

# **The Evolution of Strategic Thinking at the Canadian Department of National Defence, 1950-1960**

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## **Author's Note**

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Canadian defence policy in the post-war period has been widely interpreted as illustrating the limitations and constraints that small countries face when making difficult policy choices. Thus, according to several studies, the broad parameters of Canadian defence policy were set in the external environment, and Canada's resultant Cold War orientation left few legitimate options in its general security framework.<sup>1</sup> A related argument that is also widely accepted involves the apparent failure of Canadian defence officials to adequately identify and articulate Canada's strategic interests. According to this argument, to the extent that officials expressed such interests, they tended to simply adopt the strategic doctrine(s) and theories developed elsewhere, in particular the United States. This failure left Canada in an exposed and vulnerable position, with the result that it accepted defence roles and tasks that better served the interests of its allies (who identified many such tasks in the first place).<sup>2</sup> Both arguments are thus linked to the peripheral-dependence perspective in Canadian foreign policy, one which asserts that while Canada enjoys the trappings

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<sup>1</sup> This argument, or variations of it, can be found in most of the principal works in Canadian security. Thus, James Eayrs' five volume *In Defence of Canada* (Toronto: University of Toronto Press, 1964-1983), Colin Gray's *Canadian Defence Priorities: A Question of Relevance* (Toronto: Clarke Unwin, 1972), Jon McLin's *Canada's Changing Defence Policy, 1957-1963: The Problems of a Middle Power in Alliance* (Baltimore: Johns Hopkins Press, 1967), and Brian Cuthbertson's *Canadian Military Independence in the Age of the Superpowers* (Toronto: Fitzhenry & Whiteside, 1977) all generally assert that Canada was dependent on the U.S. for its defence orientation, and that it was severely constrained by external developments. Despite the passage of time, this argument continues to attract support among students in the field. For example, Howard Langille's *Changing the Guard: The Search for a Canadian Defence Policy* (Toronto: University of Toronto Press, 1990) and Douglas Bland's *Chiefs of Defence: Government and the Unified Command of the Canadian Armed Forces* (Toronto: Brown Book Company and the Canadian Institute of Strategic Studies, 1995), while admittedly somewhat more confident in Canada's abilities to exercise independent defence judgement, have continued to argue that Canadian defence policy is largely an exercise in making minor adjustments to decisions made outside Canada. It might be noted, though, that both Joseph Jockel's *No Boundaries Upstairs: Canada, the United States, and the Origins of North American Air Defence, 1945-1958* (Vancouver: University of British Columbia Press, 1987) and Dan Middlemiss and Joel Sokolsky's *Canadian Defence: Decisions and Determinants* (Toronto: Harcourt Brace Jovanovich, 1989) take a far more pro-active approach to Canada's ability to act independently.

<sup>2</sup> This argument, which is widely accepted in Canadian security literature, can be initially traced to three principal studies (to be examined below). See Adrian Preston, "The higher study of defence in Canada: A critical review," *The Journal of Canadian Studies* 3:3 (August 1968); Colin Gray, "The need for independent Canadian strategic thought," *Canadian Defence Quarterly* (Summer 1971); and John Gellner, "Strategic analysis in Canada," *International Journal* (Summer 1978). Despite the passage of almost 20 years since the last of the three articles was published, the argument remains popular, as revealed by a recent piece by Hal Klepak. See "Changing realities and perceptions of military threat," in *Canada's International Security Policy*, David Dewitt and David Leyton-Brown, eds. (Toronto: Prentice Hall Canada, 1995).

of independent statehood, such symbols mask a fundamentally dependent country that is unable to think for itself in many areas of state policy, of which defence is only one.<sup>3</sup>

This paper will challenge these arguments, and contend that both civilian and military officials in the Department of National Defence — assisted by officials in External Affairs<sup>4</sup> — did think strategically throughout the 1950s, a critical phase of the Cold War and one which largely set the parameters of the U.S.-Soviet competition for much of the ensuing two decades. By doing so, the paper will not deny the critical role that the U.S. played in influencing Canadian strategic thought. Rather, it will contend that similarities between the two countries' thinking reveal an essential understanding that, in the nuclear age, the security of Canada and the U.S. was largely indivisible.<sup>5</sup> While this is not to suggest that the interests of the two were inseparable in every

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<sup>3</sup> Adherents of the peripheral-dependence perspective see Canada's historical experience as a drift toward total dependence on the United States, a movement grounded in forces propelling the U.S. to a dominant position in the world capitalist economy and international political system. For a review of this perspective, see David Dewitt and John Kirton, *Canada as a Principal Power: A Study in Foreign Policy and International Relations* (Toronto: John Wiley & Sons, 1983). For a general discussion of Canadian foreign policy making, see Kim Richard Nossal, *The Politics of Canadian Foreign Policy* (Scarborough: Prentice Hall Canada, 1989) and Michael Tucker, *Canadian Foreign Policy: Contemporary Issues and Themes* (Toronto: McGraw-Hill Ryerson, 1980).

<sup>4</sup> The decision to include External documents was made after a review of the documentation made it clear that DEA officials *had* made occasional contributions to the articulation of Canadian strategic interests. That noted, it should be stressed that *DND was the departmental focus of such thought*, as External officials tended to concentrate on purely political developments, rather than on the use of force (and on the threat of its use) that is the core concern of strategy. For a look at how thinking in External evolved over this period, readers have several sources to examine. James Eayrs' five volume *In Defence of Canada* series, which relies heavily on External documents, is a good place to start. See also John Holmes, *The Shaping of Peace: Canada and the Search for World Order, 1943-1957* (Toronto: University of Toronto Press, 2 volumes, 1979 and 1982) and John Hilliker and Donald Berry, *Canada's Department of External Affairs: Coming of Age, 1946-1968* (Kingston: McGill-Queen's University Press, 1995). In addition, there are a large number of personal memoirs written by former DEA officials.

<sup>5</sup> This author is admittedly somewhat baffled by the reluctance of several Canadian security scholars to recognize — and appreciate — this basic fact. In the post-war period, successive Canadian governments understood that the core security interests of the two countries were inseparable, a recognition that helps explain the institutional cooperation that developed between the countries' militaries. That cooperation, at least with regard to continental air defence, has been thoroughly examined by Jockel, *No Boundaries Upstairs*. While the notion that the U.S. military ran roughshod over its Canadian counterpart is an old one (in the post-war period, it was first raised in James Minifie's *Peacemaker or Powder-Monkey*), it attracted more serious scholarly attention in Eayrs' *In Defence of Canada* series (in particular *Peacemaking and Deterrence*). For a more recent view of the Canada-U.S. military relationship, see Jockel, *Security to the North: Canada-U.S. Defence Relations in the 1990s* (East Lansing: Michigan State University, 1991).

defence issue area, the *core* security concerns of the United States and Canada were very similar. These were, in brief, to protect and defend the North American continent from attack, while at the same time preserving and furthering the interests of the West. However, the paper will also recognize that there were other variables — in addition to the U.S. — that may have influenced the manner in which Canadian strategic interests were articulated, including Western alliance defence considerations and the impact of rapid changes in technology.

In more specific terms, the paper will demonstrate that Canadian officials expressed interests in a variety of areas, including both conceptual and empirical strategic contributions. Conceptually, it will be demonstrated that officials began to appreciate the *mutually* destructive nature of any nuclear engagement *prior* to their American colleagues, and they therefore began to articulate an understanding of deterrence that was somewhat different from the one which emerged in the United States. Empirically, the paper will focus on Canadian air defence policy of the time, and the strategic concepts that underlined it. It will be demonstrated that the Canadian appreciation of the air defence problem (including both procurement and command concerns) differed from the American model, and that officials approached issues from a distinctly Canadian point of view. While there are other areas of defence policy that could be examined, readers should note that air defence was a vital component of Canadian defence policy in the 1950s, as most of the controversial issues of the period related to this mission (i.e., the Avro Arrow, the BOMARC missile, etc.).

Methodologically, observations and findings will be based on an examination of original government documents, many of which have been reviewed for the first time in this paper.<sup>6</sup> This inductive research process will offer security scholars a more complete picture of how defence issues and problems were considered during this period, and will be of considerable benefit in tracing Canada's Cold War defence orientation.

A critical task will be to determine whether Canadian thinking, as revealed in the documents, reflected independent interests or whether officials essentially repeated what was being expressed

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<sup>6</sup> DND records examined for this paper have included those of the Chiefs of Staff Committee, the Cabinet Defence Committee, a wide array of Air Force, Navy, and Army records, a sampling of Defence Research Board files, the records of Defence Minister Brooke Claxton, as well as those of Colonel Raymont (Executive Staff Officer of the Chiefs of Staff Committee throughout this period). DEA documents examined included those of the Defence Liaison Division (DL I and II), Ministerial records and files, as well as the main departmental collection in Ottawa.

in the United States. Reaching a judgement on this matter will be no simple task, as it is difficult to determine the precise influence that observers and analysts in one country may have had on those in another. In this regard, it is highly unlikely that Canadian documents identified the specific influences that affected the manner in which they were constructed. Thus, even a careful examination of documents will likely not reveal many direct clues regarding how and why strategic thinking evolved in Canada.

To help answer this question, two signs have been identified which, if found, will be interpreted to indicate independent thinking. The two are: (1) evidence that issues were examined from a distinctly Canadian point of view; and (2) evidence that Canadian officials made an original contribution to the larger field of strategy. While the first criteria should be rather self-evident (i.e., were issues phrased to reflect particularly Canadian concerns?), the second will require the author to draw comparisons with key examples of American strategic thought of the period, including works by Brodie, Wohlstetter, and Kaufmann (among others).<sup>7</sup> In addition, the author will also examine the extensive secondary literature in the field, a body of work that is impressive both for its scholarly quality as well as the sheer number of contributions that have been made.<sup>8</sup> One of the

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<sup>7</sup> While in the early 1950s American strategic thought was still in its infancy, by mid-decade a number of key studies had been published and the field was growing rapidly. Indeed, beginning in 1954, a “Golden age” in American strategic thought began, one which was to last until 1966. Among the critical published American studies from 1950-1960, see William Kaufmann, *The Requirements of Deterrence* (Princeton: Centre for International Studies, 1954) and *Military Policy and National Security* (Princeton: Princeton University Press, 1956); Bernard Brodie, *Strategy in the Missile Age* (Princeton: Princeton University Press, 1959); Albert Wohlstetter, “The delicate balance of terror,” *Foreign Affairs* (January 1959); Thomas Schelling, *The Strategy of Conflict* (New York: Oxford University Press, 1960); Henry Kissinger, *Nuclear Weapons and Foreign Policy* (New York: Harper and Row, 1957); Robert Osgood, *Limited War: The Challenge to American Strategy* (Chicago: University of Chicago Press, 1957); and Herman Kahn, *On Thermonuclear War* (Princeton: Princeton University Press, 1960). Readers should note that several of these studies were preceded by classified works (frequently done at the RAND Corporation), many of which have now also been released. See Marc Trachtenberg, ed., *The Development of American Strategic Thought: Writings on Strategy* (New York: Garland Press, 3 volumes, 1988).

