SORRY WE'RE LATE, EH?
PARADIGMS FOR CANADIAN MOBILIZATION

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by

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The fundamental tensions for the Canadian Army are to retain forces of sufficient mass and capability to be effective in operations, to deploy and sustain these at intercontinental distances, and to have these forces ready in time to effect change. This tension is described in modern readiness theories and exemplified in the Canadian experience in the Korean War. Based on flawed assumptions after the Second World War, Canada was embarrassingly unready for conflict and deployed forces to Korea only after pressure from allies and two spectacular operational reversals on the peninsula. Since the end of the Cold War, the doctrine for mobilization retains some of the same flawed assumptions. This study examines Canada's preparation for the Korean War, compared against Cold War readiness theories, current doctrine, and futures studies to make recommendations for updates to Canadian Forces Joint Doctrine for Mobilization from an Army perspective. The conclusions recommend parameters for a complementary Force Generating Concept study. Ultimately, this study is relevant for any national army which can imagine a need to be ready for a future expansion.

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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

SORRY WE'RE LATE, EH? PARADIGMS FOR CANADIAN MOBILIZATION, by Major Todor Dossev, 118 pages.

The fundamental tensions for the Canadian Army are to retain forces of sufficient mass and capability to be effective in operations, to deploy and sustain these at intercontinental distances, and to have these forces ready in time to effect change. This tension is described in modern readiness theories and exemplified in the Canadian experience in the Korean War. Based on flawed assumptions after the Second World War, Canada was embarrassingly unready for conflict and deployed forces to Korea only after pressure from allies and two spectacular operational reversals on the peninsula. Since the end of the Cold War, the doctrine for mobilization retains some of the same flawed assumptions. This study examines Canada's preparation for the Korean War, compared against Cold War readiness theories, current doctrine, and futures studies to make recommendations for updates to Canadian Forces Joint Doctrine for Mobilization from an Army perspective. The conclusions recommend parameters for a complementary Force Generating Concept study. Ultimately, this study is relevant for any national army which can imagine a need to be ready for a future expansion.

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ACRONYMS

ABCANZ	American, British, Canadian, Australian, and New Zealand
ADM	Assistant Deputy Minister
ODP	Office of Degree Programs
CAF	Canadian Armed Forces
CASF	Canadian Army Special Force
CBP	Capability Based Planning
CDS	Chief of Defence Staff
CFA	Canada's Future Army
CFJP	Canadian Forces Joint Publication
CIB	Canadian Infantry Brigade
CJOC	Canadian Joint Operations Command
DIP	Defence Industrial Planning
eFP	Enhanced Forward Presence
FGC	Force Generating Concept
FOE	Future Operating Environment
LAV	Light Armoured Vehicle
LCOL	Lieutenant-Colonel
MRS	Managed Readiness System
MSF	Mobile Strike Force
MCO	Major Combat Operations
MND	Minister of National Defence
NATO	North Atlantic Treaty Organization
NCO	Non-Commissioned Officers

NTE	Notice to Effect
OOTW	Operations Other Than War
PERSTEMPO	Personnel Tempo
PPCLI	Princess Patricia's Canadian Light Infantry
SFAB	Security Force Assistance Brigade
SJS	Strategic Joint Staff
SSE	Strong, Secure, Engaged
SRR	Strategic Ready Reserve
TAPV	Tactical Armoured Patrol Vehicle
WWII	Second World War

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CHAPTER 1

INTRODUCTION

Background

Every decade since the 1930s offers an example of strategic surprise attacks as a start to conflict: Nazi Germany's invasion of Poland (1939) and of the Soviet Union (1941); the Japanese attack on Pearl Harbor (1941); the North Korean invasion of South Korea (June 1950) and the Chinese intervention (1950); Israel's pre-emptive attack on its Arab neighbours (1967) and their surprise retaliation (1973); Argentina's invasion of the Falklands Islands (April 1982); Iraq's invasion of Kuwait (1990); 9/11 (2001); and most recently Russia's annexation of Crimea (2014).[1] These opening hostilities all occurred so quickly that mobilization began only after the initial gains by the aggressor. The cost to reverse these initial gains is most often measured in national treasure—soldiers and materiel.

An essential role of national defense institutions is to raise, train, equip, deploy, and sustain military forces. These forces have historically enabled national policies of both aggression and defense to prevent precisely these types of surprise. As a result, their constitution, resourcing, and employment are of primary import to national decision-makers. However, to reduce the costs of standing armies in peacetime, and to balance the

[1] Richard K. Betts, *Surprise Attack* (Washington, DC: Brookings Institution, 1982). Betts does not identify the Falkland or later attacks since his work predates these conflicts. Conversely, Erik J. Dahl, *Intelligence and Surprise Attack* (Washington, DC: Georgetown University Press, 2013) contends that there are multitudes of examples of intelligence success. Clearly, both surprise and warning are possible, and both must be considered plausible.

risks of being unprepared against the demands of mass during conflict, modern states rely on mobilization to raise mass forces when needed.[2]

A Brief History of Mobilization

The paradigm of mobilization, as it is generally known today, is rooted in the 19th century.[3] In the period between the French Revolution and the First World War, national service and planned mobilization of citizen soldiers became a model for balancing economic and political pressures to rapidly raise very large, sufficiently trained, and reasonably equipped armies.

The first indication of a fundamental change in the concepts of mobilization became evident during the French Revolution which demonstrated that it was feasible to raise motivated armies from amongst the domestic population. A new social contract, rooted in Rousseau's *Right to Life and Death,* demanded the citizen owed to the nation not only taxes, but also military service:

> Now the citizen is no longer judge of the peril to which the law wills that he expose himself; and when the prince says to him: 'It is expedient for the state that you die,' he should die; for it is only upon this condition that he has lived until then in safety, and his life is no longer solely a gift from nature, but a conditional gift to the state.[4]

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[2] Richard K. Betts, *Military Readiness: Choices, Concepts, Consequences,* (Washington: The Brookings Institution, 1995), 23.

[3] Karen S. Wilhelm, *Mobilizing for War in the 2st Century: An American Perspective* (Washington, DC: Georgetown University, 2012), 2-3.

[4] Jean-Jacques Rousseau, *The Social Contract or the Principles of Political Rights*, trans. Rose M. Harrington (New York: G.P. Putnam and Sons, 1893), 49-50.

Even in the fervor of *liberté, equalité, fraternité*, the passion of the masses was insufficient to raise enough volunteers, so "on August 23, 1793, the government passed the *levée-en-masse* decree, placing all French men and women in a state of permanent requisition for the duration of hostilities."[5] But while the French Revolution linked conscription to the social contract between the citizen and state, it still raised armies in response to hostilities, only after the fighting has started. The French also set other precedents for mobilization, such as standardizing equipment like artillery, establishing arsenals, and configuring standard structures of integrating conscripts and regulars into demi-brigades.[6] From these philosophical and conceptual foundations, the Prussians would develop their particular solution.

The second, and most critical evolution occurred during the wars of German Unification (Danish-Prussian War, 1864; Austro-Prussian War, 1866; Franco-Prussian War, 1870-71) when Prussia linked planned mobilization with contingency plans. Writing of the Franco-Prussian War (1870-71), historian Michael Howard expressed the French view of Prussian armies in the middle of the 19th century as: "without general mobilization, the Prussian army was too small to achieve anything, and general mobilization merely conjured up an ill-trained and undisciplined militia."[7] This should

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[5] Steven T. Ross, "Napoleon and Maneuver Warfare," in *The Harmon Memorial Lectures in Military History, 1959–1987*, ed. Harry R. Borowski, (Washington, DC: Office of Air Force History, 1988), 309-324, excerpt reprinted in U.S. Army Command and General Staff College (USACGSC), *H100 Book of Readings* (Fort Leavenworth, KS: USACGSC, July 2020), 124.

[6] Ibid., 123-124.

[7] Michael Howard, *The Franco Prussian War* (New York: Routledge, 2006), 18.

come as no surprise, as “the French military system that had called the tune for Europe from 1793 to 1815 had depended heavily on mass.”[8]

In 1858, prior to his appointment as war minister, Albrecht von Roon summarized the Prussian strategic problem as the need for an “inexpensive but at the same time impressively strong army.”[9] Dennis Showalter, writing of Prussia in the same period, observes that the readiness required by “the state’s international position called for a front-loaded army able to deter potential rivals and to undertake swift and decisive operations for clearly defined objectives, yet the institutional legacy of the reform movement was a ponderous blunt instrument ill-suited to policy wars of any sort.”[10] In other words, Prussia needed an army that was large, capable, quick, and most importantly, cheap. This was the essential tension for a small, relatively poor state like Prussia, which needed a capable army to face multiple threats without crippling its labour force.

Von Roon’s new model army had to address two issues in preparation for war through national service. First, the economic disadvantage of removing capable adult men from the labour pool imposed a disproportionate impact on their long-term productivity on the farm or in the shop.[11] Second, the time required to reach the full

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[8] Dennis E. Showalter, “The Prusso-German RMA, 1840–1871,” in *The Dynamics of Military Revolution, 1300–2050*, ed. MacGregor Knox and Williamson Murray (New York: Cambridge University Press, 2001), 94.

[9] Roon, *Denkwürdigkeiten* II 521 ff., cited in Michael Howard, *The Franco-Prussian War* (New York: Routledge, 2006), 19.

[10] Showalter, “The Prusso-German RMA, 1840–1871,” 96.

[11] Ibid., 93.

potential of military competence with new conscripts would impact how long they were unavailable either for war or the economy.[12] If the state waited until the start of hostilities to raise and train the army, the regulars could "teach a mass of several hundred men the rudiments of company drill in a few weeks if they worked the recruits to exhaustion."[13] As a result, conscripts could be committed to combat with minimal training, potentially compromising the outcome of the conflict, or at the very least wasting national treasure. Von Roon's solution was to conscript before hostilities started. He instituted a national service where young conscripts were enrolled at age 20 for three years of full-time service, followed by four more years in the reserves ready for mobilization to augment line units, then finally as older reservists for "occupation and garrison duties."[14] This approach balanced the costs, demand for labour, and ready forces by training and instilling the discipline required for service in young men, but then progressively releasing them to the labour force.

Prussian chief of staff from 1857 to 1888, Helmuth von Moltke (the Elder) combined this novel model of national service with new technologies like breech-loading rifles, railroads, and the institutionalization of a general staff capable of planning for their use in the event of mobilization. Like a chess opening, the Prussians pre-planned their strategic mobilization, but with the General Staff, railroads, and national service, the Prussians could effectively play their first several moves before the opponent had moved

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[12] Betts model of late 20th century readiness theories will be explained in more detail in chapter 3.

[13] Showalter, "The Prusso-German RMA, 1840–1871," 95.

[14] Ibid., 106.

their first piece into place. In 1859, Prussia could generate a single corps for service within 29 days – an already impressively quick mobilization by the standards of the time.[15] By the outbreak of hostilities with France in 1870, Moltke had the army mobilized in 20 days, giving "Prussia's forces a decisive initial edge over a French Army that in its own way was at least as modern."[16] Using this method of mobilization to rapidly raise forces allowed Wilhelm, King of Prussia, to defeat France and Austria in central Europe and proclaim the Constitution of the German Empire in April 1871.

By the turn of the 20th century, the new paradigm of combining national service, large reserves, and contingency plans was broadly institutionalized by most European states. Demonstrating the importance of prepared opening moves, the Germans established a model which would test the rest of Europe in 1914.

> Following the Franco-Prussian War, most Western states adopted national military service through conscription and one form or another of a general staff system. These steps may be viewed as extensions from the changes brought about by the French Revolution and Industrial Revolution. European nations would henceforth train and equip increasingly larger armies, armies that would be mobilized and deployed by general staffs using railroads, telegraphs, and whatever other technological advances that might become available.[17]

Von Roon's model for national service became the prevailing method for raising armies around the world for the next century, including both world wars. It is only since the end of the Cold War's state of "permanent military mobilization" that Western nations have

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[15] Showalter, "The Prusso-German RMA, 1840–1871," 103.

[16] Howard, *The Franco-Prussian War*, 59-60.

[17] Showalter, "The Prusso-German RMA, 1840–1871," 112.

begun to ebb away from national service, depending on their perception of threat of a major conflict.[18]

A tension between two key elements of mobilization readiness becomes evident in the history of the process. The first is that before 1860, mobilization and training of conscripts began after hostilities were declared. Von Roon's model for national reserves and national service solved this problem after 1860. The second element revealed during the Franco-Prussian conflict, and especially during the First World War, that there was no method for partial mobilization of reserves. This tension between being sufficiently ready, but not in an all-or-nothing manner remains unresolved in the post-Cold War period.

A Canadian Perspective – The Case of the Korean War

In Canada today, there is little thought of mobilization, and national service has only ever been instituted in response to conflict. Only in the instances of the world wars did Canada have to completely convert its economy and conscript its population for total war, and then only after the war had started. In other words, Canada has never maintained a large base for military mobilization in the European tradition. Even the local militias which protected the border with the United States through the 19th century were never fully integrated into a national mobilization base.

The most recent doctrinal review of mobilization is nearly 20 years old, and the most recent instance of mobilization is no less than 70 years ago in response to the Korean War (1950-53). In the last instance, following the substantial force reductions in

[18] Betts, *Military Readiness,* 19.

the aftermath of Second World War (WWII) (1939-45), Canada found it needed to rapidly raise a Canadian Army Special Force (CASF) for Korea while nearly simultaneously contributing to the newly founded North Atlantic Treaty Organization (NATO). But as the nature of the Korean conflict changed through the first year and Canada's contribution became clear, certain assumptions about mobilization also crystalized, with Canada effectively reversing the de-mobilization from WWII. Ideas about the period of warning and the time available to make a decision, the nature of the conflict, and how long it would take to recruit, equip, and train the force, have not all survived the mists of time.[19] This case of the CASF can help reveal some of the particular parameters of mobilization as they applied to Canada at the time such as the availability of officers and enlisted leaders with experience from the European Theatre. When these parameters and assumptions are examined against modern models for readiness and mobilization, but in the context of anticipated conflict, doctrine writers and planners can refine Canada's concepts of mobilization for the 21st century and perhaps anticipate or even underwrite some of the associated risks given enough time.

Problem and Research Questions

The principal question of the research which follows is this: given modern demands for readily available forces, production of increasingly advanced equipment,

[19] Lieutenant-Colonel Herbert F. Wood, *Official History of the Canadian Army. Strange Battleground: The Operations in Korea and their effects on the Defence Policy of Canada* (Ottawa: Queen's Printer, 1966), 40; hereafter cited as *Strange Battleground*; David J. Bercuson, *Blood on the Hills: The Canadian Army in the Korean War* (Toronto: University of Toronto Press, 1999), 14; Max Hastings, *The Korean War* (New York: Romatada Ltd., 1987), 238.

training needs, and a prevalence of sub-threshold conflict in a nuclear world, how should Canada update its mobilization doctrine to anticipate the force generation and readiness challenges of the Future Operating Environment (FOE)? The question originates from a line of reasoning beginning with mobilization and following through readiness of forces for contingency operations in a post-Cold War world.

Contemporary concepts of mass mobilization are rooted in 19th century paradigms of levee-en-mass, conscription, and national reserves. After WWII, these methods were adapted for the Cold War, with the United States in a permanent state of partial mobilization, but bearing a greater burden than most allies.[20] Canada has enjoyed the benefits of economic investment in place of maintaining high readiness forces, but finds itself extended to meet all commitments today.[21]

From this Canadian perspective, the most recent example of raising new forces was during the Korean War, but current doctrine remains based on assumptions of available time, industrial base, or resources so it retains the assumptions of WWII. The fundamental policy challenge for Canada remains how to deploy forces across oceans quickly enough, and with enough combat power to be effective, all while maximizing economic benefit to its citizens.

Training and equipment readiness have also become more challenging since WWII. To illustrate the increasing complexity of armoured vehicles, the M4A1 Sherman tank was conceived as a requirement in August 1940 and entered combat for the first time

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[20] Betts, *Military Readiness,* 19-20.

[21] Government of Canada, *Strong, Secure, Engaged: Canada's Defence Policy* (Ottawa: Queen's Printer, 2017). Hereafter cited as SSE.

at El Alamein in October 1942 in just over two years.[22] By contrast, the current US M1 Abrams is an exceptionally more capable tank by nearly every metric. However, from the program restart in February 1972, to production of the first M1A1s in December 1985 took nearly 14 years.[23] The increase in development times suggests a corresponding increase not only in capability, but in the complexity of components to maintain, and of crew training times. So modern demands for readily available forces, production of increasingly advanced equipment, and corresponding training needs suggest that these mobilization concepts may no longer be suited to the readiness challenges of the 21st century.

The multipolar context of international relations of the interwar period is also very unlike the early 21st century's nuclear-capable, post-cold war, post 9/11 environment. In this respect, Korea is again a closer analogue to the less-than-total wars of the later 20th and early 21st centuries. But the economic prosperity of the American century and the associated international order are an ongoing challenge to maintain.

To begin to answer this primary question, several secondary questions will support the study. First, it will be necessary to understand the historic paradigms of mobilization and what problems these constructs aimed to solve. Second, will be to examine the current Canadian doctrine on mobilization, as conceived after the end of the Cold War. Third and final, it will be necessary to hypothesize about what problems can

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[22] R. P. Hunnicutt, *Sherman: A History of the American Medium Tank* (Novato: Presidio Press, 1977), 117, 124.

[23] Steve Zaloga, *M1 Abrams Main Battle Tank 1982 – 1982* (London: Osprey Publishing, 1993), 3-11. This does not include the precursor program of the MBT-70 which was a joint development between the USA and West Germany.

be solved through mobilization—given the envisioned FOE—and to develop doctrine and policy process updates to enable these solutions.

Definitions

Finding a suitable definition for mobilization is essential for the subsequent discussion, but surprisingly difficult. In short, there are two general interpretations including a narrow meaning of activating national reserves of part-time soldiers and a broader meaning of converting national resources into military power.[24]

Richard Betts observes that mobilization through the Cold War was understood to mean "calling reserve forces to duty or surging weapons production."[25] He also addresses this in a broader sense as "the reconversion of industrial and manpower resources into military forces on a grand scale comparable to past mobilizations for major war."[26] This is unsatisfactory, since "grand scale" or "past mobilizations" or "major war" can all evoke varying meanings for individual readers by conflating the scale of conflict, the scale of forces committed, and timeliness.

Karen Wilhelm, in her dissertation, notes three elements of mobilization: massed manpower for military service, national economies and industry, and public support.[27]

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[24] Also not to be confused with conscription, which deals with the involuntary compunction of being brought into service.

[25] Betts, *Military Readiness,* 211, citing Ethan B. Kapstein, *The Political Economy of National Security: A Global Perspective* (New York: McGraw Hill, 1992), 68.

