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**CANADIAN FORCES COLLEGE / COLLÈGE DES FORCES CANADIENNES  
AMSC 6 / CSEM 6**

**A Canadian Perspective of the Operational Art**

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## **Abstract**

Canadian commanders seeking to understand the operational art are exposed to many influences, some established by common practice and accepted doctrine, and some that represent a purely national flavour. The thesis is that the Canadian perspective of the operational art generates unique implications and outcomes for Canadian commanders at the operational level.

This paper argues that Canada had not practised the operational art in war, leading to an explanation of why the operational art is now so relevant to Canadian military thinking. It explores the unique factors and outcomes influencing Canadian commanders, considered to be national influences, the nature of coalitions and interoperability, doctrine and allied thinking, and the continued relevance of selected theorists.

It is the commander's intellect – the capacity to know and to reason – that will coalesce these diverse influences into a personal view of the strategic and operational context, and will create a concept or vision of how the goal will be reached. Successful Canadian commanders will blend accepted practices, equipments, theoretical models, and emerging concepts to find intelligent ways towards a workable solution. They will be aware of the influences onal m

## A Canadian Perspective of the Operational Art

*Perspective: (figurative) Relation in which parts of a subject are viewed from the mind.*  
- The Oxford Dictionary

### **The Premise**

Generations of military theorists, strategists, and commanders have studied the concepts of the operational art and the operational level of war. From early terms such as *grand tactics*, a distinction in terminology slowly evolved into the pursuit of a national *grand strategy* through economic, diplomatic and military instruments, and the *operational level* of military campaigns that are designed to achieve strategic goals.<sup>1</sup>

The Soviets were amongst the first modern masters of the *operational art*, interpreting and applying it as the intermediate activity between strategy and tactics. Russia's victories on the Eastern Front (1942-1945) suggested the essence of the operational art, disrupting Germany's cohesion, preventing relevant reactions or initiative, and dislocating command and control.<sup>2</sup> The full-scale adoption of the operational art and the operational level of war in the United States' approach to warfare drove a widespread revival of thinking on the subject, and both terms are now common in Western military thinking.

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<sup>1</sup> Martin van Crefeld, *The Transformation of War* (Toronto: The Free Press, 1991), p 96.

<sup>2</sup> David M Glantz, "The Intellectual Dimension of the Soviet (Russian) Operational Art," in *The Operational Art: Developments in Theories of War*, ed B.J.C. McKercher and Michael A. Hennessy (Westport: Praeger, 1996), 125-146. Refer also to John A English, "The Operational Art: Developments in the Theories of War," in *The Operational Art: Developments in Theories of War*, ed B.J.C. McKercher and Michael A. Hennessy (Westport: Praeger, 1996), 14.

Canada defines the *operational art* as:

The skill of translating strategic direction into operational and tactical action. Operational art requires commanders with broad vision, the ability to anticipate, and a careful understanding of the relationship of means to ends. ... The commander applies intellect to the situation to establish and transmit a vision for the accomplishment of the strategic objective.<sup>3</sup>

Canadian commanders seeking to understand the operational art will be exposed to many influences, some established by common practice and accepted doctrine, and some that are open to interpretation, adaptation, and represent a purely national flavour. The intellectual component of the operational art is highly subjective, and every commander will interpret and project a different vision – and version – of how these influences will affect the outcome. If the operational art is truly a reflection of the intellectual talents of the commander, combined with those of command and leadership, then these influences and their potential outcomes will be acknowledged and explored during the military estimate of the strategic context and the operational problem. Deductions stemming from national influences must be incorporated into the Commander's explanation of his vision to strategic level leadership and, more importantly, to subordinate commanders and staffs. The thesis is that the Canadian perspective of the operational art generates unique implications and outcomes for Canadian commanders at the operational level.

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<sup>3</sup> Department of National Defence, B-GG-005-004/AF-000 *Canadian Forces Operations* (Ottawa: DND Canada, 18 December 2000), 3-1.

## Approach and Assumptions

The paper opens with the idea that Canada had not practised the operational art in war, leading to an explanation of why the operational art is now so relevant to Canadian military thinking. It then explores the unique factors and outcomes influencing Canadian commanders, identified as national influences, the nature of coalitions and interoperability, doctrine and allied thinking, and the continued relevance of selected theorists. The conclusion is that the Canadian interpretation of the operational art reflects Canadian influences and generates implications and outcomes for operational employment that are specific to Canada.

The initial assumption regards the likely employment of Canadian military forces. One view is that governments do not wish to be constrained by formal strategic aims, and so do not provide relevant strategic direction to military commanders.<sup>4</sup> Another holds that Canada is not likely to ever commit its navy, air force, or army unilaterally to enforce national policy, given the collective nature of Canada's national aims and the size of the forces; this raises a concern that the operational level of war might not even be applicable to Canada.<sup>5</sup> Nevertheless, there are functions that Canada is required to perform as a sovereign nation, so *Canadian Forces Doctrine* expects the Canadian Forces to be able to operate effectively in joint and combined operations,<sup>6</sup> and able to fulfill its mandated roles: to defend Canada; to contribute to the defence of North

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<sup>4</sup> BGen (retired) G.E Sharpe and Dr Allan D. English, *Principles for Change in the Post Cold War Command and Control of the Canadian Forces* (DND: Canadian Forces Leadership Institute, 2002), 39. Refer also to Douglas L. Bland, *Chiefs of Defence: Government and the Unified Command of the Canadian Armed Force* (Toronto: Canadian Institute of Strategic Studies, 1995), 213 and 267. Refer also to Dr John A English, *Lament for an Army: The Decline of Canadian Military Professionalism* (Toronto: Irwin, 1998), 67.

<sup>5</sup> Colonel K.T. Eddy, "The Canadian Forces and the Operational Level of War," *Canadian Defence Quarterly*, 21, no.5 (April 1992): 22.

<sup>6</sup> Department of National Defence, B-GJ-005-000/FP-000 *Canadian Forces Doctrine (Third Draft)*(Ottawa: DLLS DND Canada, 2003), 42

America; and to contribute to international peace and security.<sup>7</sup> The *1994 Defence White Paper* directed that “Canada needs armed forces that are able to operate with the modern forces maintained by our allies and like-minded nations against a capable opponent – that is, able to fight ‘alongside the best, against the best.’ ”<sup>8</sup> The policy also recognized that a diminished direct threat to Canada does not eliminate an ongoing role for the Canadian Forces at home.<sup>9</sup> Based on this guidance, and drawing from the recent collective operational experience of the Canadian Forces, it is assumed that Canada’s military forces must: be able to operate as a joint force domestically, commanding its own forces to pursue national objectives; be able to meet international commitments and tasks, implying strong skills in coalition and joint operations; and finally, be able to apply military capabilities across the spectrum of conflict and the continuum of operations.

For the purposes of the argument, the Canadian view will be accepted that the operational level “is not defined by the number and size of forces or the echelon of headquarters involved. ... Regardless of its size, a military force tasked to achieve a strategic objective, is being employed at the operational level.”<sup>10</sup> The paper will not explore every element of the operational art, but rather confine itself to influences with peculiarly Canadian effects. It will concentrate on the perspective that the operational art reflects the intellectual influence of the commander in his drive towards unity of effort, trust, and mutual understanding throughout the forces he or she

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<sup>7</sup> *Canadian Forces Doctrine*, 31.

<sup>8</sup> Department of National Defence, *1994 Defence White Paper* (Ottawa: Canada Communications Group, 1994), 14.

<sup>9</sup> *1994 Defence White Paper*, 18.

<sup>10</sup> *Canadian Forces Operations*, 1-6. US Doctrine limits the operational level to Combatant Commanders. Brigadier Richard Simpkin (UK) felt that combinations of technology and manoeuvre theory lowered the original threshold of operational level; refer to English, “The Operational Art...,” 17.

commands. Given these assumptions, discussion of the operational art suits many more situations and is relevant to many more commanders than might otherwise be the case.

## **A Historical Perspective**

*Force development took place in what can only be described as an intellectual vacuum.*<sup>11</sup>

Examples of sustained warfare abound throughout Canadian history, suggesting that Canada is intimately familiar with the operational level of war, and therefore is already aware of a Canadian perspective of the operational art. On closer examination, however, Canada has not designed its own campaigns or practised the operational art during war, nor have military operations since World War II offered much practical experience of wartime campaigning.

The evolution of the Canadian Corps under Lieutenant-General Sir Julian Byng into the cohesive fighting force that captured Vimy Ridge in April 1917, and then its success under Lieutenant-General Sir Arthur Currie as a spearhead of the Imperial armies in 1918 (alongside the Australians), offers supreme examples of Canadian generalship. At Amiens and after, combined arms tactics integrating radios, armour, artillery, infantry, aircraft and other elements generated highly effective combat power.<sup>12</sup> Notwithstanding the leading role of the Canadian Corps in the Hundred Days, Canadian commanders were not translating strategic direction into tactical action; tactical excellence certainly, but not campaign design.<sup>13</sup>

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<sup>11</sup> Dr Lorne Bentley, "Policy, Strategy, and Canadian Generalship: A Clausewitzian Analysis," in *Contemporary Issues in Officership: A Canadian Perspective*, ed Bernd Horn (Toronto: Canadian Institute of Strategic Studies, 2000), 171.

<sup>12</sup> John A English, "The Operational Art: Developments in the Theories of War," in *The Operational Art: Developments in Theories of War*, ed B.J.C. McKercher and Michael A. Hennessy (Westport: Praeger, 1996), 12.