<sup>8</sup> Secondary scholarly studies that have reviewed the major contributions of the period include Lawrence Freedman, *The Evolution of Nuclear Strategy* (London: The Macmillan Press, 1981); Colin Gray, *Strategic Studies and Public Policy: The American Experience* (Lexington: The University of Kentucky Press, 1982); Fred Kaplan, *The Wizards of Armageddon* (New York: Simon and Schuster, 1983); and Gregg Herken, *Counsels of War* (New York: Oxford University Press, 1987). Readers might also note that Brodie’s considerable writings have recently been reviewed. See Barry Steiner, *Bernard Brodie and the Foundations of American Nuclear Strategy* (Kansas City: University Press of Kansas, 1991).

key considerations with regards to this criteria will be to identify, as best as can be determined, the time frame in which a particular concept was first discussed. If it can be demonstrated, for example, that issues and concerns were raised in Canada *prior* to a comparable discussion in the U.S., this will be interpreted as indicating general independence in strategic outlook and may qualify as an original contribution. An additional consideration will be to look for cases in which the issue examined in Canada did not attract attention elsewhere.

One point that should be clarified relates to the question of who articulated the major contributions in strategic thought in the two countries. In Canada, which generally lacked a non-governmental defence community throughout this period,<sup>9</sup> it was up to government officials to identify and articulate strategic interests. In contrast, in the United States, most of the original contributions of the post-war period came from *outside* the government, in the civilian defence community that exerted considerable influence on American policy (especially in think tanks like the RAND Corporation).<sup>10</sup> The distinction highlights the difference in importance accorded defence issues in the two countries, as well as the amount of attention that such issues generate among their respective publics.

Before moving to the documents, a few additional preliminary comments are required. In the following section, I will briefly examine three areas of interest. These are: (1) a review of the critical defence decisions and controversies that affected Canada during this period; (2) a look at the previous studies in the field; and (3) a brief discussion on how the study of strategy changed in the

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<sup>9</sup> During the 1950s, the attentive defence public of the Canadian defence community consisted of a smattering of academics, journalists, and retired DND officials. Using fairly lenient acceptance criteria, one would still be hard pressed to count more than a dozen interested individuals. For a review of the concept of policy communities, see Paul Pross, *Group Politics and Public Policy* (Toronto: Oxford University Press, 1992).

<sup>10</sup> It was the influx of American civilian strategists into a domain which had previously been the sole preserve of the military that might have been the single biggest change in post-war strategic thinking. Strategists including Brodie and Wohlstetter worked at the RAND Corporation, an Air Force funded organization that was established in 1946 with the intent of “recommending to the Air Force preferred methods, techniques, and instrumentalities” on the broad subject of air warfare. Within a few years, RAND analysts were examining virtually all aspects of U.S. strategy and making numerous novel contributions to the field. The work that best examines RAND’s evolution during the 1950s is Kaplan, *The Wizards of Armageddon*.

post-1945 period. Attention will then turn to the documents, after which some concluding observations will be offered.

## **Part 1. Setting the Stage: Canadian defence in the 1950s, previous studies in the field, and post-1945 strategy**

### *The time period*

At a time when the Cold War is nothing but a fading memory (and one of its principal protagonists no longer even exists), many of the events and crises of the 1950s have a rather dated flavour about them. Indeed, future generations of students may find it difficult to understand the obsession with nuclear weapons and East-West relations which affected so much of the thinking of the period. In a fluid and uncertain global environment, defence and security issues were prioritized above all other concerns, and the interpretations and understandings that were reached were grounded in a world view which took as its starting point the unceasing hostility between East and West.

Canada was no bystander in this conflict. As has been well documented in the literature, successive Canadian governments viewed the Soviet threat in very stark terms, terms that were little different than the ones offered from Washington.<sup>11</sup> The net result of this world view was a Canadian conception that its security interests were largely indivisible from those of the West. This conception was manifested in several actions, including Canada's leading role in establishing the Atlantic alliance and the strengthening of the defence partnership with the United States. Indeed, the latter was to become a priority of the period, as changes in technology and in the Soviet threat resulted in pressures (in *both* countries) to enhance bilateral defence cooperation. Through the 1950s, this was codified in a series of directives that allowed tactical air force cooperation to

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<sup>11</sup> There are a number of studies that have examined Canada's initial position in the Cold War, and the factors behind Ottawa's eager adoption of a strident anti-Soviet tone. See, for example, Denis Smith, *Diplomacy of Fear* (Toronto: University of Toronto Press, 1988); Holmes, *The Shaping of Peace*; and Don Munton and Don Page, "Canadian images of the Cold War, 1946-1947," *International Journal* 32:3 (Summer 1977).



intensify, the building of a series of radar lines in the Canadian north, and the gradual establishment of a system of binational air defence cooperation.<sup>12</sup>

By the mid-to-late 1950s, changes in technology raised a number of difficult questions about Canada's defence preparedness and the roles and tasks of the Canadian military. The ways in which countries could attack each other were changing, and the security and distance that the North American continent had traditionally offered defence officials in both countries was being negated. Caught up in the discussions surrounding such questions were concerns regarding the production of the CF-105 Arrow, the jewel of the Canadian aircraft industry and an industrial project of the first magnitude.<sup>13</sup> As if the decision regarding the Arrow was not difficult enough, the Conservative government of John Diefenbaker was faced with an equally demanding decision regarding the BOMARC missile, a weapon system designed to perform much the same basic mission (that is, to track and destroy incoming bombers).<sup>14</sup> After considerable study and delay, the government decided in early 1959 to cancel the former and acquire the latter, a move that sparked a bitter debate and

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<sup>12</sup> The study that best examines the Canada-U.S. defence relationship of the period is Jockel, *No Boundaries Upstairs*.

<sup>13</sup> The Arrow is one of the few issues in Canadian defence that has not suffered from a lack of attention. Among the more popular works, see Gregg Stewart, *Shutting Down the National Dream: AV Roe and the Tragedy of the Avro Arrow* (Toronto: McClelland and Stewart, 1992); E.K. Shaw, *There Never was an Arrow* (Ottawa: Steel Rail Educational Publishing, 1981); and, most recently, Palmiro Campagna, *Storms of Controversy: The Secret Avro Arrow Files Revealed* (Toronto: Stoddart Publishing Company, 1993).

For those readers unfamiliar with the details of the project, a few brief comments can be offered. Avro Aircraft (a subsidiary of the British Hawker-Siddeley conglomerate) began designing an advanced jet interceptor in 1952, at which time it had begun production of its first generation military fighter, the CF-100. Although the initial plan was to only design the airframe, poor project management resulted in all four components of the aircraft — that is, airframe, engines, weapons, and fire control system — being overseen by either Avro or the RCAF. By 1958, the project had become the largest industrial concern in the country, directly employing 15,000 people at Avro's huge Malton, Ontario, plant. At the same time, costs were spiralling out of control, and it was estimated that the plane would ultimately cost \$10 million per copy. In spite of impressive test results, the Diefenbaker government cancelled the project in February 1959.

<sup>14</sup> The BOMARC was intended to combine the sprint start of a ballistic missile with the maneuverability of an aircraft. Designed by the Boeing Corporation of the U.S. in the early 1950s, the project became mired in controversy by mid-decade, as poor test results and increased costs led to political pressure to cancel the venture. In light, however, of the Canadian commitment to purchase it, the U.S. government continued development funding and the system finally became operational in 1961. However, BOMARC continued to suffer from an array of technical problems, and was withdrawn from service (in both Canada and the U.S.) within the decade.

shattered the national unity that had largely existed with regards to defence policy since the end of the war.<sup>15</sup>

However, the most difficult defence decision of all was the looming question on whether or not to acquire nuclear weapons for Canadian forces both at home and in Europe. While Canada had implicitly accepted a nuclear role as a result of NATO directive MC 48 (approved in 1954), it is clear that Canadian officials did not fully appreciate the obligations that the directive entailed (a confusion that was shared by several of our NATO allies).<sup>16</sup> Canada's difficult situation was exacerbated by the fact that over the period 1956-1958, the government indicated to the U.S. that it would ultimately accept nuclear weapons. While the nuclear issue only began to seriously emerge during the last two years of the period examined for this paper, many of the more controversial aspects of the problem were clearly evident during this period. Indeed, over the years 1959-60, much of the indecisiveness that was to later plague the Conservative government was already on display, although the importance of the problems that required immediate attention ensured that the public did not focus on the issue. Still, the nuclear decision formed the larger backdrop to many of the issues that were resolved during this period, as well as served as a reminder of the enormous changes that had taken place since the end of the war.<sup>17</sup>

Lastly, some comments might be offered on Canada's international standing during the 1950s. Readers should recall that, with the lone exception of the U.S., Canada was the only country

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<sup>15</sup> Between 1945 and 1957, both the governing Liberals and opposition Conservatives generally agreed on the basic approach of Canadian defence policy, which consisted of bilateral and multilateral security arrangements. While there were, of course, disagreements (for example, the Conservatives criticized the decisions to send troops to both Europe and Korea), such feuds appeared to be exercises in domestic political maneuvering.

<sup>16</sup> One indication of this is a memo, written in July 1955 by the Defence Liaison Division of External Affairs, titled "Implications of MC 48". Although prepared some seven months after the directive was approved, the document contains a detailed discussion of various "interpretations" and their Canadian implications. Public Archives of Canada, RG 25 (Records of the Department of External Affairs), Vol. 4541, File 50030-1-40, Part 3.

<sup>17</sup> The nuclear weapons crisis of 1958-1963 has been written on by several authors, but until now it has avoided a systematic and comprehensive examination. That should change with the forthcoming publication of Don Munton, ed., *Canada and Nuclear Weapons*. Among existing works, the best ones are Peyton Lyon, "Defence: to be or not to be nuclear," in *Canada in World Affairs, 1961-1963* (Toronto: Oxford University Press, 1968) and McLin's *Canada's Changing Defence Policy*.

in the world to emerge from the Second World War both economically and militarily stronger than when it had entered it.<sup>18</sup> Thus, throughout the decade-and-a-half that followed, Canada was a considerable international actor, one whose opinions were listened to carefully not only in the West, but in many parts of the world where we were not tarred with the same colonial brush from which several of our allies suffered. This privileged position gave Canada considerable international influence, although government officials were very much aware of the temporary nature of this prestige, owing as much to the weaknesses of our allies as to any particular Canadian strength. The essential point, though, is that this was a period in which Canada's influence was at its post-war peak, coming at a time when rapid changes in technology as well as in the threat assessment of the Soviet Union ensured a global environment in which the only constant was uncertainty.

*Previous studies in the field*

The topic of Canadian strategic thinking has not gone entirely unnoticed in the literature. As was mentioned earlier, the principal assumptions in the field can be traced to a series of articles written between 1968 and 1978. The authors of these studies were Canadian security scholars Adrian Preston and John Gellner, and the British strategist Colin Gray. While the precise details of the articles naturally tended to vary, *each asserted that Canada had produced little in the way of post-war strategic thought, and that any such thinking that had been articulated was the result of foreign concepts that had simply been imported from their country of origin, generally the United States.*

While length restrictions preclude the examination of the studies in detail, some general observations can be offered. First, each argued that Canada's long-standing dependence on foreign militaries (the U.K. for much of Canada's early history, the U.S. since the Second World War) in organization, discipline, and general military philosophy had resulted in a Canadian military establishment unable to recognize, or even consider, its own strategic interests. This inability began at the individual level, and was linked to Canada's long failure to establish any National Staff or Defence College as the centre of national military thought, and preference of sending Canadian officers to military institutions in the U.S. and U.K. The result was that, according to Preston,

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<sup>18</sup> J. L. Granatstein, *How Britain's Weakness Forced Canada into the Arms of the United States* (Toronto: University of Toronto Press, 1989), 45.

