desirability and sustainability.

The Strategic Operational Design model is a meta-methodology that provides a non-linear process to create a novel approach, or strategy, by applying a design inquiry. Its third iteration, the 'Z' pattern, was adapted to be applied for strategy formulation rather than just operational design. This model is the only design-centric strategy formulation model that could be found. It is also the only model that applies an emergent approach to strategy formulation. The model provides an effective path to appreciate a complex adaptive system and discover a novel approach to address a challenge. Its

simplicity is meant to stimulate degrees of freedom, or creativity and innovation. It performs best in a constraint free environment. However, the strength of a design approach is also its weakness: any derived solution must eventually be reconciled with reality and its overriding constraints, which may ultimately invalidate the defined approach. Finally, the model does not incorporate guidance to convert the solution into an effective strategy statement to foster strategic dialogue and generate operational output, nor does it explain how the strategy is assessed over time and against an adversary's actions. Therefore, the model fails at guiding the practitioner to express the designed novel strategy in a commonly understood language that will influence decision-makers.

This chapter has examined and evaluated three different strategy formulation models using a framework based on the five dominant characteristics of strategy established in chapter 2. The qualitative comparison highlights that none of the three models comprehensively considers the five characteristics. In fact, the models only partially address only three or four of the named characteristics. The next chapter will offer an interpretation of these findings, introduce a bespoke CAF strategy formulation model, and propose areas for further research.

CHAPTER 4 PROPOSING A CANADIAN MILITARY STRATEGY FORMULATION MODEL

This chapter will provide an interpretation of the findings of the previous chapter regarding the three strategy formulation models that were examined and evaluated, which determined that none of the models fully addressed the requirements of the framework. This chapter will then introduce a bespoke model that fuses the relevant elements of the three previous models and integrates the fundamental and universal ones presented in chapter 2. This chapter will subsequently present areas for further research to promote strategic thought and practice within the CAF.

Interpretation of Findings

The qualitative comparison conducted in chapter 3 reveals that none of the three models address the five dominant characteristics of military strategy. At best, they each only address three of four of them partially. This section will interpret these findings.

First, the evaluation and qualitative comparison was based on a unique framework. The three models were not conceived with the same context in mind, but different ones. For example, the first two models are deliberate and arranged to prioritize national interests over the adversary, perhaps because of the US' hegemonic position in the world. They are also linear in nature and do not refer to design thinking in any form, probably because design has not yet been embraced by these defense colleges and the broader US military community, at the strategic level. The 2012 US AWC model reflects the viewpoints and writings of Lykke and Yarger, both former faculty members, while the more nuanced 2018 US NWC model reflects the curriculum's emphasis on national security within a joint and interagency environment. Conversely, the SOD model is an evolution of an operational level design-centric model originally used to conceive novel

solutions for Israel's challenges within its own operational environment, thus reflecting its strategic culture. The SOD model evolved iteratively from the 1990s to its current 2013 version. It seems that strategy formulation models, like strategy in practice, are the product of various interplays and compromises. Therefore, we suggest that a strategy formulation model is created at a certain time by a specific community for a specific purpose, reflecting specific worldviews and biases. Ultimately, a strategy formulation model is the expression of a strategic and organizational culture. While it is wise to know and understand various models, it could be treacherous to apply a model within a significantly different context than the one it was intended for.

Second, the evaluation and comparison of the three models was performed against a distinctive theoretical and conceptual framework established from a literature review on military strategy. One may criticize the framework itself as being flawed and incapable of fully valuing the models examined. Consequently, we must objectively acknowledge that the framework itself may skew the outcome of the evaluation of each model. Therefore, we suggest that a strategy formulation model should be conceived from first principles and best practices, arising from theories of strategy and historical evidence, and aligned with strategic culture, reflecting the prevailing context at any given time.