[26] Betts, *Military Readiness,* 68.

[27] Wilhelm, *Mobilizing for War in the 21st Century,* 18.

These are complimentary observations but do not address the elements as being already fit for military production, or being converted to support it. United States (US) doctrine is similarly broad in stating: "mobilization is the process of assembling and organizing national resources to support national objectives in time of war or other emergencies."[28] In this expression, Wilhelm seems to lean toward the broader definition to include all national power.

Finally, in current Canadian doctrine, mobilization is defined as "the act of preparing for contingencies, war or other emergencies, through assembling and organizing national resources . . . and the process by which the armed forces or parts thereof are brought to a state of readiness for war or other national emergency."[29] Though it starts broadly, by explicitly noting the armed forces, the definition seems to exclude converting national resources for military purposes. Later in the same publication, however, Stage 3 of mobilization uses the Korean War as an example of force expansion, which includes raising new units, while Stage 4 is called National Mobilization, and "is likely to require commitment of the nation's full social, economic and industrial capacity."[30] In this respect, with the notable exception of conscription, the doctrine is closely aligned with Part IV of the Emergencies Act which allows for "the Governor in Council may make such orders or regulations as the Governor in Council

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[28] Joint Chiefs of Staff, Joint Publication 4-05, *Joint Mobilization Planning* (Washington, DC: Joint Chiefs of Staff, 23 October 2018), ix.

[29] Department of National Defence, B-GJ-005-703/FP-20, *Canadian Forces Joint Doctrine for Mobilization* (Ottawa: 11 July 2002), 1-3. Hereafter cited as CFJP 7.

[30] Ibid., 2-2.

believes, on reasonable grounds, are necessary or advisable for dealing with the emergency."[31] In this sense, Stage 4 is aligned with the broader meaning of mobilization to exceed the capacity of trained reserves and to require new forces to be raised, trained, and equipped. These broad definitions allow the possibility to imagine a limited mobilization which exceeds the capacity of the Reserve but does not trigger the full conversion and singular focus of national power towards the conflict. In this, the Korean War is a suitable example.

As a result, for the balance of this work, the term 'activation' will refer to activating reserve units to expand the available forces. This can include limited recruiting to bring reserve units to full strength. Once additional units are raised, or industry converted to create war material as was the case for the Korean War, the term mobilization is more suitable. In other words, the narrow meaning of mobilization will be called (reserve) 'activation', while the broader meaning will be of 'national mobilization', or simply, mobilization.

Hypothesis and Assumptions

The key assumption of a study of this nature is that the observations can be generalized. In other words, that any hypotheses and deductions made of a single 70-year-old case study can describe or suggest future theories, actions, or resource priorities.

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[31] Government of Canada, Emergencies Act, 1985, Justice Laws Website, https://laws-lois.justice.gc.ca/eng/acts/E-4.5/page-4.html#h-214091.

There are no other initial assumptions from a methodological perspective. Rather, this research aims to reveal the assumptions of national leaders in Canada during the Korean War and observe if any of these are still valid today.

Possible outcomes of this research could lead to deductions about how to gain decision time as well as time to raise—recruit, train, equip—forces. One possibility that is evident relatively early is the idea of specialization. For instance, Canada could develop rapidly deployable forces well suited to retaining a foothold on a distant landmass with specific training and equipment. One excellent historical example could be the buildup in the opening phases of Operation Desert Shield when allies sensed a window of vulnerability before they could build up combat power in the theatre.[32] One more example might be found in the US experience in Korea with Task Force Smith.[33]

Another possible outcome is to acknowledge and accept the limitations of what Canada can achieve with military force, given both the current force structure and the likely time required to grow the force. From there, Canadian policy will be both supported and constrained by what force is available. Within this outcome, this study can inform the theory and doctrine to best prepare for mobilization.

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[32] US Department of Defense, *Conduct of the Persian Gulf War: Final Report to Congress, Chapters I through VIII* (Washington, DC: Department of Defense, April 1992), 46, https://apps.dtic.mil/dtic/tr/fulltext/u2/a249270.pdf.

[33] Roy E. Appleman, *United States Army in Korea: South to the Naktong North to the Yalu (June- November 1950)* (Washington, DC: US Army Center of Military History, 1992), ch. VI.

Scope

The scope of the research is limited by the currency of available doctrine, concepts, and theories. The current Canadian mobilization doctrine was developed nearly 20 years ago. It is based on Cold War contingency plans, a 1994 Defence White Paper conceived for the post-Cold War peace dividend, and WWII mobilization assumptions. One other key shortcoming of this doctrine is the linkage to equipment that is no longer in service, so the timelines proposed in the appendix on materiel are only indicative. The limitations imposed by this doctrine will become the main focus of the critique to follow.

Another key limitation is that there is no specific service doctrine for mobilization, but rather only for force management—expressed as a managed readiness system. Within the Canadian Army, this 15-year-old system is under review. Similar concepts of force generation and force readiness exist at the national and peer service levels, but are applied uniquely to each capability, and are not within the scope of this study.

To keep this study manageable, it will be delimited in context and by the number of cases to examine. Instances of Canadian mobilization and conscription for the two world wars will not be included. Similarly, the application of the current doctrine of limited force generation through Canada's war in Afghanistan as the most recent example will not be studied. This study will also not address the mobilization doctrine of other nations in any significant way. Moreover, the examination of the military-industrial base and its capacity to support growth would require a dedicated study and engagement. Even then, estimates would be a snapshot in time, based on a particular suite of equipment.

Finally, after assessing joint doctrine, the examination will be primarily from a land army perspective, again to keep the scope manageable.

There is also a fundamental question about the utility of mass mobilization in a nuclear world. In short, if a situation of use of force exists for which the nation is willing to mobilize its entire population and to entirely reconfigure its economy, why would it not expend the same or less effort to develop and deploy nuclear weapons instead?[34] This question alone is worthy of a dedicated exploration from a Canadian perspective, particularly given Canada's existing expertise with nuclear power and abundance of resources. This question is far too large to address here.

The political and alliance elements of the context of mobilization for Korea will also be beyond the scope. Though they are undeniably relevant in terms of the calculus of the government, both in why, and how large a force should be raised, it is the process of raising the force that must remain the focus of this limited study.

Even this process of raising new forces will be constrained to a focus on the Canadian Army, though inescapably in the context of the Canadian Armed Forces (CAF) as a whole. In fact, the case study does not lend itself to a discussion of mobilization for war at sea or in the air, as Canada committed only readily available naval and air forces.

Finally, this is not a study in national service or conscription. Those models for raising forces are hardly palatable in a Canadian context even in the midst of a worldwide conflict, so there is little value in revisiting them here. In summary, this study will not

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[34] James Lacey, "How does the next great power conflict play out? Lessons from a Wargame," *War on the Rocks*, 22 April 2019, https://warontherocks.com/2019/04/how-does-the-next-great-power-conflict-play-out-lessons-from-a-wargame/.

address the "why" of mobilization, leaving this question to policy makers, rather it will address the "how" so mobilization planning can be most effective in support of Canadian Government policies.

Significance

Unlike the Franco-Prussian wars or the European power of the First World War, governments today demand nuanced military options short of complete mobilization, but capable of exceeding the available force. An all-or-nothing mobilization was not appropriate for Canada in Korea, and similar situations are easily plausible today. This study will explore the space beyond committing all standing military forces, where new forces need to be raised for contingency operations like Korea, but still short of complete mobilization. In other words, where demand for military forces exceeds supply, but still short of full mobilization, all while considering other government policies.

Akin to a force employment concept, this study aims to describe the factors which influence a Canadian Army Force Generating Concept (FGC) beyond the size of the current force. Canada's joint doctrine on mobilization remains embedded in the Cold War, with assumptions of great power conflict from the 1930s.[35] It is based on the explicit assumption of sufficient strategic warning, as well as time to deliberate and activate mobilization plans, more accurately expressed as a strategic stand-off. Materiel production schedules are for equipment and munitions no longer in service, and

[35] Charles P. Stacey, *Arms, Men, and Governments: The War Policies of Canada, 1939-1945* (Ottawa: Queen's Printer, 1970).

quantities of serviceable equipment are below established needs for the existing force.[36] The mobilization plan should clearly describe the critical path for growing the force to meet new demands.

Modern armed forces already use narratives to describe their force employment concepts, but not their force generation. Mobilization doctrine must express the capstone FGCs to include not only reserve activation but also the sustainable and realistic limited mobilization to equip or augment reserves or new forces when called or raised. Finally, this study proposes a change method to close the gap from the current paradigm of force generation through 19th century-style mobilization, and to a scalable readiness and force generation model for the next century.

More generally, this study is significant to any nation which does not maintain a large standing army. Within the many like-minded nations which have invested in social development at home, and which aspire to improve the world as Canada does, there is a tension between investment in social policies and in general-purpose military force in the absence of a specific threat. Relatively low-intensity contingency operations have dominated the international security environment since 1989, but have not always

[36] Parliament of Canada, "Report 5—Canadian Army Reserve—National Defence," *2016 Spring Reports of the Auditor General of Canada* (Ottawa: Office of the Auditor General of Canada, 2016); For how the events are perceived in the media, see Christie Blatchford, "Christie Blatchford: Canada's ragged reserves have too few vehicles, little ammo and now, no radios," *National Post*, 27 June 2016, https://nationalpost.com/opinion/christie-blatchford-canadas-ragged-reserves-have-too-few-vehicles-little-ammo-and-now-no-radios.

resulted in a reaction as in Rwanda.[37] One possible explanation is that response requires the capacity to generate a force of sufficient capacity, capability, and readiness.

Methodology

The following qualitative analysis is based on the most recent historical case study of Canadian mobilization for the Korean War. Put most simply, this study compares the historical case of the Korean War against current Canadian doctrine and readiness theories to reveal the key parameters of mobilization, then compares the current doctrine's gaps against the future environment as envisioned in Canadian publications.

Thick narrative description from a multitude of mostly secondary sources such as the official history and other historical analysis, as well as and theoretical sources on readiness and mobilization models will reveal the key parameters. Chief amongst these are the timelines to understand, orient, examine options, and act on mobilization as was the case in Korea. The research explores the key decision-makers, the information they required, and especially the assumptions they held, either explicitly stated, or implied. It will be more difficult to determine if the same assumptions remain institutionalized today—70 years after the events.

Once the narrative is reduced to its constituent parameters, these are tested against the theoretical frameworks to examine both the validity of the framework and the application in a single case. From these comparisons, the key parameters used by the

[37] Debra Black, "Why did Ottawa ignore warnings of Rwandan genocide?" *Toronto Star,* 22 May 2010, https://www.thestar.com/news/canada/2010/05/22/why_did_ottawa_ignore_warnings_of_rwandan_genocide.html.

CAF are then narratively compared against the envisioned FOE to identify potential gaps in concepts or doctrine and to propose a change method to close the gaps.

Finally, using an applied case study methodology described in detail in chapter 2, this study will make recommendations to address any shortcomings in Canada's mobilization readiness. These recommendations will be framed in a suitable analytical lens and communicated through an appropriate change implementation model.

Summary

This study will explore modern ideas of mobilization and readiness of military forces for anticipated future conflicts. This intersection of a historical case, current doctrine, and theory to inform future decisions can serve as a basis for developing Force Generating Concepts for the CAF.

CHAPTER 2

RESEARCH METHOD

This study aims to reframe the WWII mobilization paradigm through the lenses of the limited wars of the Cold War and the FOE. This is a qualitative assessment, based on a single historical case study that ultimately aims to provide recommendations for an update to the current Canadian mobilization doctrine.

Gathering Evidence through Comparison

The method examines the Canadian Army's involvement in the Korean War from generally secondary sources—acknowledging that the objective is not to reinterpret the history but to use the already synthesized narrative and extract the key variables describing the mobilization of the CASF. The key variables will be primarily time, from the start of hostilities to Canada's active participation; as well as sources of personnel, training duration and capacity, and sources of equipment. These will be directly compared against modern requirements for recruiting, training, and equipping forces.

The next step will be to compare the existing doctrinal variables against established frameworks for readiness as described by Richard Betts and for mobilization planning as described in Canadian Doctrine. In this phase, the examination will also consider the proximity to WWII and how residual leadership and equipment may have mitigated the mobilization efforts or how war fatigue might have exacerbated them. Highlighting the historical paradigm through a modern lens will begin to answer two of the secondary research questions: first, the problems past mobilization intended to solve;

and second, to reveal if the current doctrine fails to account for any current factors, frictions, assumptions, or risks.

Last, the existing doctrine with its newly revealed parameters is tested against the conceived FOE, mainly as described by Canadian Army concepts development directorate's defence thinkers. The last of the secondary research questions asks what problems can best be solved through mobilization, so in this comparison, it should become evident if mobilization is or is not a likely solution to the potential problems of any of the four future scenarios.

From these evaluations, akin to a three-value Venn diagram, the overlaps and the differences between history, theory/doctrine, and anticipated future will emerge and partly anticipate the planning challenges of a future mobilization. Taken then a step farther, by anticipating the risks well in advance, Canadian planners will be better able to inform and implement long-term mitigation strategies.

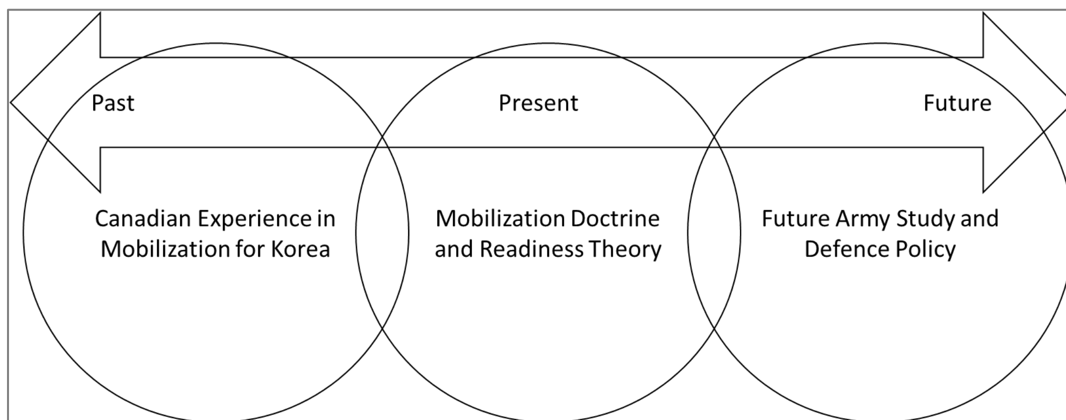

Figure 1. Structure of the Study

Source: Created by author.

Applied Professional Case Study

The specific research design is based on Robert Yin's *Case Study Research and Application*.[38] Interpretation is in line with the recommendations from John and David Creswell's overview *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*.[39] The study is modified with Professor Kenneth Long's Applied Professional Case Study methodology, to include most importantly a consideration of the chief decision-maker s' perspectives of what recommendations may be ultimately acceptable.[40] Using Long's method, the aim is to persuade the key decision-makers to modify doctrine proactively to improve mobilization readiness.

This case study method serves to enable change through an assessment not only of the problem but also of the perspectives of the associated decision-makers and stakeholders. In this instance, the primary decision-maker is ultimately the Chief of Defence Staff (CDS) of the Canadian Armed Forces (CAF), who is charged with "command, control and administration of the CAF and military strategy, plans and requirements."[41] As a result, the CDS' primary problem in this domain is to balance

[38] Robert K. Yin, *Case Study Research and Applications: Design and Methods,* 6th ed. (Thousand Oaks: SAGE, 2018).

[39] John W. Creswell and J. David Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches,* 5th ed. (Thousand Oaks: SAGE, 2018), 254-278.

[40] Kenneth Long, "Applied Professional Case Study Lecture," 29 June 2018, YouTube video, https://www.youtube.com/watch?v=4I0KQL7dfjA.

[41] Government of Canada, "Organizational structure of the Department of National Defence and Canadian Armed Forces," accessed 18 April 2021, https://www.canada.ca/en/department-national-defence/corporate/organizational-structure.html. Hereafter cited as "Organizational structure of DND."

generating ready forces for operations today, preparing for future contingencies, and retaining the capacity for mobilization, all within the limited resources of the department of national defence.[42]

As the authority for joint doctrine and the link between policy and strategy, the CDS is bounded by his or her authorities and responsibilities. At that level, the CDS is also influenced by the opinions of stakeholders, including the Canadian civilian public, ministerial and cabinet-level political leadership, as well as the established Regular and Reserve units and formations of the CAF. The frames through which each stakeholder might perceive the issue of mobilization planning, as well as their possible interest, bounds, and influence will be explored in more detail in chapter 4. Within these boundaries and context, the CDS has sufficient authority to direct contingency planning, expressed in both service and joint contingency plans, and in doctrine.

For the problem solving and sense-making methodology, a combination of the Capability Based Planning and Lessons Learned processes may be most appropriate to link with the historical case study, though limited by the scope. Through a mix of approaches, despite the distance in time, the CDS may be most likely to accept the recommendations, particularly if they bear on present problems. Since an after action review is inherently limited to a small sample size of an event or action, it is naturally matched to the case study sample size of one. In the CAF, the proponent for Lessons Learned and concept development is nested within the Canadian Forces Warfare Center

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[42] Prime Minister of Canada, "Minister of National Defence Supplementary Mandate Letter," (Ottawa, Canada, 15 January 2021), https://pm.gc.ca/en/mandate-letters/2021/01/15/minister-national-defence-supplementary-mandate-letter.

for the purpose of "adding of value to an existing body of knowledge, or seeking to correct deficiencies, in areas of concepts, policy, doctrine, training, equipment or organizations, by providing feedback and follow-on action."[43] Though the warfare center has no specific lessons learned study of Korea, there is sufficient literature to develop a brief one in chapter four.[44] Similarly, the Capability Based Planning process will apply to future studies, and along with lessons learned will be focused on the specific analysis of mobilization readiness.

The evaluation criteria which are likely to be most persuasive are linked to the tensions which the CDS must manage. These are generally aligned with Richard Betts' questions of "Ready when? Ready for what? And Ready with What?" To these, the CDS needs to add considerations for resource management, as well as immediate imperatives for operations, as described in the current defence policy. Critically, the CDS also has to manage the relationships within the department relative to any change where stakeholders have actual or perceived interests. In a narrative lessons learned from mobilization for Korea, the recommendations need to address the pressures and tensions of the modern operational environment.

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[43] Department of National Defence, *Defence Administrative Orders and Directives: 8010-0, Lessons Learned* (Ottawa: Chief of Defence Staff, 2016), https://www.canada.ca/en/department-national-defence/corporate/policies-standards/defence-administrative-orders-directives/8000-series/8010/8010-0-lessons-learned.html.