<sup>13</sup> William McAndrew, "Operational Art and the Canadian Army's Way of War," in *The Operational Art: Developments in Theories of War*, ed B.J.C. McKercher and Michael A. Hennessy (Westport: Praeger), 88. Refer



In the years between the wars, there was no serious effort to create a Canadian military strategy distinct from that of the United Kingdom, causing Canada to again mobilize the nation for allied command in 1939.<sup>14</sup> The one exception in World War II, perhaps, was Rear-Admiral LW Murray RCN, who as the commander of the Canadian North West Atlantic Command had the opportunity to practise the operational art of campaigning.<sup>15</sup> For the most part, however, the Canadian experience in war was to adopt the strategic principles of its allies, and to subordinate Canadian units and formations to allied command, usually that of the United Kingdom.<sup>16</sup> The experience was not always a positive one, as shown in this summary of Operation Veritable in the Rhineland, Spring 1945:

Operation Veritable was the epitome of the Canadian Army's way of war... Planning the battle was a prodigious achievement that displayed Canadian military staff bureaucracy at its best, highlighting all the strengths of conventional doctrine for the set-piece attack; meticulous staff work, massive firepower, careful movement. ...In theory, Canadian doctrine encouraged initiative and flexibility; however, if unit and personal accounts are at all indicative, actual practice was the opposite. Instead of a common unbroken thread connecting all levels of command, several staff layers intervened between planners and implementers. Instead of synchronizing tactics with operational insight, doctrine – the way of war – got in the way.<sup>17</sup>

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also to Shane Schreiber, *Shock Army of the British Empire: The Canadian Corps in the Last 100 Days of the Great War* (Westport: Praeger, 1997), 4. The latter is a fascinating study of the Canadian experience, arguing that General Currie grappled with operational issues by winning a string of battles to reach ultimate victory in 1918.

<sup>14</sup> Bentley, "Policy, Strategy, and Canadian Generalship: A Clausewitzian Analysis," 159. Refer also to Department of National Defence, *Report of the Officer Development Board (The Rowley Report) – Volume I*. (Ottawa: Dept. of National Defence, 1969), 13.

<sup>15</sup> Wilfred Gourlay Lund, *Rear-Admiral Leonard Warren Murray, CB, CBE, RCN: a Study of Command and Leadership in the Battle of the Atlantic* (Toronto: [s.n.], 2001), no specific page number. As the commander of the Canadian North West Atlantic Command, Rear-Admiral LW Murray RCN was responsible for naval operations in the Canadian approaches during the Battle of the Atlantic.

<sup>16</sup> Bentley, "Policy, Strategy, and Canadian Generalship: A Clausewitzian Analysis," 157 – 159.

<sup>17</sup> McAndrew, "Operational Art and the Canadian Army's Way of War," 96-97. Refer also to Dr John A English, *The Canadian Army and the Normandy Campaign: a Study of Failure in High Command* (New York: Praeger, 1991). The entire work deals with higher leadership in war.

A key method of campaigning in the Second World War was the unparalleled Combined Chiefs of Staff System, linked to geographical theatres of war and commanded by Supreme Commanders (such as Eisenhower, Mountbatten, or Nimitz).<sup>18</sup> While Canadians contributed to this system, they were excluded from strategic planning and did not fight at the operational level. However hard they may have fought the campaigns, Canadians did not design them; after six years at war, Canada remained inexperienced in linking national strategy, military strategy, and objectives into a campaign.<sup>19</sup> With the onset of the Cold War,

Senior Canadian officers had no basis for considering what other strategic paradigms were more appropriate for the future. Long accustomed to furnishing tactical formations for employment in allied formations directed by British and American strategies, Canadian officers were generally easily convinced that their much admired mentors could be trusted to continue to craft military strategies appropriate to the times.<sup>20</sup>

This practice persisted through unification and integration, stressing tactical strength in the air force, army or naval formations committed to NATO, and technical excellence in specific warfighting capabilities. The piecemeal *strategy of commitments* sidetracked efforts to develop a national joint expertise, or even a distinct national strategy to guide military efforts.<sup>21</sup> The guiding theme was that Canada should not – and need not – develop her own strategic and operational level skills, capabilities, and perspectives, given the subordinating effect of collective security offered by a modern NATO version of the familiar Combined Chiefs of Staff System. It

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<sup>18</sup> English, “The Operational Art: Developments in the Theories of War,” 15.

<sup>19</sup> William McAndrew, “Operational Art and the Canadian Army’s Way of War,” 90.

<sup>20</sup> Bentley, “Policy, Strategy, and Canadian Generalship: A Clausewitzian Analysis,” 168-169.

<sup>21</sup> This view is reflected in multiple sources. Paul Hellyer, *Damn the Torpedoes: My Fight to Unify Canada’s Armed Forces* (Toronto: McClelland & Stewart), Chapter 5. Refer also to Bland, *Chiefs of Defence...*, 215, and to Dr Allan D English, “The Americanization of the Canadian Officer Corps: Myth and Reality ?” in *Contemporary Issues in Officership: A Canadian Perspective*, ed Bernd Horn (Toronto: Institute of Strategic Studies, 2000), 185. Also relevant is a paper prepared by General R.R. Henault (Chief of the Defence Staff (Canada)), “Jointness, Expeditionary Force Projection & Inter-operability: The Parameters of the Future,” a paper prepared for the DCDS Retreat Feb 2003; available from <http://dcds.mil.ca/other/retreat/pages/reading-e.asp>. The CDS states that “Prior to 1990 our institutional focus was on planning for NATO and NORAD alliance operations, and peace support

was inevitable that the Canadian Forces would abide by the operational and strategic models defined by others. In the absence of Canadian strategic direction, relevant operational concepts became impossible in an environment characterized as an “intellectual vacuum.” “A national strategy distinct from alliance strategy was not only unthinkable, it was unreasonable and, in a sense, disloyal.”<sup>22</sup>

The conclusion is that the lack of a well-defined national strategy and the absence of operational level experience in wartime campaigning have robbed Canada of its collective experience in the operational level of war and undermined its understanding of the operational art.

### **What Has Changed - The World Has Moved On**

*The security environment upon which Canada built its defence structure for the last forty years is gone... For the first time, Canada must find its own strategy and design a military structure to fit it.*<sup>23</sup>

If Canada did not apply the operational art during the First World War, the Second World War or the Cold War, why would it now be so necessary to introduce it into our lexicon, thinking, and practice? Without trivializing the last 15 years of history, the world has moved on. Domestically, Canadian Forces have responded to forest fires, floods, ice storms and armed resistance to the civil authority. Internationally, Canadian Forces have deployed to crises in the Balkans, the Persian Gulf, the Pacific Rim, South West Asia, and Africa (among other spots), all

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operations considered more as an incremental task. This had, to a degree, produced the same rigidity of thought in our unified structures that had previously characterized our single service organizations.”

<sup>22</sup> Bland, *Chiefs of Defence...*, Preface vii.

<sup>23</sup> Bland, *Chiefs of Defence...*, Preface xii – xiii.

in attempts to cope with a changing global security environment.<sup>24</sup> Very different security and defence issues are now at the fore, dislocating Canada's traditional subordination of military forces to Europe and NATO. The disbandment of Canadian Forces Europe, changes in Canada's approach to Standing Naval Force Atlantic, and even Canada's substantive withdrawal from the United Nation's Forces in Cyprus illustrate our revised view of the world; still centred on collective defence, still supportive of NATO and the United Nations, but more selective in actual practice.

The *1994 Defence White Paper* recognized that Canada would not always follow past practice, offering choices that had rarely before been voiced.

Canada can and must be selective if it is going to remain in a position to play a meaningful role. ...Our resources are finite. We may not agree with the purpose or organization of a given mission. We may not be convinced of its prospects for success. We may be otherwise engaged. Moreover, Canada is not obliged to take on a major portion of every operation or to contribute forces for longer than seems reasonable.<sup>25</sup>

In addition to this mechanism of choice, the defence mission directs the defence of Canada and Canadian interests, and the protection of Canadian values.<sup>26</sup> This places an obligation on the Canadian Forces to become an institution that projects – perhaps offering without imposing – Canadian values abroad with a view to improving international peace and

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<sup>24</sup> *Canadian Forces Doctrine (Third Draft)*, 78-81. Refer also to Department of National Defence, *Shaping the Future of the Canadian Forces: A Strategy for 2020* (Ottawa: DM DND and CDS CF, June 1999), 4. CF Doctrine expresses the changing geopolitical trends in terms of diminished geographical protection [a dependence on geographical isolation for security]; weapons of mass destruction; regional instability; diversified regions of conflict; international terrorism; and trans-national organized crime. Emerging security issues related to information technology, globalization, demographics, the environment, and international law are also expected to affect military planning and activities.

<sup>25</sup> *1994 Defence White Paper*, 31.

<sup>26</sup> *A Strategy for 2020*, 2. "The defence mission is to defend Canada and Canadian interests and values while contributing to international peace and security... Canadian values to be defended include: democracy and rule of

security. The Chief of Defence Staff's view that *jointness*, expeditionary force projection, and interoperability are the parameters of the future reinforces the idea that the Canadian Forces have become highly expeditionary.<sup>27</sup>

These shifts in attitude, partly due to the evolution of Canadian policy, partly due to global security issues, and certainly due to the actual and expected employment of Canadian Forces, have allowed Canada's thinking to mature. Canada may not have made best use of the lessons of the First World War to document and institutionalize General Currie's lessons of joint warfighting. Canada may not have needed to define her own interpretation of the operational art in the years after the Second World War; as a founding member and active participant in NATO, there was no impulse to develop an independent perspective. Canada has now entered a period where slight differences in national interests and values can cause diverging courses of action; a case in point is Canada's lone stance regarding participation in the Second Gulf War (in comparison with Australia, the United Kingdom, and the United States of America). The world has moved on, requiring Canada to think for herself, perhaps where she has not needed to before.

