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A THEORETICAL INQUIRY INTO THE PROBLEMATIC NATURE OF CANADIAN DEFENCE POLICY

By

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B.A. Waterloo Lutheran University, 1971

THESIS

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Table of Contents

Abstract -

Acknowledgements -

List of Figures -

List of Tables -

Chapter I — Scope and Method of Inquiry - - - - - - - - - - - Page 1

General Statement
(1) An Analysis of the Problem
(2) The Use of Theory
(3) General Systems Theory as a Method of Inquiry
(4) Summary

Chapter II — The Development of Canadian Defence Policy - - - Page 24

The Perspective of General Systems Theory
(1) A Period of Dependence (1867-1940)
(2) A Period of Interdependence (1940-1968)
(3) A Period of Relative Independence (1968-)
(4) Summary

Chapter III — A Future for Canadian Defence Policy? - - - - - - - Page 59

Prefacing Remarks
(1) The Basic Incompatibility of Soviet Communism and Western Liberal Democracy
(2) US/Soviet Strategic Policy and Present Military Technology
(3) Recommendations in Canadian Defence Policy
(a) A National Security Council for Canada
(b) Strategic Re-organization and A Total Force Concept
(4) Summary

Chapter IV — Observations and Conclusions - - - - - - - - - - Page 89

Bibliography -

Abstract

This thesis attempts to analyze the problematic nature of Canada's defence policy by utilizing general systems theory as the prime method of inquiry. While much of the existing literature on Canadian defence policy is of a singular or partial nature, there is a need for a more holistic approach to the study of defence policy.

General systems theory, being a normative theory with a scientific base, assumes a holistic approach while offering explanations in behavioural phenomena as well as indicating possible future conditions.

This thesis examines the past and present of Canadian defence policy as seen in the perspective of ever-changing political, strategic and military conditions prevailing in the international systems environment. In a developmental sense, this analysis should be regarded as an ongoing process whereby a general theory has been utilized to explain and interpret existing data in such a way as to arrive at a new synthesis in the search for human knowledge.

Acknowledgments

I would like to express my gratitude to my thesis supervising committee; Professor Nicholas Nyiri, Professor Toivo Miljan and Professor John Redekop for the assistance and guidance that they offered throughout the course of this work. Also, I owe an infinite debt of gratitude to Ms. Charlotte Cox for her proficiency in typing this work.

List of Figures

Figure A-1 - Page 21

Figure A-2 - Page 67

Figure A-3 - Page 84

Figure A-4 - Page 85

Figure A-5 - Page 87

List of Tables

Nature's Hierarchy of Systems - - - - - - - - - - - - - Page 17

Ideological Table of Comparisons - - - - - - - - - - - Page 67 & 68

CHAPTER I

The Scope and Method of Inquiry

General Statement:

Canada's defence policy has shown itself to be problematic in nature as indicated by a long line of crisis situations that have occurred throughout the years. At present, no available inquiry on Canadian defence policy has utilized any particular scientific method to perform the dual functions of both explanation and recommendation. General systems theory is one particular scientific method of inquiry that enables the inquirer to make certain normative statements of recommendation while still obeying the demands of scientific analysis. The use of general systems theory to study the problematic nature of Canadian defence policy places the singular problem of defence in its broadest of all possible perspectives.

(1) An Analysis of The Problem

The first stage of any political inquiry is to observe those relevant facts that indicate that there is a problem worthy of such an inquiry. Secondly, relevant hypotheses should be drawn from the analysis of those facts which indicate the problem.[1]

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[1] F. S. Northrop, The Logic of The Sciences and The Humanities, Cleveland: The World Publishing Co., 1947, p. 29.

But what is it that makes a problem appear as requiring further inquiry? Philosopher John Dewey considered a problem to be a problem at the point that it was recognized as such.[2] Although Dewey confirmed that problem perception begins on a highly subjective level, inquiry begins when the individual observer finds something to be unsatisfactory. Inquiry can result from a physical experience or the acquisition of new information that makes traditional values and beliefs inadequate or places those values and beliefs in question.[3] Therefore having a problem is the first and necessary step in any inquiry. For without a problem, there is no need to carry out such an inquiry.

Once a problem has been recognized as a 'problematic situation', it must be reduced to those relevant facts that gave rise to the problem in the first place.[4] What this infers is a comprehensive description of those relevant facts that would indicate to the outside observer that a problem does indeed exist. In the political inquiry being attempted in this thesis, there are certain relevant facts that will be stated to indicate that Canada's defence policy is a problematic situation worthy of further inquiry.

There are certain documented case situations and relevant facts which indicate the problematic nature of Canada's defence policy.

During the Cuban missile crisis in late 1962, Canada found her

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[2] John Dewey, Logic: The Theory of Inquiry, New York: Holt, Rinehart and Winston Publishing Company, 1938, p. 108.

[3] F. S. Northrop, Op. cit., p. 17.

[4] Ibid., p. 34.

defence policy to be 'futile and unequal to an emergency situation'.[5] For example, Canada's armed forces were put on national alert a full forty-eight hours after the United States had placed its military forces on full national alert. Throughout the whole crisis situation, Canadian Bomarc missiles without nuclear warheads, remained on the ground virtually useless for any counter-offensive strategy.[6] As a result, Canada's defence against a Soviet nuclear attack relied solely on the reliability of the United States' massive second strike capability, namely its ICBM's and its missile launching submarines to counter this threat.[7]

This dependence on the United States offensive capability corresponds with the generally held belief that the United States is geographically committed to the defence of Canada.[8] Although there is a certain amount of logic in this belief, there is an equal amount of scepticism surrounding any such obvious truism. Since the early sixties, significant advances in weapons technology have placed in question those strategic arguments surrounding the long-range bomber as the chief weapon. These changes in weapons technology and resultant

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[5] R. Reford, Canada and Three Crises, Toronto: Canadian Institute of International Affairs, 1968, p. 3.

[6] Peyton Lyon, Canada in World Affairs, 1961-1963, Vol. XII, Toronto: Oxford University Press, 1968, p. 45.

[7] Lieutenant General E. M. Burns, Defence in The Nuclear Age: An Introduction For Canadians, Toronto: Clarke Irwin Publishing Co., 1976, p. 116.

[8] General R. J. Sutherland, "Canada's Long Term Strategic Situation" in International Journal (CIIA) Vol. XVII, 1961/62, p. 217
It is interesting to note that General Sutherland's remarks were made prior to the Cuban Missile Crisis in October of 1962.

strategies have played havoc with the Department of National Defence in its attempt to find an all-purpose weapon to substitute for the lack of a sound long range defence policy.[9]

Secondly, Canadian defence policy and other related issues have precipitated a series of major political crises throughout Canadian history. The conscription crises of 1917 and 1944, the controversial NORAD debate of 1957, the cancellation of the Avro-Arrow project in 1958 and the moral dilemma surrounding the nuclear weapons debate of the early sixties constitute the type of crises that have sprung from Canada's defence policy. Both the nature of these crises and the frequency with which they occurred would seem to indicate that further inquiry into the whole area of national defence is warranted.

Furthermore, there exists a general sense of confusion over what role Canada's defence policy should fulfil in terms of her foreign policy. Repeatedly, Canadian political decision makers have stated unequivocally that Canada's defence policy is 'derived directly from her foreign policy'.[10] Although this position would seem to represent what various Canadian governments intend to be the ideal, the past

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[9] John Sheltus, Toronto Star Magazine, Saturday, August 14, 1977, p. 12. Since unification of the Canadian armed forces in 1964, the Canadian government has religiously pursued weapons buying with cost effectiveness being the most influential factor in determining weapons choices. As a result, Canada's weapons arsenal offers limited supportive capability to its defensive obligations abroad. For example, the 'new' German Leopard I tank purchased by the Canadian government has become virtually obsolete before it could realize any appreciable use in the field. The CF-104 Starfighter was purchased in the early sixties with the purpose of fulfilling Canada's nuclear role in NATO but has required expensive moderation to match the governments desire to go non-nuclear in 1972.

[10] The Honourable George Pearkes, Minister of National Defence, April 1959, as quoted in R. Reford's "Making Defence Policy in Canada" in Behind The Headlines, Vol. XXIII (December, 1963), p. 15.

record has shown that the ideal has seldom corresponded to reality.

> "NATO had in reality determined all of our defence policy. We had no defence policy, so to speak, except that of NATO. And our defence policy had determined all of our foreign policy. And we had no foreign policy of any importance except that which flowed from NATO... It is a false perspective to have a military alliance determine your foreign policy. It should be your foreign policy which determines your military policy."[11]

As a result of the confusion surrounding this whole relationship between Canada's defence policy and her foreign policy, there is a further problem of 'priorities' involved when two groups compete for the same resources.[12] If the government perceives defence policy as flowing from foreign policy, then Canada's defence needs are channelled through foreign policy objectives which tend by their very nature to be 'ill-defined and capable of systematic expression only in terms of generalities.'[13]

Defence policy, unlike foreign policy, must be expressed in more precise terms as to be operational on a daily basis while foreign policy can assume more long range objectives. In this sense, Canada's defence policy and foreign policy have grown so far apart from each other as to be counter productive in their respective efforts to accomplish

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[11] The Right Honourable Pierre Trudeau, Prime Minister of Canada, Statements and Speeches, Ottawa: Queen's Printer, April 12, 1969, p. 4.

[12] Denis Stairs, "The Military as an Instrument of Canadian Foreign Policy" in H. Massey (ed.), The Canadian Military: A Profile, Toronto: Copp-Clarke Publishing Company, 1972, p. 91.

[13] Ibid, p. 87

similar objectives.[14]

Much of the research that has been done on Canada's defence policy has only partially succeeded in doing what is required for a truly scientific inquiry. The mere observation of the relevant facts surrounding any problem does not necessarily infer solutions to that problem.

> "The purpose of defence policy analysis as of all science, is to generate accurate predictions i.e. estimates of what will happen in the future based on characteristics of the present and past."[15]

Since many of the observations on Canadian defence policy span so many areas with such complexity, some theoretical framework is required to give these observations meaning. It is at this point in the inquiry that the application of theory and related hypotheses can play a significant part in furthering analysis. For 'theoretically inferred knowledge' is as essential to the process of inquiry as 'immediately apprehended knowledge'.[16]

(2) The Use of Theory

Once a factual analysis of the problem has been completed by a description of the relevant facts, the problem may still remain unresolved. It becomes apparent that something beyond the mere observation

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[14] Andrew Brewin, Stand On Guard: The Search For a Canadian Defence Policy, Toronto: McClelland and Stewart Publishing Company, 1965, p. 118.

[15] Davis Bobrow, The Components of Defence Policy, Chicago: Rand McNally Publishing Company, 1965, p. 2.

[16] F. S. Northrop, Op cit., p. 39.

of facts must be introduced into the inquiry. Most problems that are subjected to inquiry suggest certain explanations or solutions based upon the subject matter and the previous knowledge available to the inquirer. When these suggested explanations are translated into propositions, they are referred to as hypotheses.[17]

The introduction of concepts and hypotheses can bring order to a large collection of relevant facts but theorizing through the use of hypotheses can result in aimless wandering unless the systematic demands of scientific method are imposed upon the inquiry.[18]

The application of scientific method to any inquiry infers that certain facts are selected as relevant while other facts are excluded as being irrelevant. A continuous buildup of knowledge occurs throughout this process of moving from facts to theory to principle to new facts, new theories and new principles.[19] At each level of inquiry, a new theory based upon a broader interconnection of the facts will be drawn upon until the widest possible connection of the facts has been achieved.

The use of theory can be significant in developing human knowledge. The ideal type of theory, if any 'ideal' type could be found, would be capable of attaining the highest level of inquiry by connecting all the relevant facts while being firmly grounded in the

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[17] M. R. Cohen, E. Nagel, An Introduction To Logic and Scientific Method, New York: Harcourt, Brace and World Inc., 1934, pp. 200-201.

[18] Ibid, p. 394.

[19] Ibid, p. 396.

pure sciences. However, the pure sciences restrict themselves to directly observable entities and relations thus becoming descriptive and incapable of making predictions.[20]

It is scientific theory that speculates about facts and their relationships with each other while the pure sciences remain chained to observing the invariant relationships between objects.