[44] Unfortunately, the lessons learned system is not perfect. Department of National Defence, *Evaluation of the Defence Capability Development Program* (Ottawa: ADM(RS), 2017), https://www.canada.ca/en/department-national-defence/corporate/reports-publications/audit-evaluation/evaluation-defence-capability-development-program.html.

Finally, what is palatable to the Canadian public is linked to the public's threat perception.[45] Canadians do not consider defence a particularly important election issue and are far more focused on economic, climate, health, education, and infrastructure issues. During a survey prior to the 2019 federal election, in response to the question: "Which of the following issues are the three most important in determining how you will vote during that election?" only 2 percent of respondents included "Defence, the Armed Services."[46] This perception is both unfortunate for the limited engagement, but also liberating for security professionals since they can generally configure doctrine and forces as they see fit, so long as they stay within the accepted resource limits.

Summary

After comparing the past, present, and future conceptions of mobilization and the FOE, the study offers some initial recommendations. These resulting recommendations will outline specific changes to the current doctrine, including explicit parameters, assumptions, and residual risks. From there, subsequent recommendations for supporting capability elements will flow but are also tested against the imagined perspectives of the stakeholders to filter out any recommendation which may be unacceptable. Conversely,

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[45] Andrew Potter, "Andrew Potter: Canada's lack of interest in self-defence explains COVID failures," *National Post,* January 15, 2021, https://nationalpost.com/opinion/andrew-potter-covids-hard-lesson-every-country-must-look-out-for-itself

[46] Darrell Bricker, "One week from E-Day, Canadians Say They're Hearing More Negativity About Candidates and Leaders than Policy Options and Campaign Promises," *Ipsos News and Polls,* October 17, 2019, https://www.ipsos.com/en-ca/news-polls/One-Week-from-E-Day-Canadians-Hearing-More-Negativity-About-Candidates-Leaders-than-Policy.

the stakeholder perspectives may lead to additional recommendations or methods to assuage the stakeholders' concerns.

CHAPTER 3

LITERATURE REVIEW

Introduction

To begin to answer the main question of how Canada might prepare to mobilize forces for future conflict, the secondary questions help organize this study among three subordinate subjects. Correspondingly, this chapter is organized in three broad thematic sections: Canada's experience in the Korean War, based primarily on histories; current doctrine, theories, and models for raising forces; and a general description of the FOE, mainly as envisioned by the Canadian Army's Land Warfare Centre and current Canadian Defence Policy.

Canada and the Korean War

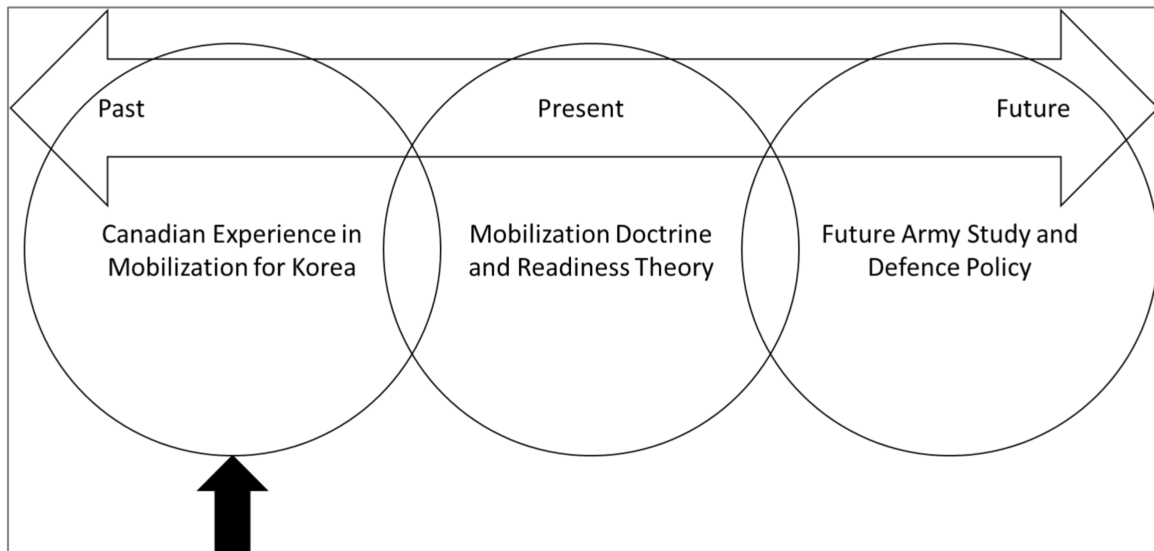

Figure 2. Structure of the Study: Past

Source: Created by author.

On the eve of the Cold War, Canada's engagement in the Korean peninsula was only one of many events of military significance. As part of WWII demobilization, Canada reduced its standing Army to a single, relatively light brigade. Called the Mobile Strike Force (MSF), its purpose was to train the Reserves as well to defend North America, returning to a pre-World War tradition.[47] In the post-war period, Canadian decision-makers lacked a complete understanding of the international political environment and were reluctant to fund a large standing force. The services all proposed a budget and size they felt suitable, but which were unacceptable to the government, resulting in only about half the funding and manpower requests being approved.[48] It was under these conditions that Canada entered the Cold War.

Nearly simultaneous to the Korean conflict was the formation of NATO, of which Canada was a founding member. With the first Soviet nuclear detonation in 1949 signalling the start of the Cold War, western nations began negotiations around the formation of a collective military deterrent. Canada's contribution used a wholly different method to create a brigade for NATO, to be positioned forward in Europe, and to act as the nucleus of what could become a division.[49] The demand for the NATO brigade was concurrent with the raising of forces for Korea. Since western nations were uncertain if the Korean conflict was intended as a distraction while communists struck elsewhere,

[47] Peter Kasurak, *A National Force: The Evolution of Canada's Army, 1950-2000* (Vancouver: UBC Press, 2013), 17.

[48] William Johnston, *War of Patrols: Canadian Army Operations in Korea* (Vancouver, B.C.: UBC Press, 2003), 11.

[49] Sean Maloney, *War without Battles – Canada's NATO Brigade in Germany, 1951-1993* (Whitby: McGraw Hill Ryerson Ltd., 1997), 17-21.

"[Canadian] planners hoped that the 25 and 26 [Brigades earmarked Korea] could be re-tasked . . . to Europe in an emergency."[50] Eventually, Canada would commit a large portion of its trained militia to Europe, raise six regular battalions for rotations through Korea, and maintain its MSF, ultimately more than tripling the size of the force in about two years.[51]

To describe the timeline of the Korean conflict and Canada's mobilization, this work draws primarily on H. F. Wood's *Official History of the Canadian Army in Korea: Strange Battleground*.[52] Published in 1966, Wood draws heavily on primary accounts and sources but is still bounded by classified and confidential decision making. Notably, this official history was published while Lester Pearson was Prime Minister, dealing with the events of the Korean War when Pearson was a key player as Minister of Foreign Affairs, possibly casting him and associated decision-maker s in a more positive light. Despite the possibility, later sources tend to supplement rather than contradict the official history.

Additional and supplementary narratives combine declassified primary sources and the benefit of temporal separation from the event. David Bercuson's *Blood on the Hills* and William Johnston's *A War of Patrols* were published about 50 years after the conflict. Combined, these works reveal—in the spirit of operational design—the decisive

[50] Maloney, *War without Battles,* 20.

[51] Ibid., 21-28. The basis for the NATO commitment was 27 CIB, comprising of rotating companies and squadrons of the militia.

[52] Wood, *Strange Battleground*.

points of the conflict and especially of the period of mobilization. They also offer some initial insights on how the force was constructed.

The Timeline

Wood's official history serves well to establish the base timeline described below in four general phases. From the start of the conflict on 25 June 1950 to Canada's decision to commit land forces on 7 August can be thought of as the deliberation phase. In the language of CAF doctrine, 7 August is Mobilization-Day, or M-Day, the moment when raising of forces is authorized. The subsequent preparation phase comprises the period from 8 August when recruiting depots opened, to the moment the first Canadian land element was declared operationally ready on 15 February 1951. This phase includes the recruiting, equipping, training, and transporting the first battalion to the theatre. Preparation does not have as clean an end and melds into the thirds phase as the balance of 25th Canadian Infantry Brigade (CIB) flowed into Korea by 4 May 1951. The third phase of fighting and fourth phase of stabilization and drawdown are not the primary focus of this case study, except to briefly consider the initial effectiveness of the newly raised forces. Instead, this study aims to inform future phase one deliberations by examining the preparation phase based on the outcomes of the phase two preparations. Throughout, these phases will be considered within the larger ebb and flow of the conflict.

Deliberation

Wood describes the deliberation phase in his first two chapters, generally mirrored by Bercuson and Johnston with some additional sources. With parliament

preparing to recess for the summer of 1950, news of the start of the conflict trickled in, mostly through UN and US channels.[53] Over the next 40 days, the St Laurent government would deliberate whether to send forces at all and "while agreeing in principle with the moves made to halt aggression, seemed anxious to avoid any precipitate action; the Far East had never been an area in which Canada had any special national interest."[54] To phrase this more bluntly: the conflict in Korea was indeed a problem, just not a Canadian problem, and based on the required capabilities, certainly not a problem Canada was in a position to help solve at the time. Bercuson notes Minster of Defence Brooke Claxton as resistant to a ground engagement because even though this was to be "'come as you are' party . . . Canada was naked."[55] Bercuson sums up the underlying assumptions of Canadian defence planning in the post-war period: "the army was not ready to embark on a foreign campaign without a full mobilization and a year to prepare."[56] Wood similarly cites Prime Minster St Laurent in his 7 August address: "Since our wartime forces were demobilized, we have not attempted to maintain in the Canadian Army, a fully trained expeditionary force, available for immediate action outside Canada."[57] Since demobilization, the Canadian government had better plans for

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[53] Wood, *Strange Battleground,* 9.

[54] Ibid., 12.

[55] Bercuson, *Blood on the Hills,* 30-31.

[56] Ibid., 30.

[57] Wood, *Strange Battleground,* 18.

its money, and funding a large standing force was not amongst them.[58] The MSF's purpose was continental defence and supporting a general mobilization, so the inability and resistance to engaging in Korea was a function of Canadian priorities, preconceptions, and culture in the period.[59]

Phase	Month	Events
	June, 1950	25 June, NKPA Forces Cross 38th Parallel; 28 June, NKPA Capture Seoul
27 Jun – 15 Sep : UN Defensive	July	
	August	7 Aug – Order in Council to raise CASF
	September	15 Sep – Inch-on Landing; 28 Sep – UN Captures Seoul
16 Sep – 2 Nov : UN Offensive	October	25 Oct – CCF Cross Yalu River
3 Nov – 24 Jan : CCF Intervention	November	11 Nov : 2 PPCLI departs Wainwright, AB
	December	18 Dec : 2 PPCLI arrives in Pusan
	January, 1951	4 Jan – CCF Capture Seoul
24 Jan – 21 Apr : First UN Counteroffensive	February	15 Feb – 2PPCLI declared Ready
	March	15 Mar – UN Captures Seoul
	April	
22 Apr – July : CCF Spring Offensive	May	4 May – 25 CIB Main body arrives in Pusan Ready for operations
	June	

Figure 3. Timeline of the First Year of the Korean War:
Key Events and Canadian Army Mobilization

Source: Created by author using data from US Army Center of Military History, "The Korean War Chronology," accessed 13 April 2021, https://history.army.mil/

[58] Bercuson, *Blood on the Hills,* 16-17.

[59] Wood, *Strange Battleground,* 18.

reference/Korea/kw-chrono.htm.

Still, to respond to the overtures of the Americans and UN, the CAF developed estimates for what could be made available for commitment to the conflict. Initial offerings included three destroyers and a squadron of five transport aircraft, but requests for land forces continued from the UN, United States, and other commonwealth countries, all echoed in Canadian print media. It is worth noting that there is a gap in the historiography on how exactly the Army, Department, and Government decided that the appropriate response to Korea was an Infantry Brigade, though perhaps the size of the MSF was an anchoring bias for the decision-maker s.[60] What is clear though is that on 17 July, now three weeks after the start of hostilities, the Chief of the General Staff General Charles Foulkes met Minister of National Defence (MND) Claxton to discuss options. Foulkes liked none of the possible options which were all based on a brigade-sized element, but if pressed he would recommend to deploy "one brigade to operate under a commonwealth division."[61] On 27 July, the United States renewed their request for a brigade,[62] but it is unclear if the scale of the force was because of what Canadians signalled they could provide, or is based on some other assessment. The deliberations would culminate with the Order in Council on 7 August 1950 to direct the raising of the

[60] Canada's army today continues to be structured as almost identical Infantry Brigade Groups comprising 3 Infantry, 1 Armour, 1 Artillery, 1 Engineer, and 1 Sustainment battalions.

[61] Johnston, *War of Patrols*, 23.

[62] Ibid., 24.

Canadian Army Special Force (CASF) comprising of an infantry brigade group for "carrying out Canada's obligations to the United Nations charter and the North Atlantic pact."[63] The announcement coincides with what is likely the lowest point for US and Republic of Korea forces as the Pusan Perimeter barely retained a toehold on the southeast corner of the country and the port through which reinforcement would flow. Wood summarizes the episode and one of the key assumptions by Canadian defence planning with a quote from Pearson: "the furnishing to the United Nations on short notice of expeditionary forces capable of quick deployment in distant areas . . . had not . . . entered into our planning."[64] With this statement, Pearson described Canada's essential national security dilemma and the heart of expeditionary contingency.

Because defence planning had not considered the possibility of expeditionary engagement, the government took over 40 days to answer three basic questions. First, should Canada commit land forces? Second, what size and shape should this force take? And third, where will this force come from? The first answer is beyond this study and is the province of policy. The answer to the second is the infantry brigade group, though the reasoning is missing in the literature. For the third question, the solution was in the decision to raise the CASF, which is quite well documented.

[63] *Montreal Gazette*, 8 August 1950, cited by Wood, *Strange Battleground*, 18.

[64] Debates in House of Commons, 1950, 2nd Session, 94, cited in Wood, *Strange Battleground,* 28.

Preparing and Deploying 25 CIB

Most important for this study is the second phase of preparation which included recruiting, training, equipping, and deploying the force to Korea. Wood devotes four chapters to describing how the 25 Canadian Infantry Brigade reached Korea by 4 May 1951. He writes mainly from the perspective of the larger military institution with a focus on recruiting and training. Johnston and Bercuson tell a more personal story, investigating the perspectives of Brigadier J.M. Rockingham, as the Brigade commander and Lieutenant Colonel (LCol) Jim Stone, who commanded the 2nd Battalion Princess Patricia's Canadian Light Infantry (2 PPCLI) as the first Canadian contingent in Korea. The creation and deployment of 2 PPCLI is perhaps the simplest way to illustrate the elements of the preparation phase, including recruiting, training, equipping, and deploying the force. Wood's third and fourth chapters form the nucleus of this story.

First, recruiting was not particularly smooth, at least initially. Though the Department of National Defence (DND) had developed an outline plan and guidance for recruiters, this could not be issued or activated until after the Prime Minister's announcement. But because the announcement occurred over the radio over a holiday long weekend, postal services and recruiting depots opening on Tuesday morning were unable to activate the plan or code word, though the volunteers arrived anyway.[65] The rush appears to have subsided within a few weeks with targets for quantity met within 10 days, and exceeded thereafter to form a reinforcements pool. However, the episode

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[65] Wood, *Strange Battleground*, 31-32. Today's information environment is wholly different and worthy of comparison: with 24/7 communications available within the military, and with social media to communicate to the public, this situation may not be repeatable.

revealed that the depots' limited capacity to process the number of volunteers negatively impacted their ability to filter out unsuitable recruits who, according to Wood "became an administrative problem for months to come."[66] Units sent to Korea would continue to filter out unsuitable soldiers up until February 1950, just days before declaring operational readiness.[67] Over-recruiting was exacerbated by seemingly arbitrary estimates of wastage rates, with the conscription crisis of 1944-45 still fresh in the minds of leaders and casualty rates based on the intense combat of WWII, though these were offset in part by relatively high rates of discharge and desertion (25percent in this instance compared to 12 percent in 1939, and 7 percent in 1914).[68] Johnston points out that the entire CASF was intended for a combat role, while in previous conflicts, less than half the recruited force actually served overseas.[69] This dichotomy reveals what the theory later observes: the purpose of the force influences the composition and readiness of that force. Notwithstanding these tensions, recruiting did achieve its aims.

Recruiting also had to consider leadership and experience. 25 CIB would ultimately have a compliment of about 7500 all ranks. Of those, Wood notes 45 percent had some prior experience in WWII and about 10 percent of the total to have been Non-Commissioned Officers (NCOs).[70] In some units such as 2nd Battalion of the Royal

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[66] Wood, *Strange Battleground*, 33-34, citing in particular a report by the Defence Research Board.

[67] Wood, *Strange Battleground*, 76-77.

[68] Ibid., 36.

[69] Johnston, *War of Patrols,* 50.

[70] Wood, *Strange Battleground*, 36.

Canadian Regiment, or 2nd Royal Canadian Horse Artillery Regiment, the ratios of experienced officers and NCO were as high as 65 percent.[71] Wood's prose is unclear, but it seems at least two thirds of the Brigade Headquarters officers, and nearly all the specialist and technical branches of Amour, Artillery, and Engineers, came from the Active Force or had prior service in WWII.[72] In one aspect, the sources agree: "the government wanted the brigade commanded primarily by war veterans" and where volunteers proved unsuitable, to select from the active force.[73] Bercuson describes a similar pattern down to the section leaders, with 26 of 36 section leaders in 2 PPCLI having had prior experience, and nearly all NCOs and officers above them, less the platoon commanders, also having served previously.[74] That this aim was achieved again illustrates the unique situation of recruiting so shortly after the conclusion of the Second World War.

The quantity of volunteers with prior experience appears to have had a positive effect on training. Army headquarters issued directives to the training cadres with the explicit assumption that "since most personnel will be veterans, training will be of an 'in job' refresher character."[75] The Director of Military Training estimated it would take five months to ready force for action, based on the assumption that half of the leaders would

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[71] Johnston, *War of Patrols,* 32.

[72] Wood, *Strange Battleground*, 36-38.

[73] Bercuson, *Blood on the Hills*, 49.

[74] Ibid., 51-52.

[75] Johnston, *War of Patrols,* 32.

be active force, with the other half from the reserves, and “90 percent of the rank and file either reserve force or veterans.”[76] In reality, the ratios were much lower and closer to 66 percent for the former group, and about 45 percent for the latter, yet the Director of Military Training’s estimate proved close.[77] Training however depended on more than the experience of the recruits. To generate a training cadre, the Army relied on augmentation by trained reservists and effectively repurposing the active force battalions into training schools.[78] Had the active force already been committed to another task such as an initial response to the Korean contingency, this training period would certainly have been much longer.