Canadians felt “unable or disinclined” to think for themselves in such matters, preferring instead to allow others the task of identifying Canadian interests.<sup>19</sup>

Canada’s reluctance to develop indigenous military traditions was therefore interpreted as contributing to the modern lack of Canadian strategic thought. On a related point, both Preston and Gray argued that Canada’s inability to produce strategic theorists of “international repute” was further evidence of this failure. Preston noted that “Canadians possess no significant tradition of military literature, intellectualism, or scholarship.”<sup>20</sup> Indeed, to each of these authors, the failure to support a national military journal (besides the *Canadian Defence Quarterly*, which re-emerged in 1971 after a 30 year hiatus) revealed a basic unwillingness to consider security issues from a Canadian point of view. While this may seem a fairly minor point, to Preston it was symptomatic of the broader unwillingness (or inability) to take national strategic concerns seriously.

Second, the authors argued that Canada’s alliance orientation in the post-war period had frequently been used as an excuse not to identify an independent Canadian strategic outlook. According to Gray, it was Canada’s alliance commitments, more so than any other development, that accounted for the poverty of Canadian strategic thinking. As a relatively junior member of two security structures (NATO and NORAD), Canada had tended to simply accept the analyses and world view(s) worked out by the more senior members as being automatically in its best interest.<sup>21</sup> It deserves noting that none of the authors considered (or found very persuasive) the notion that Canada identified its defence and security interests as being largely synonymous with those of its allies, a conception that lay at the heart of Canada’s post-war defence policy and was specifically recognized by officials in both the Departments of National Defence as well as External Affairs. Rather, the authors asserted that alliance concerns had *not* reflected Canadian ones, and that Canada had been frequently misled by its alliance partners over appropriate military decisions and courses of action.

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<sup>19</sup> Preston, 18.

<sup>20</sup> *Ibid.*, 20.

<sup>21</sup> See Gray, 7-9.

Further, the authors pointed to specific Canadian defence roles and tasks that “proved” the country’s inability to think for itself (or, at the very least, its unwillingness to act on the basis of those interests). The examples identified were the strike/reconnaissance mission of the Royal Canadian Air Force (RCAF) in Europe and the anti-submarine warfare (ASW) role performed by the Royal Canadian Navy (RCN).<sup>22</sup> Among the authors, Gellner developed these arguments most thoroughly, and contended that both indicated that “underlying strategic concepts worked out abroad without reference to specific Canadian security requirements (had been) espoused without question.”<sup>23</sup> As neither of these policies apparently satisfied narrow Canadian interests (although the criteria chosen to reach this judgement were not given), they were interpreted by the authors as “proving” that they had been accepted by a military/political establishment unable to recognize its national interests.

Having noted these observations, the most important feature of the articles may not have been what was actually said in them, but the sources upon which they were based. For in spite of the fact that each reached unambiguous conclusions, *not one was based on original government documents or files of any sort*. This would appear to be a fairly major oversight, and yet, only one of the authors, John Gellner, even recognized that it was potentially significant.<sup>24</sup> In this regard, neither Preston or Gray even mentioned this failure, as if examining documentation was totally unnecessary prior to reaching broad judgements about Canada’s long-standing strategic failure.<sup>25</sup>

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<sup>22</sup> The strike/reconnaissance role of the Canadian air division in Europe, adopted in 1959, involved the use of tactical nuclear weapons behind enemy lines in the event of a Soviet attack in Western Europe. The ASW role, performed by the RCN during the Second World War, formed the *raison d’etre* of Canada’s post-war navy and drove all navy-related procurement.

<sup>23</sup> Gellner, 496-497.

<sup>24</sup> Gellner’s recognition of this was fairly limited, however. When he discussed the possibility of studies in “the sphere of higher strategy”, he noted that “as far as can be gathered without access to classified information, these studies were in the main concerned with future organization and physical requirements rather than with national policy and the military means of achieving goals.” How Gellner reached this judgement, *without having seen the very studies he mentions*, is a mystery to this author.

<sup>25</sup> In fairness, it should be noted that given the long classification process of government documents in Canada (generally 30 years), documents were simply not available at the time(s) of writing. Still, this author believes that this should have been specifically mentioned in the articles, and at the very least, the authors should have recognized that their observations were provisional depending upon what the documents ultimately reveal.

In general, Preston, Gray, and Gellner reached their conclusions on the basis of a series of assumptions about Canada's traditional dependent political/military status and an analysis of some of the major developments in the post-war period.<sup>26</sup> Furthermore, none acknowledged the public expressions of Canadian strategic thinking that had been articulated by defence officials in various publications during the post-war period, nor did they recognize the Department's R.J. Sutherland, a civilian DND strategist who by the late 1960s had already acquired a considerable international reputation for his insight and analysis on the nuclear age.<sup>27</sup> These failures raise considerable doubts about the studies, and formed the initial point of departure for my project.

### *Post-1945 strategic thought*

While there is no need in this paper to review the evolution of strategy, some brief comments on the nature of the changes in the post-1945 period might be helpful in placing later remarks on Canadian strategic thinking in their broader context.

Up to 1945, the study of strategy was generally divided between adherents to two schools, the German strategist Karl von Clausewitz and the Swiss military theorist Henri Jomini.<sup>28</sup> While this is not to suggest that other strategists in the early 20th century were not influential,<sup>29</sup> strategy

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<sup>26</sup> Each of the authors accepted, apparently without question, the assumption that not only is the U.S. the dominant Western actor, but it also largely determines the defence policies and tasks of other states. Given Canada's alliance-oriented defence posture, the authors concluded that external actors had determined this alignment.

<sup>27</sup> Regarding the public expression of strategic thinking, the *RCAF Staff College Journal*, published from 1956 to 1964, deserved some mention in the articles, as it was the principal source for senior Canadian defence officials to express their views. The failure to engage any of Sutherland's work is a more serious oversight. Over the course of the decade, Sutherland worked at the Operational Research Group (ORG) of the Defence Research Board, the Canadian Army Operational Research Establishment (CAORE), and the Joint Ballistic Missile Defence Staff (JBMDs). It should be noted that Sutherland's principal public study of Canadian defence, "Canada's long term strategic situation," was published in 1962, six years *before* the first of the three studies was written. In addition, in 1961 the newly-retired Chairman of the Chiefs of Staff Committee, General Charles Foulkes, also wrote a study that was deserving of comment. See "Canadian defence policy in a nuclear age," *Behind the Headlines* 21:1 (May 1961).

<sup>28</sup> The principal works by the respective authors are *On War (Vom Kriege)* by Clausewitz (1832) and *Summary of the Art of War (Precis de l'art de la guerre)* by Jomini (1838).

<sup>29</sup> For example, Liddell Hart, Charles de Gaulle, and three air power theorists, General Douhet, Sir Hugh Trenchard, and General Mitchell all attracted considerable attention in the period between the world

continued to be largely viewed in two ways — an emphasis on the tactics to be employed to achieve victory on the battlefield (the Jomini school), or a joint emphasis on the political and military aspects of strategy, but one which ultimately recognized that the objectives of state policy dominate and determine the military means the entire way down the hierarchy of strategy and tactics (the Clausewitz approach).

In the nuclear age that began in August 1945, the shift toward the latter approach was strengthened, although this move was not immediate, as in the early post-war years there was a general reluctance to seriously consider the effect that nuclear weapons would have on the use of force as a rational object of state policy. In fact, even among some strategists that did consider these effects, the findings were surprisingly conservative. Thus, for example, both P.M.S. Blackett in the U.K. and Vannevar Bush in the U.S. wrote that nuclear weapons would have little impact on the outcome of war for the foreseeable future.<sup>30</sup> While these findings were strongly challenged in works by Bernard Brodie and Liddell Hart,<sup>31</sup> there was certainly no consensus in the early post-war period that strategy had been fundamentally altered by the power of the atom.

Inevitably, however, the nuclear (and thermonuclear) revolution(s) spurred new thinking about military power, as strategists struggled to make sense of new weapons which seemed to turn conventional military wisdom upside down. Thus, by the mid-1950s, the gestation period of a new

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wars.

<sup>30</sup> See P.M.S. Blackett, *The Military and Political Consequences of Atomic Energy* (London: The Turnstile Press, 1948) and Vannevar Bush, *Modern Arms and Free Men* (New York: Simon and Schuster, 1949). Both of these authors focused on the limitations of nuclear weapons to reach their conclusions, i.e., weapons stockpiles were small and were not expected to increase very much in the near future, the bombers that carried them were vulnerable to interception, and these bombers had to operate from land bases which were also vulnerable to blockade and other forms of interference.

<sup>31</sup> See B.H. Liddell Hart, *The Revolution in Warfare* (London: Faber, 1946) and Bernard Brodie, ed., *The Absolute Weapon* (New York: Harcourt, Brace, 1946). The latter can be singled out as *the* critical study of the early nuclear period. One passage from it, in particular, was to become the celebrated statement of the age of deterrence:

The first and most vital step in any American programme for the age of atomic bombs is to take measures to guarantee to ourselves in case of attack the possibility of retaliation in kind. The writer in making that statement is not for a moment concerned about who will win the next war in which atomic bombs are used. *Thus far the chief purpose of our military establishment has been to win wars. From now its chief purpose must be to avert them. It can have almost no other useful purpose.*

generation of strategists came to an end and the modern arms debate, with which we have been familiar since, was born (foreshadowed by the works of Brodie and Hart some years earlier).<sup>32</sup> In the United States, this change was induced by the growth in nuclear weapons stocks, the introduction of both tactical and hydrogen bombs, the anticipated arrival of ballistic missiles, and the articulation of the strategy of “massive retaliation.”<sup>33</sup>

The key difference of much of this literature, however, when compared with previous contributions in strategy, was the emphasis on *detering* an attack, rather than fighting. There was a widespread recognition (particularly in the West<sup>34</sup>) that nuclear war would be so horrible — and its effects so disastrous — that the only sensible military posture was to threaten an opponent with such enormous devastation that it could never be so foolish as to take the risks inherent in any military challenge. Thus, most of the critical contributions of the period were based, at their core, on a conception of deterrence which would prevent force from being used, and only in the failure of this objective did attention turn to actually fighting a war (and even then, much of the analysis focused on *limiting* war).<sup>35</sup> This change in the nature of strategic thinking should be highlighted, as it represented a basic re-consideration of what strategy was and what could be studied under its name.<sup>36</sup>

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<sup>32</sup> Ken Booth, “The evolution of strategic thinking,” in *Contemporary Strategy: Theories and Methods*, by John Baylis, Ken Booth, John Garnett, and Phil Williams (New York: Holmes & Meier, 1975), 45.

<sup>33</sup> *Ibid.*, 46.

<sup>34</sup> It deserves noting that in the Soviet Union, deterrence did not attract the same kind of scholarly or military attention. Rather, attention focused on more traditional concerns, including how to fight most effectively on a nuclear battlefield. For a review of Soviet strategic thinking of the period, see Raymond Garthoff, *Soviet Strategy in the Nuclear Age* (New York: Praeger, 1958) and Herbert Dinerstein, Leon Goure, and Thomas Wolfe, *Soviet Military Strategy* (Englewood Cliffs: Prentice-Hall, 1963).