> "A scientific theory defines phenomena and their relations through a set of propositions organized in a deductive logical form, from which are deduced general statements which assert that, given specific conditions and relationships, specific conclusions will ensue."[21]

However, most types of scientific theory are limited in both their scope and method of inquiry. The 'physical' scientific theories are confined to the mechanistic explanation of observable phenomena no matter how complex such a mechanism may be.[22] The abstract or 'mathematical' scientific theories attempt to draw out general principles by abstracting relations from the observable facts.[23]

In the area of political inquiry, many of the scientific theories that are empirically based tend to be partial theories that converge on some central point, each specifying one of the factors which plays a part

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[20] F. S. Northrop, Op cit., p. 115.

[21] Charles Reynolds, Theory and Explanation in International Politics, New York: Barnes and Noble Publishers, 1973, p. 322.

[22] M. Cohen, E. Nagel, Op cit., p. 398

[23] Ibid, p. 397

in the phenomenon which the theory is to explain.[24] Partial theories can be important for increasing human knowledge in the summative sense but they are found to be lacking in adding to our constituent knowledge of things and how they relate to each other as a whole. Also, there is limited understanding of what relationship these partial theories have with each other.[25]

What is needed in the field of political inquiry is the development of a general theory which would span all aspects of the inquiry while still explaining the specifics of the problem at hand. Canada's defence policy is one such problem area that could be more fully understood if its singular generalizations were interpreted in terms of how political systems function in their entirety.[26]

It is in this context of developing a general theory that general

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[24] A. Kaplan, The Conduct of Inquiry: Methodology For Behaviorial Science, San Francisco: Chandler Publishing Co., 1964, p. 298.
For example, the decision-making approach as developed by R. Snyder, H. Bruck and B. Sapin in their book, Foreign Policy Decision Making: An Approach To The Study of International Politics, New York: The Free Press of Glencoe, 1962, confines itself to one central process that occurs within the political system, namely decision-making (i.e. voting, legislating, administrating and adjudicating). The authors argue that there is not enough 'empirical data and preliminary conceptualization' to provide the basis for a general theory of international politics. It would seem to be their view that if enough partial theories could be developed to fill those gaps in human knowledge, then some type of general theory could be realized. This point of view is logical in the sense that most human knowledge has been derived from the building of new theories and hypotheses on top of older established theories and hypotheses. For further reference see ibid., pp. 25-26.

[25] David Easton, A Systems Analysis of Political Life, New York: John Wiley and Sons Publishing Company, 1965, p. 8.

[26] Ibid., p. 8.

systems theory is used in this thesis to study the problematic nature of Canadian defence policy.

(3) General Systems Theory as a Method of Inquiry

General systems theory is a normative theory with a scientific base.[27] It performs both an explanatory role as demanded by the pure sciences and makes predictions based upon an analysis of the observable facts. It qualifies as a general theory in that the range of its subject matter varies from the specific to the all inclusive while maintaining a high degree of consistency among its component parts.[28]

But, an important distinction must be made between systems theory as developed by David Easton and general systems theory as developed by the biologist, Ludwig von Bertalanffy. Systems theory infers 'a conceptual scheme, a state of mind or general orientation which serves as a jumping off place for more specialized political research'.[29]

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[27] Anatol Rapoport "Various Meanings of Theory" in J. Rosenau International Politics and Foreign Policy (3rd ed.), New York: Free Press Publishing Co., 1961, p. 51. General systems is normative in the sense that the basic inherent value of survival is superimposed as the 'true finality' of every open living system. All behaviour is explainable in terms of this 'true finality'.

[28] David Easton, Op cit., p. 7.

[29] A. Isaak, Scope and Method of Political Science: An Introduction To The Methodology of Political Inquiry, Homewood, Illinois: Dorsey Press Limited, 1969, p. 220.

System theorists like Easton do not base their conceptualization of 'the system' on any established scientific base.

General systems theory on the other hand, is deeply rooted in the l i f e sciences as indicated by von Bertalanffy's extensive observations of nature with his work in biology.[30] From these observations in biology, von Bertalanffy found that there are certain general phenomena that all living systems hold in common with each other. The principle governing these phenomena is referred to as isomorphism.[31]

There are approximately twelve recognizable isomorphic characteristics that re-occur in various living organisms regardless of their level of existence or complexity. These twelve isomorphic characteristics are the following:

(a) Progressive Differentiation - a movement from a more general and homeogeneous state to a more specialized and heterogeneous condition of existence.[32]

(b) Progressive Segregation - the system passes from a state of wholeness to a state whereby elements are arranged into independent causal chains.[33]

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[30]Von Bertalanffy draws some interesting parallels between certain recurring phenomenon in nature and the view of 'life' as a 'system property' in his earlier work Modern Theories of Development: An Introduction To Theoretical Biology translated by J. H. Woodger, London: Oxford University Press, 1933.

[31]L.Von Bertalanffy, General Systems Theory: Foundations, Development Applications (revised edition), New York: George Braziller Publishing Co., 1968, p. 81.

[32]Ibid., p. 211.

[33]Ibid., p. 68

(c) Progressive Centralization and Progressive Individualization

These two characteristics are combined because neither one can occur without the other. Progressive individualization is only possible if certain dominant parts in the system assume a dominant role and determine the behaviour of the whole. This constitutes progressive centralization.[34]

(d) Progressive Mechanization - 'The transition from undifferentiated wholeness to higher function, made possible by specialization and a division of labour'.[35]

(e) Competition Between Parts - The concept of competition is tied in closely with another isomorphic characteristic,growth. All open living systems having varying growth rates, experience competition for available resources among their own species as well as within themselves.[36]

(f) Domination of Parts - As the individual component parts of the system become more sophisticated in structure, they become progressively individualized because a few select parts tend to dominate the whole.[37]

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[34] Ibid., p. 73.

[35] Ibid., p. 213.

[36] Ibid., p. 65.

[37] Ibid., p. 73.

(g) Entropy - Negentropy

Entropy represents 'a constant and ongoing tendency within all open systems to move towards maximum disorder and breakdown'.[38]

Negentropy is the opposing tendency within every open system that moves the system towards maximum order thus maintaining the system.

(h) Initial Conditions - Final Outcomes

This isomorphic characteristic applies only to the higher class of open systems that display a dynamic teleology or directiveness of processes.[39]

Lower level systems with static structures have their final outcomes determined by their structure. However, the higher systems in nature's hierarchy with a certain level of awareness have the capability of having their behaviour determined by foresight of the goal. Initial conditions may influence behaviour but final outcomes are determined by the foresight of that final outcome.[40]

(i) Catabolic and Anabolic Rates of Reaction

The concepts of catabolism and anabolism are closely associated with the transmission of entropy between the open system and

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[38] Ibid., p. 39.

[39] Ibid., p. 78.

[40] Ibid., pp. 78-79.

its external and internal environments. The catabolic rate of reaction within every open system refers to the capability of the organism to channel energy into directions that promote maximum disorder. External threats to the system increases catabolism within the system. The anabolic rate of reaction counters the catabolic tendency within the system by channelling the available energy in directions that promote every open system's true finality, namely, its continued survival.[41]

(j) System Maintenance

Every open living system is constantly exchanging energy with its external and internal environments. Each system is 'self regulating in the sense of maintaining certain variables and directing the organism towards a desired goal.'[42] Certain regulators exist within every open system, be they of a natural or artificial nature, that move the system toward equilibrium or a steady state condition. In chemistry and biology, the overall process which maintains the material and energy activities at a constant level is referred to as homeostasis.[43]

(k) Growth and Development

It has been established in every scientific and social

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[41] N. Nyiri, Alternatives To Nuclear Warfare: A Possible Role for Canada in US/USSR Nuclear Balance, Volume #1, Occasional paper #2, Waterloo, Ontario, Waterloo Lutheran University, August 1971, pp. 25-26.

[42] Von Bertalanffy, General Systems Theory . . . . Op cit., p. 161.

[43] Ibid., p. 78.

discipline that growth is 'a component process in development'.[44] A recognition that these isomorphic characteristics are present in all systems implies that these systems are purposeful and goal directed.

(1) Finalities and Equifinalities

Within all living open systems, the parts are arranged in such a fashion as to indicate a 'certain purpose'.[45]

Even static structures have a directiveness based upon their structural arrangements. Sophisticated open systems have a true finality or purposiveness whereby a system's behaviour is determined by the foresight of the goal being sought.[46]

The true finality of every open system is to ensure its continued survival although man's symbolic systems may superimpose new and complex finalities on top of this basic goal of survival.

Also, all living open systems are capable of reaching the same final position from different initial conditions at different times in different ways. This process is referred to as equifinality.[47]

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[44] Refer to L. Von Bertalanffy, Modern Theories of Development . . . . Op cit., p. 158

[45] Von Bertalanffy, General Systems Theory . . . . Op cit., p. 77.

[46] Ibid., p. 79.

[47] Ibid., p. 79.

All of these isomorphic characteristics are highly interrelated to each other and can be observed to some appreciable degree in every open system. However, the selection of general phenomena that are held in common by all living organisms by itself is only one more partial theory, unless these twelve isomorphic characteristics are placed into proper perspective.

The second principle that sets general systems theory apart from other scientific theories of inquiry is the concept of organization which gives all life meaning.[48] No living substance exists in isolation. Every open system exchanges energy with both its internal and external environments. The concept of organization in all organisms specifies the internal relations of events which constitute the organism as well as setting up the external relations of that organism to other organisms in its environment.[49]

The existence of organization has created a necessity for hierarchy to establish 'a division of labour', increase specialization and thus make growth and development possible. Every conceivable organism from the smallest and most simplified to the largest and most complex can be classified in nature's hierarchy of systems. The following table (Table 1) indicates the inclusiveness of systems and the way in which systems have developed in complexity.

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[48] Ibid., pp. 47-48.

[49] E. Laszlo, A Strategy for The Future: The Systems Approach To World Order, New York: G. Braziller Publishing Co., 1974, p. 17.

Table I

Nature's Hierarchy of Systems[50]

1/ Static structures (frameworks)	- atoms, molecules and crystalline structures	- final outcomes are determined only by structure. (There is no exchange of energy with environment)
2/ Clockworks	- clocks, conventional machines (i.e. pulley, lever) solar system	- each part of system possesses a certain degree of probability but final outcomes are still determined by structure
3/ Control mechanisms (thermostat)	- thermostat, servo-mechanisms, homeostatic mechanism in organisms	- increased probability and freedom of action for individual parts but structure still determi final outcomes
4/ Open systems	- flame, cells and organism in general	- First time that initial condition (structure) do not necessarily determine final outcomes
5/ Lower organisms	- "plant-like organisms" increased differentiation of systems (a division of labour)	- individual organism (phenotype) begins to visibly differentiate itself from its genus type
6/ Animals	- information systems develop learning capability, a small degree of consciousness exists	- individual animal can behave in a manner that differs from its class of species but seldom does
7/ Man	- symbolism; man has a past, present and a future; communication by language	- man's initial conditions do not determine the final outcome - Foresight of goal determines final outcome
8/ Socio-cultural systems	- symbol determined communities such as nation state system and international system	- increased knowledge infers increased individual freedom
9/ Symbolic systems	- Language, Logic, Arts and the sciences	- The power to 'abstract' gives man the freedom to deny the natural system and its biological restrain but he cannot reject the natural system. (To reject the natural system is to reject organization which is the essence of life)

The symbolic system unlike the natural system imposes no restraints on man's ability to act. Therefore, man is capable of acting either responsibly or irresponsibly in regards to the demands of the natural system.

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[50] Table I elaborates on Boulding's informal survey of The Main Levels in the Hierarchy of Systems in L. Von Bertalanffy, General Systems Theory . . . . Op cit., pp. 28-29

Every system and sub-system in nature's hierarchy interacts with its particular environment. As a result of this interaction, there is a natural competition between systems to acquire the necessary life-giving forces to ensure survival and maintain growth and development.

> "Competition eventually leads to the extermination of the species with the smaller growth capacity. . . . Every whole is based upon the competition of its elements and presupposes the struggle between the parts.[51]

This competition between systems results in a type of conflict that is both entropic and negentropic in effect. For example, the continued survival of one organism can be dependent upon the destruction of another organism of a different species or of the same class of species. This situation is entropy creating in moving that particular species towards extinction. However, this same situation is also a positive growth force that improves the class of species through the process of natural selection whereby individual organisms of the species become more adaptive and well integrated through time.