Bercuson also observes that the nature of the training syllabus, while based on WWII training, was “modified only slightly to meet what was known about the special circumstances of geography, climate, and the enemy’s tactics in Korea.”[79] In effect, this may have been a mitigating factor in the speed of training, in that rather than training for every tactical possibility, or for all types of terrain, the curriculum could focus its examples on the known tasks. Training also depended on the selection of equipment the force would use.

Canada’s drift into the US sphere of influence began to manifest in decisions about how to structure and equip the CASF. Wood notes the tradeoff:

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[76] Wood, *Strange Battleground*, 44.

[77] Ibid.

[78] Ibid., 45.

[79] D Hist file, note 49 in Bercuson, *Blood on the Hills*, 54.

> [O]utfitting the mobilizing Canadian Army Special Force with U.S.-type equipment would involve major changes in the minor tactical doctrine of the Force, thereby nullifying much of the value of the experience of re-enlisted veterans and necessitating a considerably longer training period for the units of the brigade.[80]

Considerations of availability and supply of weapons and ammunition, vehicles and spare parts, cold-weather equipment, and other personal equipment were all relevant. What stocks of anti-armour weapons were available and left over since the end of WWII were not the best suited for use in this instance.[81] Supply arrangements in the 1st Commonwealth Division also implied it would be best to equip for British pattern consumables like ammunition.[82] On vehicle maintenance, Wood notes "it would be impossible to provide the required stock of spare parts for more than three to six months . . . [and] . . . earmarking existing stocks of spare parts for use by the C.A.S.F. would seriously prejudice the use of the remaining vehicles in Canada."[83] As a result, and in true Canadian fashion, "the brigade would use a mix of Canadian, British, and US kit."[84] However, reliance on US trucks also revealed the vulnerability to externally dictated priorities. When the Chinese intervened in November, US vehicles earmarked for Canadian units in Fort Lewis were instead pushed to US units in Korea, slowing 25 CIB's

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[80] Wood, *Strange Battleground*, 41; Bercuson, *Blood on the Hills*, 55.

[81] Bercuson, *Blood on the Hills*, 56.

[82] Problems of this nature are less prevalent today because of NATO standardization agreements (STANAGs).

[83] Wood, *Strange Battleground*, 41.

[84] Cabinet conclusions, note 56 cited by Bercuson, *Blood on the Hills*, 55.

training.[85] Similar shortages for ammunition would occur for replacement units later in the war "as theatre needs in Korea were to be supplied from the U.S. pipe-line . . . [and therefore] did not cater for training needs in Canada."[86] What these episodes illustrate is a problem not unlike the use of the active force as a training cadre, in that the same equipment and parts stocks required to train the force are simultaneously required for use in operations.

While training continued, the situation on the Korean peninsula also evolved. On 15 September, US forces landed at Inch'on, proceeded to retake Seoul, cut off the North Korean supply lines, broke out of the Pusan perimeter, and, on 27 September, initiated a counter-advance north across the 38th parallel.[87] In Canada, this resulted in reviewing the nature and requirement of the military contribution.[88] For most of October 1950, it seemed like the Canadian contingent may have been too late and that much of 25 CIB had actually missed the war.[89] Discussions continued about using only a single battalion, 2 PPCLI but in an occupation role. Though the episode had a negative impact on the morale and discipline of 25 CIB, with the Chinese intervention in late October, it all became moot and the original plan resumed.[90]

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[85] Wood, *Strange Battleground*, 93.

[86] Wood, *Strange Battleground*, 188.

[87] Johnston, *War of Patrols,* 35-36.

[88] Wood, *Strange Battleground*, 57.

[89] Ibid., 57-58.

[90] In *War of Patrols*, Johnston describes this episode in more detail than any other author, 37-42.

Despite the questions of decreased commitment through October, 2 PPCLI had continued training. The battalion boarded trains to move from Wainwright, Alberta to Fort Lewis near Seattle between 11 and 21 November. From there they embarked a troop transport ship to land at Pusan on 18 December.[91] It took another two months of training in Korea before LCol Jim Stone declared that 2 PPCLI were "ready to undertake an operational role on 15 February."[92] In all, over seven months had passed since the first shots were fired. Over the following few months, prior to the arrival of the balance of 25 CIB, the battalion would participate in multiple engagements. In the event, while 2 PPCLI was heavily engaged, the balance of 25 CIB had not even reached Korea.

The rest of the brigade would trickle into Fort Lewis and consolidate there in late December 1950 to train through the winter. By 4 May 1951, the remaining three infantry battalions, the armour squadron, artillery regiment, engineers, headquarters, signals, and medics would all be in Korea ready to join the Commonwealth Division.[93] By the time 25 CIB joined the fray, more than 10 months had passed since hostilities began. The line was stable along the 38th parallel, though not without continued sporadic fighting. It would remain that way for another two years until the armistice in 1953 and the eventual withdrawal of UN forces.

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[91] Wood, *Strange Battleground,* 52-53.

[92] Ibid., 68.

[93] Korean Veterans' Association of Canada, "Canadian Army Units - Korea," accessed 16 April 2021, http://www.kvacanada.com/cdnforces_army.htm. Hereafter cited as KVA.

In terms of performance, Canadian units appear to have acquitted themselves quite well. 2 PPCLI fought in the battle of Kap'yong and earned a Presidential Unit Citation for the defence of their sector.[94] Bercuson attributes much of that success to "the presence of tried veterans of the Second World War in the person of Stone and his officer cadre."[95] In the months after its arrival, 25 CIB also contributed to re-establishing the 38th parallel and to holding that line until relieved in the spring of 1952.[96] Two more brigades would rotate in the spring of 1953 and 1954 before the final withdrawal of combat troops in November 1954.[97] In the last phase of the war, the situation had changed too much to directly compare the performance of replacement units to 2 PPCLI and 25 CIB. Even indirect factors like discipline and non-battle casualties would be too difficult to separate from the conditions and demands of the conflict.

The timeline from the start of the conflict on 25 June 1950 to Canadians readiness to join the battle on 15 February 1951 is the most important consideration here. From the decisions by government on what force, if any, Canada should commit, through preparation in recruiting, training, equipping, and deploying the brigade more than 10 months had passed. Not including any transit time, it took approximately five months from M-Day until 2 PPCLI was declared ready for operations. It took almost eight

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[94] Johnston, *War of Patrols*, 80-107.

[95] Bercuson, *Blood on the Hills*, 110-111.

[96] Wood, *Strange Battleground*, 77-82.

[97] KVA.

months to prepare the balance of 25 CIB for operations, again not including transit, or deliberations by Cabinet.

In the time it took CAF to join the fight, the fortunes of the war changed twice, and Seoul changed hands three times. After a near imminent North Korean victory around the Pusan Perimeter in September, UN forces had seized the initiative and reached the Yalu River by November 1950, only to be reversed again with the Chinese intervention before settling into a stalemate, not far from the 38th parallel where the conflict started. The war could have been over twice before Canadian troops entered the country, only reinforcing the need for a study such as this.

The facts regarding Canada's participation in the Korean conflict, especially the timelines, are hardly in question. Much of the decision-making process, however, is not as clear. What the sources do reveal are the clearly explicit assumptions and intentional risk mitigations by government and cabinet about the time available and the costs of mobilization.

Models for Mobilization and Readiness

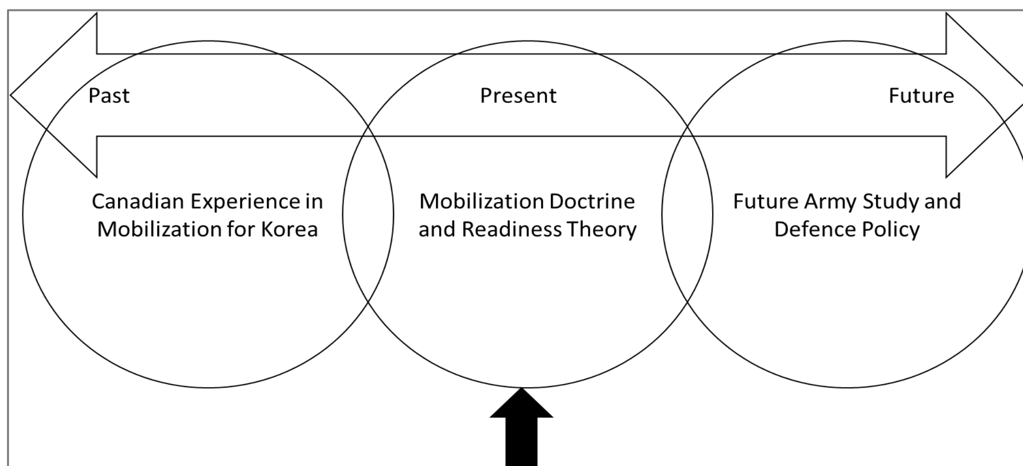

Figure 4. Structure of the Study: Present

Source: Created by author.

Roughly 10 years after mobilizing for WWII, most western nations attempted to replicate their most recent mobilization model.[98] These shaped the prevalent methods and assumptions for Korea, and to a degree for the remainder of the Cold War. Speaking of the American experience, Karen Wilhelm observes: "At the beginning of the Korean War, both the military and the public assumed the nation would be mobilized along the same general pattern as for WWII, but the ambiguities and limited nature of that conflict quickly caused confusion."[99] Oddly, the experience of the Korean War does not feature in current mobilization doctrine.

Theory

Published shortly after the end of the cold war, Richard K. Betts' *Military Readiness: Choices, Concept, Consequences* offers a rare treatment of concepts of readiness almost exclusively from an American perspective.[100] Betts proposes two broad periods: the first being the standard models for mobilization and relative unreadiness up

[98] For the US experience mobilizing for WWII, see: Charles E. Kirkpatrick, *An Unknown Future and a Doubtful Present: Writing the Victory Plan of 1941* (Washington, DC: US Army Center of Military History, 1992); and for a Canadian perspective, see Stacey's *Arms, Men, and Governments*.

[99] Wilhelm, *Mobilizing for War in the 21st Century,* 2.

[100] Betts, *Military Readiness*.

to and including the Second World War; and a second model of perpetual readiness through the Cold War, at great cost, to the United States in particular.[101]

Another key contribution to this literature is Betts' definition of 'readiness.'[102] Though readiness is not the topic here per se, by Betts' definition mobilization represents one particular form of readiness and is, therefore, a useful model. He identifies three components of readiness, only one of which is temporal, and deals with converting potential military power into actual military power.[103] The other two parameters deal with the size of the force committed, and its tasks. In other words, a force could be ready in time, but be too small, or unsuited for its tasks by virtue of training or equipment. Conversely, a force could be perfectly prepared in terms of composition and capabilities for its assigned tasks—an example might be in the opening phases of Desert Shield, where US forces had to flow into Saudi Arabia, but in a period of increased risk to counter-attack.[104]

Betts' main contributions of relevance here are his stages of readiness. He describes the four stages as unreadiness, mobilization readiness, structural readiness, and operational readiness along three values of time horizon, actual, and potential capability.[105] In general terms, these trend together from the longest horizon on the scale

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[101] Ibid., 3-23.

[102] Betts, *Military Readiness,* 27-28.

[103] Ibid., 27.

[104] Robert H. Scales, Jr. *Certain Victory: The U.S. Army in the Gulf War* (Washington, DC: Brassey's, 1997), 53.

[105] Betts, *Military Readiness,* 40.

of decades, with latent potential capability, and negligible actual capability to operational readiness on the scale of hours or days with fully equipped and trained elements. In more detail, unreadiness means that a capability does not exist at all. If Canada suddenly needed to field an aircraft carrier, it might take over a decade to design and build the ship, but also many years to recruit and train new crew. Mobilization readiness is most akin to reserve forces as conceived in Canada—battalions with only one or two understrength companies and only enough equipment for a few platoons. These are embryonic structures which, given a year or more to recruit and train to full strength, would also require additional equipment. In this instance, the capabilities are likely already in service, just not on the scale required. Similarly, structural readiness suggests a force exists, but is simply not prepared to deploy for any intensive task. In the Canadian sense, this might be a force recently rotated out of the theatre, with many of its cadre posted to new units. New or less experienced soldiers might be posted in, but not be fully integrated into the existing teams. Equipment might be in various states of disrepair due to recent use and may require several months to be ready for intensive operations again. Finally, operationally ready forces are those at 100 percent of their personnel and equipment strengths, are fully competent as individual operators, as well as tactically proficient at a collective level. Operationally ready forces are those prepared for employment within hours or days. Betts' typology of readiness will offer a framework against which to describe Canada's experience in Korea, as well as potential future instances of mobilization.

To address mobilization readiness, albeit from a uniquely US perspective, Betts devotes some thought to policy, planning, and synchronization in his final chapter.[106] Here, he rightly identifies the critical path, or rather how centralization of control can best synchronize the raising of forces between military and civilian industrial elements, except for all the frictions and the impossibility of developing a perfect plan for every contingency. These more theoretical sections will be explored in more depth through chapter 4.

Canadian Doctrine

Canada has joint and service doctrines for mobilization and force readiness management, but each of these is flawed in various ways. Published in July 2002, the *Canadian Forces Joint Doctrine for Mobilization* (CFJP 7), needs to be updated in terms of contingency plans, and materiel production schedules.[107] The CFJP 7 is aligned to a 1994 Defence White Paper, though successive governments have published new policies in 2008 and again in 2017.[108]

In the first instance, CFJP 7 is influenced by contingency operations plans of the three services—air, sea, and land—many of which are dated from the end of the Cold War.[109] Some of these service contingency plans are augmented by joint contingency

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[106] Betts, *Military Readiness,* 210-249.

[107] CFJP 7.

[108] The last three Canadian Defence Policies are: Government of Canada, *1994 White Paper on Defence* (Ottawa: Queen's Printer, 1994); Government of Canada, *Canada First Defence Strategy* (Ottawa: Queen's Printer, 2008); and SSE.

[109] CFJP 7, ref. 1-2.

plans, today prepared and maintained by the Canadian Joint Operations Command (CJOC). The references also reveal three of the four secondary sources to be based on Canada's experience of mobilization for WWII, with little acknowledgement of the experiences of Korea, the Cold War, or the post-Cold War period.

The second deficient element which requires an update is Annex E. Here, the doctrine lists the production times for key equipment in service. In the Army's case alone, nearly the entire inventory of land equipment has been recapitalized. Light Armoured Vehicle (LAV) III was replaced by LAV 6; Leopard C2 Main Battle Tanks were replaced by Leopard 2s; M113 and Coyotes were replaced by a combination of LAV 6 and Tactical Armoured Patrol Vehicles (TAPV). Importantly, the entire fleet of logistics vehicles and trucks has also been completely replaced by newer variants. In some cases, such as the TAPV, the manufacturers and strategic supply chains are entirely new or heavily modified.[110] As a result, the key deficiency of the published doctrine is that it has not been refreshed in nearly 20 years of nearly continuous operations abroad.

Another important question about how to use the regular force, or the seed corn, is poorly described in the doctrine. This metaphor intends to express the tradeoff between using the readily available regular forces to either recruit and train the newly mobilized force, essentially planting the seeds; or sending the regular force as a rapid response, effectively consuming the seed. The ready regular forces can maintain commitments, respond to contingencies, or train newly raised forces, but it can hardly do all of these well simultaneously. In a single brief paragraph, CFJP 7 speaks to balance but seems to

[110] The Coyote vehicle was built by GDLS Canada, with domestic production capacity, while TAPV is sourced from Textron in the USA.

consider each stage on its own, rather than as an escalation and incremental built-up.[111] Of course, developing a single solution for how to use the seed corn is not reasonable before the conditions and objectives of a conflict are clear. However, the considerations of how large forces will be trained depend on the availability and capacity of the trainers and should feature in doctrine.

Despite these shortcomings, the narrative description of the joint doctrine provides a well-grounded theory. Like Betts' typology, CFJP 7 also describes four stages of progressive commitment and the conversion of potential combat power into actual combat power, though these use different metrics. Each stage defines Betts' three elements of readiness, as well as a duration to answer the questions: "with what?," "for what?," "when?," and, in the Canadian case, "for how long?" While the stages of the CFJP 7 are fixed in the specific language of the 1994 Canadian Defence Policy, the conceptual increments are generalizable.[112]

In its most primitive form, Canada conceives Stage 1 to be characterized by "activities to generate, employ and sustain forces from Canada's peacetime military establishment (Regular Force and Primary Reserve) for operational tasks that consist primarily of operations other than war, using the existing DND resource base."[113] In other words, using no more than the standing forces, for relatively low-intensity tasks, and for an indefinite period. Of course, this seems perfectly reasonable in the context of

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[111] CFJP 7, 2-2.

[112] *1994 White Paper on Defence*, para. 50.

[113] CFJP 7, 2-1.

the 1990s and the peace dividend expected from the end of the Cold War. This stage is most akin to Betts' Operational Readiness, but with the caveat that the task is of a limited, low-intensity nature.

Stage 2 is defined as the deployment of most or all of the "Main Contingency Force" (MCF), within 90 days, to be capable of 60 days of combat and up to a year in theatre.[114] The MCF comprises what is essentially the entire inventory of the full-time Regular field forces of the Army, and a large component of their counterparts in the Navy and Air Force. By Betts' terminology, this might be structural readiness, where units could be employable, but may not be at their full strength immediately. Incidentally, the general size of the Canadian Army's brigade sized contribution to the MCF has not changed in scale since the 1950-51 expansions for Korea and NATO.[115]

In Stage 3, Canada would need to expand the forces to sustain the MCF in a theatre of operations indefinitely. Implicitly, this force expansion can be triggered by additional smaller scale or lower intensity contingencies. Interestingly, the historical example offered by the CFJP 7 in this instance is the force expansion for Korea and NATO in 1950-51.[116] This is the last stage that could be addressed by reserve activation and is most like Betts' mobilization readiness. Here Betts' typology as well as the

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[114] CFJP 7, 2-1. The MCF is not defined within the CFJP, but is described in a think-tank assessment of the 1994 White Paper. Queen's University Chair of Defence Management Studies, *Caught in the Middle: An Assessment of the Operational Readiness of the Canadian Forces* (Ottawa: Conference of Defence Associations Institute, 2001), 18-19, https://cdainstitute.ca/wp-content/uploads/2012/06/caughtmiddle_2001.pdf.

[115] Kasurak, *A National Force*, 16-19; Maloney, *War without Battles*, 21.

[116] CFJP 7, 2-1.

definitions of broad mobilization and reserve activation and the CFJP 7 concepts become blurred, so this topic will be a point of focus in the analysis of the following chapters.