By stepping beyond the all-encompassing umbrella of past practice, these shifts in attitude have also created implications in the grey area of expeditionary forces employed at the operational level, straddling strategy and tactics. Consider these representative scenarios: Canada leading the humanitarian effort in Zaire in 1996; a Canadian commander of the International Security and Assistance Force in Afghanistan in 2004, at the forefront of Canada's Campaign Against Terrorism; the opportunity for an elected Minister to confirm an Air Tasking

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law; individual rights and freedom as articulated in the Charter; peace, order, and good government as defined in the Constitution; and sustainable economic well-being.”

Order; or an unarmed Canadian serving as a United Nations Military Observer, held hostage to counter a NATO air campaign also endorsed by Canada. Each of these situations poses intellectual challenges to Canadian commanders, and exposes them to variations of the operational art.

Commanders must anticipate the natural overlaps between national objectives and policies (such as Foreign Affairs and National Defence), and ensure that the implementation of one policy will not disrupt the conduct of another. The manner in which the policies are implemented must also be consistent with national aims, or risk that the instruments (the means) are either irrelevant or inappropriate to the solutions (the ends). The measure of Canada's ability to apply the military instrument resides in the commander's skill at translating policy into action; this is the operational art.

### **Influences on the Operational Art**

*Command, above all, is designed to enhance cohesion in a force and achieve unity of effort. To operate effectively in the chaos and confusion of conflict, it is dependent on decentralization. This requires the development of trust and mutual understanding. The end result is the development of timely and effective decision-making and the disciplined use of force.*<sup>28</sup>

The operational art has been defined as the translation of strategic direction into operational and tactical action, requiring the commander's *intellect* to interpret the situation and to inculcate the whole force with a vision of how the solution will be brought about. Army thinking includes a commander's education, leadership, professional judgement, and strength of

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<sup>27</sup> Henault, "Jointness, Expeditionary Force Projection & Inter-operability: The Parameters of the Future."

<sup>28</sup> Department of National Defence, B-GL-300-1/FP-000 *Conduct of Land Operations – Operational Level Doctrine for the Canadian Army* (Ottawa: DND Canada, 1998), Chapter 3.

will as personal qualities with crucial effects on the expression of the operational art.<sup>29</sup> This study will not explore these personal traits, but rather examine the external factors that influence a commander's perspective and thinking, and therefore the practice of the operational art. A better understanding of the strategic context and operational level factors strengthens the foundation of experience and professional knowledge, and helps balance intuition with analysis in decision-making.

The understanding of common factors also contributes to coherent interpretation and consistency throughout an institution; not unity of thought, but enablers towards the *unity of effort* and *mutual understanding* sought by a commander. The very concept of the operational art becomes most useful to a commander if its purpose is understood by the military organization as well as by the participants from Other Government Departments, Policy Advisors, and Non-Government Agencies; a smart force will apply ideas, a common understanding, and a common intent towards solving the crisis.

With these qualifiers in mind, some consideration of the unique factors and outcomes influencing Canadian commanders is appropriate. Each of these will be addressed in turn: national influences; the nature of coalitions and interoperability; doctrine and allied thinking; and the continued relevance of selected theorists.

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<sup>29</sup> *Conduct of Land Operations*, Chapters 3 and 4.

## A National Influence

*In War: Resolution. In Defeat: Defiance. In Victory: Magnanimity. In Peace: Goodwill.*<sup>30</sup>

Canada's national will has never been expressed as succinctly as Sir Winston Spencer Churchill did for Great Britain. In 1962, however, R.J Sutherland (the head of the Defence Research Board Operational Research Group) found stable foundations for national security policy in the invariants of Canada's geography, economic potential, and broad national interests.<sup>31</sup> Canada's evolution over the past 40 years is not likely to have shifted these elements: consider the maturation of Canada's social and multi-cultural fabric; the steady growth in Canadian economic potential; and a defence policy adapted to Canadian *values*.

Well-defined vital national interests and an accompanying military strategy are not normal elements of Canadian policy, so the *1994 Defence White Paper* and periodic announcements (such as *Strategy 2020*) are the more common methods. In the absence of identifiable and direct threats to national security, and therefore in the absence of a pure national military strategy, other elements are introduced to ensure Canada fulfills her international obligations.<sup>32</sup> *Leadmark*, for example, illustrates the fine blend of diplomatic instruments and war fighting capabilities offered by a navy to the nation.<sup>33</sup> Canada's unique situation of being able to select where and when she applies military influence allows policy documents to stress the importance of coalitions, interoperability, Operations Other Than War, and other techniques of collective security. The recent addition of a Policy Advisor as a routine element of a

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<sup>30</sup> Sir Winston S. Churchill, *The Second World War*, (Boston: Houghton Mifflin, c1948), Moral of the Work.

<sup>31</sup> Bentley, "Policy, Strategy, and Canadian Generalship: A Clausewitzian Analysis," 166.

<sup>32</sup> Sharpe and English, *Principles for Change...*, 39.



command team testifies to the sway of national interests in the conduct of military operations. A commander will be well served by a Policy Advisor who contributes to the commander's perspective by anticipating, interpreting and advising on political motivation, imperatives, constraints, and desired results.

Some argue that institutional culture and national experience have a huge influence on both doctrine and how forces fight.<sup>34</sup> Recent Canadian publications - including *Canadian Forces Doctrine and Duty With Honour* - set out the expectations of our distinct Canadian and military culture, and deem the essential qualities for military operations as *duty, loyalty, integrity, and courage*.<sup>35</sup> The military ethos affirms the obligations of *unlimited liability, fighting spirit, discipline, teamwork, and the profession of arms*.<sup>36</sup> These are easily accepted and understood, and reflect well on Canada's unique history and military heritage. They offer sound elements and guiding principles to a commander's intellect, and should bear up well in the true test in action and under fire.

It is not enough to write new doctrine, if the purpose is to change the way an army will fight. Ultimately, an army's behaviour in battle will almost certainly be more a reflection of its character or culture than of the contents of its doctrine manuals... it is wartime experience rather than peacetime innovation that changes an army's corporate culture.<sup>37</sup>

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<sup>33</sup> Department of National Defence, *Leadmark: The Navy's Strategy for 2020* (Ottawa: Chief of the Maritime Staff, 18 June, 2001).

<sup>34</sup> Paul Johnston, "Doctrine is Not Enough: The Effect of Doctrine on the Behaviour of Armies," *Parameters* 30, no. 3 (Autumn 2000), 30 and 36. Refer also to Charles F Brower IV, "Commentary on the Operational Art," in *The Operational Art: Developments in the Theories War*, ed BJC McKercher and Michael A. Hennessy (Westport: Praeger, 1996), 195.

<sup>35</sup> *Canadian Forces Doctrine*, 26-27. Refer also to Department of National Defence, B-GJ-005-000/FP-010 *Duty With Honour: The Profession of Arms in Canada* (Ottawa: DND Canada, June 2003).

<sup>36</sup> *Canadian Forces Doctrine*, 28-29.

<sup>37</sup> Johnston, "Doctrine is Not Enough...", 37.

Ultimately, we are a product of our history and our environment; not an island nation like Australia, no longer British, but not American. National culture is an inherent element of the profession of arms.

Perhaps one of the most illustrative examples of independent Canadian thought relates to the likely employment of Canadian military forces. The *1994 Defence White Paper* states that Canada is willing to commit forces to a “full range of multilateral operations,” listing these as: preventive deployment of forces; peacekeeping and observer missions; enforcing the will of the international community and defending allies; post-conflict peace-building; and measures to enhance stability and build confidence.<sup>38</sup> The extreme range of these options, however, strains the ability of the Canadian Force to respond – both intellectually and physically. The Chief of Defence Staff’s commentary confirms the situation:

We are now faced with continual, unpredictable and sudden demands for military forces for combat-like operations on a global basis, but without the priorities and national commitment of a wartime environment, and drawing on peacetime establishments which are often restricted and focused on peacetime activities and processes.<sup>39</sup>

A model that well suits the quasi-war faced by the Canadian Forces is the *Three Block War* proposed by General Krulak (a former Commandant of the United States Marines Corps). It closely approximates the chaos that Canadians already encounter on operations that span peace-keeping, peace-making, and war, and where standard doctrine and structures may not suit. This description easily fits Canadians deployed abroad:

In one moment in time, our service members will be feeding and clothing displaced refugees, providing humanitarian assistance. In the next moment, they will be holding two warring tribes apart – conducting

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<sup>38</sup> *1994 Defence White Paper*, 31 ff.

<sup>39</sup> Henault, “Jointness, Expeditionary Force Projection & Inter-operability: The Parameters of the Future.”

peacekeeping operations – and finally, they will be fighting a highly lethal mid-intensity battle – all on the same day... all within three city blocks. It will be what we call the “three block war.”<sup>40</sup>

The conclusion is that Canadian commanders will be affected – both consciously and more subtly – by Canadian policy and culture: the invariants of geography; the multi-cultural mosaic; traditions and heritage; and the risks the Country is prepared to accept for soldiers, sailors, and aircrew deployed into three-block wars. These elements improve a commander’s insight – a clear perspective of the nation that spans the strategic-operational interface – and allow him to make best use of the nation’s will.