<sup>35</sup> The first American book that specifically examined how a nuclear war might actually unfold was Herman Kahn’s *On Thermonuclear War*. Even in this work, though, much of the attention was focused on the concept of limited war, in which targets could be exchanged in a “tit for tat” scenario until a political accommodation was reached. While hardly a new concept (in the nuclear age it can be traced to Liddell Hart’s *The Revolution in Warfare*), Kahn’s discussion of limited war may have been the most detailed, and helped pave the way for many of the ideas that dominated the American strategic and policy environment of the early-to-mid 1960s.

<sup>36</sup> Major contributions in deterrence literature are obviously too numerous to list here, but some of the key ones from this period are William Kaufmann, *The Requirements of Deterrence*; Arthur Lee Burns, “From



In this altered environment, purely military conceptions of strategy, while still formulated, were increasingly marginalized, as they largely failed to convey either the flavour or the scope of a subject that straddled the spectrum of war and peace, and was as much concerned with statesmanship as it was with generalship. In the Cold War environment of the 1950s, most of the critical studies were attempts at addressing an essentially political question — how could the U.S. most effectively acquire, deploy, and employ its military power in ways that would further American global interests but avoid large-scale military challenges? It is thus important to note that most “Golden age” literature was almost exclusively Cold War oriented. Catalyzed by dissatisfaction with the manner in which the U.S.-Soviet relationship was unfolding, post-1945 American strategy was intended to improve the quality of policy for dealing with the Soviet Union. It was *not* intended to be applicable in all (or even most) international situations, which helps explain its essential irrelevance for most conflict conditions in much of the world.<sup>37</sup>

Deterrence was not the only strategic contribution of the nuclear age. Additional critical offerings included the concepts of limited war and arms control. Together, the three required a conception of both political and military interests to be effective, a further indication of the shift toward the Clausewitzian approach.<sup>38</sup> These new strategic concepts represented a recognition of the enormous destructive power that nuclear weapons entailed, and the absurdity of stressing war preparations in an era where weapons of mass destruction could turn any conflict into Armageddon.<sup>39</sup>

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balance to deterrence: A theoretical analysis,” *World Politics* (July 1957); Morton Kaplan, “The calculus of deterrence,” *World Politics* (October 1958); Bernard Brodie, *Strategy in the Missile Age*; Brodie, “The anatomy of deterrence,” *World Politics* (January 1959); Glenn Snyder, “Deterrence and power,” *Conflict Resolution* (June 1960); and Snyder, *Deterrence and Defence* (Princeton: Princeton University Press, 1961).

<sup>37</sup> Gray, *Strategic Studies and Public Policy*, 45-49. Another critical characteristic of “Golden age” thinking was that it adopted the realist approach to international politics. Thus the key strategists in the U.S. shared a common set of assumptions about the utility of force and the kind of reasoning that is appropriate for dealing with political/military problems.

<sup>38</sup> *Ibid.*, 46. The belief that deterrence, arms control, and limited war are the enduring contributions of the “Golden age” is quite widespread. See, for example, Hedley Bull, “Strategic studies and its critics,” *World Politics* (July 1968), and Ken Booth, “The evolution of strategic thinking.”

<sup>39</sup> Liddell Hart may have best commented on this change. He noted that “old concepts and old definitions of strategy have become not only obsolete but nonsensical with the development of nuclear

In spite of the stark terms of the nuclear age, some policy practitioners and military leaders continued to approach global politics in terms little different from past ages, with a focus on the use of force to defend and project state power. The principal danger in strategic thought, both during the early nuclear age and the current one, is that preoccupation with narrow technological and military issues may lead one to start treating broad concepts as if they were narrow defence ones. This danger faced Canadian officials as well, and their responses tell us much about the factors and influences that they considered relevant.

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weapons. To aim at winning a war, to take victory as your object, is no more than a state of lunacy.” From *Deterrence or Defence* (London: Stevens, 1960), 66.

## Part 2. The evolution of Canadian strategic thinking in the 1950s

The examination of government documents has revealed that Canadian officials *did* recognize and articulate Canadian strategic interests, and that these interests were *not* always synonymous with those of the United States. Such thinking permeated much of the Department, and encompassed the military services (the Army, Navy, and Air Force), the civilian Defence Research Board (DRB), and an array of defence committees that reported to the Chiefs of Staff.<sup>40</sup> While the U.S. was clearly the dominant influence in the articulation of these interests, other factors may have played a part as well.

As noted earlier, this paper will focus on two areas where Canadian officials articulated strategic interests — Canadian thinking on nuclear weapons and the emerging policy of deterrence, and thinking as it related to the air defence mission. Readers should note that comparisons with critical American contributions of the period will be made where relevant.

Before beginning this examination, two final caveats should be noted. First, these findings are based on those documents which the author has (to date) been granted access. While many were cleared for the first time for this project, it must be stressed that they still represent only a relatively small percentage of the relevant collections that remain classified at the Public Archives of Canada (PAC).<sup>41</sup> Second, the project from which this paper is taken is a work in progress, and thus these findings should be regarded as being somewhat preliminary in nature. With these cautions, attention can turn to the documentation.

### *Early Canadian attitudes towards nuclear weapons*

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<sup>40</sup> The Chiefs of Staff Committee was the focal point of defence policy coordination and advice to the Minister. It was headed by an independent Chairman, who throughout the 1950s was General Charles Foulkes. The DRB, established in 1947, was designed to ensure that Canada remained an active player in scientific/ military research in the post-war period. The Board's terms of reference gave it full power to direct and regulate military research in Canada.

<sup>41</sup> In addition to the Archives, an important secondary source of original documents was DND's Directorate of History (D Hist). The author would like to acknowledge the assistance of Dr. Owen Cooke at D Hist and Mr. John Armstrong at PAC. In particular, a special note of thanks is due to Mr. Ron Falls at PAC, who has been a tireless supporter of the project.

From the start of the nuclear age, Canadian officials revealed an understanding and appreciation of both the uses and limits of nuclear weapons. Early DND thinking on such weapons was contained in a 1951 Defence Research Board document titled “A preliminary assessment of future trends in offensive-defensive balance.”<sup>42</sup> While the report was principally concerned with the advantages that the offense had traditionally enjoyed over the defence in military engagements, it offered some interesting observations with respect to this balance as a result of the introduction of nuclear weapons.

The study noted that because of the enormous power that nuclear weapons offered both the offensive and defensive sides, a re-orientation in strategic thinking was called for. It argued that while the offense would continue to enjoy an advantage in striking first, that advantage would be nullified should an opponent acquire an assured retaliatory capability. That capability among “major powers” was inevitable, as the study predicted that nuclear stockpiles “in the thousands” would become commonplace over the ensuing ten to twenty years.

In a critical section, the study noted that “summarizing the atomic situation, it can be predicted that in the next 15 years...*the greatest deterrent to atomic attack will be fear of retaliation.*” The report thus contended that it was the mutual power of nuclear weapons, rather than a build-up on the part of one country, that offered the greatest chance for long-term stability. The observations reveal that, even though at the time the Soviet Union was well behind the U.S. in its weapons programme (it had only detonated its first bomb in August 1949), the DRB believed that the period of American nuclear superiority was only a temporary one, to be replaced by the mutual deterrent relationship.

A second early view on Canadian attitudes towards nuclear weapons can be seen in a Department of External Affairs telegram, jointly written by the Secretary of State, Lester Pearson, and the Canadian Ambassador to the United States, Hume Wrong, in December 1950. Titled “Korea and the atomic bomb,” the telegram was drafted only days after newspaper reports had indicated that U.S. President Truman was considering using nuclear weapons in Korea, in response to the Chinese

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<sup>42</sup> The report was prepared by the Scientific Intelligence Division of the DRB (dated September 1951). PAC, RG 24 (Records of the Department of National Defence), Vol. 4221, File 69-301, file 2.

intervention.<sup>43</sup> This possibility generated widespread anxiety throughout the West — Canada included. In the telegram, Pearson and Wrong noted that

the military authorities may argue that the atomic bomb is just another weapon. But in the minds of ordinary people everywhere in the world, it is far more than that and has acquired an immensely greater intrinsic significance...The psychological and political consequences of the employment of the bomb, or the threat of its employment, in the present critical situation would be incalculably great...The effectiveness of the bomb as a tactical weapon cannot be fully appreciated. Once it has been used tactically, much of its force as a deterrent may disappear.<sup>44</sup>

The telegram went on to note that, while the U.S. was entitled to consider all available courses of action, consultation in the nuclear age was more important than ever, a point that was to be emphasized by Canadian officials throughout the Cold War. Further, the telegram noted that Canada, as an original partner in the wartime nuclear weapons project and a respected international actor, was in a unique position to ensure that its concerns were directly transmitted to the U.S.<sup>45</sup> Lastly, it deserves noting that while the telegram was principally concerned with the tactical use of nuclear weapons in Korea, its general tone was one which suggested that the use of such weapons should be restricted to the gravest of national emergencies, and even then considerable caution should be practised in their deployment. It asserted that nuclear weapons were useful in threatening opponents with harm, but that once employed, they lost their deterrent effect.

The two documents reveal that, even in the period 1950-51, officials in both DND and DEA were in agreement that the introduction of nuclear weapons had fundamentally altered both military

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<sup>43</sup> In a November 30 news conference, President Truman made some remarks that had both allies and adversaries concerned. The President warned that “(the U.S.) will take whatever steps are necessary to meet the military situation.” When pressed by reporters on whether that could include nuclear weapons, Truman responded that “there has always been active consideration of its use...It is one of our weapons.”

<sup>44</sup> PAC, RG 25, Vol. 4758, File 50069-C-40, Part 1. The telegram was addressed to the Secretary of State for External Affairs, and was dated 4 December 1950.

<sup>45</sup> Pearson took to the Canadian airwaves on 5 December 1950, and made many of the same points. Both the telegram and the radio broadcast were similar to a Pearson memo prepared in 1945. Titled “On atomic warfare,” this memo stressed the revolutionary nature of atomic weapons and the need for a comprehensive system of international control. See J.A. Munro and A.I. Inglis, “The atomic conference 1945 and the Pearson memoirs,” *International Journal* 29:1 (Winter 1973-74).

and political aspects of global politics, and that traditional approaches to problems were no longer adequate. More importantly, there was an implicit recognition of the purely transitory nature of the current nuclear (im)balance, and the appreciation of the inevitability of the mutual deterrent relationship. Lastly, there was an understanding of the enormous consequences that would result from any use of nuclear weapons.