The true finality of every open living system is survival, maintaining itself and its identity.[52] In light of this, all defensive activities occurring within the system are directly supportive of the

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[51] Ibid., p. 66

[52] A. Rapoport, Conflict in Man-Made Environment, Middlesex, England: Penguin Books Ltd., 1974, p. 17. The concept of survival infers much more than the system attempting to attain a steady state condition. Growth and development are essential components to system survival. The regulating activity attempting to bring all systems to a steady state condition compliments the overall evolution of the organism to a higher level of existence and complexity. Von Bertalanffy refers to this ongoing movement as one leading to maximum effect with minimum effort. Refer to General Systems Theory . . . Op cit., p. 75.

system's true finality, survival.

> "The defensive mechanism of each system ensures the survival of each open system which manifests itself through conflict and destructive behaviour".[53]

In man's social systems such as the nation state system, defence is as primary a function as it is in all natural systems.

However, man, unlike the lower systems, has a high degree of self awareness enabling him to see a past, present and future.

> "The more man knows, the more freedom of choice he has, and the more he knows that he knows, the more he can make purposive use of his freedom"[54]

Too much freedom of choice can become license unless it is understood in terms of its relationship to the limitations of nature's hierarchy of systems. For example, man can assume that all of his choices are self-determined 'free' choices rather than choices that are co-determined with his environment.[55] Man, with his increased level of knowledge, mistakenly assumes that the restraints of nature can be controlled, if not rejected, without serious consequences. This lack of social restraint enables man to become one of nature's most excessively violent species.

> "Man becomes a killer of his own species because he has failed to develop social restraints capable of substituting for the biological wisdom evolved under natural conditions."[56]

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[53] N. Nyiri, Op cit., p. 34.

[54] E. Laszlo, Introduction To Systems Philosophy: Toward A Paradigm of Contemporary Thought, New York: Gordon and Breack Science Publishing Co., 1972, p. 247

[55] Ibid., p. 240

[56] R. Dubois, "Man's Nature and Social Institutions" in Ashley Montagu, Man and Aggression, second edition, New York: Oxford University Press, 1973, p. 91.

While conflict is regulated and controlled within lower ordered systems by various homeostatic processes, man's potential for conflict can only be self-regulated. In nation state systems, the function of defence is more one of control rather than one of prevention.[57] The prevention of conflict between men and nations is difficult to attain when unlimited demands continue to be made upon the finite natural system.

The function of all defensive activity in the nation state system is to control the conflict that occurs within the confines of that political system itself (i.e. civil war and insurrection) as well as controlling the conflict that occurs between competing political systems (i.e. inter-state wars). The following diagram (Figure A-1) represents in a conceptual sense how the defence function is realized in a sequential fashion.

A nation state's defence policy is a rational response by that nation's political authorities to control the conflict resulting from the natural competitiveness of open systems, thus maintaining the political system in its entirety. All questions of defence can be considered questions of survival.

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[57] The real debate in the last few years has been between whether efforts should be intensified in the areas of conflict prevention or the areas of conflict management. General systems theory regards conflict springing from the natural competition between interacting systems as inevitable. This implies that efforts should be intensified in finding ways to control conflict within certain acceptable limits. Yet, the difference between conflict management and conflict prevention may only be a semantic one when it is conceivable to control conflict by working to ameliorate those economic, social and political conditions that can give rise to conflict between nation states. Future studies of conflict in its hierarchial context may prove to be highly significant in determining at what systems level efforts of conflict management may prove to be most effective.

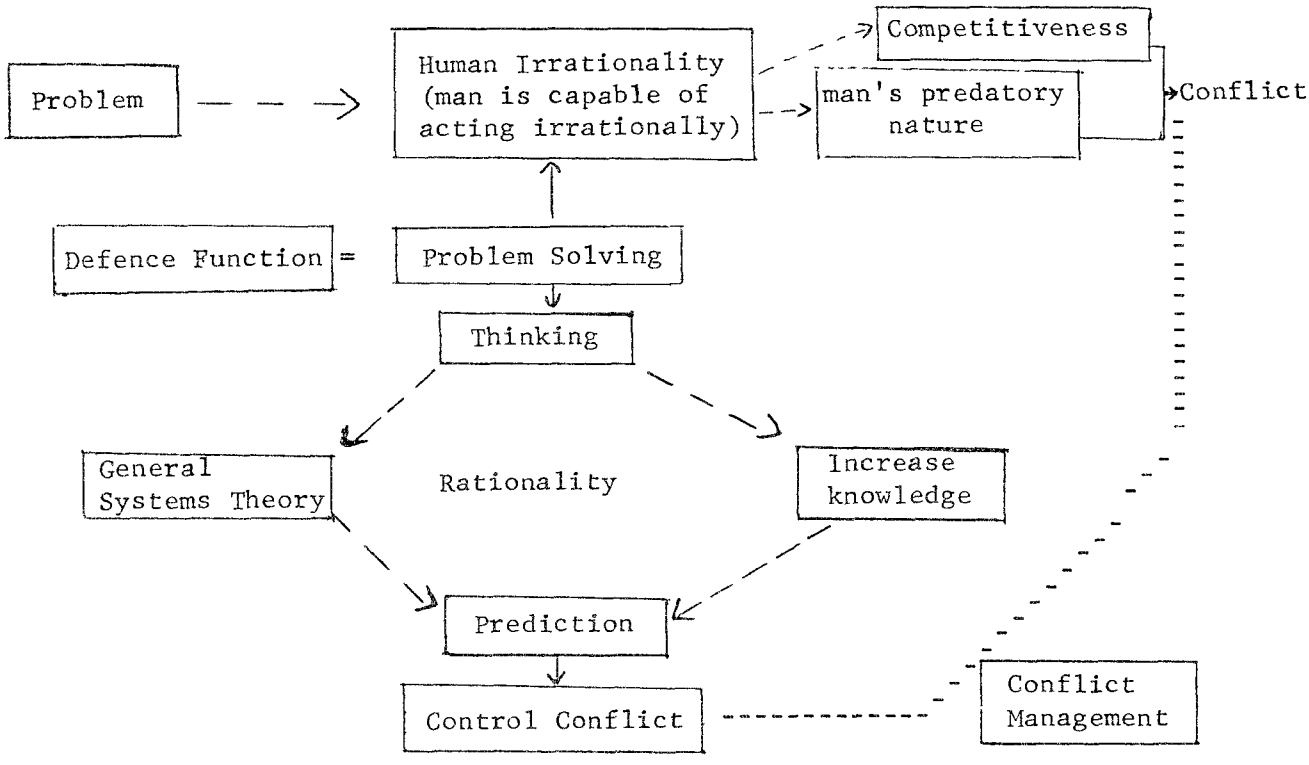

Figure A-1

Defence establishments exist to carry out the task of 'professionalizing conflict' by conducting the conflict in the most efficient way to attain victory.[58] These defence establishments act as 'homeostatic agents' which attempt to restore the political system to a steady state condition and thus maintain the nation state system intact. It is unreasonable to argue, as some will, that it is possible to develop a credible defence policy while having no military establishment to implement it.[59]

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[58] A. Rapoport, Op cit., p. 212

[59] James Eayrs, "Military Policy and Middle Power: The Canadian Experience" in J. K. Gordon (ed) Canada's Role as a Middle Power, Toronto: Canadian Institute of International Affairs, 1966, p. 67.

Defensive activity and more specifically defence policy is a basic system activity that must be seen in its totality and not fragmented as is so often the case.

Summary

Canada's defence policy has precipitated a series of major political crises. Most of the research into the problem has been limited in both the scope and method of inquiry. As of yet, Canada's defence policy has not been considered in its totality, namely as being a primary activity serving the interests of national survival.

The use of theory and more specifically general systems theory may enable one to view defensive activity and defence policy in a more holistic sense while continuing to employ certain scientific rigour. General systems theory, being a normative theory with a scientific base can be utilized in this purpose.

There are two ruling principles that provide the focus for general systems theory. The first is the realization that certain common characteristics or tendencies of behaviour re-occur in all living organisms at various times. The second principle is the concept of organization. Every organization, no matter how simple or how complex, exists in a natural hierarchy of systems. As a result of systems interaction competition occurs between the system parts which eventually leads to situations of potential conflict.

From an understanding of these two principles combined with competition and conflict between system parts, the defensive activity in all open systems can be explained in terms of general systems theory.

As a corollary to this, a nation state's defence policy becomes a rational response by that nation's political authorities to control the conflict resulting from the natural competiveness occurring within the nation state system itself and the natural competiveness occurring between other nation state systems.

With this theoretical perspective in mind, the following chapter details the historical development of Canada's defence policy.

CHAPTER II

The Development of Canadian Defence Policy

The Perspective of General Systems Theory:

As stated in the previous chapter, all living open systems are threatened by anabolic and catabolic rates of reaction which move the system from a state of undifferentiated wholeness to a differentiation of parts. This movement is referred to as progress when one system becomes a new type of system of a higher order and greater complexity.[1]

Progressive centralization within an open system sets into motion the forces that promote a gradual transition to progressive individualization. As certain dominant parts begin to take a leading role in the system, they dictate certain types of behaviour to the whole, thus centralizing system activities. These are important characteristics to keep in mind in discussing how political systems such as the nation state system (NSS) and the international system (INS) have developed.

However, man can alter many of the natural processes that occur within all open living systems. As stated previously, man lives in a symbolic universe of his own creation which has given him the power to

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[1] L. Von Bertalanffy, General Systems Theory . . . . Op. cit., p. 70. In general systems theory, a retrogressive step from a high level of differentiation to a lower level of differentiation is also considered as growth over time. It is only in the social disciplines that growth has been assigned a positive normative value.

alter but not necessarily control the natural system and its biological restraints. While all natural open systems move towards progressive individualization or independence, man can intercede within his social systems and reverse this natural progression towards individualization. All natural and man-made social systems strive to reach a high level of organization and complexity through time.[2]

A study of the development of the nation state shows an ongoing movement in the direction of progressive individualization and relative self-sufficiency. Territories and nationalities that were once colonies or protectorates have either progressed to become sovereign nation states in their own right or have disappeared by way of being absorbed into a larger, more viable, political system.

The development of the Canadian nation and more specifically its defence policy, which is a component part of any nation state system, reflects this natural progression from a highly centralized state of dependence upon the whole to a state of increased differentiation and individual self-sufficiency.

For purposes of this thesis Canada's defence policy will be broken down into three distinct periods of development: (1) a period of dependence (1867-1940); (2) a period of interdependence (1940-1968); and (3) a period of relative independence (1968-). In differentiating between one period of development and another, certain common characteristics of each period tend to re-occur to some degree in all three designated periods of development.

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[2]E. Laszlo, Introduction to Systems Philosophy . . . . Op cit., p. 252.

For example, although a particular nation state may appear relatively self-sufficient on one level of existence, that same nation state may be highly dependent upon another nation state for other resources that contribute to its continued existence. In general systems theory these periods of development are referred to as equifinal positions or intermediary stages arrived at independently of initial conditions.[3]

(1) A Period of Dependence (1867-1940)

Prior to Confederation defence was of little concern to the colonial inhabitants of Upper and Lower Canada with the exception of those few situations where the threat of invasion from the United States seemed a possibility.[4] In these situations Britain was relied on to provide whatever defence was required.

For economic reasons, Britain wanted to rid itself of the excessive burdens involved in defending a territory of such immense size as the North American colonies. Britain had more pressing concerns in Europe than in Br. North America. Furthermore, the colonial governments of Upper and Lower Canad had been demanding the right of complete self government prior to Confederation. British Prime Minister Benjamin Disraeli found it highly intolerable that Britain continue to pay for the defence of British North America when she could not govern her.[5] Self-government implied self-defence.

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[3] L. Von Bertalanffy, General Systems Theory . . . . Op. cit., p. 132.

[4] R.A. Preston, Canada and Imperial Defence: A Study of the Origins of The British Commonwealth Defence Organization 1867-1919, Durham, N.C.: Duke University Press, 1967, p. 39. The U.S. Civil War and the Trent Crisis of 1861 alarmed many colonials as relations between Britain and the United States appeared to be rapidly deteriorating. At various times, talk of invading Canada was heard in many high places throughout the United States.

[5] G.F. Stanley, Canada's Soldiers: The Military History of An Unmilitary People, third edition, Toronto: Macmillan Publishing Co., 1974, p. 240.