### **Coalitions and Interoperability**

*For us, interoperability and the ability to work in the closest harmony with like-minded nations will remain amongst our highest goals and one of my personal priorities. It is this capability, supported by some of the most capable men and women in uniform, which makes the Canadian Forces stand out from the rest.*<sup>41</sup>

Both the *1994 Defence White Paper* and *Canadian Forces Doctrine* refer to multi-lateral security cooperation as a defining Canadian tradition, presenting coalitions as the ideal and most likely translation of Canadian values into an international context.<sup>42</sup> Most Canadians cannot foresee an international situation requiring independent action by Canadian military forces, arguing that Canada’s foreign campaigns always fit into alliance wars. Nevertheless, the instinct to join with the United States and other traditional western allies for unified action is paired with

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<sup>40</sup> Gen Charles C Krulak, “The Three Block War,” *Vital Speeches of the Day* 64, No 5 (15 Dec 1997), 139.

<sup>41</sup> Henault, “Jointness, Expeditionary Force Projection & Inter-operability: The Parameters of the Future.”

<sup>42</sup> *1994 Defence White Paper*, 13 and 27. Refer also to *Canadian Forces Doctrine*, 46, which states that, “Acting through coalitions is a defining and traditional characteristic of Canadian foreign policy... In the multi-polar world of the future it is increasingly likely that Canada will be acting as a member of a coalition force in Warfighting operations.”

a wish to play a distinct role in the United Nations, giving a dual nature to Canadian military participation in international operations.<sup>43</sup> Canadians have deployed to the Balkans, the Persian Gulf, and Afghanistan under of the auspices of the UN, NATO, or coalition leadership, sometimes with overlapping jurisdictions and mandates.<sup>44</sup>

While coalition operations help legitimize the use of force, they will differ in purpose, character, composition, and scope. The different approaches to warfare pursued by each coalition participant only makes the enterprise more complex. Any divergence of doctrines and national perspectives, and hence views on end-states and conflict termination, is echoed at multiple levels. Coalitions are also likely to confront national insistence on preserving some control on the employment of forces. The intricacies of National Command, Operational Command, and Operational Control in NATO doctrine offer examples of how coalition teamwork is actually practiced.<sup>45</sup>

The Canadian commander must make sense of these diverging pressures, blending national imperatives with those of the coalition. If acting as the lead nation, it may well be a Canadian commander who must provide the strength of will to reconcile nascent friction, developing a coherent campaign plan to achieve a common end-state. As acknowledged in

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<sup>43</sup> Desmond Morton, *Understanding Canadian Defence* (Toronto: Penguin/McGill Institute, 2002), 206 & 212. Refer also to Joel J Sokolsky, "Glued to its Seat: Canada and its Alliances in the post Cold War Era," in *Forging a Nation: Perspectives on the Canadian Military Experience*, ed Bernd Horn (St Catherines: Varnwell Publishing Limited, 2002), 397.

<sup>44</sup> Consider two examples: the transition in the Balkans from United Nations Protection Force to the NATO Implementation Force (IFOR) December 1995; and the contributions of the Canadian Forces in the Persian Gulf/South West Asia in 2001/2 (a US led coalition) evolving into International Security Assistance Force (ISAF) in 2003 (a NATO led coalition).

<sup>45</sup> General Robert W RisCassi, "Doctrine for Joint Operations in a Combined Environment: A Necessity." *Military Review* (June 1993 reprinted Jan/Feb 1997): 103-104, 107, 109. Refer also to North Atlantic Treaty Organization,

Canadian writing, “A multinational response is of little value if the least capable member defines the potential of the entire force.”<sup>46</sup> Given Canada’s commitment and reliance on coalitions to promote international security, Canada is obliged to be competent in actual practice, rather than the least capable member. The observation is that Commanders and staffs must recognize the sources of friction, and be able to ease the strain; there is excellent value in training that explores the weak points of a coalition and then builds the resilience needed in operations.

Paired with an expectation of coalition operations is a drive towards inter-operability or *jointness* amongst air, land, and naval forces. *Strategy 2020* directs that “Armed forces must be inter-operable with our main defence partners in UN, NATO, and coalition operations. This means that Defence must keep pace with new military concepts, doctrine, and technological change.” The five-year target is to enable seamless operational integration with the US and other allies at short notice.<sup>47</sup>

The ease with which Canadian naval and air forces pair off with their US counterparts in combined (international but single service) operations, and the need to maintain this capacity, is considered a driving force towards the adoption of offshore concepts and doctrine. Tension persists between attempts to sustain modern and combat-capable forces (driving closer ties to the service specific views of the US Army, Navy, and Air Force), and attempts to implement joint Canadian Forces doctrine (requiring Canadian air, naval, and ground forces to work together).<sup>48</sup>

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AJP – 01 (B) *Allied Joint Doctrine* (Brussels: NATO, 2001) and North Atlantic Treaty Organization, AJP 3 *Allied Joint Operations* (Brussels: NATO, September 2002).

<sup>46</sup> *Canadian Forces Doctrine*, 45.

<sup>47</sup> *A Strategy for 2020*, 3 and 10.

<sup>48</sup> Dr Allan D English, “The Americanization of the Canadian Officer Corps: Myth and Reality ?” in *Contemporary Issues in Officership: A Canadian Perspective*, ed Bernd Horn (Toronto: Institute of Strategic Studies, 2000), 186. See also Sharpe and English, *Principles for Change...*, 49-50. Refer also to Henault, “Jointness, Expeditionary

Canada remains better at army, navy, or air operations with allies than at exclusively Canadian joint enterprises, so while the CF may be a mature, *unified*, and *integrated* single-service, it is not yet inter-operable. The most likely deployment and employment of an exclusively Canadian Joint Task Force is not warfighting, but as a military response to a domestic Canadian crisis. Each domestic experience generates useful lessons, but more importantly, the improvements to concepts of operations, training, and equipment at the strategic, operational, and tactical layers pay dividends towards readiness for coalition and joint operations.

Canadian doctrine urges that units are to be commanded, structured, equipped, and trained for joint and combined warfare, while retaining the capability to undertake single service operations.<sup>49</sup> In the physical sense, Canada finds itself compelled to keep up with the lead nations, developing doctrine, training, and equipment in line with allies. The technological effort earned the observation that, “Interoperability is just as expensive as keeping up with any neighbour who just happens to be a multi-billionaire.”<sup>50</sup> In the intellectual sense, the ability of an organization – individually and collectively – to work closely with other nations towards a shared purpose is a noble goal and an enviable achievement.

Given the tenets of joint and coalition inter-operability as a modern basis for military operations, there is a physical and intellectual need to sustain the absorption of new ideas, doctrine, and technology. Commanders and staffs must be familiar with the capabilities offered

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Force Projection & Inter-operability: The Parameters of the Future.” The CDS comments that “Canada’s military contributions to international operations, because of their size and coalition needs, tend to be employed within their environmental niches.”

<sup>49</sup> *Canadian Forces Doctrine*, 36.

by leading-edge Canadian equipment as well as the operating concepts, tactics, and enablers that actually exploit their full potential. Interoperability relies on common doctrines and a mutual understanding of the professional language (often a technical jargon) that communicates commander's intent, battlefield missions, control measures, combined arms and joint procedures, and command relationships.<sup>51</sup>

To summarize, coalitions and inter-operability impose significant influences on the operational art, demanding that Canadians be familiar with the equipment, capabilities, and ideas employed by themselves and their allies, especially in those disciplines where interaction is most likely and most critical: information and knowledge management, staff procedures, sustainment, and especially command and control. Mutual understanding and trust do not come naturally; they represent the latent potential of a relationship that has been studied and nurtured so that they may be drawn upon when called. Interoperability and coalitions are as much the product of equipment and skill as they are the result of mental agility and attitude.

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<sup>50</sup> Morton, *Understanding Canadian Defence*, 99.

<sup>51</sup> General Robert W RisCassi, "Doctrine for Joint Operations in a Combined Environment: A Necessity." *Military Review* (June 1993 reprinted Jan/Feb 1997): 104-106. As examples of terminology, General RisCassi considered agility, initiative, depth, and synchronization to be important concepts of coalition operations. His explanations of key terms are succinct: "**Agility** derives from a keen sense of what is happening in battle, the poise to transition rapidly from one situation to the next, and a physical and mental ability to always have more options than the enemy. ... **Initiative** is a state of mind as well as an action-reaction cycle... it is dictating the terms of battle to an opponent, thus obviating the opponent's ability to exercise initiative. ... **Depth** is applied as a reference to time, space, and resources. It recognizes that modern battle has eliminated linearity – and linear thought. War is a continuum of events and activities in space and time. ... **Synchronization** is the calibrated movement of hundreds or thousands of different pieces moving in tandem and operating to produce the desired effect. In war, the desired effect is simply combat power at the time and place of the commander's choosing. It is key to achieving unity and efficiency in action."

## Allied Thinking and Doctrine

*Stimulating search through historical precedents now seems to have entered a new stage, in which insights congeal into antithetical conventional wisdom. Axioms codify into principles, and principles to checklists, which surreptitiously replace thought.... The Canadian Forces have not experienced that vital intellectual search for first principles.... Trying to absorb foreign doctrines second hand will be as fruitless as transplanting tropical plants in the tundra.<sup>52</sup>*

With coalitions so prominent in Canadian military thinking, it is worthwhile to consider the concepts offered by allied thinking and doctrine, and to assess their influence on the Canadian perspective of the operational art. Doctrine is sometimes described as the informed view on military action, representing fundamental principles and common approaches,<sup>53</sup> but it can also act as the foundation for the next iteration of progressive ideas and innovation.

Given the Canadian military's roots in the British Empire, the United Kingdom is a likely source of thinking that should strike a familiar chord. British Defence Doctrine is a concise, brief, and unambiguous statement of the essential elements of the British approach to military operations. Prominent in the British view is that,

An intelligent commander faced with unique circumstances will always be better placed than the writer of doctrine to assess the most appropriate way of achieving his objective.... Dogma – the resort of the idle and unimaginative mind – is anathema. Doctrine is promulgated for guidance only, not for slavish adherence.<sup>54</sup>

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<sup>52</sup> William McAndrew, "Operational Art and the Canadian Army's Way of War," 97.