These early Canadian thoughts can be compared with American thinking of the same period. While there were some civilian strategists in the U.S. who were making similar arguments (see below), the official American strategic doctrine, as stated in NSC-68 (completed in April 1950), noted that the United States desperately needed to strengthen both its nuclear and conventional forces in order to deter a wide array of possible Soviet actions. The directive further argued that the hydrogen bomb, at the time the object of a major American scientific effort, would preserve the American nuclear advantage for the remainder of the decade.<sup>46</sup> In essence, NSC-68 *viewed nuclear deterrence as largely a one-way street*, in that it would result from American war-fighting capabilities. It basically reflected a traditional power politics approach, in that it asserted that security could be achieved through the expansion of military power.<sup>47</sup>

It also should be noted that, while NSC-68 did not explicitly argue it, American administrations of the period fully expected to win World War Three should it occur, a war which was expected to include the widespread use of nuclear weapons. Blunt language to this effect was written into NSC-20/4 of November 1948 and was reproduced in NSC-162/2 of October 1953.<sup>48</sup> This expectation was codified in the official American war plans of the period, which were based on a massive atomic blitz of the Soviet Union in the opening phase of any conflict, a strategy that clearly indicated that the U.S. did not take the possibility of Soviet atomic retaliation very

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<sup>46</sup> Lawrence Freedman, "The First Two Generations of Nuclear Strategists," in *Makers of Modern Strategy: From Machiavelli to the Nuclear Age*, Peter Paret, ed. (Princeton: Princeton University Press, 1986), 738.

<sup>47</sup> The origins of the directive have been well examined by John Lewis Gaddis, *Strategies of Containment: A Critical Appraisal of Postwar American National Security Policy* (New York: Oxford University Press, 1982).

<sup>48</sup> Gray, *Strategic Studies and Public Policy*, 38.

seriously.<sup>49</sup> These developments stand in contrast to early Canadian thinking, which, as we have seen, recognized the mutually deterrent nature of the nuclear relationship as well as the restraint that should be exercised with respect to the use of such weapons in future conflict. It seems clear, then, that early thinking as it pertained to nuclear weapons evolved rather differently in Canada and the United States.

Why did this occur? While any answers offered are highly speculative, one cannot help but recognize a certain American confidence in its technical and scientific capabilities, and at the same time a rather poorly concealed contempt for those of other countries. Representative of such thinking was Vannevar Bush, who noted that the Russians “lack men of special skill, plant adapted to making special products, and possibly materials...They lack the resourcefulness of free men, and regimentation is ill-adapted to unconventional efforts.”<sup>50</sup> Bush’s views were widely shared both in and out of government, as indicated by the constantly shifting predictions of the early post-war period of when the USSR could be expected to acquire a nuclear capability.

It would be misleading, however, to conclude that all Americans shared these views. One strategist who did recognize the mutual dangers of nuclear weapons was Bernard Brodie, who as far back as 1946, had concluded that in the nuclear age aggressors would be deterred as long as they believed that there was a good chance of retaliation.<sup>51</sup> Still, it was not until the early 1950s that Brodie, then a recently-hired analyst at the RAND Corporation, offered greater clarity to some of his earlier observations. He wrote that an atomic war would inevitably be a “two way affair”, and that a war with hydrogen bombs was unwinnable. He argued that, rather than the planned massive atomic blitz that the U.S. had developed, a better alternative was a controlled and limited atomic

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<sup>49</sup> Early post-war American war plans were largely based on a World War Two “city busting” model, but with nuclear weapons doing the damage. In effect, the wartime success of the American air power strategy (particularly over Japan) was simply reformulated to be used against the Soviet Union. Plans specified that up to 1,000 nuclear weapons would be dropped over the Soviet Union on the day fighting began. For more on early American post-war plans, see Freedman, *The Evolution of Nuclear Strategy*.

<sup>50</sup> Bush, *Modern Arms and Free Men*, 104.

<sup>51</sup> Brodie, ed., *The Absolute Weapon*.

attack, one which could exploit the enormous threat potential of nuclear weapons.<sup>52</sup> Readers will recognize in these observations a definite link with the Canadian documents discussed above. However, it might be noted that in the 1940s and early-1950s Brodie was extremely isolated in his thinking at both the Air Force and at RAND, where his views on target restraint and the mutual nature of deterrence were generally either ignored or viewed with disdain.<sup>53</sup> They had not, in any event, entered the mainstream of American strategic thinking.

Lastly, one might note the reaction generated by two American research studies of the period, Project Charles (released August 1951) and the Lincoln Summer Study Group (released February 1953), which further revealed the American conception of security in the nuclear age. While it should be recognized that neither study was specifically concerned about deterrence and the utility of nuclear weapons, both reports stressed the dangers of possible Soviet atomic attack and the benefits of early air defence warning. Still, neither the U.S. Air Force or the Department of Defense paid much attention to the studies, despite the apparent importance of their findings and recommendations. This was because the very concept of investing resources in air defence was foreign to the U.S. military, and was totally inconsistent with its view of the deterrent relationship believed to be in operation.<sup>54</sup>

By the mid-1950s, Canadian officials began to reconsider their attitudes towards nuclear weapons and deterrence. This was linked to a series of developments — the seemingly endless war in Korea, the introduction of tactical nuclear weapons, and the enormous growth in stockpiles in both the U.S. and USSR. But what was most significant about the Canadian evaluation was the

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<sup>52</sup> These ideas were developed over the period 1951-1952, and relate to three different studies. The first was a report written while Brodie was a special consultant to the Air Force. See Kaplan, *The Wizards of Armageddon*, 47. The second was a RAND internal working document, “Must we shoot from the hip?”, that was prepared in September 1951. It has been re-printed in Trachtenberg, ed., *The Development of American Strategic Thought*. According to a separate study by Trachtenberg, these thoughts were developed still further and delivered in a lecture to the Air War College in April 1952. See *History and Strategy* (Princeton: Princeton University Press, 1991), 7-8.

<sup>53</sup> Kaplan has noted with respect to these writings that “in most quarters, Brodie and his reports were scorned.” Kaplan, *The Wizards of Armageddon*, 48. While the opposition of Air Force officials to Brodie’s writings is easily explained, the hostility that his ideas often generated at RAND is not. Even Steiner’s exhaustive study does not adequately explain the tension between Brodie and his peers at RAND.

<sup>54</sup> For more on these two reports, see Jockel, *No Boundaries Upstairs*, 61-71.



recognition of the dangers posed by the American doctrine of “massive retaliation”, and the subsequent realization that deterrence — which had become the *de facto* American (and Western) policy of the nuclear age — may not be a stable strategy of conflict avoidance.

*Canada’s reaction to massive retaliation and the 1955 External and National Defence studies*

The strategic doctrine that was to become known as “massive retaliation” was first pronounced by American Secretary of State John Foster Dulles in January 1954. In a speech before the Council on Foreign Relations, he declared that, from that point on, the U.S. planned to rely on a “deterrent of massive retaliatory power” to dissuade aggressors from hostile acts. Rather than the policy of containment, which was tailored to every provocation and demanded large and expensive conventional military deployments in many parts of the world (and which was essentially *reactive* rather than *proactive*), President Eisenhower was opting for the threat of total response tied to the protection of vital American interests.<sup>55</sup> The new policy was intended to protect and uphold the political status quo by the very magnitude of the threat, should the international equilibrium again be challenged by the Soviets.<sup>56</sup>

Canada’s reaction to the new American policy was swift and uncompromising. As the closest ally of the U.S., officials in Ottawa were incensed that no prior discussion of the speech had taken place (recall the earlier comments on the importance of consultation). Pearson’s thoughts were outlined in a memo dated 2 February, in which he took strong exception to the notion that the U.S. would unilaterally choose when to retaliate against the Soviet Union. As he wrote,

It is important to know what Mr. Dulles means by “our” in this context; especially when the “means” would appear to be largely atomic. Certainly, this new strategy makes full consultation — being asked rather than being told — more important than ever...It is also clear that the weapon of over-whelming retaliation, or the threat of it, is one which can only be exercised when the issue is clear-cut and decisive...If it

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<sup>55</sup> Philip Bobbitt, *Democracy and Deterrence: The History and Future of Nuclear Strategy* (New York: St. Martin’s Press, 1988), 36.

<sup>56</sup> For background on the doctrine of massive retaliation, see Gaddis, *Strategies of Containment*; Freedman, *The Evolution of Nuclear Strategy*; and Samuel Wells, “The origins of massive retaliation,” *Political Science Quarterly* (Spring 1981).

becomes a question of the atom bomb and all-out war, or nothing, it may be, too often, nothing.<sup>57</sup>

It is important to emphasize that last sentence, for in addition to Pearson's concerns over the need for consultation, the memo indicated Canadian apprehension regarding the wisdom of the general strategy, in particular, reservations over threatening atomic bombardment in response to minor Soviet transgressions. The comment is thus reminiscent of Pearson's 1951 telegram noted earlier. The memo made many of the points that were later repeated in Pearson's speech at the National Press Theatre in Washington, on 15 March. That speech attracted international attention, and led Secretary of State Dulles to issue a "clarification" on the American need to better consult with its allies.

The changes in American defence were also examined by the Joint Planning Committee, a DND committee that had representation from each of the services as well as from External Affairs. In a report written on 10 February 1954,<sup>58</sup> the Committee concluded that American defence changes as a result of the speech would be considerable, but that they had been rather poorly defined. While the Committee agreed that possible restrictions on the use of atomic weapons had been removed, it was not clear what kind of provocation would lead to their use in a future conflict. In a critical section, the report noted that "because of our close association with the U.S. in the military field, we may find ourselves involved in an atomic war without much consultation," an indication of just how unsure America's allies were over the question of future nuclear use.

But the most important finding of the report was the belief that the recent changes would lead to increased American pressure to reach some form of bilateral air defence command arrangement. In this regard, the document noted that it was now "inevitable" that Canadian and American forces would ultimately be integrated. While the reasons behind this change were not clearly stated, the report did suggest that with the recent improvements in Soviet force capabilities, the two North American countries needed to better pool their air defence resources to protect the air approaches

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<sup>57</sup> Pearson's memo is quoted at length by Eayrs. See *In Defence of Canada: Growing Up Allied*, 252-253.

<sup>58</sup> "A study of recent changes and trends in United States defence policy and the implications it might have on Canadian defence policy," File 112.3M2.009 (D260), Directorate of History (dated 11 February 1954).

to the continent. The study concluded with the suggestion that “every effort at every level” should be made to further improve information on American strategic thought, which could lead to an enhanced understanding of the future direction of U.S. defence policy.<sup>59</sup>

Canadian concerns over the Dulles’ massive retaliation speech were hardly unique. In fact, within days of the address, a variety of American analysts were offering their own critiques. Among such observers, the work of William Kaufmann should be highlighted, for he offered the first comprehensive analysis of the new doctrine in October 1954.<sup>60</sup> Still, not only was Pearson’s evaluation one of the first to be offered, but it was also unique in that it focused on the need for consultation in the nuclear age, and the dangers that unilateral American action might pose in a crisis.<sup>61</sup> Further, the JPC study approached the doctrine from a distinctly Canadian point of view, in an attempt to determine what impact it would have on Canadian defence policy. Thus, while the two documents may not qualify as constituting original contributions to the field, they demonstrate that American strategic doctrine was approached and judged from a distinctly Canadian perspective.

Canadian concerns regarding massive retaliation took many forms over the period 1954-1956. After the initial critiques were written, officials in both DND and DEA began reconsidering the central Canadian concern of the nuclear age, namely, how could stability be best assured while at the same time ensuring that key Western interests were protected? The observations offered differed somewhat from those developed in the U.S., and once again reveal an effort at recognizing Canadian interests while at the same time identifying with the larger goals of the West. For the

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<sup>59</sup> On 12 February, Lt-General Guy Simmonds, the Chief of the General Staff, wrote a memo in which he strongly criticized the JPC report. Simmonds called the study “superficial”, and concluded that in spite of the recent statements from Washington, American defence policy had actually changed very little. Untitled memo, File 112.3M2.009 (D260), Directorate of History.