When the British North America Act of 1867 was signed it granted Canada dominion status and the responsibility of defending itself.[6] The Macdonald government placed considerable emphasis on defence and the need to build a permanent militia in the early years of Confederation. Sir George Etienne Cartier, Canada's first Minister of the Militia, committed the Macdonald government in policy to the building of a permanent militia.

> "No people can lay claim to the title of a nation if it does not possess a military element - the means of defence."[7]

However, stated government policy gave way to more pressing and immediate concerns than the creation of a permanent militia. Prime Minister Macdonald's frantic concern to build the Canadian Pacific Railway to span the Canadian nation from coast to coast, regardless of cost, drew attention away from the problems of defence.[8]

It was not until the British Colonial Secretary informed the Governor-General of Canada in early 1870 that all British regular troops would be withdrawn that defence became an immediate concern to the Macdonald government.[9] Prior to this, the Militia Act of 1868 had established a volunteer militia force which was broken down into small bands of volunteers

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[6] The British North America Act, 1867, Section 91(7) 'Militia, Military and Naval service, and Defence.

[7] R.A. Preston, Canadian Defence Policy and the Development of the Canadian Nation 1867-1917, Ottawa: Canadian Historical Association Publication, #25 1970, p. 4.

[8] G. Glazebrook, A History of Canadian External Affairs: The Formative Years to 1914, Volume I, revised edition, Toronto: McClelland and Stewart Ltd., 1966, p. 226.

[9] G.F. Stanley, Op. cit., p. 241.

who met only on certain special occasions. It became obvious that the Macdonald government's volunteer militia had been a token gesture in the sense that the militia behaved more like a fraternity than a well trained fighting force.[10]

When the British regulars were withdrawn in 1871, the Canadian government did very little to fill the void. It was not until the establishment of the Royal Military College in 1874 that the government started to develop a command structure for a virtually leaderless volunteer militia.[11]

The Militia Act of 1883 finally set up a small permanent militia for reasons that grew out of the necessity of crisis more than from any understanding of how important defence was to a young nation. Macdonald's use of the permanent militia to put down the Riel rebellion of 1885 indicated the importance of having a permanent fighting force that was both well trained and well equipped. The citizen soldiers of 1885 had won the day, but only just barely.[12]

While many Canadians exhibited a certain complacency towards defence matters, the Canadian militia attempted to prepare itself to meet any

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[10] R. H. Roy, "The Canadian Military Tradition" in H. Massey (ed.) The Canadian Military: A Profile, Toronto: Copp-Clark Publishing Co., 1972, p. 27.

[11] G. F. Stanley, Op. cit., p. 244.

[12] Ibid., p. 258.

crisis.[13] Limited government financing combined with outdated weaponry and poor inconsistent training made their attempts practically futile.

Britain still regarded the Dominion of Canada as a dependent entity. When Britain committed itself to numerous military adventures abroad, Canada was expected to contribute to the imperial effort to retain the British Empire, a common goal for all of Britain's dominions.[14] Although Canada made a significant contribution to the British victory in South Africa, Prime Minister Laurier served notice to the British in 1900 that a new and independent Canada would no longer accept the dictates of imperial centralization.

> "I claim for Canada this, that, in future, Canada shall be at liberty to act or not to act, to interfere or not to interfere, to do just as she pleases and that she shall reserve for herself the right to judge whether or not there is a cause for her to act.[15]

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[13] In the late 1890's Lord Dundonald, the chief commanding officer of the Canadian militia made several recommendations to improve the quality of the militia. These recommendations were regarded with skepticism and distaste by politicians and civilians alike. Prime Minister Laurier suggested that Dundonald 'not take the militia seriously, for though it is useful for suppressing internal disturbances, it will not be required for the defence of the country, as the Monroe Doctrine protects us from enemy aggression.' For reference Ibid., p. 294. Also, the Canadian press expressed a type of distaste for Dundonald and his recommendations for a better militia. An editorial in the Montreal Herald of 1902 expressed the general view that many Canadians held regarding war and militarism. "With Europe war is a condition. With us [Canadians] it is a theory." For details see G. Glazebrook, Op. cit., p. 229.

[14] Ibid., p. 234.

[15] G.F. Stanley, Op. cit., p. 288. Prime Minister Laurier was torn by his commitment to the two solitudes of French Canada and English Canada. The fact that he was a French Canadian Prime Minister with a natural distaste for British imperialism was tempered by the realization that he was a political leader of a predominantly English speaking country which strongly supported British adventurism.

The obvious contradiction between this ideal of independence of choice and Canada's natural dependence on Britain revealed itself as Europe prepared itself for world war. Britain's Joseph Chamberlain did not hide the fact that the expense of Canada's defence would be borne by Britain. In return for this protection, he fully expected that Canada would contribute more in terms of resources and personnel to the defence of the Empire.[16]

At the Imperial Defence Conference of 1909, Britain advocated the creation of a common defence scheme between all dominions. This would involve the military standardization of all dominions in terms of policy guidelines set down by Britain:

> "There would be only one school of study, one curriculum and one teacher; there might be several schoolhouses but the lessons taught in each would be identical."[17]

For Canada, this meant a form of regression to a state of complete dependence. It seemed that many of the concessions acquired from Britain since Confederation had been lost by Canada's acceptance of this defensive arrangement.

In general systems terminology, a movement towards progressive individualization is often countered by an equivalent movement towards increased centralization and undifferentiated wholeness.[18]

When Britain declared war on Germany on August 4, 1914, Canada had only the freedom 'to determine the extent and nature of her contribution to war and not the right to proclaim neutrality.'[19] In battle, the British

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[16] G. Glazebrook, Op. cit., p. 238.

[17] G. F. Stanley, Op. cit., p. 304.

[18] L. Von Bertalanffy, General Systems Theory . . . . Op cit., p. 71.

[19] G. F. Stanley, Op. cit., p. 310.

military command lumped Canadian soldiers together with its own regulars. Canadian political leaders protested against this lack of differentiation and insisted that Canadian soldiers be viewed as serving the interests of Canada abroad. For if the British were to recognize the independent status of the Canadian soldier then this could amount to a de facto recognition of Canada's independence.[20] Gradually, Canada was beginning to exercise more and more freedom within the confines of this highly centralized imperial defence arrangement.

At the end of World War I, Canadian defence policy encountered a significant degree of governmental complacency. When the crisis of war subsided and peace returned, the Canadian government neglected defence policy again and allowed the wartime effectiveness of the military to deteriorate in the areas of weapons modernization and personnel morale.[21] Consequently, Canadian defence policy had become crisis oriented in that it only received day to day consideration only during extended periods of crisis.

In the general systems context, a form of natural dependency can develop for those parts that fall behind their competitors. If a nation's defence policy is crisis oriented and merely reactive in its responses to actions that are initiated by others, then that nation can exercise very little control in crisis situations. More specifically, when a nation's defence policy becomes merely a stimulus-response syndrome, the prediction of conflict becomes haphazard and its control virtually non-existent.

After the conclusion of World War I, the Canadian government was desirous of striking up a new and more autonomous relationship with

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[20] Ibid., p. 315.

[21] Ibid., p. 340.

Britain. At the 1926 Imperial Conference, Canada was granted certain important concessions from Britain. The most important being Britain's agreement that Canada would no longer be automatically committed to any future European war. Canada would be a signatory to any major treaty, including a declaration of war.[22]

Canadian Prime Minister Mackenzie King, like his predecessors, had a strong sense of mistrust of European political affairs. When the possibility arose for Canada to be elected as a non-permanent member of the Council of the League of Nations, King was hesitant in involving Canada in European politics.[23] When the Italian army invaded Ethiopia in 1935, the King government supported the use of sanctions by the League of Nations in principle but King refused to adopt any military or economic sanctions against Italy in the fear of committing Canada to some future European war.[24]

For many years, Prime Minister King was able to steer a course down the middle of the road between isolationism in fact and collective security in principle. Canada's defence policy reflected this ambiguity in governmental policy. During the depression years, the Canadian military establishment incurred serious cutbacks in both its financing and personnel.[25] Attempts to bolster the defence budget in the years prior

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[22] H.B. Neatby, William Lyon Mackenzie King 1924-1932: The Lonely Heights Toronto: University of Toronto Press, 1970, p. 188.

[23] Ibid., p. 194.

[24] F. Soward, J. Parkinson, N. MacKenzie, T. MacDermot, Canada in World Affairs: The Pre-War Years, Toronto: Oxford University Press, 1941, p. 25.

[25] G.F. Stanley, Op. cit., p. 343.

to 1937 met with stiff opposition.

However, the increasing prospects of war in Europe, combined with a proposal by Major-General A. McNaughton to streamline the Canadian militia, loosened the purse-strings of the King government.[26]

A further development was occuring within the confines of the Canadian defence establishment. The defence establishment was exhibiting aspects of growth and development from within as it moved from a general state of undifferentiated wholeness to a differentiation of the parts and 'a division of labour.'

The 1936 re-organization of the Canadian militia by Major-General McNaughton recommended the creation of a Canadian Defence Committee with the function of co-ordinating the militia's activities with those of other government departments.[27] This development can be accounted for in general systems theory:

> "If the system (i.e. defence establishment) is split up into individual causal chains, these go on independently. Increasing mechanization means increasing determination of elements to functions only dependent on themselves and consequent loss of regularity which rests in the system as a whole, owing to the interrelations present."[28]

Slowly, Canada's defence policy was beginning to develop both form and substance. Its defence policy was no longer to be paraphrased as the defence of the British Empire.

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[26] Ibid., p. 346.

[27] Ibid., p. 347.

[28] L. Von Bertalanffy, General Systems Theory . . . . Op. cit., p. 69. The development of Canada's defence establishment will be discussed in greater detail in the following chapter.

(2) A Period of Interdependence (1940-1968)

A differentiation between the period of dependence (1867-1940) and the period of interdependence (1940-1968) is important to understand both for their distinct differences and similarities. For purposes of this thesis, the Ogdensburg Agreement of 1940 is selected as the initial take-off point for the period of interdependence by which Canada agreed to allow the United States and Britain the use of Canadian soil for defensive activities relating to their war efforts.[29]

All parties to this agreement fully realized that this concession was not merely a temporary one, but rather a long-term commitment by Canada for the defence of North America. The Ogdensburg Agreement was the formal acceptance of the principle of North American defence which had been worked out two years prior to the Agreement itself. President Roosevelt and Prime Minister King met at Kingston, Ontario in 1938 to lay the foundation for this mutual commitment. President Roosevelt assured Canada that the United States would not 'stand idly by if domination of Canadian soil is threatened by any other empire.'[30] Prime Minister King's counter-endorsement of Canada's commitment to the defence of the United States was far more explicit, leaving little room for interpretation:

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[29] J.S. Pemberton (ed.) "Ogdensburg, Hyde Park -- and After" in Behind The Headlines (April, 1941), p. 3.

[30] R.M. Dawson, Canada in World Affairs: Two Years of War (1939-1941) Toronto: Oxford University Press, 1943, p. 237. Many observers at the time regarded the President's guarantee as nothing more than an extension of the Monroe doctrine.

> "Canada would regard it as her duty to see that, at our own instance, our country is made as immune from attack or possible invasion as we can reasonably be expected to make it, and that, should the occasion ever arise, enemy forces should not be able to pursue their way, either by land, sea or air to the United States across Canadian territory."[31]

The significant differences in these two official statements on a common problem, the defence of North America, indicated the type of relationship these nations had with each other. President Roosevelt spoke in generalities which allowed him the freedom to react to any crisis in terms of whether or not it was in the national interest of the United States. Prime Minister King, on the other hand, reflecting Canada's growing dependence on American military superiority, made a blanket commitment to intervene to stop any threat to North American security. More specifically, every threat against North America was to be perceived as a threat against Canada. In the case of the Americans, there was some element of choice involved in their decision of whether or not to act. Although on the surface the declaratory policies coming out of Canada and the United States emphasized interdependence and mutuality in problems of continental defence, in reality there was clear cut substantive evidence of a growing dependency by Canada on the U.S.

As the war in Europe dragged on, Canada found it self in the position of paying off Britain's growing war deficit by borrowing money from the United States. This situation increased Canada's national debt and created an unhealthy balance of trade deficit with its neighbour to the south.[32]

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[31] G.F. Stanley, Op. cit., p. 407.