Lastly, because none of the models have been validated as comprehensively satisfying the requirements of military strategy formulation, it seems that an entirely new model should be conceived for use within the CAF, one that is aligned to Canadian strategic culture and CAF organizational culture. This new model should incorporate the relevant elements from each of the three examined models and integrate the fundamental and universal elements of military strategy presented in chapter 2 from the literature review. The fusion of these various elements into a conceptually and contextually

coherent and logical whole is a challenging task. It may explain why the CAF and other militaries have not yet embraced the practice of strategy, lacking an appropriate formulation model. As always, academic grind can guide and assist such endeavours by acting as innovation incubators. This research project is a case in point. Our interpretation of findings therefore suggests that the CAF requires its own bespoke strategy formulation model.

This section has established that strategy formulation models are customized by a community for its own purpose and in accordance with its specific worldview. It has also established that strategy formulation models should nonetheless dutifully conform to universal principles and historical evidence while remaining aligned with respective strategic cultures. Finally, this section has established that the CAF requires a bespoke strategy formulation model that would respond to its needs. The next section introduces a novel model for use within the CAF that would fully satisfy the framework for comparative analysis presented at the end of chapter 2.

Introducing a Bespoke CAF Strategy Formulation Model

Acknowledging the interpretation of findings discussed above, this section will introduce and explain a new model that incorporates many elements presented in previous chapters. The model is based on the notion that strategy evolves within a complex adaptive system against one or more adversaries with the goal of dynamically gaining and maintaining a decisive advantage and transitioning to a more beneficial state of affairs. The model combines deliberate and emergent approaches to strategy formulation.
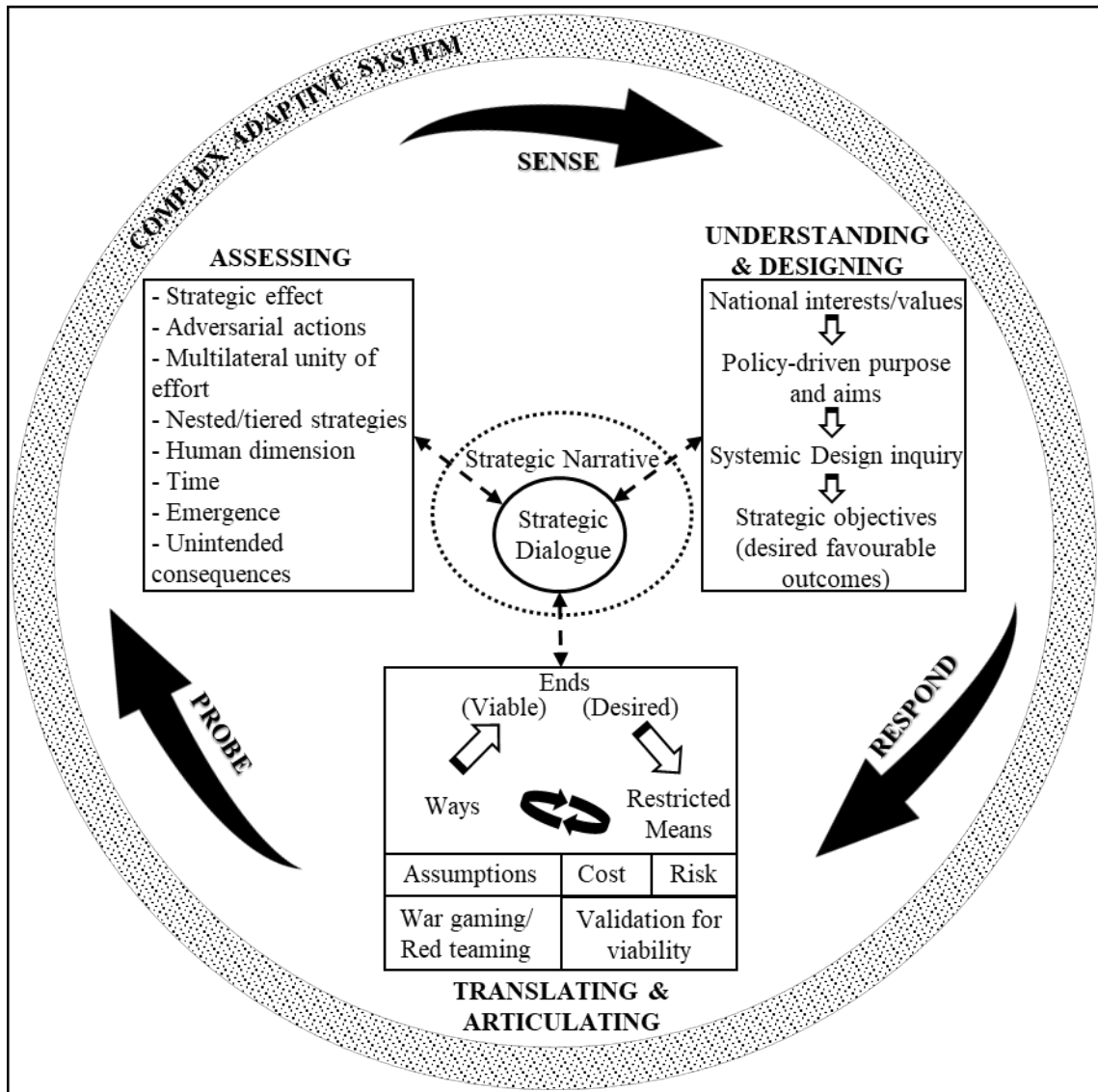
Figure 4.1 – Proposed Canadian Military Strategy Formulation Model