<sup>60</sup> William Kaufmann, “The requirements of deterrence” (Princeton: Center of International Studies, Memoranda No. 6, 1954). Kaufmann’s central argument was that in a foreign policy crisis, the U.S. would have no choice but to make good on its threat, for if it did not it would lose credibility. On the other hand, Kaufmann realized that if the U.S. did retaliate, it would almost certainly suffer much the same fate as a result of the inevitable Soviet retaliation. The paper was later re-printed in book form. See William Kaufmann, ed., *Military Policy and National Security*.

<sup>61</sup> In contrast, Britain’s response to the speech was wholly enthusiastic, as since 1952 (and the release of the Global Strategy Paper) it had repeatedly argued that the West’s nuclear superiority needed to be better exploited. For early British attitudes on nuclear strategy, see I. Clark and N. Wheeler, *The British Origins of Nuclear Strategy* (Oxford: Oxford University Press, 1989).

comments that follow, attention will focus on two critical 1955 studies, which together reveal how Canadian attitudes on strategic matters had evolved and matured by mid-decade.

*The 1955 External study*

In March 1955, a document prepared by George Ignatieff, a senior official in External Affairs, attempted to answer many of the questions raised over the previous few years. Titled “The strategic concept of the nuclear deterrent,” the study represented both an additional investigation of American nuclear strategy as well as an indication of how Canada could most effectively contribute to strategic stability and ensure a strong Western defence posture.<sup>62</sup>

The report began by noting that “the main aim of Canada and its allies...is to preserve peace without sacrificing any vital interests.” The principal means of maintaining peace was believed to be through the operation of strong nuclear forces and the resulting deterrent strength that came from them. However, recognizing that nuclear deployments could also *decrease* security as well as increase it (depending, of course, on who was doing the deploying), the document noted how the Soviet Union’s growing nuclear capability meant that North America was no longer immune from a devastating first strike. Rather than interpreting this development as purely de-stabilizing (as many American analysts of the time were), however, the study noted that a curious form of strategic stability had taken hold, one based on the mutual fear of retaliation. In a passage that built on the observations on deterrence offered a few years earlier, the report noted that

The United States and Soviet Union now confront one another with the prospect of mutual devastation by thermonuclear and nuclear weapons. It is this prospect, and not the mere existence of such destructive power, which is the deterrent to war...If the strategy of the nuclear deterrent works, it is because it strikes fear and uncertainty in the calculations of a potential aggressor...The strategy of the nuclear deterrent, as its name implies, makes sense as a strategy for the prevention of war, not as a strategy for fighting one.<sup>63</sup>

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<sup>62</sup> “The strategic concept of the nuclear deterrent,” PAC, RG 25, vol. 4541, file 50030-1-40, part 2 (dated 26 March 1955).

<sup>63</sup> *Ibid.*, 6.

After further comments about the nature of the deterrent relationship, the document went on to examine NATO thinking regarding nuclear weapons (in particular, the implications of MC 48), the need for increased air defence cooperation between Canada and the U.S. (see below), and the political and military implications of the imminent introduction of ballistic missiles.

But the report's most important section dealt with the ways in which Canada could most effectively contribute to the overall deterrent power of the West. It identified two such measures: (1) by the provision of facilities on or over Canadian territory; and (2) through continental defence arrangements with the United States. With regards to the first point, Ignatieff noted that ensuring that the American Strategic Air Command (SAC) could fulfil its mission was *as much of a Canadian concern as an American one*, as it was through SAC that much of the deterrent power of the West was based. As Canada was obligated under NATO to protect and strengthen the West's deterrent posture (an obligation that had been reconfirmed at both the Cabinet Defence Committee and the Chiefs of Staff), the document argued that Canada should cooperate with American requests that were designed to improve SAC's capabilities (i.e., refuelling in the Canadian north, lengthening some runways at Canadian bases, etc.). The essential point in judging such requests, according to Ignatieff, was that improving deterrence served Canadian as well as Western interests, and that this needed to be better appreciated so that appropriate Canadian actions could be taken in the future.

As for the second point, the paper noted that "the existing arrangements as a framework for continental defence are open to serious question(s)." Adding to the emerging chorus of voices that were pressing for some form of air defence change,<sup>64</sup> it argued that the recognition of a boundary for the purposes of air defence made little strategic sense, and moreover, it forced defence planners to treat the defence of the continent as if it were two separate problems, rather than a single, interconnected one. The document further contended that the present system of air defence not only jeopardized the survivability of American forces, but that it also posed particular dangers to Canada, as the lack of command arrangements would have an "adverse affect" on air operations over Canada in any future conflict. It thus served neither country's air defence forces very well. The study

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<sup>64</sup> By 1955, military officials in both countries had concluded that a bilateral command was necessary. However, the stumbling block remained the political storm that such an arrangement would undoubtedly ignite in Canada. For more on the air defence developments of the time, see Jockel, *No Boundaries Upstairs*, Chapter 5.

concluded that air defence cooperation and command arrangements with the U.S. were necessary actions that would serve several Canadian interests as well as ensure a continued Canadian role in the defence of North America.<sup>65</sup>

The study clearly satisfied at least the first of the criteria established earlier to indicate independent Canadian strategic thought, that being it approached issues from a distinctly Canadian point of view. As for the second consideration, making a unique contribution to the field, this question will be examined below.

Rather than offer answers in all areas of defence, however, this paper specifically recognized that more study was needed with regards to the military and security aspects of contemporary defence problems. In many respects, it paved the way for the DND studies that quickly followed.

#### *The 1955 DND study*

Just a few months after the External report was completed, a major DND review of Canadian defence policy was undertaken that attempted to answer some of the questions raised in the External study. Titled “Future Canadian defence policy” and prepared by the Directorate of Military Operations and Plans (which operated under the authority of the Army), this study’s aim was stated in the opening paragraph — “to determine what changes, if any, are required in Canadian Defence Policy because of the increasing threat against North America.”<sup>66</sup> Readers should note the basic difference in outlook of this study, which explicitly recognized that changes in Canadian defence might be required in light of rapid shifts in the international security environment.

The report’s principal focus was on the emerging requirements of the air defence mission, and how these were changing in response to rapid adjustments in the perception of threat. Like the DEA study, this report noted that deterrence remained the best means of avoiding conflict with the USSR, and that Canada needed to cooperate with the U.S. in those tasks that improved the operational capability and credibility of SAC. The report further argued that as weapons stockpiles

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<sup>65</sup> This particular point is important, as it demonstrates that as early as mid-1955, External officials were actively considering some form of air defence command arrangement with the U.S. (a point that was to become very controversial in the aftermath of the NORAD signing).

<sup>66</sup> “Future Canadian defence policy,” File 112.3M2.009 (D147), Directorate of History (dated 14 July 1955).

on both sides grew, an increasing reluctance to use such weapons would develop, given the amount of damage that could result from any such use.<sup>67</sup>

However, where this report differed from prior studies was in its assessment of the present stability of deterrence, and the chances of a successful challenge of the West's defence posture. Building on observations that had first been offered in the Department *as early as 1953*,<sup>68</sup> the study ignored conventional thinking that took for granted that the West would always act first in a crisis, and instead considered the possibility that the Soviet Union might enjoy the benefit of strategic surprise. In such a scenario, the study concluded that *deterrence was surprisingly fragile, for if the Soviets could destroy a large part of SAC's force on the ground, there would be little left to threaten them with in the way of retaliation*. As the report noted, "should the Soviet leaders ever conclude, rightly or wrongly, that by an attack on North America they could destroy a major part of SAC before it could retaliate effectively, there would be little left to deter them from war."<sup>69</sup> From this observation came the realization that deterrence was not stable, and that the West needed to take precautionary actions that would improve this situation.

The possible vulnerability of American SAC bases to pre-emptive Soviet attack was being recognized at much the same time in the United States (see below). Nonetheless, one can scarcely overstate the importance of the issue, as the entire Western defence posture was predicated on the assumption that the West had invulnerable nuclear forces that could withstand any conceivable Soviet first strike. At a time when deterrence had been accepted as the West's principal strategy of conflict avoidance with the Soviet Union, the DND study questioned some of its core assumptions.

From this analysis, several conclusions were reached. As SAC bases were potentially vulnerable, continental air defence needed to be vastly improved. In reaching this decision, the study repeated what had been argued before by officials in both DND and DEA. However, this report, unlike many of its predecessors, carefully examined both the military and political

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<sup>67</sup> *Ibid.*, 5.

<sup>68</sup> An October 1953 memo prepared by General Foulkes had noted that "if the Soviet Union was successful in carrying out a surprise raid on all SAC bases and catching the aircraft on the ground, the retaliatory power of the U.S. might be seriously reduced." See "Reassessment of the risk," File 73/1223 (Raymont collection), file 89, Directorate of History.

<sup>69</sup> "Future Canadian defence policy," 30.

implications of any air defence command arrangement with the United States. It concluded that, while Canada could conceivably allow the U.S. to both unilaterally build a system of air defence and take over the air surveillance role over Canada, the *political costs* of this option far outweighed any possible benefits in terms of financial savings.<sup>70</sup>

The study thus called for an increased North American air defence effort, one which would include more interceptors, missiles, greater radar facilities, increased personnel, and of course, some type of command authority with the U.S. While it recognized that such a system would be useless against the future threat posed by missiles, it observed that to refuse action for this reason “would simply invite the very attack we are seeking to avoid.” It called for Canada to take full part in this effort, while at the same it recognized that a re-examination of other defence roles may become necessary as a result.

In a passage that is almost as relevant to the Canadian defence environment of the mid-1990s as it was 40 years earlier, the study closed with the following paragraph:

the basic conclusion to be drawn from this paper is that...the time has come for Canada to determine realistically what its peacetime defence capabilities are, as a first step toward initiating a defence programme appropriate to those capabilities. Only in this way can we expect to convince our Allies, particularly the U.S., that we are in fact pulling our full weight in the joint defence effort, and thus put ourselves in a sound position to protect our national and international interests including our sovereignty.<sup>71</sup>

In summary, The DMO & P study argued that: (1) SAC bases were potentially vulnerable to a Soviet first strike; and (2) as a result of this, deterrence itself was fragile. To help counter this situation, continental air defences needed to be improved. While, like the DEA study, it is apparent that the report examined issues from a Canadian point of view, it remains to be determined whether

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<sup>70</sup> With regards to these costs, the report noted that “Canada would become in international eyes, and to some extent in effect, a mere satellite of the U.S. if the latter were left to proceed alone...In short, Canada’s international position and her existing cordial relations with the U.S. would probably be seriously damaged by such a course of action.” It is ironic that in the aftermath of the NORAD signing, critics made much the same argument in *opposition* to the agreement.