[32] R. Cuff, J. Granatstein, Canadian American Relations in Wartime: From the Great War to the Cold War, Toronto: Hakkert Publishing Co., 1975, p. 74.

The 1941 Hyde Park Agreement strengthened this dependency relationship by broadening the scope of continental defence to include as well 'the economic defence of the Western Hemisphere.'[33] Although the Hyde Park Agreement held out some promise for the development of a defence production industry in Canada, in the long run the agreement served to make Canada more dependent on United States technology.

Since the United States had both the financial and technological base to support new weapons development on a massive scale, Canada found itself dependent on the U.S. for the benefits of that technology.

> " . . . despite the spirit of the Declaration [Hyde Park] Canada remained dependent on the U.S. for new weapons, and for all intents and purposes, the development of a long range defence policy depends on weapons-systems production at home."[34]

As discussed in the previous section on Canada's early dependency on Britain prior to World War I, military standardization by one dominant part over the other parts of the system tends to serve the interests of the whole system often at the expense of the individual parts that seek increased independence. While Canada perceived that a mutual partnership with the United States in certain areas would grant her more freedom and independence of action, increased interdependence had restored a new type of dependence instead.

During World War II, the United States government increasingly informed rather than consulted Canada when it came to matters of North

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[33] The Right Honourable William Lyon Mackenzie King, House of Commons Debates, April 28, 1949, p. 2289.

[34] N. Nyiri, Alternatives to Nuclear Warfare: A Possible Role for Canada in US/USSR Nuclear Balance, Waterloo: Waterloo Lutheran University 1972, Volume II, Occasional Paper #2, p. 416.

American defence.[35] While the Canadian government talked of mutuality and equal partnership, the United States did not respond as an equal partner but rather acted as a dominant part of the whole system.

> "The sum total of all these developments was that Canada, in fact if not in theory ceased to be the equal partner in continental defence envisaged in 1938 and 1940."[36]

In an attempt to reverse this strong movement towards a centralized form of regional defence, the Canadian government looked toward Europe as a possible counterweight to offset a growing dependency on the United States. The major threat to Canada after World War II was the growing possibility of a future nuclear war in Europe between the allied forces and the Soviet Union. In any nuclear exchange, Canadian airspace would be an inevitable battleground with a certain number of Soviet atomic bombs falling on Canadian soil.[37]

In response to this threat, the Canadian government felt that Canada could best be defended as far away from her native shores as possible by involving herself in collective defence arrangements abroad.[38] This became the basis for the argument of Europe being Canada's first line of defence.

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[35] G.F. Stanley, Op. cit., p. 409. The United States would often bypass the Canadian government and consult Britain on matters of North American defence. The defence of Newfoundland and Greenland and the installation of a destroyer base on Canadian soil were two examples of this tendency by the United States to inform Canada after the decisions had been made.

[36] Ibid., p. 415.

[37] General Charles Foulkes, Canadian Chief of Staff speaking in 1948 as quoted in James Eayrs, In Defence of Canada: Peacekeeping and Deterrence Volume III, Toronto: University of Toronto Press, 1972, p. 100.

[38] The Honourable Brooke Claxton, Minister of National Defence, House of Commons Debates, Friday, March 27, 1953, p. 3339.

The creation of the United Nations in San Francisco in 1945 complemented the beliefs of many Canadian politicians that if enough collective security pacts existed 'to girdle the globe' then the prospects for world peace would be enhanced.[39] However, collective security administered through such international bodies as the United Nations by itself proved to be insufficient. The fall of Czechoslovakia to the Communists on February 25, 1948, indicated to the major Western powers that an European defensive alliance capable of using force would be needed to halt Soviet aggression.

As a result, the North Atlantic Treaty Organization (NATO) grew out of the belief that collective self defence on a regional basis would fill those gaps the United Nations could not fill. In the bipolar world of the nineteen-fifties, Canada attempted to encourage the larger superpowers to commit themselves to various multilateral treaties and agreements. If enough structural organizations existed to compel the larger superpowers to resolve their differences through negotiation, the possibility of conflict occurring would be lessened.

In a systems context, Canada's role was one of 'systems modulation'.[40] There were two possible options that Canada could pursue simultaneously in its role as systems modulator.

Option 1: Moderate the views and behaviour of the only superpower actor to which Canada had some effective measure of access : the United States.

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[39] The Honourable L.B. Pearson, "Canada and the North Atlantic Alliance" in Foreign Affairs, Volume XXVII (April 1949), p. 374.

[40] Denis Stairs, "The Foreign Policy of Canada" in J. Rosenau, K. Thompson and G. Boyd (eds.) World Politics: An Introduction, New York: Free Press Publishers, 1976, p. 194.

Option 2: Exercise a constraining influence on such conflicts as might break out in peripheral parts of the global system, with a view to preventing them from escalating to the great power level.[41]

It was in the context of these two foreign policy options that Canada's defence policy was expected to operate in the late fifties and early sixties.

But, carrying out these options meant that the majority of Canadian military personnel would be committed to crisis situations abroad over which they had no actual control.

> "This amounted in essence to a claim that overall decisions relating to military requirements, were being made elsewhere, and that Canada was performing--faithfully--an externally assigned role."[42]

This fact became more obvious with the controversy surrounding the NORAD debate in 1957. The conflict between foreign policy objectives and the fulfillment of basic defensive obligations required in Canada's commitment to collective security had shown the inherent contradictions in government policy. The previous position that Canada's best line of defence should be established as far away from Canadian shores as possible offered little for the immediate defence of Canada.[43]

The sound military logic of NORAD was lost in the political confusion and the semantic problems created by the Diefenbaker government and the opposition political parties.[44] In an attempt to disguise Canada's

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[41] Ibid., p. 194.

[42] Denis Stairs, "The Military as an Instrument . . . . Op. cit., p. 101.

[43] Refer to Brooke Claxton, op. cit., p. 3339.

[44] J. McLin, Op. cit., p. 56.

natural dependency on the United States in matters of defence, the Canadian government argued that NORAD was an 'integrated part' of the NATO Alliance.[45]

The long delay in accepting NORAD accomplished very little in granting Canada a more credible voice in North American defence strategy. The Canadian government's concern for sovereignty and independence served only to increase Canadian dependence on the American deterrent capability.

While Canada reaffirmed a commitment to the principle of collective security, it was unwilling to be associated with any existing organization or weapons system that backed up that collective security principle. The nuclear weapons debate of the late fifties and early sixties was one more indication of this very point. Improved developments in strategic nuclear weapons placed a great strain on the Canadian government to go with the trend or risk the consequences of rejecting new technology. If Canada were to accept strategic nuclear weapons then this would mean that Canada had gone 'nuclear'. This course of action would have represented going back on an earlier general commitment made after World War II that Canada would not become a nuclear power.[46]

But, a total rejection of nuclear weapons would amount to an

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[45] Ibid., p. 54. This position was refuted by both the American authorities and Secretary-General of NATO, Paul-Henri Spaak, who regarded NORAD strictly as a bilateral military agreement.

[46] Canada, Department of National Defence White Paper on Defence (Ottawa: Queen's Printer, 1964), p. 7. The Canadian position not to become 'a nuclear power', was shrouded in contradiction. For years, successive Canadian governments continued to sell uranium to the United States for military and non-military purposes. Also, the Canadian government had granted U.S. authorities permission to fly their nuclear air carriers into Canadian airspace. For more details see J. McLin, Op. cit., p. 128.

abdication of Canada's responsibility for sharing in continental defence with the United States and living up to its defensive obligations in NATO. There was no escape from the reality that Canada would have to continue to play its part in the NATO/NORAD alliances which meant placing tactical nuclear weapons in Canadian hands. The real issue was one of control. Should Canada have exclusive control over any nuclear weapons emplaced on Canadian territory or provided for its military forces stationed in Europe?[47]

Without resolving the moral issue of whether or not Canada should have nuclear weapons, the Diefenbaker government acquired the necessary delivery systems for such nuclear weapons. Bomarc missiles were emplaced on Canadian soil and made operational in March 1962. They were not armed with nuclear warheads until early 1964.[48] Honest John rockets were provided for the Canadian brigade in NATO in early 1962 but no nuclear warheads were installed on them until the middle of 1964.[49]

For a period of approximately two years from the middle of 1962 to early 1964, the Canadian armed forces had only conventional capabilities to meet any possible nuclear threat. It was factually impossible for Canada's armed forces to be provided with nuclear weapons 'if and when they were required' in an emergency situation as the Canadian government

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[47] Ibid., p. 123.

[48] Ibid., p. 132.

[49] Ibid., p. 132.

claimed.[50]

During the Cuban missile crisis of October 1962 when the Soviet Union threatened to penetrate the continental defence of North America, Canada was in a situation of total dependence on the nuclear deterrence capability of the United States to defend Canada against nuclear attack.

As a result of this crisis situation, the new Canadian government accepted Canada's obligation to NATO and NORAD by providing its armed forces with the necessary tactical nuclear weapons. A forced acceptance of one's responsibilities had proven to be a bitter pill to swallow. Canadian political authorities were eager to look for new roles and responsibilities that could be effectively performed without stirring up unwanted controversy.

It was the Canadian government's desire that the whole basis of defence policy be reexamined with special reference being made to finding 'more realistic and effective roles' for Canada to play in the NATO/NORAD Alliance systems.[51] The Pearson government hoped that Canadian industry would be capable of supplying the needs of its defence policy commitments.[52]

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[50] The Right Honourable John Diefenbaker, House of Commons Debates, January 18, 1969, #1, p. 73. Prime Minister Diefenbaker argued that it was possible for Canada's armed forces to receive nuclear weapons from the United States within half an hour. This was not possible as Canada had no agreement with the United States for such an exchange.

[51] The Right Honourable L.B. Pearson, Globe and Mail, January 14, 1963, p. 11.

[52] The Right Honourable L.B. Pearson, House of Commons Debates 1962-63, Vol. III, p. 3124.

The 1964 White Paper on Defence represented the embodiment of these hopes for a more meaningful defence policy. The White Paper recommended shifting the locus of Canada's defence policy away from the bilateral concerns of North American defence to the broader and more universal concerns of collective security in Europe and the United Nations.[53] This emphasis on multilateralism and the downplaying of Canada's natural dependency on the United States reaffirmed the persistent Canadian belief in mutual deterrence through collective security.[54] The de-emphasizing of the defence of Canada by means of bilateral agreements between Canada and the United States represented a marked departure from previous defence White Papers.[55]

Also, the White Paper proposed a complete reorganization of the military establishment with the hope of making it more flexible and versatile in performing its assigned tasks. Flexibility was a key term that repeatedly appeared in the White Paper.

> "The goal of flexibility was dictated by the view that a country of Canada's size and resources could no longer afford to invest in expensive weapons systems that were useful only for one mission which changing strategic or political conditions might render inappropriate."[56]

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[53] Canada, Department of National Defence White Paper on Defence (Ottawa: Queen's Printer, 1964), p. 4.

[54] N. Nyiri, Alternatives to Nuclear Warfare . . . . Vol. #2, p. 106.

[55] Canada's various White Papers on Defence spanning the years 1949 to 1959 repeatedly established that the defence of Canada was the primary objective of her defence policy. The 1964 White Paper on Defence shifted this objective to a tertiary position in terms of priority.

[56] J. McLin, Op. cit., p. 200.

What the Canadian government was looking for was a multipurpose weapon that would perform more than one role with limited expense. For example, a substitute was sought for the CF-104 Starfighter, a tactical support aircraft which could perform both ground-to-air support and fly surveillance and reconnaisance missions.[57] However, multi-purpose weapons systems are a rare commodity in an age of highly sophisticated weapons technology that develops weapons systems for specific needs.

The Pearson government further handicapped itself in its search for weapons flexibility by setting up an arbitrary budget figure for up-coming defence expenditures and then manipulated Canada's defence requirements so that they fell in line with that arbitrary figure. This frugal approach to defence spending was criticized because no preliminary analysis on objectives was attempted prior to setting down any budgetary figures.[58]

As a result, Canada's new-look armed forces were expected to carry out existing responsibilities, as well as assuming the challenging demands of international peacekeeping, with the same amount of money. As could be expected, the functional utility of Canada's armed forces was taxed to the limit.