Finally, Stage 4 in the CFJP 7 is defined as "response to a war emergency . . . likely to require commitment of the nation's full social, economic and industrial capacity."[117] This is mobilization in the most classic sense, as conceived for WWII, in the Franco-Prussian model of the 19th century. Most critically, this stage reveals two key doctrinal assumptions: "Because a substantial strategic warning period is likely to precede a war emergency demanding a full national mobilization, routine force development activities will not consider Stage 4 mobilization requirements as justification for maintaining large standing forces."[118] The first assumption is explicitly one of strategic warning, though the term 'substantial' is in no way refined. This assumption permeates Canadian defence policy and is a product of Canada's geostrategic position behind the most ideal moat, secured by the world's last superpower. The second assumption is that all potentially necessary capabilities exist in the inventory, thus keeping Stage 4 aligned with Betts' mobilization readiness, but if the latter assumption is proven false, the stage will have to be at least partially described as unreadiness. Both of these assumptions will be tested against the case of the Korean War below. Similarly, what remains poorly defined in these frameworks is how, under what conditions, and by who's authority should a posture shift to another stage of mobilization. The Korean War

[117] CFJP 7, 2-2.

[118] Ibid.

case study will aim to illustrate at least one instance of how that transition occurred, and if that process could be more clearly defined.

Chapter 3 of CFJP 7 deals with planning and expands on strategic warning in the third section on assumptions. Prevalent amongst these is the relation between early stages of mobilization, effectively using ready forces, with rapid-response environments. Conversely, stages three and four, those of expanding the force, are related to a "deliberate environment", defined as a situation which "deteriorates gradually."[119] The assumption indicates that stages 2 may be executed on up to 90 days' notice, suggesting that later stages of mobilization will occur with more than three months' notice.

Readiness Concepts

As for the balance of military readiness as described by Betts, the CAF today uses variations of a Managed Readiness System (MRS) based on a multi-phase rotation. In the case of the Army, three broad phases, each of one year, flow from employment in operations, to reconstitution, to readying for the next employment.[120] Though it worked well for long-duration deployments for peace support operations and in Afghanistan, this system is unsatisfactorily implemented in the understrength army of today, particularly when combined with contingencies that draw on ready forces and upset the planned employment. As a result, the MRS is under review, but it illustrates one key element of an FGC that is missing from Betts and from current doctrine—that of duration.

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[119] CFJP 7, 3-1.

[120] Chief of the Land Staff, *3350-1 (CLS) Managing the Army's Readiness* (Ottawa: National Defence Headquarters, 25 November 2005), DMCS-31190, Document Management Control System, Ottawa.

Committing forces to operations is a question of opportunity cost. In her article, "When Resources Drive Strategy," Vanya Eftimova Bellinger indirectly observes that to maintain a force, but not to use it, is also economically ineffective.[121] To use Colonel Lykke's trinity in this Canadian case is that the means are the ends.[122] As a result, government is incentivized to maximize the use of standing forces, even if by using them for a non-military purpose such as aid to the civil power in disaster relief operations because some return on investment is better than none. The incentive to use military forces—or rather to potentially misuse them—fails to consider one of Betts' key questions: "ready for what?" and upsets the planned employment in sustained missions: "ready when?" and "available for how long?"

In summary, there are several elements of mobilization to consider. As a general framework, these elements are structured around the stages of mobilization and readiness or how to convert potential to actual military power. Betts' key questions: "ready when, ready with what, and ready for what?" are complimented by CFJP 7's and MRS' "ready for how long?" Other key factors include the time and effort required to shift between stages, as well as the time, information required, and ownership of decisions of resource commitments to make these shifts. Resource priorities, and the conversion of elements of national power between economic, diplomatic, military, and information will also feature

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[121] Vanya Eftimova Bellinger "When Resources Drive Strategy: Understanding Clausewitz/Corbett's War Limited by Contingent," *Military Strategy Magazine* 7, no 1 (Spring 2020): 27-34, https://www.militarystrategymagazine.com/article/when-resources-drive-strategy-understanding-clausewitz-corbetts-war-limited-by-contingent/.

[122] Colonel Arthur F. Lykke Jr., "Defining Military Strategy," *Military Review* 69, no. 5 (May 1989): 2-8.

prominently, particularly as key decision-maker s in Cabinet must weigh threats, warning times, costs, and benefits associated with resource priorities. These, and other factors will become more evident in the next chapter.

Canada and the Future Operating Environment

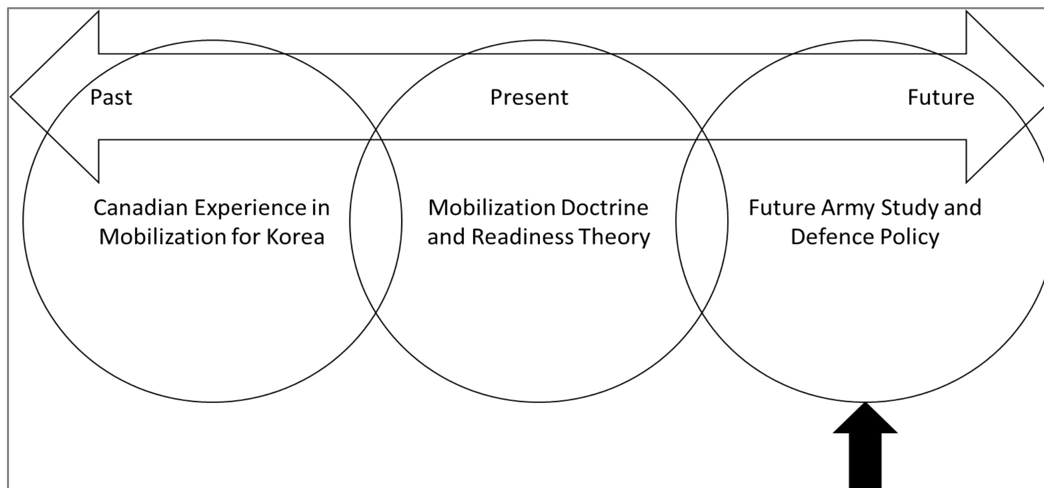

Figure 5. Structure of the Study: Future

Source: Created by author.

Scenario planning based on possible futures is a staple of modern military capability based planning (CBP).[123] But the present study is not an exercise in CBP, which is normally performed by dedicated staffs, based on classified comprehensive intelligence analysis of friendly and probable adversary capabilities. However, some of the input products which support CBP are widely available and focus not specifically on

[123] Department of National Defence, *Capability Based Planning Handbook* (Ottawa: National Defence, 2014). Hereafter cited as *CBP Handbook*.

the adversary, but the environment and trends which will be prevalent during a future conflict.

Canada's Future Army (CFA) Study

The Canadian Army perspective on futures as far out as 2040 is based on a meticulous study led by the Canadian Army Land Warfare Centre between 2012 and 2017. Relying on historical perspectives, as well as various foresight methods, *Canada's Future Army* (CFA) was published in three volumes between 2015 and 2017. The first volume describes the methodology and outlines the futures, the second suggests implications for the future force, and, most importantly for the present purpose, the third volume describes the four alternate worlds.[124] These are defined along two axes: reliability of energy supply, and proactivity relative to the climate and environment. As a result, the four possible futures are described by high or low proactivity and abundant or deficient energy supply. For instance, the best-case scenario is the aptly named "High Octane Green world . . . in which global energy supply exceeds demand . . . and in which the world is taking a proactive approach to the environment."[125] Conversely, the worst case is the "Global Quagmire . . . [where] energy supply is increasingly scarce . . . and the globe is taking a reactive approach to the environment."[126] The other two scenarios,

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[124] Department of National Defence, B-GL-007-000/JP-011, *Canada's Future Army, Volume 3: Alternate Worlds and Implications* (Kingston: Canadian Army Land Warfare Centre, 2017). Hereafter cited as CFA, vol. 3.

[125] Department of National Defence, B-GL-007-000/JP-007, *Canada's Future Army, Volume 1: Methodology, Perspectives and Approaches,* (Kingston: Canadian Army Land Warfare Centre, 2015). Hereafter cited as CFA, vol. 1, 76.

[126] Ibid., 83.

"Materialism Gone Mad" (energy secure, reactive)[127] and "Recyclable Society" (energy scarce, but proactive)[128] represent the other two permutations (Figure 6).

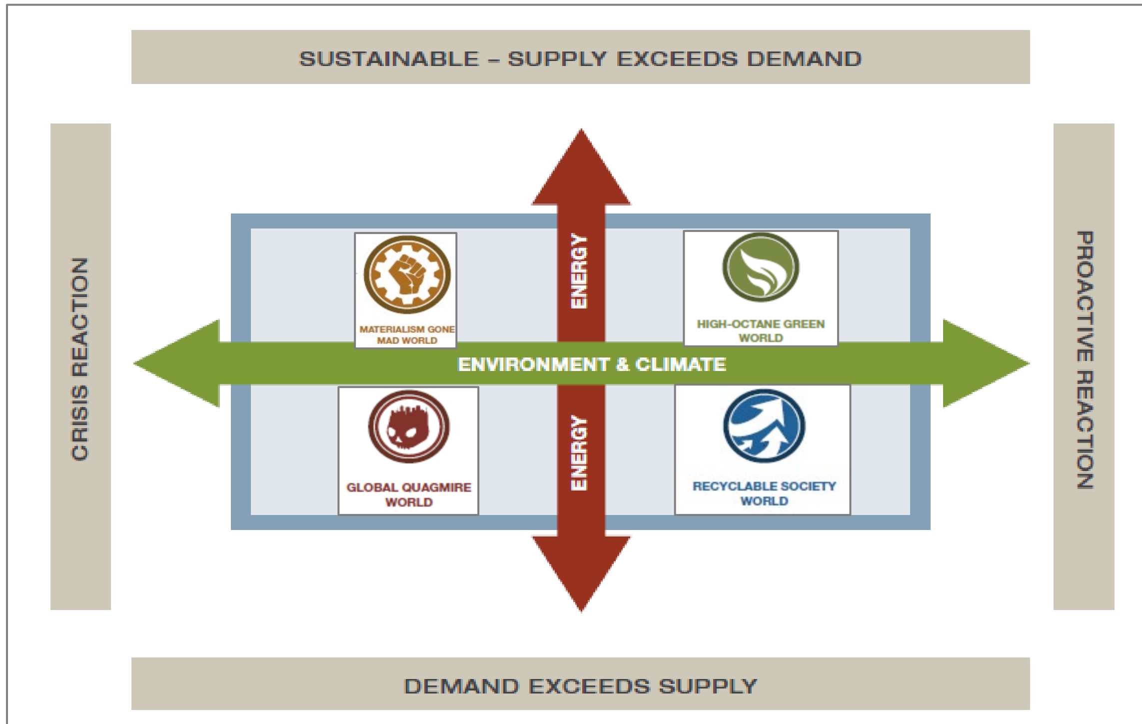

Figure 6. Polarities and Four Possible Futures of the CFA Study

Source: Department of National Defence, B-GL-007-000/JP-007, *Canada's Future Army, Volume 1: Methodology, Perspectives and Approaches* (Kingston: Canadian Army Land Warfare Centre, 2015), 29. Modified by author.

In volume 3, in addition to considerations of impacts on energy supply and environmental impacts, the CFA study also considers the subsequent effects of each future environment on social, science and technology, and defence and security sectors.

[127] CFA, vol. 1, 90.

[128] Ibid., 97.

From these considerations, the authors assess more or less likely campaign themes across the conflict spectrum from peacetime military engagement through peace support, counter-insurgency, and major combat (Figure 7).[129] The resulting correlation sees the scenarios associated with the proactive approach to the environment as requiring a lower intensity military effort and operations. In volume 2, the authors also admit surprise for "[t]he necessity for general mobilization and the need to function on a nuclear battlefield, including the offensive use of nuclear weapons, in the 'Global Quagmire' scenario."[130] However, since mobilization does not presuppose the task, all scenarios could conceivably require a (limited) force expansion.

[129] CFA, vol. 3, 50-51.

[130] Department of National Defence, B-GL-007-000/JP-009 *Canada's Future Army, Volume 2: Force Employment Implications,* (Kingston: Canadian Army Land Warfare Centre, 2017), 29. Hereafter cited as CFA, vol. 2.

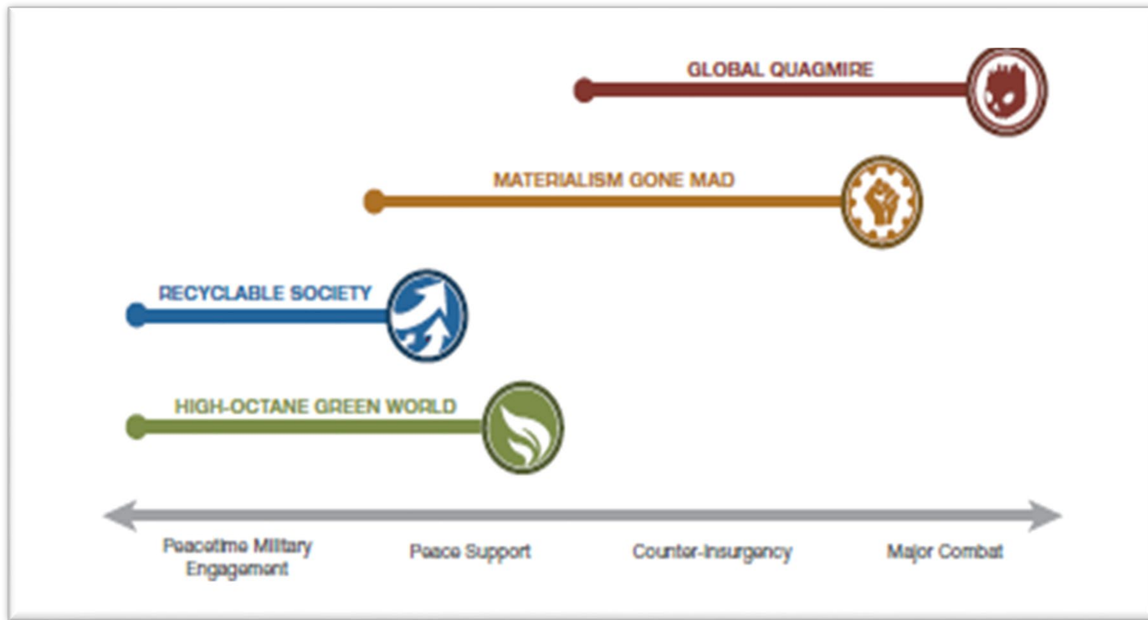

Figure 7. Relation of CFA Futures and Spectrum of Conflict

Source: Department of National Defence, B-GL-007-000/JP-011 *Canada's Future Army, Volume 3: Alternate Worlds and Implications* (Kingston: Canadian Army Land Warfare Centre, 2017), 50.

Three other features of the CFA study worth mentioning are signposts, emerging technologies, and wild cards. In one chapter and several annexes, the authors include the "signposts" associated with each scenario—those indicators which highlight the worldwide or national trends making one future or another more or less likely.[131] The closing pages of volume 3 also provide an annex list of examples of shocks that have the potential to dramatically alter the possible futures in a particular domain.[132] Similar to the

[131] CFA, vol. 3, ch. 3, 39-46.

[132] CFA, vol. 3, Annex C, 93-95. For more detailed examples, see for instance, Andrew F. Krepinevich, *7 Deadly Scenarios: A Military Futurist Explores War in the 21st Century* (New York: Bantam Dell, 2009).

wildcards, the known emerging technologies merit their own exploration in volume 2, with sections dedicated to Cyber, Autonomous Technologies and Artificial Intelligence, and Space.[133] While the study imagines what those technologies might do within the Canadian Army, or how they might be employed, it stops well short of considering how forces employing emerging technologies might be raised, particularly in extremis.

In summary, the CFA study describes four scenarios, across two polarities, of which at least one is foreseen to require mass mobilization. Three other useful aspects of the study are the list of identified signposts, emerging technologies, and wild cards which can act as indicators for accruing risk. Future scenarios are inherently incomplete, but the CFA study represents the Canadian Army's most recent effort, so its approval for publication by the Commander of the Army establishes it as the benchmark against which to conduct planning. Its conclusions will all be explored in more detail in the next chapter when the CFA study is compared against the current doctrine.

Canadian Defence Policy

Canadian defence policy has not changed substantively since at least Colin Gray wrote about it in the 1970s. It is a function primarily of invariants such as "geography, economic potential, and broad national interests", so in Canada's case, the priorities in 1970 were: Country, Continent, World.[134] 50 years later, *Strong, Secure, Engaged*'s

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[133] CFA, vol. 2, 62-70.

[134] Colin Gray, *Canadian Defence Priorities: A Question of Relevance*, (Toronto: Clarke, Irwin & Company Ltd., 1972), 3, and note 5 in ch. 2, citing James Eayrs, "Future Roles for the Armed Forces of Canada," *Behind the Headlines* 28, no. 1-2 (April 1969): 7.

(SSE) full title is as revealing: “Strong at home, Secure in North America, Engaged in the World.”[135] On a longer time scale, the use of the CAF has drifted toward international engagement, possibly because the first two priorities appear satisfied.

Most prominent for this study, it is SSE’s call to “detect, deter, and defend against threats” that helps define the possible future environment.[136] While the policy is written at the national level and frames the world differently from the Army’s study, the two are sufficiently aligned. Deterrence, and action by the Canadian government since 2017, has seen participation in NATO’s enhances Forward Presence (eFP) brigade.[137] Canada is a framework nation Battle Group lead in Latvia, as part of NATO’s deterrence efforts aimed at Russia in the Baltic States. The proactivity of NATO is not aimed at the environment, but the potential adversary, though it deals directly with energy supply, particularly from Russia. As a net effect, eFP and SSE’s emphasis on deterrence place the CAF as trending towards low proactivity, but energy secure middle ground of Materialism Gone Mad, though a potential conflict in the Baltics illustrates the possibility of Canada having to mobilize forces to reinforce the eFP.

To enable detection, a key element of SSE is the stated aim of anticipating potential threats.[138] This effort to anticipate threats is based on the acquisition of joint

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[135] SSE, 14.

[136] Ibid., 17.

[137] North Atlantic Treaty Organization (NATO), “Boosting NATO’s presence in the east and southeast,” last updated 26 April 2021, https://www.nato.int/cps/en/natohq/topics_136388.htm.

[138] SSE, 63.

intelligence, surveillance, and reconnaissance capabilities. Partly to monitor Canada's vast northern archipelago, but also linked to intelligence fusion, analysis, and dissemination, this approach aims to ultimately "tailor [Canadian] contributions to global security in a way that maximizes effectiveness."[139] SSE's policy aim of anticipation links conceptually to the doctrinal assumptions of strategic warning and bears further examination.