<sup>53</sup> Paul Johnston, "Doctrine is Not Enough: The Effect of Doctrine on the Behaviour of Armies," *Parameters* 30, no. 3 (Autumn 2000), 31.

<sup>54</sup> Ministry of Defence. JWP 0-01 *British Defence Doctrine* (Shrivenham: JDCC, October 2001), 3-9. The key concepts of the British approach to military operations are presented as: the principles of war; the warfighting ethos; the manoeuvrist approach; mission command; the joint, integrated, and multi-national nature of operations; and flexibility and pragmatism. Refer also to Major General AA Milton, "British Defence Doctrine and the British Approach to Military Operations," *RUSI Journal* 146, no. 6 (Dec 2001), 41-42.



Flexibility and pragmatism are distinctive themes throughout the UK approach, and are presented as fundamental to the way the UK Armed Forces think.<sup>55</sup> Contrast this with the slightly less trusting Canadian view that doctrine can be “be altered or even ignored, but care must be taken to ensure that the underlying processes are not abandoned.”<sup>56</sup>

Canada’s links to the United States are close – always by geography, usually by policy, and frequently by common sense. Canada has allied much of its thinking to the concepts introduced by the United States; some of this concordance is driven by policy, but much of it derives from the natural ebb and flow of ideas across a permeable intellectual membrane. In some ways, the United States is already moving out of its self-prescribed manoeuvre box, rapidly absorbing into its operational art the concepts of asymmetric warfare, revised definitions of security and conflict, Network Centric Warfare, and Effects Based Operations. While Canada is beginning to incorporate these ideas into its own thinking, it will be difficult to match the pace and range of US writing, experimentation, and development. As for the future, it is expected that strategic realities will keep driving incremental commitments of forces, joint formations, and multi-national forces. Successful campaigns will depend on the ability of a commander to combine tactical skill, intelligence, and endurance; cohesion may depend on the traditions of regiments, but campaigns will depend on “fluency and competence in joint warfighting.”<sup>57</sup> The implied task of interoperability with the US is the obligation to be well informed on developments in American military thought.

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<sup>55</sup> Major General AA Milton, “British Defence Doctrine and the British Approach to Military Operations,” *RUSI Journal* 146, no. 6 (Dec 2001), 43.

<sup>56</sup> *Canadian Forces Doctrine*, 1.

Canada shares much in common with Australia, but there are significant differences in thinking. Australian publications are refreshing for their distinctive character; they blend the self-reliant and warfighting attitude of Australia's determination to safeguard her national interests – alone if need be – with the intent to participate actively in joint and coalition operations across the spectrum of conflict.<sup>58</sup> An intriguing pamphlet outlines *The Future Warfighting Concept*, which is direct, visionary, and focused on fighting and winning. It will provide the basis for experimentation, wargaming, and analysis of alternative ways of protecting Australia and her interests. Concepts such as network-centricity, systems views of 'friendlies' and adversaries are also emerging in the Australian Defence Force's views on conflict and future capabilities.<sup>59</sup>

Canadian thinking includes many of the same concepts of the operational art already adopted by the UK, US, and Australian forces, with varying interpretations and emphasis. *Canada's Army* embraces manoeuvre warfare, and the terminology has spread into operational, joint, and strategic documents.<sup>60</sup> The Navy's *Leadmark* considers itself descriptive rather than

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<sup>57</sup> General Montgomery C Meigs, "Operational Art in the New Century," *Parameters* 31, no. 1 (Spring 2001), 4-11.

<sup>58</sup> Australia, ADDP-D.1 *Australian Approach to Warfare* (Canberra: Defence Publishing Service, July 2002), 6-1 – 6-2. The *Australian Approach to Warfare* emphasizes five 'Key Warfare Concepts': integration of the capabilities of the three services; early resolution of conflict in a way that allows Australia not only to win the war but also win the peace; maximization of the physical pressure and psychological pressure on the adversary's will to continue fighting; mobility of forces and well-directed application of firepower; and the ability to operate effectively in coalition with other nations when required.

<sup>59</sup> Australia, ADDP D-3 *Future Warfighting Concept* (Canberra: Defence Publishing Service, 2002), Foreword and 2. Refer to pages 12, 27, and 29 for further exploration of these concepts. "Multi-dimensional manoeuvre requires the ability to create a dilemma for the adversary. ... Effects based operations is defined as the application of military and non-military capabilities to realise specific and desired strategic operational outcomes in peace, tension, conflict, and post conflict situations. ... Network Centric Warfare seeks to provide the future force with the ability to generate tempo, precision, and combat power through shared situational awareness, clear procedures, and the information connectivity needed to synchronize our actions to meet the commander's intent."

<sup>60</sup> Department of National Defence, B-GL-300-000/FP-000 *Canada's Army: We Stand on Guard for Thee*, (Ottawa: DND Canada, 1998), Chapter 5.

prescriptive, and prides itself in being an “intellectual underpinning.”<sup>61</sup> The Air Force’ *Out of the Sun* is presented as “a compilation of immutable truths about the employment of aerospace forces in warfighting that have withstood the test of time.”<sup>62</sup> If doctrine is not aggressively updated, it may represent the lowest common consensus that inhibits freedom of action rather than war winning innovation.

The argument to accept emerging allied doctrine as our own and to avoid distinctly Canadian approaches is tempered by a mandate to develop doctrine that is *consistent* with both the USA and NATO; this preserves the opportunity to excise the aspects that do not suit Canadian requirements.<sup>63</sup> The abiding concern is that allied doctrine may be serving purposes that are not obvious to all readers; this ranges from assumptions that are imprecise or irrelevant in a Canadian context, to ulterior motives related to inter-service rivalries and resource allocations. Widespread adoption of allied ideas inevitably imports the friction and flaws inherent to any doctrine.

Canadian thinking acknowledges that doctrine is not normally forward looking, but notes that this view is thawing in the face of widespread *transformation* and recognition that fast-paced change is the norm. While discussion of the Revolution in Military Affairs is beyond the scope of this paper, its influences are far ranging and pervasive, demanding that innovative organizations apply new technologies intelligently. Modern commanders will rely less on

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<sup>61</sup> Department of National Defence, *Leadmark: The Navy’s Strategy for 2020* (Ottawa: Chief of the Maritime Staff, 18 June, 2001), 6.

<sup>62</sup> Department of National Defence, *Out of the Sun: Aerospace Doctrine for the Canadian Forces* (Winnipeg: Craig Kelman & Associates Ltd. for Air Command, 1997), 1.

<sup>63</sup> *Canadian Forces Doctrine*, 4. “Canadian Forces Doctrine should be *consistent* with that of our principle allies and should be *compatible* with the joint doctrine of the USA.” Refer also to Eddy, “The Canadian Forces and the Operational Level of War,” 23.

prescriptive doctrine than in the past, drawing their perspective of the operational art from the underlying conceptual framework and the potential offered by exploiting technology.<sup>64</sup> A prescient view is that:

The luxury of doctrine led armies, for the most part, is at an end. The practice of deriving doctrine then producing equipment to execute that doctrine requires a clear threat to sovereignty and much national will.... Technology will shape doctrine.... Military thought of the last two hundred years has produced a finite model of doctrine to explain the nature of warfare. This model can no longer accommodate the near limitless explosion of innovation. Emerging technologies are forging new paths without considering military doctrines. The finite doctrinal models tend to restrict the military practitioner.<sup>65</sup>

Further study of the ideas presented in allied professional journals and doctrine gives Canadian commanders the broad insight required to better understand modern thinking and the complexities of coalition operations. Doctrine and other sources are theoretical contributions towards unity of effort and mutual understanding, but they do reveal subtle differences in definitions, concepts, and attitudes where there might be scope for conflict and misinterpretation during operations. The fading “luxury of doctrine led armies” and rapid progression of the Revolution in Military Affairs creates a climate of constant change that must be anticipated. The high probability of coalition operations requires that Canadian commanders interpret, integrate, and implement diverse concepts. The influence of allied thinking and doctrine on the Canadian perspective of the operational art is realized in the commander whose thinking balances accepted practice with theoretical models and emerging concepts, and adopts their influences to the practice of the operational art.

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<sup>64</sup> *Canadian Forces Doctrine*, 77 and 86. Refer also to Johnston, “Doctrine is Not Enough...,” 31.

<sup>65</sup> Col Howard J Marsh, “Emerging Technology and Military Affairs,” in CSC 28 CFC LFS/LCDO/531/L-9 *Land Force Studies - Land Force Command Doctrine and Organization Reading Material*, No page numbers.

## Theorists and Strategists: Carl von Clausewitz and Sir Julian Corbett

*Every age had its own kind of war, its own limiting conditions, and its own peculiar preconceptions.... The events of every age must be judged in the light of its own peculiarities.*<sup>66</sup>

To this point, distinctly Canadian influences on the interpretation of the operational art have considered the modern era. The writings of theorists and strategists, here represented by Carl von Clausewitz and Sir Julian Corbett, are an important dimension of professional understanding. They are a valuable source of logical, theoretical constructs with a high degree of relevance to modern operations.

Clausewitz, for example, presents common principles and concepts for consideration, leaving the conclusions open to creativity and diverse opinions.<sup>67</sup> Clausewitz stated that “theory should be study, not doctrine,” knowing that that circumstances, fog, and friction will always create situations not suited to rule-based solutions. He knew that only a few will show the “talent and genius” of great commanders.<sup>68</sup> “It really is the commander’s *coup d’oeil*, his ability to see things simply, to identify the whole business of war completely with himself, that is the essence of good generalship.”<sup>69</sup> Clausewitz’ insight remains an accurate appreciation of a commander’s rare ability to interpret and rationalize the chaos and complexity of warfare.