As a result, the Canadian defence establishment became less concerned with military problems than with finding ways to economize in the performance of its responsibilities. Although economy in government spending is a

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[57] Ibid., p. 200.

[58] For further details refer to The Special Committee on Defence, House of Commons, Minutes and Proceedings of Evidence (Ottawa: Queen's Printer), Thursday May 28, 1964, p. 43.

desirable goal, it is 'essentially extraneous to the immediate pursuit of Canada's role in world affairs.'[59]

A certain number of basic limitations that resisted the successful implementation of those policy changes recommended in the 1964 White Paper, prevailed. The first and most important limitation was the recognition that Canada had long established defence commitments to the NATO and NORAD Alliances that had to be respected. Although Canada was not the dominant part of these alliance systems it was expected 'to pull its own weight.'[60]

Furthermore, the Canadian government's desire to utilize Canada's industrial resources to fulfil its defence policy requirements was severely handicapped by the government's support of competitive bidding. Canadian industry, lacking the economic and technological base to be competitive, was unable to match her American counterpart in weapons cost and delivery dates.[61]

Canada's defence production industry required some form of government protection before it could hope to compete with the more competitive defence production industries in the United States. The cancellation of the Avro-Arrow defence project in early 1959 indicated how dependent Canadian defence policy was on American weapons systems.[62] The Canadian government argued for the principle of competitive bidding on

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[59] Denis Stairs, "The Military as an Instrument . . . Op. cit., p. 107.

[60] The Right Honourable John Diefenbaker, Statements and Speeches #63/6, January 25, 1963, p. 3.

[61] J. McLin, Op. cit., p. 216.

[62] For more details on the Avro-Arrow Project see R. Reford "Making Defence Policy in Canada" Op. cit., pp. 12-14 inclusive.

the pretext of wanting to obtain good value for every defence dollar spent.[63]

As a result, Canadian defence buying policy took on the appearance of being highly inconsistent in terms of obtaining value.[64] While certain aspects of Canada's defence production industry were protected by the government, other aspects of that same industry (i.e. Canada's aircraft industry) were given little or no protection whatsoever. Often certain barter type arrangements were made with other NATO member nations for the purchase of weapons systems that proved unsuitable for Canada's needs.[65]

The cumulative effect of these various decisions during the mid-sixties was to increase Canada's dependency on the United States for defence.[66]

Although the 1964 White Paper on Defence promised new responsibilities and a significant change in direction, very little had in fact changed from the fifties and early sixties. Canada's defence policy continued to be understood and justified in terms of alliance commitments to NATO and NORAD.

(3) A Period of Relative Independence (1968 -).

The concept of 'independence' as used here in the context of Canada's defence policy must be interpreted with a certain amount of caution. By

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63 The Honourable C.M. Drury, Minister of Industry, House of Commons Debates, February 7, 1966, pp. 802-803.

64 Gideon Rosenbluth, The Canadian Economy and Disarmament, Toronto: Macmillan of Canada Ltd., 1967, p. 40.

65 The purchase of Armoured Fighting Vehicles (AFV's) for Canada's NATO forces in 1966 is one case in point of a weapon that was unsuited for Canadian needs. The AFV's proved to be too heavy for airlifting and their steel tracks tore up roads and terrain alike. For more details see J. Sheltus, Op. cit., p. 12.

66 Gideon Rosenbluth, Op. cit., p. 41.

no means can independence be thought of in absolute terms.

> "No nation can enjoy the degree of independence in decision which existed in earlier times. Every major decision has become immensely more complicated by the considerations which new military technology, science, economics and humanitarian obligations present to the governments concerned. The great powers have more complex considerations to weigh but the lesser powers cannot expect to have much freedom of choice either. Independence in foreign affairs cannot have quite the same meaning as in other fields."[67]

In general systems theory, a degree of 'independence' is possible for every system part only if it remains an integral part of the system. More specifically, the degree of independence attained by a system part is proportionate to the level of interdependence enforced within the whole system.[68]

When considering a possible period of independence in Canadian defence policy, it is relative to how interdependent Canada was in terms of the whole international system. The 1964 White Paper on defence attempted to set down new roles and responsibilities that Canada's armed forces could perform aside from her usual alliance contributions.

Peacekeeping was the ideal vehicle through which Canada could make an important individual contribution to international peace and security as well as integrating both her defence policy and her foreign policy.[69] However, peacekeeping began to lose its appeal when UNEF was ordered out

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[67] The Honourable Paul Martin, Minister of External Affairs, Statements and Speeches, January 31, 1966.

[68] E. Laszlo, Introduction to System Philosophy . . . . Op. cit., p. 239.

[69] A.M. Taylor, D. Cox and J. Granatstein, Peacekeeping: International Challenge and Canadian Response, Toronto: Canadian Institute of International Affairs, 1968, pp. 49-51.

by the Egyptians in 1967.

The year 1968 represented a significant year in the continuing evolution of both Canada's defence and foreign policies. Canadians had elected a new Prime Minister with a different perspective on the role that Canada should play in world affairs. Prime Minister Trudeau's concerns were less directed towards the international community than they were towards an economically viable Canadian society. In the Prime Minister's opinion this was the best contribution that Canada could make to the international community.[70]

The Trudeau government promised a more realistic appraisal of Canada's foreign and defence policies when it announced its foreign policy review in early 1968.[71] Prime Minister Trudeau expressed certain personal preferences regarding Canada's alliance contributions to both NATO and NORAD. It was the view of the new government that Canada had overcommitted herself to NATO on the Pearsonian assumption that Europe was Canada's first line of defence. This European commitment had led to the unfavourable situation of NATO dictating Canadian foreign policy.[72] Prime Minister Trudeau personally believed that it was NORAD and not NATO that held the key to Canada's defence policy.[73]

On the 3rd of April, 1969, Prime Minister Trudeau announced the phased reduction of Canadian armed personnel in her NATO contingent in Europe.[74] While Canadian forces in NATO were cut back by approximately

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[70] Bruce Thordarson, Op. cit., p. 70.

[71] The Right Honourable Pierre Elliot Trudeau, Statements and Speeches, #68/17 May 29, 1968.

[72] John Holmes, Canada: A Middle Aged Power, Toronto: McClelland and Stewart Publishing Co., 1976, p. 9.

[73] B. Thordarson, Op. cit., pp. 72-73.

[74] Office of the Prime Minister, Press Release, April 3, 1969.

50 percent, there were very few cutbacks made in its NORAD contribution. The shift in Canada's defensive commitments from Europe to North America indicated the Trudeau government's desire to have a greater input in the determination of continental defence.[75]

However, while these developments were occurring in Ottawa, certain other related developments were unfolding in Washington that had an important bearing on North American defence strategy and, more specifically, Canada's defence policy. In the latter part of the sixties, an explosion in weapons technology occurred which placed all questions of military strategy open to debate. The most significant technological breakthroughs in weapons development came in those areas that related directly to improving a nation's defensive capability. Both the United States and Soviet Union had made significant advances in developing Anti-Ballistic Missile Defence (ABMD) systems that could be deployed exclusively on home soil.

As a result of this technological development, the basis of continental defence became subject to question. Canada had become less important in American plans to defend the United States, the continent and the deterrent.[76]

Canadian politicians and the military alike were fully aware that these new developments could force hard decisions on smaller nations like Canada. If the United States decided to install either the Sentinel or Safeguard ABMD systems on American soil, then that would tend to 'fragment the defence of North America.'[77]

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[75] B. Thordarson, Op. cit., p. 73.

[76] John Holmes, "Canada and The United States: Political and Security Issues" in Behind The Headlines, Vol. XXIX, #1-2 (March, 1970), p. 2.

[77] See Dr. G.R. Lindsey, Standing Committee on External Affairs and National Defence, Minutes of Proceedings and Evidence, Wednesday May 21, 1969 and Thursday, May 22, 1969.

Although the United States government decided to postpone the full scale implementation of the ABMD system due to its exorbitant cost, individual ABMD systems (Safeguard) were installed around some of the larger American cities. The significance of the whole ABMD issue centered not in the weapon itself but rather it indicated the kind of changes that defensive weapons like ABMD could bring about, affecting future military strategy.

In the past, weapons technology had favoured the development of general all-purpose offensive weapons, such as the hydrogen bomb, which has been used in an indiscriminate manner. In recent years, weapons development has shifted away from indiscriminate offensive weapons systems to the more discriminating tactical offensive weapons as well as active and passive defence measures.[78]

These technological developments in weapons systems created a new attitude of 'arbitrariness' in Washington toward its military allies. For many years, United States authorities had continued to warn its allies that if they did not contribute more to alliance defence then the United States would not continue to bankrupt itself for their benefit.[79]

This arbitrary attitude in Washington towards America's allies was reflected by both the United States Congress and the Nixon administration alike. When Senator Fulbright, then chairman of the highly prestigious Foreign Relations Committee, was asked if the Canadian government had been

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[78] Weapons technology and how it influences Canada's defence policy will be discussed in greater detail in the following chapter.

[79] For more details on the growing expense of alliance defence for the Americans, refer to Chapters One and Four of Bruce Russett's What Price Vigilance?: The Burdens of National Defence, New Haven: Yale University Press, 1970, pp 1-22, pp. 91-123 respectively.

'informed' of the installation of the ABM Safeguard on the U.S. border, his response that Canadians either 'like it or lump it' was indicative of this hardening in attitudes.[80]

The Nixon administration although more tactful than certain members of Congress, encouraged Canada to assume more 'autonomous and independent policies' for each nation must decide the requirements of its own security. This policy became popularly known as the Nixon Doctrine.[81] Canada was being forewarned that weapons technology had brought about certain changes in strategic conditions. Canadian territory was not as imperative to 'continental defence' efforts as it had been in the past.[82]

Also, the Nixon Doctrine emphasized that Canada become more self reliant in economic matters as well as in matters of security. On August 15, 1971, the United States levied a 10 percent surcharge on all Canadian exports entering the United States. This unilateral action forced the Canadian government to reexamine Canada's position as an industrial and trading nation.[83]

The conclusions drawn from that reexamination basically reaffirmed the geographical fact that Canada was, for better or worse, a North American nation whose destiny lay with the United States and the

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[80] Senator Fulbright as quoted in J. Holmes, Canada: A middle Aged Power, Op. cit., p. 15.

[81] President Richard Nixon, as quoted in the article "Canada-U.S. Relations: Options for the Future" in International Perspectives (Ottawa: Department of External Affairs, Autumn 1972), p. 7.

[82] Refer back to R. Sutherland's argument in 1962 that geography 'strategically committed' United States to the defence of Canada. Geography is not as important a factor as it was in 1962.

[83] The Honourable Mitchell Sharp, Minister of External Affairs, Statements and Speeches #71/23, September 21, 1971.

Atlantic Community.[84]

What is significant in the recognition of this basic fact is that the Trudeau government fully realized that Canadian independence to any appreciable degree could only be attained through increased interdependence.

> ". . . our goal should be to exercise our national independence, political and economic alike, as responsible parts of a whole that can be greater than its parts, where each pursues his own interests and aspirations with full respect for the interests and aspirations of others . . . ."[85]

To acquire sufficient independence of action within the confines of a highly interdependent relationship is a problem common to all living systems. A corresponding desire by the parts for increased individualization is countered by the whole system's tendency to increase centralization and thus make the natural dependency of the parts to the whole even greater.[86]

Under these changing conditions the Trudeau government tabled its 1971 White Paper on Defence - Defence in the 70's. The White Paper represented a significant shift away from the general concerns of alliance defence to the more specific concerns of defending Canadian territory. The prevention of nuclear war through mutual deterrence remained the major objective of Canada's defence policy as it had in previous White Papers.[87]

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[84] Brian Crane, An Introduction to Canadian Defence Policy, Toronto: Canadian Institute of International Affairs, 1964, p. 63.

[85] The Honourable Mitchell Sharp, Minister of External Affairs, Statements and Speeches, #72/6 February 25, 1976, p. 1.

[86] L. Von Bertalanffy, General Systems Theory . . . . Op. cit., p. 73.

[87] Canada, Department of National Defence, Defence in the 70's (Ottawa: Queen's Printer, August 1971).