The entire model resides within a greyish dotted rim which reflects the permeable

bounded instability of a complex adaptive system and reminds us that military strategy

always evolves within such a system and remains subject to its unpredictability and

uncontrollability. There are three components to the model which are expressed as verbs

in the continuous tense, namely "Understanding & Designing," "Translating &

Articulating," and "Assessing." These components are arranged in a circular manner.

They are connected by arrows which express the application of a probe-sense-respond

methodology as an emergent practice to address complexity, building on the precepts of the Cynefin Framework.[163] The notion of strategic dialogue is deliberately situated at the centre of the model as the never-ending engine that feeds the strategy formulation process. The concept of strategic narrative is positioned just outside and around it as a product of the dialogue, the strategic environment, and the duelling narratives, hence its porous dashed external line. The three components are also connected by double arrow lines to the strategic dialogue and narrative, signaling their role in shaping and being shaped by these views, thoughts and interests.

The model can be initiated with any component. The top right component, Understanding & Designing, guides the strategy practitioner to first identify and prioritize national interests and values, then consider or infer the policy-driven purpose and aims of the strategy, followed by conducting a systemic design inquiry, and finally determining strategic objectives. The systemic design inquiry is epistemologically agnostic, and seeks to frame the challenge, frame the environment through its systems including the rival one, build scenarios, and create a novel strategic approach. The devised novel approach becomes the envisioned state. The envisioned state informs the determination of strategic objectives, or ends as desired favourable outcomes. The practice of Understanding & Designing engenders an applicable response which requires deeper analysis and formation before implementation.

The bottom component, Translating & Articulating, seeks to further the reflection by translating the envisioned state and strategic objectives into a commonly shared institutional language, and producing a rational strategy statement which clearly exposes

[163] David J. Snowden and Mary E. Boone, "A Leader's Framework for Decision Making." *Harvard Business Review* (November 2007), 3-4.

the assumptions, costs and risks of the strategy. The ends, ways and means triad is depicted in the means restricted form. The ends are the strategic objectives and they must be construed as favourable outcomes rather than end states. The interaction between means and ways results in adjusting desired ends (favourable outcomes) into viable ones. The selected ways should favour an indirect approach, advocating deception and pitting one's strengths against the adversary's weaknesses. The selection of strategic approaches and modes of action, and their orchestration with their related means, as described in the US NWC model, should be encapsulated in sub-text. This component also mentions war gaming and red teaming to further calibrate the strategy against likely and dangerous adversary courses of action. The design thinking equivalent, prototyping, can also be used when the strategy seeks to adapt to and solve a complex problem which is not propelled by an adversary. Finally, the strategy statement must be validated as viable by testing its feasibility, acceptability, suitability, desirability, and sustainability. The practice of Translating & Articulating a strategy statement generates an actual operational output which probes the system, to iteratively improve the system or adjust the strategy and operational output.