Clausewitz also introduced the idea of wars of “limited aims” with weakly defined causes or national interests; elements that seem to suit Canadian participation in international coalition

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<sup>66</sup> Carl von Clausewitz, *On War*, translated and edited by Michael Howard & Peter Paret (Princeton: Princeton University Press, 1976), 593.

<sup>67</sup> Bentley, “Policy, Strategy, and Canadian Generalship ...,” 177.

<sup>68</sup> Clausewitz, *On War*, 140-141.

<sup>69</sup> Clausewitz, *On War*, 578.

operations and where Canada's interests may not be entirely clear. "One country may support another's cause, but will never take it so seriously as it takes its own.... The auxiliary force usually operates under its own commander; he is dependent only on his own government, and the objectives the latter sets him will be as ambiguous as its aims."<sup>70</sup> Clausewitz admitted that his understanding of limited war was incomplete, and that further revision would bring greater clarity to the contrasting ideas of war with an objective to "overthrow the enemy" and war with a more "limited aim."<sup>71</sup>

Some years later, Sir Julian Corbett amplified Clausewitz' ideas of something less than total war into a more useful distinction, in that "there might be cases where the object was actually so limited in character that the lower form of war would be at once the more effective and the more economical."<sup>72</sup> Corbett was keenly aware that the importance of a minor goal or end-state might not engage a nation's full potential, interest, or power; countless regional wars since 1945 have proven this out.<sup>73</sup> "A war may be limited physically by the strategical isolation of the object, as well as morally by its comparative unimportance."<sup>74</sup> This idea of a moral component meshes with Canada's defence mission to defend Canada and Canadian interests and *values* while contributing to international peace and security.<sup>75</sup> Corbett recognized the inevitable influences of domestic politics, economic constraints, and diplomacy that might

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<sup>70</sup> Clausewitz, *On War*, 603.

<sup>71</sup> Clausewitz, *On War*, 69. A limited war had the sense of being merely to "occupy some of his frontier districts so that we can annex them or use them for bargaining at the peace negotiations."

<sup>72</sup> Sir Julian S Corbett, *Some Principles of Maritime Strategy* (Old Woking: Unwin Brothers, 1972), 73.

<sup>73</sup> William R Hawkins, "The Man Who Invented Limited War," *Military History Quarterly* (Autumn 1994), 105.

<sup>74</sup> Corbett, *Some Principles of Maritime Strategy*, 56.

<sup>75</sup> *A Strategy for 2020*, 2.

channel a commander's preferred conduct of military operations to ensure that forces did not merely fight battles, but also won wars.<sup>76</sup>

Clausewitz' and Corbett's explanations of limited wars, the strategic-operational interface, and the nature of command still ring true in the Canadian context, and complement the "intellectual underpinning" of more modern concepts. There are legions of theorists to consider – from Giulio Douhet and Albert Thayer Mahan to John Boyd and John Warden – each offering differing interpretations and models.<sup>77</sup> A Canadian commander would do well to develop an appreciation for the ideas and concepts presented by "The Great Theorists" in the context of likely Canadian circumstances. Corbett championed the idea that commanders need an understanding of theory and history to help define changing circumstances, and more importantly, to explain their actions as operational commanders to the political and strategic interface.<sup>78</sup> This outcome alone makes the study of great theorists a worthwhile pursuit of Canadian commanders, and suggests that theorists remain an important component to a commanders' understanding of the profession of arms.

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<sup>76</sup> Hawkins, "The Man Who Invented Limited War," 106.

<sup>77</sup> Giulio Douhet, the airpower theorist, argued that aircraft are weapons of unlimited potential and against which defence was difficult. He believed that wars could be won by shattering civilian morale through aerial bombardment. Douhet's ideas are of interest, but limited in scope and becoming dated in the context of proportionality and balance [John Keegan, and Andrew Wheatcroft, *Who's Who in Military History From 1453 to the Present Day* (New York: Routledge, 1996), 78]. Alfred Thayer Mahan stressed that "command of the sea" was the goal of naval power, and was to be achieved through "offensive action" of a "prepondering fleet." He dismissed the value of attacking commerce, coastal defences, or a "fleet in being." As with Douhet, his single-minded focus on one theme limits his value to Canada. [Keegan and Wheatcroft, *Who's Who in Military History*, 181, and Barry M Gough, "Maritime Strategy: The Legacies of Mahan and Corbett as Philosophers of Sea Power," *RUSI Journal* 133, no.4 (Winter 1988), 57]. John Boyd and John Warden's ideas are already deeply integrated into US concepts of the operational art; writings on the 1991 Gulf War are replete with examples of the application of Boyd's OODA loop [Observe – Orient – Decide – Act] and the application of precision weapons in order to achieve strategic paralysis [David S Fadok, *John Boyd and John Warden: Air Power's Quest for Strategic Paralysis* (Maxwell AFB: Air University Press, 1995), no specific page].

<sup>78</sup> Hawkins, "The Man Who Invented Limited War," 106.

## **A Canadian Perspective of the Operational Art**

*Intellect: Faculty of knowing and reasoning.*  
- The Oxford Dictionary

An exclusively Canadian approach to the operational art would be inappropriate for Canadian purposes. If it were too isolated from allied influences, it would risk creating a school of thought that is both incompatible and irrelevant to the principles of interoperability and coalition operations. There is, therefore, no basis or need to create an independent or pure Canadian approach to the operational art. A countering view is that allied thinking on the operational art can be adopted as is; however, an approach that does not acknowledge and incorporate Canadian influences ignores the reality that commanders are invariably affected by their personal experience, education and judgement. It is these very qualities of Canadian commanders that ensure that the nation's best interests are properly respected and that the nation's will is achieved. The reasonable expectation of Canadian commanders is that they understand the uniquely Canadian influences, their relation to the strategic whole, and how they should be applied to achieving the end state.

A Canadian perspective of the operational art blends many factors and influences to create an approach that acknowledges where we differ from others, and why. Because a *perspective* is the *relation in which the parts of a subject are viewed from the mind*, a Canadian perspective of the operational art cannot be a clearly defined object with bounded parameters. Each person who practices warfare and military operations at the operational level, translating strategic direction into tactical action, will realize a different perspective of the operational art. While common factors will affect the context, interpretations will be subjected to individual



influences and will vary from commander to commander. Definitions, historical precedent, national culture, coalitions and interoperability, allied thinking, and theorists all generate unique implications and outcomes for Canadian commanders. These paragraphs will consolidate the intermediate observations and conclusions regarding the common factors affecting a Canadian perspective of the operational art, and will lead to the final conclusions.

Canada establishes an immediate variation from the US approach at the outset, simply by stating that *regardless of its size a military force tasked to achieve a strategic objective is being employed at the operational level*. Canada's definition creates a broad scope for when – and in what circumstances – a commander is considered to be applying his intellect to translate strategic direction into tactical action. This interpretation must be voiced with some caution, recognizing that the proportion and positioning of forces within a coalition will also provide some sense of whether or not a commander is engaged at the operational level. There is a balance between Canadian participation that implicitly accepts an allied campaign plan, and involvement on a scale that earns positive influence in the campaign design. This subtle difference delineates “participation” in operations within an operational level context, and the “conduct” of operations at the operational level.

In its purest sense, the Canadian application of the operational art as a tool for warfighting is weakened without a tradition of wartime campaign planning, and without the corresponding experience and institutional memory of warfare at the operational level. The Canadian perspective is drawn instead from a variety of experiences, incorporating domestic operations (such as ice storms and floods), participation with coalitions in limited war (such as

the Persian Gulf and Afghanistan), and Operations Other Than War (such as the Balkans and Africa). This practical approach suits the more probable Canadian applications across a spectrum of operations and conflict. The Canadian view of the operational art does not confine itself to warfighting alone, but expands it to one that includes the full range of likely tasks.

The commander's strategic purpose will be greatly simplified if the natural overlaps between foreign and defence policies are correctly blended. Ideally, the aims and instruments of policy will be consistent and clearly understood by the commander, but if the conflicts are not adequately resolved, then he or she may be working at cross-purposes. The dynamic strategic context obliges commanders to grasp the global situation and to correctly interpret the nation's intent. Canadian attitudes and culture will also affect the commander's insight, improving his understanding of the nation and allowing him to make best use of the nation's will. The range and depth of writing on issues such as culture, foreign and defence policies, and Canada's place in the world requires that commanders actively seek Canadian strategic guidance.

The propensity to enter into coalition operations demands that commanders and staffs recognize the sources of friction within alliances, and that they actively ease the strain. Mutual understanding and trust in operations are the results of a relationship that has been studied and nurtured, deriving resilience from shared thinking and doctrine, as well as from training that has already explored the weak points of a coalition and created workable interfaces. Familiarity with allied equipment, capabilities, and ideas also contributes to interoperability and simplifies the complexities of coalition operations. The demands of joint and combined operations are not limited to interaction within the Canadian Forces or with traditional allies. There is an

expectation that Canada can plug into an existing alliance structure as easily as it can work with – or lead – like-minded members of an ad-hoc coalition. The idea is that, “None may be ever committed to the dance, but they all must know the steps.”<sup>79</sup>

The writings of theorists, old and new, have much to offer to Canada’s military thinking. Clausewitz and Corbett’s writings on generalship, strategic purpose, and limited warfare are just a few of the ideas that remain relevant to modern Canadian purposes. In the near future, widespread transformation and technological innovation will confront asymmetric conflict and three block wars, demanding that Canadian commanders interpret, integrate, and implement diverse concepts. Canadian commanders skilled in the operational art will balance known ways and resources with theory and innovative concepts, articulating new ways of reaching the objective.