However, there was a distinct shift in emphasis given to those priorities by which that mutual deterrence objective could be attained. The four major priorities to be carried out by Canada's armed forces were the following:

(a) Surveillance of Canadian Territory and Coastline, i.e. Protection of Canadian sovereignty;
(b) Defence of North America in cooperation with the United States;
(c) The fulfillment of such NATO commitments as may be agreed upon;
(d) The performance of such international peacekeeping roles as we may from time to time assume.[88]

Unlike the 1964 White Paper on Defence, Defence in the 70's related explicitly to Canada's national interests. Such terms as 'sovereignty and independence', 'economic well being', 'aid to the civil power' and 'national development' appeared frequently throughout the text of the Defence White Paper.

While some viewed the 1971 Defence White Paper as a form of 'retrenchment', it would be more precise to regard the White Paper as an attempt to rationalize existing defence roles with the prospect of improving the capability to perform Canadian defined functions and assist in protecting the U.S. deterrent at the same time.[89] The phased reduction of Canadian armed personnel in NATO as well as the dropping

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[88] Ibid., p. 16.

[89] Melvin Conant, "A Perspective on Defence: The Canada-United States Compact" in Behind The Headlines, Vol. XXXIII, #4, Sept., 1974, p. 24.

of its NATO nuclear strike role seemed to indicate Canada's abandonment of Europe as an essential counterweight to the United States.[90]

However, for most western nations, defence policy decisions are essentially economic decisions.[91] As the Trudeau government continued to reassess its defence policy, it was becoming obvious that the economics of defending Canada would ultimately determine the strength of the Trudeau government's commitment to change. The Trudeau government, like its predecessor, wanted to provide the best means of defence for the least amount of money. The emphasis in the 1971 Defence White Paper was on developing a highly mobile and well-equipped military force to carry out these new roles.[92] Much of the existing military equipment proved unsuitable for many of the new roles being proposed in the Defence White Paper.[93]

The significance of the 1971 White Paper on Defence in comparison to other Defence White Papers is the recognition that defence begins at home.[94] While previous Defence White Papers emphasized Canada's international commitments before its national responsibilities, the 1971

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[90] John Holmes, Canada: The Middle Aged Power, Op. cit., p. 12.

[91] Colin Gray, Canadian Defence Priorities: A Question of Relevance, Toronto: Clarke, Irwin Publishing Company, 1972, p. 8.

[92] The Right Honourable Pierre Trudeau, Prime Minister of Canada, Statements and Speeches, 69/7 April 3, 1969, p. 1. This desire for acquiring multipurpose weapons is quite similar to the Pearson government's search for multipurpose weapons in 1964.

[93] For example, the DDH-280 helicopter-destroyer by itself without ground-to-air support, would prove highly ineffectual in performing a coastal surveillance function. Also, the outdated but reliable Argus long range patrol aircraft needed to be replaced by a faster prototype that could cover greater distances in shorter periods of time. For details see Colin Gray, Op. cit., pp. 134-135.

[94] Ibid., p. 170.

Defence White Paper reversed this alignment and reordered Canada's defence commitments by building from the centre core to the outside rather than building from the outside into the centre core. Europe would no longer be considered as Canada's first line of defence.

As a result, NORAD assumed new importance in Canadian defence policy because it enabled Canada's armed forces to carry out the surveillance of Canadian territories and continue its detection role in NORAD thereby protecting the U.S. deterrent.[95] Although NATO seemed to be downplayed in favour of the NORAD Alliance, the Trudeau government continued to value its NATO membership for political and economic reasons rather than military ones.[96]

The question of Canadian independence in respect to continuing its commitment to the NATO/NORAD Alliance systems has proven to be both superficial and misleading when it is discussed in a general systems context. Since Canada is not a dominant part in the international system like the United States or the Soviet Union, she must adapt to changes in the external environment that are not of her own choosing.

However, this situation of natural dependency upon the actions of the superpowers differs from the previous periods of dependence and interdependence in Canada's history.

> " . . . Canadian authorities are now less preoccupied than before with the Pearsonian problem of stable 'systems maintenance' per se, and more Canadian interests from system interactions . . , they are less concerned with contributing to the conditions of peaceful diplomatic exchange than with the substance of the exchange itself."[97]

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[95] The Honourable James Richardson, Minister of National Defence, Statements and Speeches, #73/11 April 13, 1973, p. 5.

[96] The Honourable Mitchell Sharp, Minister of External Affairs, Statements and Speeches, #73/12 April 17, 1973, p. 2.

[97] D. Stairs, "The Foreign Policy of Canada," Op. cit., pp. 197-198.

Canadian decision makers no longer perceive Canada's role as being that of a "system maintainer" but rather visualize themselves only as one more actor within the international system with specific national interests to protect.

From this perception comes the realization that Canadian 'independence' to any degree can only be found in already existing inter-dependent relationships such as the NATO/NORAD Alliances. Canadian defence critic John McLin argues that a nation can only have as much influence upon the structure and the military and political policies of any alliance as it is willing to contribute to the alliance militarily.[98] It may seem ironic, but Canada's continued participation in the NATO/NORAD Alliance systems may be the one commitment that keeps it from being forced into a greater dependency upon the United States.[99]

Furthermore, there have been other recent developments in the international system that would seem to indicate increased Canadian reliance on strengthening this relationship with the United States. The multipolarity prevalent in the international system has given way to a new type of realignment among nations. The establishment of the European trading blocs, Britain's entry into the European Economic Community (EEC) and the movement of the United Nations towards bipartisanship such as the General Assembly's condemnation of Zionism, has created a situation that may speed up the natural process of integration

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[98] J. McLin, Op. cit., p. 214.

[99] Ironic in the sense that Prime Minister Trudeau acknowledged in early 1969 that the NATO/NORAD Alliances had constituted all of Canada's foreign policy since 1945. For the Prime Minister, it was a false perspective to have a military policy determining Canada's foreign policy. Yet, Canada's continued participation in the NATO/NORAD Alliance systems remains the focal point of her foreign policy.

occurring between Canada and the United States.[100]

But there is an obvious danger in Canada continuing to rely upon the U.S. deterrent capability for mutual deterrence. It is conceivable that mutual deterrence could break down again, as it did during the Cuban missile crisis in October 1962.

The defence of Canada is solely the responsibility of Canadians.[101] Although collective security agreements can be established to assist in the defence of Canada, they offer very few guarantees that assistance will be given when needed. French President Charles DeGaulle understood that the United States' nuclear deterrent by itself could not guarantee France's sovereignty. As a result, France withdrew from NATO in 1969 and created her own independent form of nuclear deterrence - 'Force de Frappe' thereby placing the responsibility for France's defence in French hands. The combination of this independent nuclear deterrent and certain American guarantees of sovereignty has allowed France a type of freedom of action that she did not enjoy previous to 1969.

France was able to capitalize on certain strategic conditions such as her focal geographic position in the NATO Alliance. When she decided to quit NATO in 1969, she left being fully aware that she still sat beneath the United States nuclear umbrella. This action is

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[100] A closer look at the voting patterns in the United Nations seems to bear this fact out. In the early fifties the United States tended to dominate the General Assembly. In the early sixties the Soviet Union and the United States seemed to share in their domination of the United Nations. Today, United Nations voting behaviour is no longer dominated by the two superpowers but rather an alliance of voting third world nations has changed UN voting behaviour drastically.

[101] Former U.S. President Richard Nixon reminded Canadians that their security is ultimately their personal responsibility. Refer back to Nixon Doctrine, "Canada-U.S. Relations: Options for the Future" Op. cit., p. 7.

significant if viewed in its general systems context. Although the initial conditions of existence for every nation state system influence final outcomes, they do not determine those final outcomes.

France, having developed certain policy objectives that emphasized increased self-sufficiency, acted on those objectives and altered the initial conditions of her existence to such an extent as to assume a new and different equifinal position.

Canada, having a different set of initial conditions can respond in similar ways but defence policy objectives must be established that reflect certain political realities.

Summary

Canada's defence policy has progressed through three stages of historical development, namely a period of dependence, a period of interdependence and a present period of relative independence. This historical development can be explained in general systems theory as the ongoing movement within every living open system towards a higher level of differentiated existence.

However, every movement towards increased differentiation and progressive individualization is opposed by a counter movement to return the system to a previous level of dependence. Canada's defence policy has fluctuated between these two counter movements. There are many recommendations that can be made regarding the future of Canada's defence policy. The following chapter offers certain recommendations which are based upon significant political and technological considerations.

CHAPTER III

A Future For Canadian Defence Policy ?

Prefacing Remarks:

The purpose of defence policy analysis is to make predictions about the future based upon both a knowledge of the past and present. In this chapter, the future of Canada's defence policy is considered in a political, military, and strategic continuum. It is with an understanding of this prevailing continuum that recommendations on Canadian defence policy are made.

(1) The Basic Incompatibility of Soviet Communism and Western Liberal Democracy

In all open living systems, competition between system parts for dominance leads to conflict.[1] In the international political system, there is intense competition between two differing ideological systems for dominance. These two differing political systems are the Marxist - Communist political system as represented by the Soviet Union and the Western Liberal Democratic system as represented by the United States of America.

The essential differences between these two opposing ideological systems and their basic antithetical incompatibility can be more fully understood by comparing their respective attitudes toward the individual, the concept of property, and the role of conflict in history.

Both Soviet Marxism and Liberal Democratic thought are philosophically grounded in the individual and the role that he should play in political society. The Marxist Communist holds the view that the values and political objectives of Marxism-Leninism and Western Capitalism are totally incompatible with each other. For the Marxist-

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[1] L. Von Bertalanffy, General Systems Theory . . . , Op. cit., p. 66. Von Bertalanffy observed in nature that competition, 'the struggle between the parts' eventually leads to the extermination of the species with the smaller growth capacity.

Leninist, Western Capitalism is an outmoded structure doomed to collapse in the path of world socialism.[2]

This point of view represents much more than just a verbal exercise in polemics. The Marxist-Leninist ideology is both rigidly dogmatic and highly methodical in its political doctrine and military policy. Marxism-Leninism has successfully been able to split the individual's life-property relationship by placing the ownership of all property in the collective hands of the state.

Liberal democratic thought, on the other hand, holds the individual's life-property relationship in reverence by making it the focal point of individual existence. In liberal democratic philosophy, every individual has a basic inherent right to own property in support of his life.

> "For each man has a right to his preservation and hence to appropriating the necessities of his life."[3]

The importance of the individual's right to the ownership of property in liberal democratic societies cannot be underestimated. Property and the proper use of it sustains life. The removal of property and the individual's right to its use threatens his continued existence. Therefore, one must realize as the Marxist-Leninists have, that to have property is to have power.

Although Marxism-Communism regards the individual possession of property in its most negative, exploitive sense, the possession and use

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[2]Marshall V.D. Sokolovsky, Soviet Military Strategy, Third edition, edited with an analysis and commentary by H.F. Scott, New York: Crane, Russak Publishing Co., 1968, p. 16.

[3]C.B. Macpherson, The Political Theory of Possessive Individualism: Hobbes to Locke, London: Oxford University Press, 1967, p. 142.

of property can offer many benefits that go well beyond the fulfillment of an individual's biological needs. For example, the possession of property by the individual gives him a sense of distinction, a separateness from his fellow men. For lack of a better term, the ownership of property can give man a personal type of freedom that sets him apart.

> "Not only has the individual a property in his person and capacities, a property in the sense of right to enjoy and use them and exclude others from them . . . . What makes man human is his freedom from other men. Man's essence is freedom. Freedom is the proprietorship of one's own person and capacities."[4]

Once an individual assumes effective possession of any part of the earth's bounty and puts it to his own personal use, he has then acquired both a property right and a corresponding right to exercise whatever power he has available to defend his property from others. For

> "Man hath by nature a Power . . . to preserve his property, that is his Life, Liberty and Estate."[5]

The natural systemic competitiveness between various individuals in society to protect existing properties as well as acquire new properties creates a situation of potential conflict among men. As a result of this competitiveness leading to potential conflict, political society has grown out of the recognition of the necessity to orderly structure the defence of properties belonging to a large number of individuals.

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[4] Ibid., p. 142.
The individual right to property is important in a general systems context. One of the major isomorphic characteristics in general systems theory is progressive differentiation, the movement away from a more general and homogeneous state to a more specialized and heterogeneous condition of existence. L. Von Bertalanffy, General Systems Theory . . . . , Op. cit., p. 211.

[5] Ibid., p. 198. For original source, refer to Thomas Hobbes, Leviathan 'Of Property' section 87.