The top left component, Assessing, seeks to deliberately assess, at various levels, how the system responds to the implementation of the strategy as a probing act. Strategic effect, as the cumulative and sequential impact of the strategy over the course of events, must be measured. If the net strategic effect is negative, the strategy must be reviewed. The adversary and his actions, as the main competitor against one's envisioned state, must be appraised. Other critical aspects to be assessed include the allied/coalition and multilateral unity of effort, the impact of other nested/tiered strategies, as well as the human dimension and how it affects the adversary's will to fight, the local and regional

affected populations, and international and public support. Time, as the most consequential dimension of strategy in terms of pre-empting the adversary and impacting one's staying power, must be considered. Finally, emergence must be recognized for leverage and unintended consequences must be acknowledged for mitigation. The practice of Assessing implies dwelling and wayfinding. It enables one to sense the strategic environment while maintaining shared situational understanding with stakeholders, and setting successful conditions for creating or adjusting a strategy through the practice of Understanding & Designing.

The model is circular. Akin to Boyd's "observation, orientation, decision, and action (OODA) loop,"[164] the faster and tighter the cycle (in terms of months at the strategic level), the more probable that favourable outcomes will be achieved against an adversary and within the complex adaptive system, and the envisioned state realized. The faster feedback loops between the probe of the strategic environment and the sense and response activities enables the iterative adjustment of the strategy and the operational output. This strategy formulation model was borne from the best practices identified in the three models examined, and from the features of the five dominant characteristics of military strategy explained in chapter 2. The model applies and organizes the relevant elements in a coherent and logical manner, while enabling both deliberate and emergent approaches of strategy formulation. The model's structure allows for abduction, defined as leveraging a best guess, testing it in a specific environment, and adjusting it iteratively as required.[165] Abduction enables acceptable risk-taking. The model empowers the

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[164] Robert Coram, *Boyd: The Fighter Pilot Who Changed the Art of War* (New York: Time Warner Book Group, 2004), 327-344.
[165] Beaulieu-Brossard and Mitchell, *Challenge-Driven: Canadian Forces College's…*, 7.

strategy practitioner to formulate a military strategy in a non-linear and iterative manner, while embracing unpredictability.

This model would fully address every characteristic and their enabling criteria presented in the framework in chapter 2. It would also address or mitigate Gray's eight problems with strategy presented in chapter 2 at figure 2.2. Interestingly, the proposed model also presents a synthesis of many features of the current NSP curriculum at CFC, despite this project not being an attempt to do so. This circumstance legitimizes a portion of the NSP curriculum as being anchored and aligned on the modern fundamental characteristics of military strategy. This model is, however, only a small step in a bigger endeavour to promote strategic thought and practice within the CAF.

Areas for Further Research

The practice of strategy within the CAF remains embryonic, despite aspirations or claims to the contrary as specified in its institutional leadership doctrine. The field of military strategy is vast, but it can be assimilated within our institution pragmatically and in small bites. This section establishes areas for further research to this end.

First, further research should be conducted on strategic theory, confirming or expanding the dominant characteristics of military strategy presented in chapter 2. This would enable the establishment of a doctrinal framework, confirm or disprove the evaluation and comparison provided in chapter 3, and further refine the proposed model above. Further research on strategy formulation, such as specifically examining and evaluating other models which may exist and may not be in the public domain, may also evolve the findings and recommendations of this paper. For example, the author learned of a 2015 Israeli design doctrine that is not yet publicly disclosed. There may be other

strategy formulation models conceived by other countries practicing strategy and its formulation. Further research on the matter would inspire academic and professional reflection.