<sup>71</sup> “Future Canadian defence policy,” 32.



the observations on deterrence can be considered a unique strategic contribution. To establish the originality of these observations, some brief remarks on the evolution of deterrent thinking in the U.S. are required.<sup>72</sup>

*American thinking on SAC vulnerability and the nature of deterrence*

The principal American strategist who investigated SAC base vulnerability was Albert Wohlstetter. A mathematician by training, Wohlstetter came to RAND in 1951 and quickly began work on a study that examined the security of air bases from attack. The study's operating assumption was that the Soviet Union — not the U.S. — would attack first in a future conflict, a premise that was believed to be so dubious at SAC that even *considering* it was virtually tantamount to national treason.<sup>73</sup>

Wohlstetter's principal conclusion was that the Strategic Air Command, which at the time was relying on using overseas bases from which to fly nuclear bombing missions against the Soviet Union,<sup>74</sup> was vulnerable to a surprise Soviet attack. He argued that only 120 bombs — just a small percentage of the total Soviet force by that time — could destroy up to 85 per cent of SAC planes

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<sup>72</sup> It is important to note that the observations offered in both the External and DND studies were not made in isolation. For example, the recognition of SAC's vulnerability was indicated at a meeting of the Chiefs of Staff held on 28 January 1955, at which time the Committee approved the following recommendation: "Because the threat of massive nuclear retaliation is now the major deterrent to war, and the Strategic Air Command is the primary agent by which retaliation may be effected, *the protection of SAC becomes one of the first priority tasks for the air defence commanders of both countries.*" Further observations on the issue were offered on 1 November 1955, when the Chief of the Air Staff, Air Marshall Slemon, noted that protecting SAC bases "was as vital to Canada as (it was) to the U.S."

<sup>73</sup> SAC Commander General Curtis LeMay was highly critical of studies that examined SAC vulnerability. As Kaplan noted, LeMay made no secret of the fact that in a serious crisis, he fully intended to give the attack order to the forces under his command *with or without* political approval from Washington. Indeed, LeMay is quoted as saying in 1957 that "if I see that the Russians are amassing their planes for an attack, I'm going to knock the shit out of them before they take off the ground." Kaplan, *Wizards of Armageddon*, 134.

<sup>74</sup> Until the arrival of the B-52 in 1956, the Air Force's "mobility plan" envisaged flying SAC units with their equipment to overseas bases, then conducting repeated strike missions from those bases. It was estimated that SAC would need approximately *one week* to get the bases fully operational and perform its planned mission.

as they sat on overseas airstrips.<sup>75</sup> The result of this investigation was a top secret study completed in April 1954, titled “The Selection and Use of Strategic Air Bases.”<sup>76</sup> Wohlstetter’s major recommendation was that early warning radar systems around air bases needed to be improved, and that SAC overseas bases should primarily be used for refuelling, not as a base for complete operations.<sup>77</sup>

While the Wohlstetter report attracted considerable attention at the government level, it was some time before it was formally accepted. Indeed, for much of the ensuing 18 months after its release, the RAND team that Wohlstetter led was constantly rebuffed by both Air Force and Department of Defense officials, who found an array of flaws in both the study’s methodology and conclusions. The reaction reveals that there were many people in official capacities who did not wish to hear that the central tenant of U.S. defence policy may have been based on a faulty premise.<sup>78</sup>

The Records of the Joint Chiefs of Staff in Washington indicate that the notion of SAC base vulnerability first attracted official attention in October 1955, *some five months after the DND study*. In a memo for the Chairman of the JCS, written by Air Force Colonel William Moore, it was observed that “SAC is vulnerable if tactical warning only is received”, and furthermore, a wide array of corrective measures, including dispersal and advanced equipment, were being considered in reaction to the RAND report.<sup>79</sup> At the same time, the document clearly indicates the general

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<sup>75</sup> Kaplan, *The Wizards of Armageddon*, 99.

<sup>76</sup> Albert Wohlstetter, Fred Hoffman, Robert Lutz, and Henry Rowen, *Selection and Use of Strategic Air Bases* (Santa Monica: RAND Corporation, R-266, April 1954).

<sup>77</sup> Readers may have noted that the DND study was concerned with the vulnerability of American air bases, while Wohlstetter’s examined the security of those overseas. The difference is likely attributable to the fact that DND was not likely informed of the intricacies of the SAC war plan. Despite this difference, the central concern of both was base vulnerability, and thus I do not feel that the distinction is very important.

<sup>78</sup> Kaplan has noted that the Air Force disliked the very concept behind the RAND study. If SAC was so vulnerable, so the Air Force counter-argument went, then what was needed was more and better bombers, not a defensive plan that was still open to attack. It might be noted that SAC ultimately accepted something of a compromise — it did get better bombers but it also agreed to pursue some defensive measures.

<sup>79</sup> “NSC briefing on the vulnerability of SAC,” National Archives and Records Administration (NARA), RG 218, Admiral Radford’s files, 1953-1957, Box 37, File 381.

reluctance of the Joint Chiefs to admit to the basic conclusions of the RAND study. In fact, it was not until July 1956 that the Air Force and the Joint Chiefs agreed on a series of measures that alleviated some of the concerns identified in the Wohlstetter report.<sup>80</sup>

The above discussion indicates that Canadian defence officials recognized SAC base vulnerability *at roughly the same time as their American counterparts*. While members of the civilian defence community in the U.S. were the first to appreciate the importance of the issue, it was some time before the matter was officially recognized in Washington. In fact, it appears that DND officials may have accepted SAC vulnerability slightly prior to DoD officials, although greater examination of the American records is required before making definitive observations in this regard. Still, the principal conclusion from this discussion is that Canadian officials identified this concern while it was still fairly novel, and while it cannot be deemed a unique contribution, it reveals Canadian awareness and sensitivity to one of the most vexing strategic problems of the day (by itself a considerable challenge to the passivity of Canadian officials asserted in previous studies).

As for the fragile nature of deterrence asserted in the DND paper (an off-shoot of the vulnerability argument), this notion did not attract widespread attention until the 1959 publication of Wohlstetter's "The delicate balance of terror."<sup>81</sup> This paper argued that unless nuclear powers had secure second-strike forces, the nuclear "balance" was more imagined than real. While the article touched off a national debate (and somewhat of a panic) on the subject, the stability of deterrence had been commented on before, in particular by the 1957 Gaither Committee,<sup>82</sup> which had concluded that vulnerability to a Soviet attack placed the U.S. in a dangerous and exposed position, one that could only be eradicated through a massive programme of military expansion. Once again, the Canadian recognition of a strategic issue was articulated at roughly the same time as in the United States.

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<sup>80</sup> See "NSC briefing on the vulnerability of SAC," NARA, RG 218, Admiral Radford's files, 1953-1957, Box 36, File 381.

<sup>81</sup> "The delicate balance of terror," *Foreign Affairs* 37 (January 1959).

<sup>82</sup> Security Resources Panel, *Deterrence and Survival in the Nuclear Age: Report to the President*, (Washington: Office of Defence Mobilization, Nov. 1957). In point of fact, one could argue that this argument was first articulated in the 1951 Project Charles report and its 1952 successor, Project East River, both of which stressed the dangers that the U.S. faced and the advantages to be offered through early warning.

Lastly, some further comments might be offered on the evolution of American thinking on deterrence, and in particular the conception of the mutual dangers posed by nuclear weapons. As noted earlier, the enunciation and acceptance of the doctrine of massive retaliation in 1954 indicated that, at least officially, the U.S. continued to view deterrence as largely an American-driven concern. However, there were several civilian analysts who recognized the flawed conception of deterrence that underlay that doctrine.

Foremost among such analysts was Bernard Brodie. It was noted earlier that in 1946, Brodie had recognized the mutual dangers of any nuclear exchange. His thinking on the issue continued to evolve throughout the 1950s, and his writings reveal an impressive depth and sophistication. In a January 1954 article titled “Nuclear weapons: Strategic or tactical?”, Brodie built on his earlier observations regarding the futility of planning for nuclear war.<sup>83</sup> Written at a time when thermonuclear weapons were being introduced into national arsenals, Brodie noted that the power of such weapons “is likely to be excessive in terms of any reasonable war objectives we might have.” Moreover, he argued that “within a relatively few years Soviet capacity to injure us and our allies through such means will at least rival our capacity to injure them.”<sup>84</sup> In this article, then, Brodie re-introduced the concept of national objectives in war (something that had been virtually absent in much American strategy), and asserted that the traditional balance between objectives and costs had been ruptured as a result of the nuclear revolution.

In a later 1954 article, “Unlimited weapons and limited war,” Brodie repeated many of his observations in even stronger language, noting that “when we talk about an unrestricted general war we are talking about a catastrophe in which there are no predictable limits.”<sup>85</sup> The article went on to argue that the U.S. required military options in addition to the “spasm” nuclear attack then being planned, a notion that heralded an emerging literature in limited war studies (and which was ultimately accepted as formal American policy by Secretary of Defense Robert McNamara in 1961). Brodie’s thinking on the issue reached its natural conclusion in his 1955 article, “Strategy hits a dead

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<sup>83</sup> Bernard Brodie, “Nuclear weapons: Strategic or tactical?”, *Foreign Affairs* 32 (January 1954).

<sup>84</sup> *Ibid.*, 227.

<sup>85</sup> Bernard Brodie, “Unlimited weapons and limited war,” *The Reporter* (18 November 1954), 16.

end,” which asserted that the revolution in firepower had eliminated any traditional notion of victory in war, and had led, in fact, “to the end of strategy as we have known it.”<sup>86</sup> These articles all led to his 1959 book *Strategy in the Missile Age*, which is generally regarded as the definitive post-war work in the field. The book’s central premise was that deterrence was fallible, and that the U.S. needed to consider alternative strategies for dealing with the Soviet Union. While Brodie’s thinking on deterrence was somewhat different than the one presented in the Canadian studies, one can see similarities with the manner in which the concept was appreciated by officials in both DEA and DND.

This comparison of Canadian and American thought reveals that Canadian officials identified some of the central concerns of the nuclear age at roughly the same time as American analysts, and perhaps slightly before they were officially recognized at the American government level. While Canadian contributions may not have been as sophisticated or as comprehensive as their American counterparts, the study reveals that recognizing and writing about these concepts was hardly an American preserve. Thus, while other countries may have lacked the sophisticated security apparatus that the U.S. had, this does not appear to have been required to appreciate some of the basic concepts of the period.

Having examined Canadian thinking with regard to nuclear weapons, American nuclear doctrine, and the nature of deterrence, attention will now turn to a series of DND air defence studies completed in the latter part of the decade. Following this discussion, some final observations will be offered.

### *The DND air defence studies*

By the late-1950s, a series of DND studies, specifically designed to examine the problems of air defence, were completed.<sup>87</sup> Readers should recall that at this time, the Canadian government was faced with some very difficult procurement issues, in particular, decisions regarding the Avro Arrow

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<sup>86</sup> Bernard Brodie, “Strategy hits a dead end,” *Harper’s Magazine* (October 1955), 36.

<sup>87</sup> The studies to be examined in this section were all concerned with the procurement issues of the day, *not* the air defence command arrangement then being negotiated with the U.S. The latter topic also attracted considerable study in the department, and is the subject of a separate chapter in the author’s dissertation.

and the BOMARC missile. *All* of these studies recommended that the Arrow should not be a priority for a combination of strategic and financial reasons, and thus gave Prime Minister Diefenbaker several rationales for the decision that was announced in early 1959. In addition, each made further observations on deterrence and the nuclear balance, observations that built on those offered in previous years.