Summary

On the eve of the Korean War, Canada intended to mobilize as it had for WWII, but the urgency of the conflict required a faster response than Canada could provide. In eight months, the country doubled the size of its army and dispatched forces to Korea, relying heavily on veterans of WWII to fill out the ranks, and on equipment from its allies. Despite the experience, modern Canadian doctrine on mobilization remains rooted in the WWII paradigm and explicitly assumes strategic warning and time, though it aligns to a degree with Cold War theories of military readiness. The Canadian Army has also developed a comprehensive study of the FOE, where at least one future scenario sees a requirement for mass mobilization. Canadian Defence Policy rounds out the sources with an emphasis on how the government perceives the close future security environment and the CAF's role in it. These three perspectives—historic, present, and future, can be partly reconciled.

[139] SSE, 63.

CHAPTER 4

FINDINGS

The original research question was how Canada might update its mobilization doctrine and planning for the force generation and readiness demands of the 21st century. A future decision-maker will want to know how to generate forces when demand exceeds capacity. Regardless of cause or requirement, the CAF may at some point in the next century be asked by their Government to provide more force than it has readily available. DND must then inform Cabinet that within the parameters of the direction comprising M-day, funding, objectives, and location, it can offer options to raise forces of a particular size and capability within a certain period. This chapter considers the factors which impact the length of the period, from Notice-to-Effect (NTE).

The findings below are organized in three parts as described in the methodology. First, the analysis begins with a comparison of present doctrine to theory and historic experience of Korea from which some deductions and recommendations will arise. Second, present doctrine and theory are contrasted against future concepts and policy, giving rise to a complementary series of deductions and recommendations. Finally, the themes which emerge from the recommendations are filtered against what present-day decision-maker s might find acceptable or if potential tensions remain.

History and Doctrine

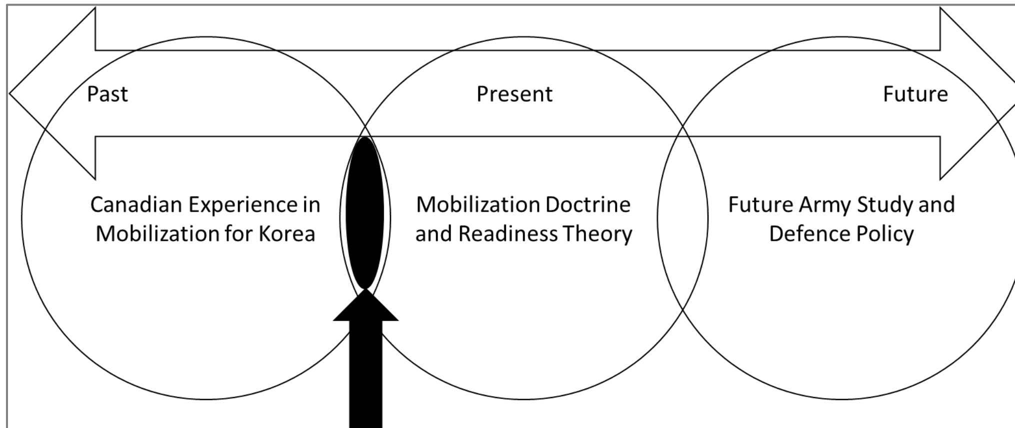

Figure 8. Structure of the Study: Intersection of Past and Present

Source: Created by author.

The comparison of the experiences in Korea against current doctrine and theory flows similarly to the discussion of the literature in chapter 3. Chronologically, Canada had to decide to participate, then to recruit, train, and equip the force, and finally to sustain and rotate the force. This section will examine each in turn against CFJP 7 and make recommendations for incorporating the lessons into the doctrine.

Deliberation

In assessing the variables which impact mobilization, the point of departure is the decision to act. Though this element is at the edge of the scope for this study, military planners contribute to the decision-making process. Preliminary deductions focus on the choices available to the decision-maker s including preparation before and during a conflict, available forces, and actions with allies.

A useful lens for this examination is the well-known elements of national power: Diplomatic, Informational, Military, and Economic. Immediately after demobilization

from WWII, Canada strove to develop an equilibrium between diplomatic, economic, and military power. When this equilibrium was disturbed, as with the pressure to act in Korea and the formation of NATO, Cabinet was forced to convert economic into military power to generate responses. Wood describes the cost to the army in the annual budgets, increasing from $143,500,000 in 1950 to $500,000,000 by 1953.[140] Considering the induction of replacements for 25 CIB, the payroll for the NATO brigade, and the MSF at home, the size of the field army increased by a factor of four, while the budget increased by a factor of three and a half. The budget also included what CFJP 7 calls increased usage rates, based on the distance travelled, and the increased consumption of equipment, ammunition, and supplies.[141] Canada also paid to the United States a cost per person per day, or per ton of supplies to be shipped across the Pacific, as well as a "capitation" rate for training in Fort Lewis and for sustaining the force in Korea.[142]

Finance departments today can arrive at much more detailed and accurate estimates, but for the purpose of this study, it is enough to say that the cost to increase the size of the force was roughly linear. In other words, doubling the size of the force in 1950 required a rough doubling of the budget, and despite economies of scale, there was an additional cost to use the force in operations. A corollary deduction is that insufficient funding could express in a slower time to raise the force, though the inverse may not be

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[140] Wood, *Strange Battleground,* 104.

[141] CFJP 7, 1-3.

[142] Wood, *Strange Battleground,* 50.

true—even with unlimited funding, there will be a lower limit to how quickly the force can prepare for operations.

Two recommendations flow from increased defence spending for Korea: first, that the reliance on strategic warning and gradual build-up of forces is a flawed assumption. This is a recurring theme in the recommendations. Second, that investments during peacetime to develop mobilization readiness requires further study.

As an indirect result of massive demobilization after 1945, and with corresponding reductions in defence spending, Canada had very few viable options for a response to Korea. Deploying some or all of the MSF would leave Canada potentially vulnerable at home—a risk anathema to defence policy. Combined with a suspicion that Korea was a communist distraction so that the Soviet Union could act in Europe, completely eliminated the possibility of deploying the MSF.[143] Using the Primary Reserves was another option, but these units were about to form the bulk of Canada's NATO commitment. Ultimately, Canada needed another brigade, but it also needed to respond quickly. Even today, tested against its MRS, the Canadian Army maintains units in a rotation of readiness, as well as Immediate Response Units for response to natural disasters.[144] Still, there is no army element of battalion or even company size that is trained and ready for deployment on short notice against contingency scenarios. Any elements already designated to a task such as disaster assistance response or non-

[143] Wood, *Strange Battleground,* 21.

[144] Government of Canada, "Operation LENTUS," accessed 15 April 2021, https://www.canada.ca/en/department-national-defence/services/operations/military-operations/current-operations/operation-lentus.html.

combatant evacuation are excluded by definition since they are already committed to readiness for another task. Stated bluntly, the episode reveals that Canada had no strategic ready reserve. Modifying the existing MRS to include a Strategic Ready Reserve (SRR) is another recurring recommendation.

Another key consideration for Canada's participation in Korea was the coalition framework. The formation of the commonwealth brigade as well as the close cooperation with the United States in shipping and supplying forces from North America into Asia were key components to enabling Canada's participation. Conversely, the allies extracted from Canada both military forces and credibility for the UN actions. But doctrine is silent on cooperation with allies. Even though CFJP 7 is rooted in Canada's participation in WWII, when allies cooperated in sustainment arrangements, forming multi-national echelons of command, and distributing economic responsibilities, there is no mention of allies with the current doctrine. As a result, it will be wise to include an assumption of coalition operations within a future doctrine rewrite to include as a planning factor. In fairness, Canada has already established partnerships and networks in NATO and with American, British, Australian, and New Zealand Armies (ABCANZ) which promote interoperability and standardization.[145] Cooperative planning for sustainment of munitions and spare parts, and equipment such as vehicles and weapons will become another recurring theme in the recommendations.

[145] US Department of Defense, "International Standardization," Defense Standardization Program, accessed 15 April 2021, https://www.dsp.dla.mil/Programs/International-Standardization/.

To summarize, the way doctrine can support decision-making is through advising on how funding can offset risk, preparing options, and establishing the frameworks to operate with allies. Specific recommendations for updates to readiness planning include identifying the cost factors to build mobilization readiness such as the cost of establishing a strategic ready reserve. Recommendations for doctrine updates are to remove the assumption of strategic warning, though this is qualified below. The doctrine should also insert an assumption that Canada will operate with allies or within a coalition.

Preparation

In the period between the start of the North Korean invasion and the first engagements by Canadian ground forces, the longest delay was in the five months to recruit and train the first Canadian battalion.[146] Modern armies use NTE as a metric, measured in hours or days for some of the highest readiness forces today. In examining the historic case, several factors influenced this duration: recruiting directly for operations, peacetime structures, and the anticipated purpose of the forces. Taken together, these factors allowed the Canadian Army to effectively double in size in eight months. Taken severally, each factor offers insights into how this NTE period might be reduced in the future.

It is unreasonable to expect that future instances of Stage 3 mobilization will be able to draw on a large pool of recruits with prior service experience in a World War.

[146] Wood, *Strange Battleground*, 44, cites Director of Military training's estimate of five months to train the brigade, though the Chief of the General Staff still felt that the programme was too slow. In fact, it took five months only to prepare the first battalion, and another three months for the rest of the brigade.

Approximately half of the recruits—mostly concentrated in the officers and NCOs of the newly formed battalions—had such experience. It may help to think of Korea less as mobilization and more as a reversal of the post-WWII demobilization.[147] This was a unique factor, but it is difficult to quantify the effect it had on either the total training time or the effectiveness of the Canadians in Korea.[148] In this instance, several tentative deductions and recommendations are possible: first that a high turn-over in recruiting and training during peacetime may be desirable. Any previously trained soldiers, even with a minimum of deployed experience that can be drawn back to service will improve the inexperienced force. A second recommendation, to be developed further below, suggests that having a pool of trained NCOs and Officers offers a compromise to maintaining a large standing force.

Wood describes the composition of leadership in 25 CIB to comprise a combination of prior service CASF recruits and regular force officers.[149] It is also clear that during the period the focus of the Primary Reserve was not to fill out 25 CIB for Korea, but rather 27 CIB for NATO in Europe.[150] Effectively, the Primary Reserve was

[147] Wood, *Strange Battleground,* 44 notes Director of Military Training's estimate that "90% of the rank and file would be Reserve Force of veterans".

[148] CANFORGEN 159/07 cited in Department of National Defence, B-GJ-005-000/FP-001*, Canadian Forces Joint Publication CFJP 01 Canadian Military Doctrine* (Ottawa: Canadian Forces Experimentation Centre, 2009), 4-3; For instance, mission command requires trust and common understanding, but in the absence of knowledge, experience, and familiarity amongst leaders, the application of this doctrine becomes less likely.

[149] Wood, *Strange Battleground,* 37-38.

[150] Maloney, *War without Battles,* 21.

used in what today would be called Stage 2 mobilization for Europe, and the CASF became an example of Stage 3 mobilization for Korea. The observation is that in expanding, the Canadian Army drew the bulk of its leadership from the regular force and prior full-time service, and what it needed most from the personnel raised for Stage 2 and Stage 3 mobilization was primarily fighting troops at the company level. This was a sensible approach that nurtured the existing experience to grow the forces rapidly. To achieve a similar effect in the future, the recommendation about peacetime army structures is twofold: first to establish leadership cadres in the regular force; and second that the reserve force should strive to comprise large companies and battalions, rather than brigades or divisions.

A final observation on recruiting deals with what became the "wastage crisis" in the final two months of training of 2 PPCLI once in Korea.[151] LCol Stone sent home 60 soldiers as non-battle casualties, many for health problems that should have made them ineligible for service.[152] Arising from this observation, the fourth recommendation is to align newly recruited troops into a second echelon - that is into the balance of the brigade to give recruiters and trainers more time to identify such issues. Applying the recommended models to Korea would see a unit from the MSF, such as 1 PPCLI acting as the SRR deploying nearly immediately, reaching Korea sometime in early October, while the balance of 25CIB was recruited and trained.

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[151] Bercuson, *Blood on the Hills,* 76.

[152] Wood, *Strange Battleground,* 76-77 identifies chronic bronchitis, atrophy of the leg muscles, cardiac palpitation, perforated ear drums, traumatic arthritis of the spine, hernia and hypertension.

With recruiting complete, the next key element for examination centers on training – specifically who conducted the training, and more importantly what the training was for. One of Betts' key considerations in describing readiness is what the force is being trained to do. In Korea, the intended purpose of the force was for combat, despite the uncertainty through October as UN forces had great success before the Chinese Intervention. Conversely, CFJP 7 states that standing forces should prepare for Operations Other Than War (OOTW).[153] But in the event, it was these regular forces of the MSF that became the primary trainers for the CASF.[154] These are clearly incongruent. If the role of the regular force was to train and lead the newly recruited CASF, then the regular force should specialize in what doctrine today calls Major Combat Operations (MCO).[155] Preparing the regular force for MCO is also congruent with the relatively higher readiness required of an SRR. This nuance is not entirely lost in CFJP 7, which speaks to the breadth of capability to mean "the range of military and support skills and abilities."[156] In other words, while current doctrine defines the breadth of capabilities to respond to a spectrum of conflict, it wishes away the possibility of a sudden requirement for MCO during Stage 1 mobilization. This implicit assumption that

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[153] CFJP 7, 2-1.

[154] Wood, *Strange Battleground,* 44.

[155] Department of National Defence, B-GJ-005-300/FP-001*, Canadian Forces Joint Publication CFJP 3.0 Operations* (Ottawa: Canadian Forces Warfare Centre, 2009), 2-3; Department of National Defence, B-GL-300-001/FP-001, *Land Operations* (Kingston, Ontario: Directorate of Army Doctrine, 2008), 3-10. The spectrum of conflict is prominent also in the CFA study and correlates at least one future with MCO.

[156] CFJP 7, 1-2.

the highest readiness forces would be used only for OOTW should not only be purged from the mobilization doctrine but replaced with the requirement to prepare for the most intensive operations. The second recommendation stemming from observations on training is that if the regular force is expected to provide the leadership and training cadres, it would be inherently configured much like an army school or like a smaller version of what the US Army calls Security Force Assistance Brigades (SFAB).[157] Incidentally, these units comprising of experienced leaders and trainers can be directed to enabling partner nations as well as expanding domestic capacity when required.

Between August 1950 and May 1951, the size of the Canadian Army roughly doubled. This doubling rate presents a potential metric for mobilization readiness. Using the regular force and prior service leaders to train and lead the new 25 CIB demonstrated that units could perform well if comprising at least 50 percent experienced veterans, though there is not enough data to suggest if lower ratios would lead to a precipitous drop in performance. To grow farther, forces can be rotated home to train new forces in turn. In the case of Korea, because replacements were trained while the lead units were deployed, these subsequent diffusions of experience did not occur until the 3rd rotation. Based on the experience in Korea, a doubling frequency could be eight months for the first rotation and then once again every two years, depending primarily on the rotation pattern.

[157] US Army, "Careers & Jobs: Security Force Assistance Brigade (SFAB)," accessed 16 April 2021, https://www.goarmy.com/careers-and-jobs/current-and-prior-service/advance-your-career/security-force-assistance-brigade.html.

In summary, based on the experience in recruiting and training for Korea compared against current mobilization doctrine, this study suggests three changes to doctrine and three structural principles. First, the implicit assumption that standing forces would only be employed for OOTW should be replaced with readiness for MCO. Second, include in doctrine the best practice of directing newly recruited forces into a second or subsequent rotation of forces into a new theatre. Third, introduce in doctrine estimates for force doubling rates as a metric for mobilization readiness. Fourth, structurally, the regular force units should include leadership cadres organized for training similar to US SFABs, and prepared to lead newly trained units. Fifth, vest the SRR in the standing regular force, comprising the first echelon of a response which serves to deliver a near-immediate effect; and last, that reserve forces should be configured with large battalions each focused on training many large companies and accepting high turnover or low retention rates. Taken together, these recommendations have the potential to both reduce the NTE window, as well as to improve the time required for Stage 3 mobilization.

Distance, Weight, and Duration

Once a force is raised and trained, it must be equipped, deployed, and sustained. The purpose of the force will influence how it is equipped, and this equipment will in turn influence how the force is sustained. Both factors are also influenced by the duration of the deployment and balanced against the need for urgency and the distances over which the force must be transported and sustained. 25 CIB in Korea represented a particular balance of equipment, deployment, and sustainment which can be instructive for future instances of mobilization.

A fundamental tension exists between a desire for a better armoured, more mechanized, and capable force on one hand, balanced against the need to fund, rapidly transport, and sustain this force across intercontinental distances on the other hand.[158] This tension is particularly pronounced for a nation like Canada where even domestic distances are effectively expeditionary and transcontinental. In general, as any force becomes heavier, both the width of supply lines and the ratios of personnel required to sustain it increase, but importantly, as a force becomes mechanized, the increase is not linear, but discontinuous. In effect, the ratio of sustaining and supporting forces increases proportionally as the size of the fighting forces increases, but increases suddenly and drastically once a force is mechanized.

A common metaphor in discussing the ratio of supporting and fighting forces is the cliché "tooth-to-tail" ratio, implying that when fighting, teeth are desirable, and tails are less useful. The current metaphor is intended to illustrate the growth of bureaucracy, but breaks down almost immediately, not least because it can evoke so many creatures. More importantly, it over-simplifies the essential concept of strategic reach and sustaining a modern fighting force on a distant landmass.[159] A more apt metaphor to express the importance of reach is to consider a spear instead. The size of the spearhead represents capacity, and the material represents its capability. The spear shaft must enable

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[158] Mechanized "Refers to a land unit or formation whose manoeuvre elements are equipped with armoured fighting vehicles." Government of Canada, "TERMIUM Plus," accessed 16 April 2021, https://www.btb.termiumplus.gc.ca/tpv2alpha/alpha-eng.html?lang=eng&i=1&srchtxt=mechanized&index=alt&codom2nd_wet=1#resultrecs.

[159] For a more detailed description of what US forces in the interwar period called the "division slice", see Kirkpatrick, *An Unknown Future and a Doubtful Present,* 95-96.

reach and sustainment for the duration. This metaphor becomes particularly illustrative when imagining a spear shaft reaching from Canada to Korea.

Applying this line of reasoning to Korea requires a brief review of the structure of 25 CIB. The brigade was organized around three dismounted infantry battalions which could be transported by trucks when available. They were supported with artillery, armour, engineers, signalers, and medics, though these elements were generally mounted. The brigade was preceded into Korea by 2 PPCLI which was a dismounted infantry battalion. Strategic transport, including deployment and sustainment, was by sea from Seattle to Pusan and was provided by the United States.[160] Equipment and some key munitions including weapons such as anti-armour recoilless rifles and trucks were sourced from Canadian, British, and US stocks and manufacture.[161] However, as illustrated after the Chinese intervention, relying on external sources made Canada vulnerable to external priorities. Conversely, these supply arrangements compensated for Canada's lack of preparation and domestic production capacity.