It is the commander’s intellect – the capacity to know and to reason – that will coalesce these diverse influences into a personal view of the strategic and operational context, and will create a concept or vision of how the goal will be reached. It is the commander’s unique interpretation and perspective of the operational art that will lead to the mutual understanding and unity of effort so crucial to successful operations.

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<sup>79</sup> B.J.C. McKercher, and Michael A. Hennessy, editors, *The Operational Art: Developments in the Theories of War*. (Westport: Praeger, 1996), 4.

## **In Conclusion**

*Operational art is the skill of translating strategic direction into operational and tactical action. Operational art requires commanders with broad vision, the ability to anticipate, and a careful understanding of the relationship of means to ends. ...The commander applies intellect to the situation to establish and transmit a vision for the accomplishment of the strategic objective.*<sup>80</sup>

Canada's understanding of the operational art is rooted in the common concepts and tenets shared with allies. Joint and combined operations, especially those pursued with NATO forces, demand a measure of interoperability and commonality. Common doctrine and accepted practice notwithstanding, there remain distinctly national influences that affect the interpretation of the strategic environment and the translation of national aims into tactical action.

The Canadian interpretation of the operational art reflects influences that are specific to Canada, generating unique implications and outcomes for operational level commanders. Rather than a distinct Canadian school of the operational art, the reasonable expectation of Canadian commanders is that they understand the uniquely Canadian influences, their relation to the strategic whole, and how they should be applied.

Commanders must be sensitive to differing views on what constitutes the operational level, and recognize when limited Canadian participation implicitly accepts an allied campaign plan, and when a sufficiently robust deployment should earn positive influence in campaign design. Since most operations will be conducted as part of a coalition, it is essential that the mutual understanding and trust - representing the latent potential of an international relationship - be studied and nurtured to ensure it is already well developed when needed. Canadian attitudes

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<sup>80</sup> *Canadian Forces Operations*, 3-1.

and culture will also affect the commander's insight, improving his understanding of the nation and allowing him to make best use of the nation's will. Definitions, historical precedent, national culture, coalitions and interoperability, allied thinking, and military theorists all influence the commander's perspective.

Successful Canadian practitioners of the operational art will blend accepted practice and existing capabilities with theoretical models and emerging concepts, finding intelligent ways towards conflict resolution and the end-state. They will be aware of the influences on the operational art, adjust their thinking to acknowledge and accommodate these factors, and incorporate their effects in the translation of strategic aims into campaigns.

## **Bibliography**

### References Cited

Australia. ADDP-D.1 *Australian Approach to Warfare*. Canberra: Defence Publishing Service, July 2002

Australia. ADDP D-3. *Future Warfighting Concept*. Canberra: Defence Publishing Service, 2002.

Bentley, Dr Lorne. "Policy, Strategy, and Canadian Generalship: A Clausewitzian Analysis." In *Contemporary Issues in Officership: A Canadian Perspective*, ed Bernd Horn, 145-180. Toronto: Canadian Institute of Strategic Studies, 2000.

Bland, Douglas L. *Chiefs of Defence: Government and the Unified Command of the Canadian Armed Forces*. Toronto: Canadian Institute of Strategic Studies, 1995.

Brower IV, Charles F. "Commentary on the Operational Art." In *The Operational Art: Developments in the Theories War*, ed BJC McKercher and Michael A. Hennessy, 193-198. Westport: Praeger, 1996.

Canada. Department of National Defence. *1994 Defence White Paper*. Ottawa: Canada Communications Group, 1994.

Canada. Department of National Defence B-GL-300-000/FP-000 *Canada's Army: We Stand on Guard for Thee*. Ottawa: DND Canada, 1998.

Canada. Department of National Defence. B-GJ-005-000/FP-000 *Canadian Forces Doctrine (Third Draft)* Ottawa: DLS DND Canada, March 2003.

Canada. Department of National Defence. B-GG-005-004/AF-000 *Canadian Forces Operations*. Ottawa: DND Canada, 18 December 2000.

Canada. Department of National Defence. B-GL-300-001/FP-000 *Conduct of Land Operations – Operational Level Doctrine for the Canadian Army*. Ottawa: MND Canada, 1998.

Canada. Department of National Defence. B-GJ-005-000/FP-010 *Duty With Honour: The Profession of Arms in Canada*. Ottawa: DND Canada, June 2003.

Canada. Department of National Defence. *Leadmark: The Navy's Strategy for 2020*. Ottawa: Chief of the Maritime Staff, 18 June, 2001.

Canada. Department of National Defence. *Out of the Sun: Aerospace Doctrine for the Canadian Forces*. Winnipeg : Craig Kelman & Associates Ltd. for Air Command, 1997.

Canada. Department of National Defence. *Report of the Officer Development Board (The Rowley Report) – Volume I*. Ottawa: Dept. of National Defence, 1969.

Canada. Department of National Defence. *Shaping the Future of the Canadian Forces: A Strategy for 2020*. Ottawa: DM DND and CDS CF, June 1999.

Churchill, Winston S. *The Second World War*. Boston : Houghton Mifflin, c1948.

Corbett, Sir Julian S. *Some Principles of Maritime Strategy*. Old Woking: Unwin Brothers, 1972.

Eddy, Colonel KT. “The Canadian Forces and the Operational Level of War.” *Canadian Defence Quarterly* 21, no.5 (April 1992): 18-24. A good grounding in the Canadian perspectives on the operational level, but becoming dated in the context of evolutionary changes in NDHQ and command and control structure in the CF.

English, Dr Allan D. “The Americanization of the Canadian Officer Corps: Myth and Reality ?” In *Contemporary Issues in Officership: A Canadian Perspective*, ed Bernd Horn, 181-204. Toronto: Institute of Strategic Studies, 2000.

English, Dr John A. *The Canadian Army and the Normandy Campaign: a Study of Failure in High Command*. New York: Praeger, 1991.

English, John A. “The Operational Art: Developments in the Theories of War.” In *The Operational Art: Developments in Theories of War*, ed B.J.C. McKercher and Michael A. Hennessy, 7-27. Westport: Praeger, 1996.

English, Dr John, A. *Lament for an Army: The Decline of Canadian Military Professionalism*. Toronto: Irwin, 1998.

Fadok, David S. *John Boyd and John Warden: Air Power's Quest for Strategic Paralysis*. Maxwell AFB: Air University Press, 1995.

Glantz, David M. “The Intellectual Dimension of the Soviet (Russian) Operational Art.” In *The Operational Art: Developments in Theories of War*, ed B.J.C. McKercher and Michael A. Hennessy, editors, 125-146. Westport: Praeger, 1996.

Gough, Barry M. “Maritime Strategy: The Legacies of Mahan and Corbett as Philosophers of Sea Power,” *RUSI Journal* 133, no.4 (Winter 1988): pp 55-62.

Hawkins, William R. “The Man Who Invented Limited War.” *Military History Quarterly* (Autumn 1994): 105-111.

Hellyer, Paul. *Damn the Torpedoes: My Fight to Unify Canada's Armed Forces*. Toronto: McClelland & Stewart, 1990. Very little on operational capabilities and effectiveness, and surprisingly, very little useful material on unification and integration; it is interesting for what it does not say.

Henault, General R.R. (Chief of the Defence Staff (Canada)). "Jointness, Expeditionary Force Projection & Inter-operability: The Parameters of the Future." A paper prepared for the DCDS Retreat Feb 2003; available from <http://dcds.mil.ca/other/retreat/pages/reading-e.asp>.

Hillen, Dr John. "Peacekeeping at the Speed of Sound: the Relevancy of Airpower Doctrine in Operations Other Than War." *Airpower Journal* (Winter 1998): 6-16.

Horn, Bernd (ed). *Contemporary Issues in Officership: A Canadian Perspective*. Toronto: Canadian Institute of Strategic Studies CISS, 2000.

Horn, Bernd and Harris, Stephen J. editors. *Generalship and the Art of the Admiral: Perspectives on Canadian Senior Military Leadership*. St. Catharines: Vanwell Publishing, 2001.

Johnston, Paul. "Doctrine is Not Enough: The Effect of Doctrine on the Behaviour of Armies." *Parameters* 30, no. 3 (Autumn 2000): 30 – 39.

Keegan, John and Wheatcroft, Andrew. *Who's Who in Military History From 1453 to the Present Day*. New York: Routledge, 1996.

Krulak, General Charles C. "The Three Block War." *Vital Speeches of the Day* 64, No 5 (15 Dec 1997): 139-141.

Lund, Wilfred Gourlay. *Rear-Admiral Leonard Warren Murray, CB, CBE, RCN : a Study of Command and Leadership in the Battle of the Atlantic*. Toronto : [s.n.], 2001.

Marsh, Colonel Howard J. "Emerging Technology and Military Affairs." In *CSC 28 CFC LFS/LCDO/531/L-9 Land Force Studies*. Land Force Command Doctrine and Organization Reading Material, *No page numbers*.

McAndrew, William. "Operational Art and the Canadian Army's Way of War." In *The Operational Art: Developments in Theories of War*, ed B.J.C. McKercher and Michael A. Hennessy, 87-102. Westport: Praeger, 1996.

McKercher, B.J.C. and Hennessy Michael Michael A. editors. *The Operational Art: Developments in Theories of War*. Westport: Praeger, 1996.

Meigs, General Montgomery C. "Operational Art in the New Century," *Parameters* 31, no. 1 (Spring 2001): 4-14. An excellent essay, well worth reading.