The first of the studies was a comprehensive review of the Arrow programme, completed for the Chiefs of Staff Committee on 19 August 1958.<sup>88</sup> The report examined the Arrow from a variety of different perspectives — i.e., its financial cost, expected utility, the threat it was designed to counter, how well it fit into the larger Western defence concept, etc. It systematically and strategically reviewed the Canadian concept of air defence and the Arrow's role in the future system. While it was clearly complimentary of the aircraft's performance potential, it observed that the strategic necessity for the plane was lacking. This was the result of the fact that, according to Canadian intelligence, missiles were expected to constitute the principal threat by the early-to-mid 1960s, a threat which the Arrow could not counter (see below). The study concluded that because of the "diminishing requirements" for manned interceptors, the changing technical nature of the threat, and the project's "exorbitant" costs, the plane could not be supported. This recommendation was reached on the basis of a Canadian appreciation of the international environment, and reveals that several factors raised difficulties for the project.

The Arrow study was followed by a report titled "Future Canadian air defence policy," which was prepared by R.J. Sutherland of the Canadian Army Operational Research Establishment (CAORE) in October 1958.<sup>89</sup> This paper supported the findings of the Arrow study, and concluded that with the introduction of ballistic missiles into operational inventories, further investments in air defence no longer made strategic (or financial) sense. However, the report did suggest that increased funding of anti-ballistic missile systems (ABMs) was required, and that Canada had an important role to play in this field. The era of "mutual deterrence", which had been discussed in Canada since

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<sup>88</sup> *Report of the Development of the CF-105 Aircraft and Associated Weapon System, 1952-1958* (prepared for the Chiefs of Staff Committee, August 1958). From File 73/1223 (Raymont Collection).

<sup>89</sup> "Future Canadian air defence policy" (prepared by R.J. Sutherland), File 112.1.003 (D14), Directorate of History (dated 27 October 1958).

at least 1951, was now firmly at hand, with the result that a comprehensive re-examination of Canadian defence and security policy was required. In a critical section, the report noted that

the structure of Canadian military forces should be immediately re-examined in the light of the changed strategic situation. In particular, the allocation of first priority to the limited war and cold war capabilities of Canadian military forces should receive serious consideration.

While Sutherland did not specifically identify defence tasks that were open to question, it is clear that he believed that Canada's forces in Europe as well as the air defence mission needed to be re-considered in light of the altered strategic landscape.

Lastly, the DRB's principal air defence study of the period, "Some considerations affecting air defence policy," was completed in February 1959.<sup>90</sup> This report also began by noting that the introduction of missiles had made air defence an increasingly problematic exercise, in that it was virtually impossible to prevent large numbers of nuclear weapons from attacking targets in North America. This study was also the first in Canada to explicitly identify the emerging concept of mutual assured destruction (MAD). As the report noted, "from 1965 onwards, it appears that there will be enough missiles available for either side to achieve virtually complete destruction of the other, *irrespective of who takes the initiative.*"

In light of these developments, the study identified two air defence roles that Canada should concentrate on: (1) improving the early warning network covering the northern approaches to the continent (including the ballistic missile early warning system); and (2) providing sufficient active defences to discourage a small surprise attack against SAC bases. The report recognized that changes in technology had transformed the prospects for air defence, and this called into question a long-standing Canadian defence role.<sup>91</sup>

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<sup>90</sup> "Some considerations affecting air defence policy," File 73/1223 (Raymont collection), file 14, Directorate of History (dated 12 February 1959).

<sup>91</sup> Concern over the Arrow can be traced almost to the project's birth, and by mid-decade critics were loudly calling for its cancellation. Representative of such calls, Lt-General Simmonds, Chief of the General Staff, noted at a Chiefs of Staff Committee meeting in early 1955 that the programme was "wrong in principle". Arguing that the introduction of guided and ballistic missiles would make interceptors obsolete, Simmonds contended that the Arrow would offer "no return for a very large investment" (Minutes from the 574 meeting, 11 February). Simmonds comments indicate the *inter-service* nature of the Arrow debate, as

This brief review of three air defence studies reveals that Canadian officials made recommendations on procurement issues on the basis of their own analysis of the military/technological revolution. In this regard, it might be noted that Canadian and American officials came to rather different conclusions on one key aspect of this revolution. While the latter estimated that missiles would be pre-dominant by the mid-1960s, they also believed that Soviet bomber forces would remain an important part of the threat well into the 1960s, and thus an anti-bomber weapon (preferably an interceptor) would still be required for many years.<sup>92</sup> Canadian officials viewed the issue differently, and concluded that Soviet missile deployments would result in a total re-allocation of resources away from the bomber programme.<sup>93</sup> There was thus little need to invest in costly interceptors.

Regardless of the precise nature of (or the reasons behind) this intelligence difference, the air defence studies once again reveal that issues were considered from a Canadian point of view. Each was concerned with the question of how Canada could best contribute to air defence at a time when the meaning of the term had been thrown into question. While the recommendations, in retrospect, may be open to challenge, it bears recalling that this was a period of rapid technological change, change that negated old defence roles and created new ones. Lastly, the studies challenge one of the long-standing myths of Canadian defence — that it was American pressure that led the government to cancel the Arrow. In contrast, the studies indicate that the decision may have been the result of a purely Canadian appreciation of the strategic situation. In any event, there is not the slightest evidence in the documentation that suggests that the U.S. had anything to do with the Canadian decision.

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both the Army and Navy were concerned that the aircraft would consume a disproportionate share of the total defence budget (a concern that was not unfounded).

<sup>92</sup> This message was directly transmitted to Canada in August 1958, at a meeting between the Canadian Minister of Defence George Pearkes and his U.S. counterpart, Neil McElroy. At this meeting, U.S. officials stated that regardless of the production schedule of Soviet ballistic missiles, “a substantial bomber threat would continue for at least ten years,” and therefore there was a continuing need for anti-bomber forces. See untitled telegram, from the Canadian Joint Staff in Washington to General Charles Foulkes, 6 August 1958. File 73/1223 (Raymont collection), file 11, Directorate of History. At the time of the meeting, the U.S. was pursuing no less than four separate interceptor programmes — the F-101, F-102, F-106, and F-108.

<sup>93</sup> This was the conclusion reached in a report jointly prepared by the Joint Intelligence Committee and the JPC, titled “The threat to North America, 1958-1967.” File 112.3M2.009 (D260), Directorate of History.



### Part 3. Observations and Conclusions

In 1971, Colin Gray observed that “without the protection of a living and fairly independent strategic debate, Canadian governments have been at the mercy both of foreign governments, strategic theory better versed in the subject, and of individual services pursuing military technological modernization.”<sup>94</sup> This paper has revealed that Canadian officials did recognize and articulate strategic interests during the 1950s. While those interests were, at times, similar to those of our allies, this should not be interpreted as indicating that they were not fundamental Canadian ones as well. Indeed, one of the goals of the paper has been to reveal that in the nuclear age, the ability of countries to formulate their own strategic interests was limited. Canada, as a founding member of the Western alliance and a partner, with the U.S., in the defence of North America, found this task more difficult than most. Having noted that, the paper has demonstrated that Canadian officials did articulate some distinctly Canadian strategic concerns. While I have concentrated on thinking as it pertained toward nuclear weapons, deterrence, and air defence, there are a variety of other areas which could have been examined.<sup>95</sup>

This paper has noticeably not examined a larger issue which is of considerable importance — whether Canadian strategic thinking had any influence on actual defence policy decisions and outcomes. Length permitting, some observations on this question could have been offered. Clearly, this issue is quite critical, for it is one thing to demonstrate the existence of some interesting departmental studies and reports, but quite another to document that those same reports actually had an influence on government decisions. Suffice it to say that my preliminary investigation reveals a link between the departmental studies and the defence policies that were ultimately adopted by the Canadian state (the air defence studies noted above being just one example).

In the post-war period, the principal Canadian interest (both political *and* military) was international stability and order. This was articulated in both policy papers and various speeches

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<sup>94</sup> Gray, “The need for independent Canadian strategic thought,” 12.

<sup>95</sup> For example, the author’s dissertation examines Canadian thinking on arms control and disarmament, the acquisition of nuclear weapons, peacekeeping, and thinking as it related to specific defence roles and tasks.

by ministers. Canada could focus on the international environment because, unlike most states, Canada's security was not directly threatened by hostile neighbours or unlawful domestic organizations, but rather by the prospect of an international conflict involving the superpowers. There was thus no inherent contradiction between Canada's alliance interests and its domestic security interests. Rather, the two could — and did — advance Canada's principal interest.

And yet, it would surely be somewhat disingenuous to argue that the two never conflicted. There were occasions during the 1950s when Canada needed to better examine its interests, and determine whether they were furthered by alliance decisions. One specific example regarded the role of the RCAF in Europe, and whether the adoption of the nuclear strike role made strategic — or Canadian — sense. In this regard, there certainly was an opportunity for Canadian officials to more carefully review the NATO request and make recommendations accordingly.

In aligning with the U.S. and committing itself to two American dominated military organizations, Canada implicitly adopted the basic military strategies of the West. The cornerstone of those strategies, and hence of Canadian security, was nuclear deterrence, and the means to this end were the strategic nuclear weapons of the United States.<sup>96</sup> Protecting those weapons — and thus enhancing the credibility of the deterrent — was a Canadian interest, not one forced upon us by the external environment. These developments, as demonstrated, were reflected in the writings of officials in both the Department of National Defence and External Affairs. While those writings may not reveal a totally unique body of thought distinctive to Canada, they certainly *do* reveal that the critical issues of the day were evaluated on the basis of national interests and concerns, not on what other countries desired of Canada.

By revealing such interests, this paper has implications outside of the specific area of Canadian security and defence. First, it indicates that Canada may have had considerably more latitude in its thinking during this period than it is generally given credit for, a development that has ramifications for other American allies of the time. Second, it helps establish the factors that influenced Canadian thinking, in addition to the U.S. This has implications for the larger study of Canadian policy making. Third, and perhaps most important, the comparison of Canadian and American thought adds to our broad understanding of this bilateral relationship, and may lead to an

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<sup>96</sup> Middlemiss and Sokolsky, *Canadian Defence: Decisions and Determinants*, 212.

enhanced appreciation of the factors that encourage both similarities and differences in analysis between the two countries.

It is important to emphasize, therefore, that this paper has not been intended to be of purely historical interest. Rather, one of its additional goals has been to determine if it can tell us anything about the defence and security debate of today. While the issues are different (as are many of the key players), many of the influences and constraints are the same. Canada is still closely allied with both the U.S. and NATO, and it continues to derive its security policy through its ties to both. Furthermore, as in the 1950s, the external environment is today highly uncertain, and while the monolithic power blocs of the Cold War have disappeared, states are still faced with difficult security choices. How they reach those choices still carries enormous political importance. Thus, better understanding how and why Canada chose the defence options it did during the Cold War might alert us to similar debates at present, and if possible, help prevent Canada from making similar mistakes.

This examination of Canadian strategic thought reveals a country that was trying to determine where it could make its most effective contribution as a middle power. The Canadian experience over the decade was doubtlessly repeated elsewhere, as many countries were faced with the hegemonic strategic views of the United States. If the experience of the 1950s tells us anything, it is that Canada has security interests of its own, but that it still faces the challenge of convincing a generally disinterested populace that issues of security demand continuing attention and occasional action.