What the experience suggests are two possible approaches for supply arrangements, both of which were generally successfully employed for Korea. Canada could either constitute and maintain war stocks, particularly for weapons and munitions; or develop arrangements with allies, ideally before a conflict begins, as Canada does today with standardization agreements in NATO and ABCANZ. Essential for the former option is the standing requirement to update and maintain the production schedules for

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[160] Elements such as the Brigade command group may have deployed by air.

[161] Wood, *Strange Battleground,* 38-43.

any Canadian sourced equipment in the mobilization doctrine annexes. The latter option of relying on allies exposes the risk of raising forces simultaneously and straining to equip partners, only underscoring the need to investigate alliance planning in additional detail.

The solutions used in Korea also suggest a recommendation for how an SRR might be structured and the response layered. A mechanized force imposes non-linear growth in weight and a step-growth in time to deploy as well in sustainment requirements. But in complex terrain, such as the interior mountains of Korea, or built-up areas, relatively light dismounted or motorized forces, performed quite well, especially if well-armed and well trained. While tanks certainly had their uses throughout the Korean conflict and formed an integral part of 25 CIB, the first Canadians in the country were the predominantly dismounted 2 PPCLI. The use of the relatively light SRR, if coupled today with intercontinental flight, can also reduce NTE in the future. The importance of staggering the inflow of heavier vehicles becomes evident when considered against the importance of maintaining a foothold on the landmass such as in the Pusan perimeter and when NTE matters most. The recommendation, therefore, is to aim for a multi-staged NTE. The initial stage, based on the SRR, should comprise a predominantly dismounted or motorized force, enabled with mortars, pioneers, anti-armour, and anti-air weapons, to be deployed by air.[162] Had such a force existed in 1950, it could have responded to the

[162] Infantry battalions will normally be organized with 3-4 line companies, a supply company, a battalion headquarters, a combat support company (reconnaissance, pioneers, etc) and/or a weapons company which is normally equipped with medium and heavy machine guns, mortars, and crew served anti-armour weapons. The weapons companies represent the bulk of the destructive firepower of the battalion.

Korean conflict as early as August when the order in council was proclaimed—a full seven months earlier than 2 PPCLI did.[163] The second echelon, on a longer NTE, consisting of what amounts to 25 CIB could then deploy by sea several months later, and include those heavier, more capable forces. With subsequent rotations would come the staying power if the mission demands it.

A final consideration that impacts the weight and sustainment of a force is duration. The impacts are several: for one, there is an upper limit to the staying power of the first rotation of troops, considered to be up to one year in theatre by current Canadian standing orders personnel tempo (PERSTEMPO).[164] Second, duration influences the semi-permanent establishment of dedicated strategic lines of communication and supply. For instance, Canadian Forces in Korea were expected to remain for multiple rotations, so Canada made arrangements with the US for supply lines, but also embedded its own clerks, and supply experts in the chain within the theatre, effectively growing the shaft of the spear.[165] The real impact to the unknown duration of the commitment was that Canada had to recruit and train replacement troops. In effect, committing one brigade to operations meant raising at least two. In fairness, duration may be unknowable at the outset of the conflict, despite the common desire to have conflicts resolved quickly and decisively. Mission duration impacts are therefore twofold: first, the total size of the force

[163] Such a force design begs the question: what is the heaviest possible dismounted or motorized force that can be rapidly and pragmatically deployed by air?

[164] Department of National Defence, CANFORGEN 082/07, PERSTEMPO Policy for CF International Operations (Chief of Defence Staff, Ottawa, 2007).

[165] Wood, *Strange Battleground,* 67 for Command and Control of administrative forces, and 42 for supply arrangements.

needs to be at least doubled, and second, the establishment of a semi-permanent presence and supply chain imposes additional costs in terms of semi-permanent administrative support. While the latter observation is already captured in Annex D of CFJP 7, the former suggests the addition of PERSTEMPO considerations within the doctrine.

What Korea illustrates, and what planners know intuitively today, is that the larger, and more capable the force, the longer, and more expensive it is to raise and train, and the more difficult it is to transport and sustain. Though there is little discussion in the historic literature why the particular size and capability of force was chosen for Korea, there is little doubt that the staff of the department of defence developed estimates and considered the objectives in Korea, then weighed these against what force the department could raise, train, equip and sustain in the acceptable time.

Based on the factors of distance, weight, and duration of deployment for 25 CIB, the case study offers several preliminary recommendations for doctrine and structure. First, updating the production rate annexes of doctrine should be a periodic and automatic requirement. Second, already in progress to a degree, is the establishment of sustainment contingency plans, either with allies as in NATO and ABCANZ or through war stocks. Third, that the SRR should comprise the heaviest possible force while remaining transportable by air—effectively limiting it to at most a motorized force, but heavily armed.[166] Fourth, include and reinforce within mobilization doctrine the layers of NTE, from a rapidly deployable SRR in Stage 1 to a deliberate, relatively heavy, follow-on force in Stage 3 mobilization, which establishes the staying power and supply lines if

[166] To be clear, Joint Forcible Entry with parachute deployed forces is a very specific instance of this proposal and not the aim of the proposal.

necessary. Effectively, Canada could use the Korean deployment as a template, with a handful of modifications to improve responsiveness sustainability.

Many of the recommendations in the comparison between history and doctrine are recurring and build on previous ideas. Some will recur again when tested against possible futures, but these will all need to be examined through the lens of the case study methodology against what the key stakeholders might find acceptable.

Doctrine and the Future Army

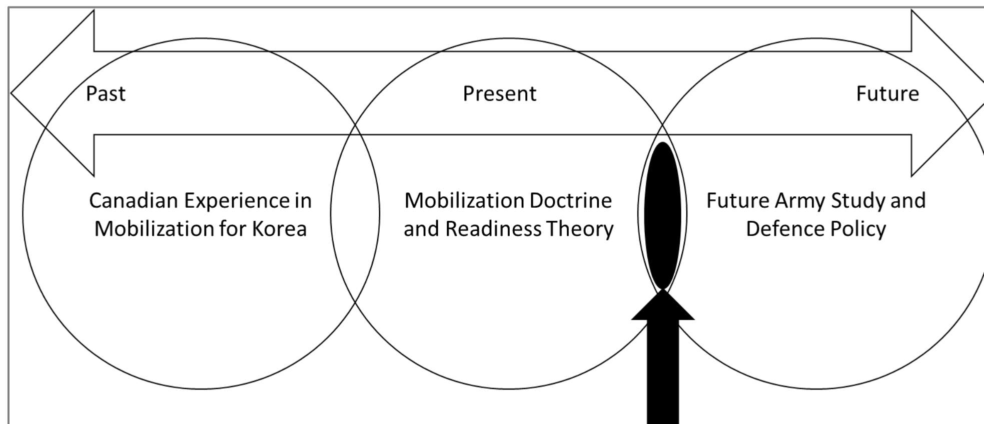

Figure 9. Structure of the Study: Intersection of Present and Future

Source: Created by author.

The subsequent findings explore the intersection between how Canadian planners imagine the future as expressed in the CFA study and SSE and the current doctrine. The four futures of the CFA are as informative as the polarities, revealing both the possibility of mobilization as well as suggesting the nature of the activities. Similarly, the stated policy aims also illustrate some trends for which mobilization readiness can create decision and option space. Though it is counter-intuitive to address emerging

technologies and trends with the doctrine which is inherently rooted in history and theory, there is some space for consideration how doctrines of prudent planning can reduce the impacts of emergence. Most importantly though, this section addresses the explicit assumption of strategic warning in CFJP 7. This topic alone is the focus of entire monographs and theoretical works beyond the scope of this brief exploration, but the relations between warning, decision, readiness, and response are completely relevant.

The Four Futures and Polarities

The four futures of the CFA study are combinations of the polarities of energy security and proactive response to climate change. As the two polarities intersect like axes, four combinations crystalize into scenarios. Of these, even the optimistic High Octane Green World of proactive response to climate and secure energy supply sees a need for military force, albeit in supporting roles and in the lowest intensity conflict. Of the other three scenarios, the Global Quagmire surprised the CFA's authors with the possibility of requiring mobilization. But mobilization is not only an expression of capability—it is also capacity so any possible future can require more capacity than is readily available. Considering that each future can lead to a need for military force and rather than examining each, in turn, the more fruitful implications and recommendations for the doctrine are found in the extreme polarities.

On the energy security axis, it is the extreme eventuality where energy is scarce that has particular implications for mobilization. Combined with Betts's considerations of for what, with what, how soon, energy scarcity can impact at least two elements of the possible response. First, in answering "with what" in an energy insecure environment, the desire to use mechanized forces may be impractical and suggests the structure should

prepare to use relatively lighter forces from the outset. Second, transport and sustainment at intercontinental distances with aircraft instead of more efficient forms of transport like rail and ship can influence how soon forces can be brought to bear. Combined, these factors suggest that deploying light infantry forces by ship like for Korea may be most sustainable in a low energy security environment.

On the second axis, it is climate change which most prominently suggests the need for raising forces in the future. The reasoning follows from three related planning assumptions: that policy will continue to drift towards worldwide engagement once secure in the North American continent; that not all nations will have the capacity for proactive response to climate change; and that the effect of climate change can manifest suddenly, but are long-lasting. Simple examples of drought, starvation, mass migrations, or political instability all illustrate the possibility of a sudden need for CAF to respond, albeit in lower-intensity conflict. That climate-caused crises are recurring and long-lasting will also require the staying power of Canadian troops once engaged, implying the need for rotational forces and again increasing the demand on the total force. The simple deduction here is not a modification to the doctrine, but rather to reinforce the urgency for updating and maintaining the mobilization doctrine for these possible futures.

Emerging Technologies and Wildcards

Internal combustion engines had a fundamental impact on the conduct of WWII, making possible the tank, the airplane, and the supply truck. Technologies emerging today such as artificial intelligence and robotics have the potential to be similarly disruptive in a future conflict. Predicting exactly how these might impact future conflict and mobilization is not reasonable, but developing the mental models for how to examine

their implications has a place in doctrine. Without pontificating on the wider meaning of new technologies, a handful of simple addition to CFJP 7 can be of help to future mobilization planners.

In examining the integration of new capabilities, defence institutions consider the relation of the capability to the institution, but rarely the impact of how a technology might alter the relationship between the military and the wider defence industrial base.[167] This is the province of what CFJP 7 calls "Defence Industrial Preparedness (DIP) Measures."[168] While DIP planning deals more specifically with preparing industry to support military materiel, it also implies the identification of potential frictions. An example specific to emerging technologies such as cyber, for which there may be a small pool of expertise or labour, is the potential requirement to balance the needs of growing force with the need of an emerging industry to support the force. While such considerations may apply more broadly in Stage 4 mobilization, when it comes to small volume and emerging systems, the friction can manifest in Stage 3 and should therefore be included in the doctrinal discussion of DIP planning. Of course, these limited skills can be multiplied by training new personnel. In routine capability planning, inducting new capabilities into service routinely triggers a review of training requirements. But while CFJP 7 includes an annex for the time to produce equipment and munitions, there are no comparable planning tables for personnel training while equipment is becoming

[167] US Army War College, School of Strategic Landpower, *How the Army Runs: A Senior Leader Reference Handbook* (Carlisle Barracks, PA: U.S. Army War College, 2020), 3-1 for DOTMLPF-P, or *CBP Handbook*, 40 for the Canadian PRICIE model.

[168] CFJP 7, 1-2, 1-3.

more complex. Because emerging capabilities could be limited in capacity, or, like mechanization, imposes a massive growth (or reduction) in NTE, it will be wise to include a similar annex with training data within the mobilization doctrine.

Finally, considering wildcards such as breakthroughs in quantum computing is taken in this instance as an extreme case of the rapid emergence of new technology. A whole field of study deals with such disruptive and unforecastable events, called black swans and pink flamingoes, but for the present, it suffices to treat these as triggers.[169] In one instance, wildcards can be both globally and regionally destabilizing and requiring classic mobilization in response. But in another case, they can have implications for rapid integration of a new capability (a growth) in the defence apparatus for which Stage 3 type mobilization could be appropriate. A simplistic example might be the need to recruit, train, equip and deploy an entire army of medical workers in response to a wildcard event such as a global pandemic.

Emerging technologies, and their extreme examples of wildcards, suggest two minor modifications to doctrine. First, the section on DIP planning should include a note that frictions in labour force management may manifest even in the early stages of mobilization. Second, as emerging technologies field, the impacts to training durations and NTE will require periodic or event-based monitoring and updates of mobilization rate estimates. These impacts belong in a training annex, similar to Annex E – Materiel Production Schedules.

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[169] Frank Hoffman, "Black Swans and Pink Flamingoes: Five Principles for Force Design," *War on the Rocks*, 19 August 2015, https://warontherocks.com/2015/08/black-swans-and-pink-flamingos-five-principles-for-force-design/.

Strategic Warning, Detection, and Signposts

The policies to "detect, deter, and defeat", like the doctrinal assumption of strategic warning, and the signposts of the CFA study are really restatements of two clichés: that forewarned is forearmed, and when intending to deter, that an ounce of prevention is worth a pound of cure. However, this logic of early warning is incomplete because it still requires an ability to act on any warning. Protecting from surprise is a necessary and sound objective, but it is no panacea, and certainly not a valid assumption.

Increasing the time for notice alone is insufficient. Consider a thought experiment of applying the principle of warning in Korea: Canada would require not only knowing in advance that the North Korean People's Army would invade on 25 June 1950, but also must include time for deliberating internally and amongst allies, deciding, activating, and acting on the warning. Given Canada's unpreparedness to respond in August, to effect any deterrence CAF would have required strategic warning seven months in advance to deliberate, recruit, train, equip, and transport 2 PPCLI into Korea. Even a partial warning to develop a contingency plan for mobilization short of any actual spending would have required intense pressure from the UN, US, and UK to act. This counter-factual thought experiment illustrates that strategic warning or detection alone is insufficient in generating strategic response and must be coupled with ready forces. This problem was not unique to Canada or the Korean War.

More broadly, in his study of *Intelligence and Surprise Attack*, Naval Postgraduate School Professor Eric Dahl persuasively argues that meta-studies of intelligence failure suffer from a version of survivorship bias: only the failures are

studied.[170] To compensate, Dahl also explores a series of intelligence successes in preventing surprise, but that these require “a combination of precise, tactical-level warning together with policymakers who are receptive to that warning.”[171] Similarly, Richard Betts in an earlier study on *Surprise Attack* notes, “the principal challenge in translating warning into response is to contract the period of debate within and between allied governments.”[172] Applying these observations to Canadian doctrine leads to the conclusion that while the Department of Defence and its intelligence capabilities aim to inform and warn policymakers, what the CAF can most influence is how prepared they are to respond and offer options after the decision to act is taken. As a result, the assumption of strategic warning should be removed from mobilization doctrine not least because it creates a false sense of security for planners and wishes away the possibility of surprise.

Considering hypotheticals and drawing qualified deductions for doctrine is challenging but worthwhile. In summary, the considerations of policy and the CFA study suggest several doctrinal edits such as removing the strategic warning assumption, including a training annex, and including considerations for labour force management in DIP planning. More broadly, the four futures of the CFA study suggest fewer specific

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[170] Dahl, *Intelligence and Surprise Attack,* 3-4; for a poignant example of survivorship bias see Iain King, “What do Cognitive Biases Mean for Deterrence?” *The Strategy Bridge*, 12 February, 2019, https://thestrategybridge.org/the-bridge/2019/2/12/what-do-cognitive-biases-mean-for-deterrence

[171] Dahl, *Intelligence and Surprise Attack,* 175.

[172] Betts, *Surprise Attack*, 290.

responses, but rather serve to reinforce the likely need for lighter forces and most importantly to underscore the need for a study on mobilization readiness.

Applied Case Study Method

The final element of analysis summarizes the recommendations and filters them through Professor Long's applied case study method. The essential elements of this method are to identify the chief decision-maker and stakeholders, consider the analytical process which might convince them, and finally consider how culture might influence the message and content of the recommendations.[173]

Recommendations for Doctrinal Updates

Undeniably, the Joint Doctrine for Mobilization requires an update. The following recommendations for updates to CJFP 7 can stand on their own, but will ideally be integrated with complementary changes in PERSTEMPO, MRS, and Army tasks and structures. Though the recommendations are for updates to Joint doctrine, they originate from a specific Army perspective, based on the Army-focused study of Korea and on the CFA study. The summary recommendations from the case study and future scan are for the proponents of CFJP 7 to:

1. Remove the explicit assumption of strategic warning from Chapter 1 and Chapter 3 of CFJP 7.

[173] Kenneth Long, "Case Study Research Method" (Lecture Notes, US Army Command and General Staff College, Fort Leavenworth, KS, 2016).

2. Remove the implicit assumption that Stage 1 mobilization forces will be used for OOTW in Chapter 2 of CFJP 7 and replace it with the requirement to prepare for MCO.
3. Update production schedules for the current fleet of vehicles in Annex E of CFJP 7, and introduce a requirement within defence acquisition project approval directive to provide event-based updates as new equipment fields. Introduce the concept of division slice to represent maintenance and support requirements associated with key equipment.
4. Integrate Richard Betts' readiness framework of ready for what (capability), ready with what (capacity), ready when (NTE), and for how long (PERSTEMPO) into Chapter 1 of CFJP 7, replacing the language of breadth of depth of capability. Include Betts' concepts of Operational Readiness, Structural Readiness, Mobilization Readiness, and Unreadiness in Chapter 2 aligned with stages of mobilization.
5. Add considerations for emerging technologies and national labour management in DIP planning in Annex D of CFJP 7.
6. Add assumption of coalition or allied operations in Chapter 3 of CFJP 7. Include coalition contingency planning for command and supply arrangements in Annex D of CFJP 7.
7. Add a personnel training annex by trade and rank to CFJP 7. Include estimates of the doubling rate of the force as a measure of mobilization readiness and considerations for training cadres in Annex D of CFJP 7.

8. Introduce task for Stage 1 Mobilization forces to maintain a Strategic Ready Reserve and remove reference of Main Contingency Force (MCF) in Chapter 2 of CFJP 7.