Milton, Major General AA. "British Defence Doctrine and the British Approach to Military Operations." *RUSI Journal* 146, no. 6 (Dec 2001):41-44. An excellent survey of British Military Doctrine 2001.

Morton, Desmond. *Understanding Canadian Defence*. Toronto: Penguin/McGill Institute, 2002.

North Atlantic Treaty Organization. AJP – 01 (B) *Allied Joint Doctrine*. Brussels: NATO, 2001.

North Atlantic Treaty Organization. AJP 3 *Allied Joint Operations*. Brussels: NATO, September 2002.

RisCassi, General Robert W. "Doctrine for Joint Operations in a Combined Environment: A Necessity." *Military Review* (June 1993 reprinted Jan/Feb 1997): 103 – 114.

Schreiber, Shane. *Shock Army of the British Empire: The Canadian Corps in the Last 100 Days of the Great War*. Westport: Praeger, 1997.

Sharpe, Brigadier General (retired) G.E. and English, Allan D. *Principles for Change in the Post Cold War Command and Control of the Canadian Forces*. DND: Canadian Forces Leadership Institute, 2002.

Sokolsky, Joel J. "Glued to its Seat: Canada and its Alliances in the Post Cold War Era." In *Forging a Nation: Perspectives on the Canadian Military Experience*, ed Bernd Horn, 393-409. St Catherines: Varnwell Publishing Limited, 2002.

United Kingdom. Ministry of Defence. JWP 0-01. *British Defence Doctrine*. Shrivenham: JDCC, October 2001.

van Creveld, Martin. *The Transformation of War*. Toronto: The Free Press, 1991.

von Clausewitz, Carl. *On War*. translated and edited by Michael Howard & Peter Paret. Princeton: Princeton University Press, 1976.

## References Consulted

Australia. ADDP-D. *Foundations of Australian Military Doctrine*. Canberra: Defence Publishing Service, 2002.

Bashista, Ronald J. "Auftragstaktik: It's More than Just a Word." *Armor* (Nov/Dec 1994): 19. Read in tandem with Bateman's article, these two make for excellent reading.

Bateman, Robert L. "Force XXI and the Death of Auftragstaktik." *Armor* (Jan/ Feb 1997): 13-15. See Bashista.

Bland, Douglas. "Everything military Officers Need to Know About Defence Policy Making in Canada." In *Canadian Strategic Forecast 2000: Advance or Retreat? Canadian Defence in the 21st Century*. ed David Rudd, Jim Hanson and Jessica Blitt, 15-29. Toronto: Canadian Institute of Strategic Studies, 2000. Very direct.

Bland, Douglas. "Military Command in Canada." In *Generalship and the Art of the Admiral : Perspectives on Canadian Senior Military Leadership*, ed Bernd Horn and Stephen J. Harris, 121-136. St. Catharines: Vanwell Publishing, 2001.

Bland, Douglas. *Canada's National Defence Volume 1: Defence Policy*. Kingston: Queen's University School of Policy Studies, 1997.

Canada. Department of National Defence. *Advancing with Purpose: the Army Strategy*. Ottawa: DND Canada, 2002.

Canada. Department of National Defence. *Canadian Forces Joint Operating Concept 2012 (Draft)*. Ottawa: DCDS, 24 Jul 03.

Canada. Department of National Defence. *Canadian Forces Operational Force Employment Concept 2012 (Draft)*. Ottawa: DCDS, 17 Sep03.

Canada. Department of National Defence. *Capability Based Planning Draft 2002*. Ottawa: DND Canada, 2002.

Canada. Department of National Defence. Mason, Lynn Gordon and Crabbe, Raymond. "A Centralized Operational Level Headquarters." Unpublished paper written for DND, December 2000.

Cancian, Colonel Mark. "Centers of Gravity are a Myth." *United States Naval Institute Proceedings* 124 no. 9/1147 (Sep 1998): 30- 34.

Dunn, Martin. "Levels of War: Just a Set of Labels ?" *Research and Analysis: Newsletter of the Directorate of Army research and Analysis 10* (October 1996).

Elting, Colonel John R. *The Super Strategists: Great Captains, Theorists, and Fighting Men who have Shaped the History of Warfare*. New York: Charles Scribner's Sons, 1985.

English, Dr Allan D. ed. *The Changing face of War: Learning From History*. Montreal & Kingston: Royal Military College of Canada by McGill –Queen's University Press, 1998.

Fry, Brigadier Robert. "Myths of Manoeuvre." *RUSI Journal*, (Dec 1997): 5-8. A sceptical view of manoeuvre.

Garnett, Vice Admiral (retired) G.L. "The Evolution of the Canadian Approach to Joint & Combined Operations at the Strategic and Operational Level." *Canadian Military Journal* 3, no.4 (Winter 2002-03): 3-8.

Gimblett, Dr Richard. "The Canadian Way of War: The Legacy of OP FRICTION & the Gulf War." In *Conference of Defence Associations Institute First Graduate Studies Symposium*, 87-91. Ottawa: CDAI, 1999.

Gimblett, Dr Richard. "The Canadian Way of War: Experience and Principles." A Paper presented to the Dalhousie University Centre for Foreign Policy Studies, 2002.

Glenn, Russell W. "No More Principles of War." *Parameters*, 28 no. 1 (Spring 1998): 48-66.

Hansen, Brigadier General (retired) Jim. Review of *Lament for an Army: The Decline of Canadian Military Professionalism*, by John English. *Canadian Defence Quarterly* 7, no. 3 (Spring 1998): 35.

Hunt, Barry D. "The Outstanding Naval Strategic Writers of the Century." *Naval War College Review* 27, no.5 (September October 1984): 86 – 107.

Jablonsky, David. "Army Transformation: A Tale of Two Doctrines," *Parameters* 31, no. 3 (Autumn 2001): 43-62.

Jarymowycz, Lieutenant Colonel Roman J. "Doctrine and Canada's Army. Seduction by Foreign Dogma: Coming to Terms with Who we Are." *The Army Doctrine and Training Bulletin* 2, no. 3 (August 1999): 48-52.

Johnston, Paul. "The Myth of Manoeuvre Warfare: Attrition in Military History." In *The Changing face of War: Learning From History*, ed Dr Allan D. English, 22-32. Montreal & Kingston: Royal Military College of Canada by McGill –Queen's University Press, 1998.

Jockel, Joseph T. *The Canadian Forces: Hard Choices, Soft Power*. Toronto: CISS, 1999.

Keithly & Ferris. "Auftragstaktik, or Directive Control, in Joint and Combined Operations." *Parameters* 29, 3 (Autumn 1999): 123.

Killebrew, Colonel Robert B. "The Army After Next." *Armed Forces Journal International* (October 1996): 36-45.

Krulak, General Charles C. "The Strategic Corporal: Leadership in the Three Block War." *Marine Corps Gazette* 83, (Jan 1999): 18-21.

Krulak, General Charles C. (signed by). *Operational Maneuver From the Sea: United States Marine Corps Concept Paper*: Washington: USMC, 1995.

Maloney, Sean M. "Domestic Operations: The Canadian Approach." *Parameters* (Autumn 1997): 135-152. Focus on legal basis for military assistance and support to civilian governments at all levels during domestic operations.

McCulloch, Lieutenant Colonel Ian. "A Study in Operational Command: Byng and the Canadian Corps." In *The Changing face of War: Learning From History*, ed Dr Allan D. English, 50-66. Montreal & Kingston: Royal Military College of Canada by McGill –Queen's University Press, 1998.

McLean, Lieutenant Commander Doug. "Adaptive Warfare Theory: a Flexible Theory of War and Warfare for the Canadian Forces" (Toronto: Canadian Forces College Command and Staff College Course Paper, 1999.

Middlemiss, Danford W and Sokolsky, Joel J. *Canadian Defence: Decisions and Determinants*. Toronto: Harcourt Brace Jovanovich, c1989.

Peskett, Commander Gordon R. "Levels of War: A New Canadian Model to Begin the 21<sup>st</sup> Century." Toronto: Canadian Forces College Advanced Military Studies Course Paper, 2002.

Posen, Barry. *The Sources of Military Doctrine*. London: Cornell University Press, 1984.

Ranft, B. McL. "Foreword." In *Some Principles of Maritime Strategy*, Corbett, Sir Julian S, vii – xvi. Old Woking: Unwin Brothers, 1972.

Saint, General Crosbie E. "A CINC's View of the Operational Art." *Military Review* (Jan/Feb 1997): 115- 122.

Sokolsky, Joel J. "The Politics of Defence Decisions at Century's End." In *Generalship and the Art of the Admiral: Perspectives on Canadian Senior Military Leadership*, ed. Bernd Horn and Stephen J. Harris, 341-360. St. Catharines: Vanwell Publishing., 2001.

Taylor, Commander R.K. "2020 Vision: Canadian Forces Operational-Level Doctrine." *Canadian Military Journal* 2, no. 3 (Autumn 2001): 35-42.

Tooke, Colonel (retired) Lamarre. "Blending Maneuver and Attrition," *Military Review* (March April 2000): 7-13.

United States of America. *Joint Doctrine Capstone and Keystone Primer*. Washington: Secretary of Defense, 10 Sep 2001.

United States of America. FM-3 *Operations*. Washington: Department of the Army, 14 June 1993.

Wakelam, Lieutenant Colonel Randy. "Senior Professional Military Education for the 21<sup>st</sup> Century." *Canadian Defence Quarterly* 27, no. 1 (Autumn 1997) 14-18.

Young, Lieutenant Colonel Richard R. "Clausewitz & his Influence on US & Canadian Military Doctrine." In *The Changing face of War: Learning From History*, ed Dr Allan D. English, 9-21. Montreal & Kingston: Royal Military College of Canada by McGill –Queen's University Press, 1998.