The proposed model should also be applied both theoretically as part of professional military education and practically to real world problems by the Strategic Joint Staff, to validate its efficacy and pertinence. This proposed strategy formulation model can serve as a steppingstone in many regards, such as for academic case studies, and for the development of a primer on strategy by CFC and of institutional doctrine by Chief Force Development. Further research would be required in both cases. The application of the model would undoubtedly reveal a tension that should be explored between the more fundamental and universal aspects of strategy reflected in the model and the contextual ones applicable to Canadian strategic culture and CAF organizational culture. The application of the model would also stimulate design thinking practice and generate much needed professional reflection on the matter. The military application of design at the strategic level is in and of itself a very valuable and fascinating topic that remains yet unexplored.

Finally, research should be conducted on how the CAF and the Department of National Defence can generate a strategy workforce composed of educated and experienced civilian and military strategists. These strategists should be uniquely qualified in the formulation and articulation of strategy through a combination of training, education and experience obtained by way of a particular career path. A starting point

would be evaluating the strategist programs of the various services of the US Department of Defense.[166]

Further research into the topic of strategy formulation would ultimately instill new ways of thinking and operating within the CAF. Among others, it would promote personal mastery, assist us in contesting our deep-seated assumptions that influence how we understand the world and act, stimulate our ability to define a shared picture of the future, or envisioned state, and encourage productive interaction and learning.[167] In short, further research on these subjects would promote organizational learning and allow the CAF to better adapt to changing realities and future challenges, through the practice of strategy and its formulation.

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[166] Cancian et al., *Formulating National Security Strategy*, 154-163.
[167] Senge, *The Fifth Discipline*, 3-12.

CHAPTER 5 CONCLUSION

This paper has postulated that a strategy formulation model is essential to enable the practice of strategy and set advantageous conditions in war and conflict. It proposed a novel strategy formulation model that coherently integrates fundamental elements from strategic theory and best practices from existing models, to address complexity and emergence in a non-linear and iterative manner. This outcome was achieved by first framing five dominant characteristics of military strategy: the primacy of purpose and aims, the changing character of war and conflict, the dialectic of opposing wills, the complementarity of deliberate and emergent approaches, and the strategy bridge. A case study on the lack and incoherence of military strategy in Afghanistan supported this framework. The framework was subsequently used to examine three existing strategy formulation models. The evaluation of these models revealed their respective limitations and deficiencies. These findings led to the understanding that strategy formulation models are tailored by a community for a particular purpose, that they should nonetheless conform to universal principles, and that the CAF requires its own bespoke model.

The theory and practice of military strategy are of vital importance to any nation. Strategy is about iterative choices informed by an emergent context and strategic dialogue.[168] The 'Long War' in Afghanistan demonstrated that intervening militarily without a coherent and nested strategy can be costly and potentially disastrous. Gray reminds us that "all too often, a country has bounded from policy into military action having paid scant regard to the vital enabling role of strategy … Those who despise,

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[168] Martin E. Dempsey, "From the Chairman: Making Strategy Work." *Joint Force Quarterly* 66 (3rd quarter 2012): 2.

ignore, or otherwise neglect strategy, invariably are required to pay a high price for their mistake."[169] It is incumbent upon CAF institutional leadership to set the conditions required for strategic thought and practice. Strategic planning is not strategy. The practice of strategy begins with a coherent shared conceptual model about how to formulate it, as a first step in a long journey.

The critical reflection contained in this paper may be regarded as problematizing, which is defined as actual critical thinking that threatens institutionalism.[170] The proposed strategy formulation model will either eventually deliver substantial change for the CAF, by seeding further thoughts about strategy, or the concept will risk alienation or marginalization. Regardless, it is a first step, taken within the relative safety of academic freedom, to promote the practice of strategy. Ultimately, the practice of strategy and its formulation would enable the CAF to consistently make better strategic choices, enable strategic effect, increase the probability of success in war and conflict, and generate more favourable outcomes in the quest to gain and maintain a decisive advantage against an adversary or when confronting a wicked problem. This is particularly relevant today in the context of grey zone conflict. In an existential protracted fight to safeguard our way of life and national interests, the failure to practice military strategy may be our demise.

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[169] Gray, *Fighting Talk: Forty Maxims on War, Peace, and Strategy*, 56-57.
[170] Zweibelson, *Three Design Concepts Introduced for Strategic and Operational Applications*, 96-99.

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