A Force Generating Concept Study

The proposed updates to doctrine suggest a modification to other standing tasks and structures. Since these are beyond the scope of this study, the recommendation below offers specific suggestions for avenues of research in future structural developments. In light of the CFA study, this study on FGCs is necessary and urgent even before the doctrinal updates. Specifically, this paper recommends a deliberate study of the distribution of tasks, personnel, and equipment to enable mobilization readiness and to study the associated costs. For instance, such a study could examine the cost in money and time to sequentially raise two brigades for service in a conflict like the Korean War. The recommended options for an FGC study to consider are:

1. Baseline – retaining current army structure. Canada will continue to send "forces of choice to wars of choice."[174] This option continues to do what Canada has always done: expend diplomatic power to buy time for mobilization, while simultaneously conducting war by contingent. In this

[174] I first came across this turn of phrase in Brigadier Chris Mills and LCol Leo Purdy, "Fighting to Win – the importance of the tank to the ADF in the 21st Century," *Australian Defence Magazine*, 12 September 2018, https://www.australiandefence.com.au/land/fighting-to-win-the-importance-of-the-tank-to-the-adf-in-the-21st-century. Though the context is wholly different, the expression applies perfectly to Canada in 1950, just as it did in 1939, and continues to apply today.

option, all standing forces should be considered fully committed to rotations through ongoing operations such as eFP.[175]

2. Strategic Ready Reserve. The Canadian Army will institutionalize its light forces for the specific purpose of rapid response to MCO contingencies through structure, equipment, and tasks. The first echelon should be based on a dismounted or motorized, heavily armed battalion, capable of rapid deployment by air. Its primary purpose will be to retain a foothold on distant landmasses until a second echelon based on the Primary Reserve can be raised. In this option, the primary reserve is configured in large light infantry companies and battalions, prepared to mechanize based on allied or war stock equipment and contingency requirements. Optionally, recruiting and training are configured for an intentionally high turnover, especially in reserve units and for lower ranks.
3. Specialize in capacity building. This last option assumes that the role of the Regular Force will be to train and lead a newly raised force for unexpected operations. Some regular force units are reconfigured as trainers, similar to US Army SFABs or Canadian Army Schools. In this instance, it will be the demonstrated mobilization readiness that aims to have a deterrent effect nearly as impactful as perpetually ready forces. Trainer battalions are included in

[175] Government of Canada, "Operation REASSURANCE," accessed 18 April 2021 https://www.canada.ca/en/department-national-defence/services/operations/military-operations/current-operations/operation-reassurance.html.

rotations of expeditionary operations to build partner capacity when not required at home such as Operation UNIFIER in Ukraine.[176]

Decision-maker and Stakeholders

The final stage of the analysis requires an evaluation of what the chief decision-maker in whose name the doctrine is published might accept from the above recommendations. Naturally, the CDS is not personally the drafter of joint doctrine and relies on the expertise nested within CJOC and the Canadian Forces Warfare Center where the Joint Doctrine Branch drafts publications such as CFJP 7. Also, the CDS' counterpart is the top civil servant in the department who is responsible for the defence policy advice to the government, the Deputy MND.[177] Together, they advise the MND and are in turn advised by a multitude of executive leaders, service chiefs, assistant deputy ministers (ADMs), and commanders within the department. These constituents also have particular expertise, analytical positions, and cultures. Most of these stakeholders are unlikely to object to routine updates to doctrine and may even welcome it. Of course, these judgments are hypothetical, because they are based on an outsider's view of key positions based only on their stated roles and without the benefit of understanding their unique sub-cultures in detail.

Where the changes in doctrine portend a shift to perceptions of current operations, alter planned and contingency plans, or modify employment of forces on current

[176] Government of Canada, "Operation UNIFIER," accessed 18 April 2021, https://www.canada.ca/en/department-national-defence/services/operations/military-operations/current-operations/operation-unifier.html.

[177] "Organizational structure of DND," Deputy Minister of National Defence.

operations, advisors such as Strategic Joint Staff (SJS), CJOC, or the ADM (Policy), will offer inputs.[178] For instance, CJOC as the primary force employer will consider how command or sustainment may impact operations, but along with ADM (Pol) will consider if a reduction in operations to develop mobilization readiness will impact the CAF's ability to sustain current operations. Conversely, SJS and CJOC may welcome additional flexibility expressed in layered NTEs on the scales of days, weeks, months, and years. Similarly, in concert with the Chief of Force Development, they provide input of scenarios against which the new doctrines and FGCs can be tested. But here, it is important to recall Vanya Eftimova Bellinger's observation of war by contingent. Government is incentivized to use all military forces available, even for non-military purposes, because they are already paid for.[179] Having military force merely ready and waiting provides little direct return on the investment. A reduction in output for operations to prepare for mobilization may therefore be unacceptable, not only to ADM (Policy) but also to the MND. In this instance, studies that consider global threats and estimate Canada's contribution to deterrence through readiness as part of an alliance may need to precede the doctrinal change. Canada is unlikely to find itself as unprepared, as it did for Korea, but reconfiguring forces while a crisis erupts is also preventable. As a related concern, policy is also as much about resource management as it is about engagement.

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[178] "Organizational structure of DND," Assistant Deputy Minister (Policy); Canadian Joint Operations Command; Strategic Joint Staff.

[179] Bellinger, "When Resources Drive Strategy."

Those who manage resources directly to enable operations, such as ADM (Finance), ADM (Materiel), and Military Personnel Command will be most likely to be implicated in developing the estimates for costs, updating equipment production annexes, or estimating recruiting and training throughputs respectively.[180] This staff effort would require a surge above their routine duties and may lead to resistance to change if that change suggests new tasks without additional resources. To overcome this resistance, the department may need to invest in temporary staffing to offset the cost in personnel conducting a detailed study.

Conversely, a reduction in perceived relevance can be menacing to a service, branch or stakeholder when competing in a resource-constrained environment. For instance, abandoning the assumption of strategic warning may be anathema to Canadian Forces Intelligence Command considering the investment directed in SSE to detect adversary actions.[181] Here again ADM (Policy) may be resistant to change lest this change in doctrine signal an abandonment of relatively recent policy despite multiple factors in the analysis suggesting that strategic warning is not likely. A possible compromise may be to suggest that removing the assumption from doctrine does not necessarily equate to the abandonment of the policy to pursue early detection, but rather that it is an acknowledgement that strategic warning is exceptionally difficult.

The recommendations for changes are driven by the army experience in Korea and relate to the Canadian Army particularly for the proposed FGC study. Therefore, the

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[180] "Organizational structure of DND," Assistant Deputy Minister (Materiel); Assistant Deputy Minister (Finance); Military Personnel Command.

[181] "Organizational structure of DND," Canadian Forces Intelligence Command.

Commander of the Canadian Army is the most likely stakeholder to influence the CDS, and also the likeliest champion for these changes.[182] But just as the CDS is advised by many interested and knowledgeable stakeholders, so too is the Commander of the Army advised by his staff. In this instance, it is the Canadian Army's relationship with its Reserve component which becomes an important consideration. This relationship is not a simple one, considering for instance that the current MND is a former commanding officer of a reserve regiment.[183] As such, he may have notions about what the role of the Army Reserve should be, informed by his particular experiences. Depending on the notions of the stakeholders outside the army, the reaction could be mixed. Oddly, CFJP 7 does not explicitly rely on the Primary Reserve for Stage 2 mobilization, though this is in practice how the reserves have been used in supporting ongoing operations.[184] In 1946, then MND thought "the Reserve Army formed the essential framework of the traditional Canadian defence scheme," but this is no longer the case.[185] A refreshed mobilization doctrine can trigger a reframing and clarifying the role of the Army Reserve.

[182] Government of Canada, "The Canadian Army of Today," accessed 18 April 2021, https://army.gc.ca/en/home/organization.page.

[183] Government of Canada, "The Honourable Harjit Sajjan," accessed 18 April 2021, https://www.canada.ca/en/government/ministers/harjit-singh-sajjan.html.

[184] Author's personal experience in the Directorate of Land Force Development within the Canadian Army HQ witnessed an ongoing effort to integrate reserve forces into ongoing missions, including the use of formed elements up to platoon in strength.

[185] Bercuson, *Blood on the Hills,* 14; Canada continues to wrestle with the role of its reserves, particularly in the post-Cold War period. See for instance: Jack English, *The Role of the Militia in Today's Canadian Forces* (Calgary: Canadian Defence and Foreign Affairs Institute, 2011); and "Report 5, Canadian Army Reserve – National Defence."

A final tension for the army for which there are multiple stakeholders arises from the recommendation for a lighter force. Recent experiences for the Canadian Army in Afghanistan saw a very low tolerance for casualties, combined with a perception that larger, better armoured vehicles will prevent battlefield losses. Nearly every vehicle introduced into inventory during the Afghanistan conflict provided increasing protection or was questioned for lacking it.[186] There are potential interests here within the Army, ADM (Materiel), ADM (Policy), and cabinet, but also the wider public and especially industry. The relationships of a multitude of heavier vehicles, armour, protection, and survivability have become an emotive issue that may make a shift towards lighter forces less palatable.

Ultimately, doctrinal updates are relatively inexpensive, and the recommendations above are only academic if enough stakeholders prove reticent to accept the changes for any number of predictable or pedantic reasons. The Canadian Department of Defence and its multitude of constituents practice consensus-based decision-making.[187] Even for doctrinal change which amounts to little more than words on paper, it is easy to imagine an emotional response and excessive resistance resulting in a failed change effort. But as the study above demonstrates, there is an urgency to preparing intellectually and

[186] David Pugliese, "Questions raised about Canadian special forces spending $20 million for vehicles offering no protection," *Ottawa Citizen*, 23 January 2017, https://ottawacitizen.com/news/national/defence-watch/questions-raised-about-canadian-special-forces-spending-20-million-for-vehicles-offering-no-protection.

[187] Author's personal observations working in force development roles, 2014-2020.

materially for mobilization given the lessons from Korea and the pressures forecasted by the CFA study.

Summary

After comparing history, doctrine, and foresight, this study amounts to eight specific recommendations for updates to Canadian mobilization doctrine. Because the doctrine alone is insufficient to drive change, it must be accompanied by structural—and potentially cultural—change including an alignment of tasks, equipment, and personnel. To that end, this study also leads to a recommendation for developing a Force Generating Concept for the Canadian Army, both for peacetime and for extreme contingencies requiring mobilization. The study here offers recommendations for avenues to explore in the FGC study and some key parameters to consider in relation to mobilization readiness. Finally, the study considers potential stakeholder positions and resistance to change, offers some suggestions for how stakeholders might be compelled to buy in, and ultimately offers a promise to revisit the fundamental relationship between the Canadian Army and its citizen-soldiers.

CHAPTER 5

CONCLUSIONS AND SUMMARY RECOMMENDATIONS

Updating the Joint Doctrine for Mobilization for the 21st century offers only a partial solution to creating mobilization readiness. Without corresponding changes to the structure, equipment, training, and purpose of the force, updates to doctrine alone are unlikely to prepare Canada for another conflict like Korea. However, it will certainly help those future planners.

Scope and Purpose

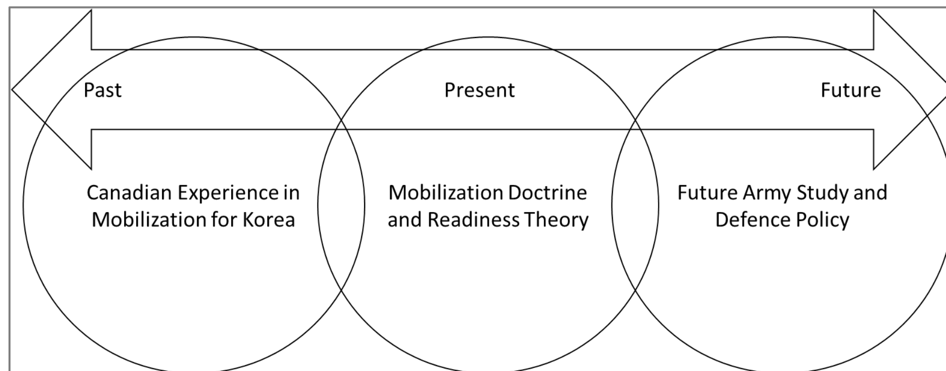

Figure 10. Structure of the Study

Source: Created by author.

Each area of the diagram in figure 10 corresponds to one of the research questions: historic paradigms and the case study, current doctrine and theory, and considerations of the future security environment in which the Canadian Army can expect to operate. From these examinations arose the recommendations for doctrinal updates which aim to anticipate the force generation and readiness challenges of the FOE.

Of necessity, the study was delimited in scope. To respond to the fundamental questions of the possibility for mobilization readiness in a nuclear world, this study focused on the space between insufficient ready forces and limited war. If anything, the example in Korea illustrates that even with nuclear weapons available, the United States did not resort to them even in the face of North Korean and Chinese tactical and operational successes. Similarly, this study did not examine the machinations of the UN and other coalition and allied partners or how participant nations agreed on the nature of their contributions.

The other, more pragmatic delimitation focused on the scale of the study, leaving out considerations of other examples of mobilization as well as methods for conscription and national service. Other nations' models and experiences, and Canada's own instances of mobilization in two world wars, across all services, were all left unexamined but offer opportunities for further study. These, and several other avenues of future research follow what the study did find.

Summary Recommendations

The study makes recommendations for eight doctrinal amendments:

1. Remove the explicit assumption of strategic warning from Chapter 1 and Chapter 3 of CFJP 7.
2. Remove the implicit assumption that Stage 1 mobilization forces will be used for OOTW in Chapter 2 of CFJP 7 and replace it with the requirement to prepare for MCO.
3. Update production schedules for the current fleet of vehicles in Annex E of CFJP 7, and introduce a requirement within defence acquisition project

approval directive to provide event-based updates as new equipment fields. Introduce the concept of division slice to represent maintenance and support requirements associated with key equipment.

4. Integrate Richard Betts' readiness framework of ready for what (capability), ready with what (capacity), ready when (NTE), and for how long (PERSTEMPO) into Chapter 1 of CFJP 7, replacing the language of breadth of depth of capability. Include Betts' concepts of Operational Readiness, Structural Readiness, Mobilization Readiness, and Unreadiness in Chapter 2 aligned with stages of mobilization.
5. Add considerations for emerging technologies and national labour management in DIP planning in Annex D of CFJP 7.
6. Add assumption of coalition or allied operations in Chapter 3 of CFJP 7. Include coalition contingency planning for command and supply arrangements in Annex D of CFJP 7.
7. Add a personnel training annex by trade and rank to CFJP 7. Include estimates of the doubling rate of the force as a measure of mobilization readiness and considerations for training cadres in Annex D of CFJP 7.
8. Introduce task for Stage 1 Mobilization forces to maintain a Strategic Ready Reserve and remove reference of Main Contingency Force (MCF) in Chapter 2 of CFJP 7.

In addition to doctrinal updates, the study resulted in an unexpected recommendation for a wider and deliberate Force Generation Concept examination to

include considerations for the structure of the Canadian Army and the role of its components. The recommended options for an FGC study to consider are:

1. Baseline – retaining current army structure and component roles.
2. Construct a light Strategic Ready Reserve in the Regular Force, and configure the Primary Reserve for the second echelon of mechanized forces.
3. Specialize a portion of the regular force as a cadre for reserves or newly recruited forces and for exportable capacity building akin to US Army SFABs.

Recommendations for Subsequent Research

The first avenues for future research stem from the topics which could not be included. There is undoubtedly ample literature from the height of the Cold War which explored the need for large conventional forces in lieu of resorting to nuclear options. A possible research question, if not already addressed in the existing nuclear theory, is to determine what factors influence thresholds beyond which nuclear weapons become the preferred response. Similarly, what thresholds would even trigger mobilization? Of course, these will all need to be weighed against possible futures, so continued research like the CFA study, expanded to include a joint force, in re-emerging great power competition is also a viable avenue of research.

A study similar to the present is required for all services, especially including nascent services and functions like cyber and space. Considerations for how to expand such niche capabilities, like emerging technologies, have the potential for competitive advantage as the utility of such capabilities crystalizes. A study of expanded scope, not only across services, but examining other nations' FGCs, and across multiple historic periods, will provide a comprehensive view of the possible approaches to raising forces

and could offer insight for an innovative approach, akin to Von Roon's reforms of the mid-19th century.

Throughout the research for this study, other gaps in institutional knowledge became apparent. Surprisingly, none of the literature dealt with the Canadian decision to provide the particular contribution of an Infantry Brigade as the appropriate response to Korea. It is entirely possible that this avenue has already been explored, but that it was not readily accessible reveals a broader consideration.

In a similar vein, the lessons learned reports from Korea or other recent conflicts are not readily available, and may not even exist. This function is nested within services and at the joint level, alongside the joint doctrine center in the Canadian Forces Warfare Centre.[188] In fact, a recent study by ADM (Review Services) noted in its first key finding that "doctrine and lessons learned are not fully exploited in support of the Capability Development Program."[189] But to exploit such research requires that it be complete and accessible. The nature of this follow on research would ultimately be about procedural improvements within the Department both in capturing, but also in practically managing lessons from past conflicts.

Despite the prevalence of alliances in the modern international system, there is little commentary in the discourse beyond the level of spending as a percentage target of Gross Domestic Product. Alliance systems and contributions require a more fundamental,

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[188] Emily Robinson, *Lessons Learned Performance Measurement* (Ottawa: Defence Research and Development Canada, 2017, https://cradpdf.drdc-rddc.gc.ca/PDFS/unc285/p805764_A1b.pdf.

[189] *Evaluation of the Defence Capability Development Program.*

grounded theory research on their effects to the contributors, to the members, and to the international system in which they participate.[190] The mere assumption that Canada and similar nations will participate in an alliance system suggests a need for a deeper examination.

Finally, it is worth considering historian Brian McAllister Linn's research on patterns in post-war armies.[191] His observations about rapid reductions in funding, demobilization, and uncertainty are all immediately recognizable in the state of the CAF between 1945 and 1950. The patterns he identifies suggest there may be a period of vulnerability in post-war armies—perhaps as long as a decade—and that research on doctrines to minimize this vulnerability are worthwhile.

Perhaps unsurprisingly, this study revealed a multitude of avenues for subsequent research beyond what was evident with the delimitations at the outset. In summary, these include expanding the scope to other examples and models of mobilization, developing grounded theory on alliances, investigating the nuclear threshold in the imminent future, developing doctrine for demobilization, investigating the specific lessons of how decisions about the employment of forces were made, and more broadly how such lessons can best be captured within the CAF. Any one of these avenues will be a worthy addition to a relatively neglected field.

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[190] A useful starting point could be Matthew D. Marfongelli, *The United States and the British Commonwealth in Korea, 1950-53: A Critical Study of the Origins of Joint Publication 3-16, Multinational Operations*, Art of War Papers (Fort Leavenworth, KS: US Army Command and General Staff College, 2013).

[191] Brian M Linn, "The US Army's Postwar Recoveries," *Parameters* 46, no. 3 (2016) https://press.armywarcollege.edu/parameters/vol46/iss3/4.

Closing Thoughts

The suddenness of the Korean War and other similar examples of strategic surprise epitomize the need for a developed Force Generating Concept rooted in current doctrine and complemented with a fundamental review of the roles and structures of the Canadian Army. For the moment, the CAF in general—and the Army specifically—seem poorly prepared to mobilize for the limited contingencies which appear quite likely in the coming decades.

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