> "Society consists of relations of exchange between proprietors. Political society becomes a calculated device for the protection of this property and for the maintenance of an orderly relation of exchange."[6]

The opposing point of view to this interpretation of the life-property relationship in liberal democratic philosophy infers that property ownership is a culturally learned characteristic rather than a biological necessity.

> "Private property is the child of culture and develops into a major pre-occupation only with the evolution of complex society. Allegiance to territory rather than one's kin is a relatively recent development in human history accompanying the invention of the state."[7]

The Marxist-Leninist concept of private property is very similar to this point of view, however, property is thought of exclusively in terms of social class and economic relationships.[8] Political society is composed of two antithetical forces, namely those who control the economic means of production (i.e. the bourgeois class) and those who have only their labour to contribute to that economic relationship (i.e. the proletariat class).

For the Marxist-Communist, political society evolves from the perpetual conflict resulting from the struggle between these two antithetical forces of economic existence. The liberal democrat, on the

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[6] C.B. Macpherson, Op. cit., p. 3. From this point of view, one can infer that the function of defence is to protect individual property which sustains human life.

[7] A. Allard, The Human Imperative, New York: Columbia University Press, 1972, p. 64.

[8] In the words of Karl Marx, the theory of Communism is the abolition of private property. Refer to Karl Marx, Frederick Engels, The Communist Manifesto with Introduction by Leon Trotsky, New York: Pathfinder Press, 1970, p. 28.

other hand regards the evolution of political society more as a result of social consensus rather than social conflict.[9]

While Marxism-Communism views human existence in the more negative context of conflict, democratic liberalism regards human existence in a positive sense. Competition between individuals and nation states is encouraged, any conflict resulting from this natural systemic competition is often regarded as unnatural and unhealthy. Herein lies the contradiction that liberal democracy has failed to see.

In all open living systems, systemic competition over finite natural resources results in potential conflict between system parts. For

> "If a system does not permit 'conflict' it prevents adjustment thereby it maximizes the danger of catastrophic breakdown (spasm-war)."[10]

In Marxist-Communist doctrine, human conflict and the promotion of it is essential in the attainment of every Marxist's true finality, namely 'the socialist state'. The following basic principles flowing from conflict can be realized in Marxist-Communist ideology:

Guidelines for Communist Promotion of Conflict[11]

(a) War and Peace have no meaning or place in the Communist concept of the nation-in-arms. An unending struggle is

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[9] Jean Jacques Rousseau's Social Contract embodies the general belief in man's potential reason as indicated by the fact that a social consensus between individuals can be reached through common agreement.

[10] N. Nyiri, Alternatives to Nuclear Warfare . . . . Vol. I, Op. cit., p. 99.

[11] These guidelines have been adapted for this thesis from the unpublished manuscript of Lt. Col. D.G. Loomis, On Conflict, Ottawa: Dept. of National Defence, April 1st, 1969, pp. 308-309.

envisaged against counter-revolutionaries acting either within the state or outside of it.

(b) Conflict is of a four-fold nature--diplomatic, economic, psychological and, as a last resort, military. It is possible to have many combinations of offense and defence in any or all of these spheres.

(c) A Communist has no loyalty except to Communism. Thus, a Communist cannot be loyal to any nation, state, institution, or person save those nations, states, institutions, or persons which are Communist. For a Communist, the nation state is only a temporary stage of equifinal position along the road leading to the perfect socialist state.

(d) To every revolution, there will be a counter-revolution. For every Communist, conflict is both an inevitable and desirable state of affairs.

(e) Success in conflict is contingent on an alliance with the least privileged classes of society. Every society has variations of relative privilege. Thus, every society is vulnerable to Communism.

(f) Always act offensively in as many spheres as possible. This principle is closely related to the next one. The ideal is a combined diplomatic, psychological, economic, and military offensive. In any case, offensive action in the diplomatic, economic, and psychological spheres cannot be successful unless a strong military potential exists. For this reason, the Soviet Union has continued to maintain large armed forces.

(g) All actions must be properly timed. In particular, the timing of offensive actions is governed by crisis. The most serious crisis for a Capitalistic state is an economic one. The second most serious is a military one.

Although an economic crisis in a capitalist country works very much in favour of the Communists, economics is also 'the Achilles heel' of the Soviet system of government. The continued existence of liberal democracy based upon a free enterprise or market economy remains the major threat to World Communism.

If the capitalist or free enterprise nations continue to lead the Communist nations in every conceivable economic standard of comparison, then the very basis of Communism will be threatened. For example, the military and technological advances of western democratic nations in the late fifties and early sixties were perceived as a very real threat to the continuation of Communism.

> "The military revolution came as a severe blow to Communist ideology: the Marxist thesis that capitalism was doomed because it had already exhausted all possibilities for effective development of productive forces was clearly disapproved by the discovery and adaptation in the capitalist camp of nuclear energy."[12]

(h) Conflict is conducted by different means in different fields. This implies the well known principle of war--flexibility.

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[12] Nikolai Galay "The Soviet Approach to the Modern Molitary Revolution" in John Erickson (ed.) The Military-Technical Revolution: Its Impact on Strategy and Foreign Policy, New York: F.A. Praeger Publishers, 1966, p. 20.

(i) Foreign policy and internal affairs of a Communist state must be closely related. A state's internal policies can be directed to bring about conditions that are favourable to the realization of that state's long term political objectives.[13]

Foreign policy, on the other hand, can be utilized in the preparation for war by signing treaties, forming coalitions and safeguarding the neutrality of neighbouring countries.[14]

For the Soviet Union, since conflict is considered to be inevitable, then all government policy must be directed in such a way as to ensure final victory.

(j) The actions of one state must determine the actions of others. In non-Communist states this arises only indirectly through trade and commerce and sometimes military war. However, the nation-in-arms will always strive to influence the external and internal affairs of other states.

(k) The overthrow of Capitalism is impossible without violence. Liberal Capitalism based upon market economy is recognized as the main threat to Communism. Other classes of opposition or counter-revolutionaries are recognized, but these may be overcome without violence or resorting to military action. Some examples are Middle East nationalism, Far East "neutralism" and so on.

While an all-out nuclear holocaustis to be avoided, violence will

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[13] Marshall V.D. Sokolovsky, Op. cit., p. 18.

[14] Ibid., p. 18.

still be required in the form of peaceful coexistence.

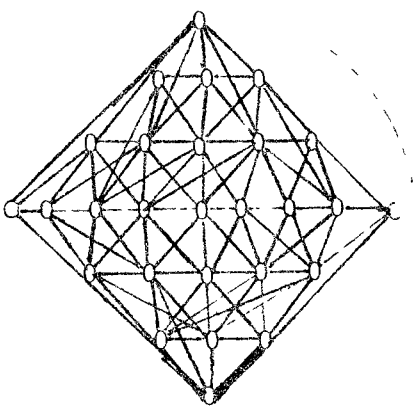
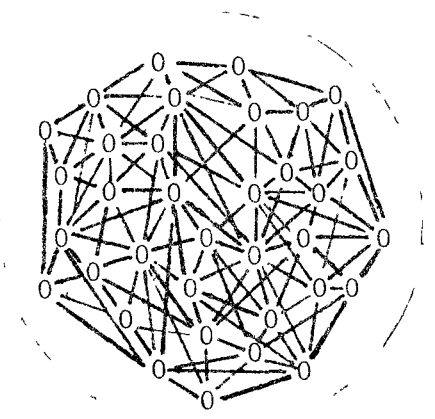
> "Peaceful coexistence by their (Soviet) definition means pursuing a vigorous policy of expanding their influence and power by any expedient means short of war."[15]

In answer to the question on whether or not the values of Soviet Communism are compatible with those of liberal democratic nations, the reply must be an emphatic no.

The values of Marxism-Communism are completely antithetical to the values of liberal democratic philosophy. While Communist ideology is grounded in both the inevitability and necessity for human conflict, western liberal democracies regard human conflict as being neither inevitable nor a desirable state of affairs.

The following table of comparisons between the two ideological systems indicates the real degree of asymetry that exists on every practical level of analysis.

FIGURE A-2

Marxist-Leninist system	Liberal Democratic system
limited "open" system	an "open" system
	
Parts $\leq$ Whole	Parts $\geq$ Whole

cont'd ...

[15] R. Garthoff "Military Power in Soviet Policy" in John Erickson (ed.) Op. cit., p. 239.

con't ...

Ideological Table of Comparisons

Marxist-Leninist system	Liberal Democratic system
Ideological differences	Ideological differences
1. Life ≠ property relationship severed (no private ownership of property allowed)	Life = property relationship protected by law (private ownership of property fully endorsed)
2. Domination of Parts by the Whole System parts (individuals) interrelate to achieve objectives set by the whole (i.e. The Communist Party)	Domination of Whole by the Parts individual parts interrelate to achieve objectives set by the parts.
3. Status/ Encirclement by Capitalism makes defence necessary as Capitalism is both predatory and aggressive by nature[16]	Status/ Defence becomes necessary as Communism is hostile to the continuation of Capitalism
4. Achievements/Defence of revolutionary gains: freedom from exploitation, slavery and poverty of Czarist Russia	Achievements/Defence of democratic liberalism and its gains: liberty, equality, individual freedom and a high standard of living
5. Sovereignty of the nation state Sovereignty of the Soviet Union considered essential: Integration with west would threaten Marxist ideology	Sovereignty of the nation state Sovereignty of democratic states considered outdated. Global interdependence and integration sought as long range goal[17]

From these ideological differences comes the realization that liberal democratic nations like the United States and Canada have shown a dedication to strategies that promote stability, preservation of the status quo, and the balance of power rather than seeking conquest and final solution through the methodical use of controlled conflict.[18]

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[16] Marshall V.D. Sokolovsky, Op. cit., p. 40.

[17] Ervin Laszlo, A Strategy for the Future . . . . Op. cit., p. 144.

[18] Stefan Possony, J. Pournelle, The Strategy of Technology: Winning the Decisive War, Cambridge, Mass.: University Press of Dunellen, 1970, p. 3.

On the other hand, the Soviet Union has shown itself to be true to Marxist-Leninist ideology by utilizing all of its national capabilities to promote conflict with the prospect of bringing about the downfall of western democratic societies.[19] It is in this perspective of understanding the purposes behind the Soviet military policy and learning from past Soviet behaviour that democratic nations respond with counter military strategies to offset any advantages that Soviet military strategy may have gained. Canada's contribution to western military strategy can be significant in countering Soviet military strategy. However, before counter strategies can be offered to challenge Soviet strategy, it is important that present American and Soviet military strategy be examined in light of military technology so that the strengths and weaknesses of each can be fully understood before endeavouring to make any recommendations on policy for Canada and western democratic nations in general.

(2) U.S./Soviet Strategic Policy and Present Military Technology

Although von Clausewitz argued that it was misleading to think that dependence on any one particular weapon by itself makes for a successful strategy, it is accepted fact that military technology and

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[19] Ibid., p. 3.
If there is one thing that can be said about the past political behaviour of Soviet Communism, it would be that it has shown a high degree of consistency in regards to its commitment to Marxism-Leninism. This has been an obvious advantage to the Communists but also it is a potential weakness worthy of exploitation.

new weapons systems play a very leading role in shaping both the character of a nation's military strategy as well as influencing those policy options chosen.

> "Technology is dynamic, no one can agree to stand still. Force relationships change in the course of armament cycles despite the best planning possible . . . . New technologies create new power."[20]

Every nation, no matter how large or how small, is affected by these new developments in weapons technology and the resultant policies that nations pursue in response to this technology. This has never been more evident than in the present nuclear age.

In the early fifties, the Soviet Union found it self in a position of technical inferiority when it came to military technology. Although the Soviets possessed a large inventory of nuclear bombs of sufficient megatonnage, they lacked the necessary transport systems todeliver their nuclear payloads to North American shores. As an alternative to this deficiency, the Soviets resorted to building up large conventional forces in Europe with the purpose of holding United States' European allies hostage.[21]

In the latter part of the fifties and early sixties, the Soviet Union embarked on a crash program of offensive weapons development to lessen the technological gap that existed between themselves and the Americans. Intercontinental ballistic missiles (ICBMs) were produced in sufficient numbers to make it possible for the Soviet Union to strike at American cities. At the same time as the Soviets were attempting to improve upon their inferior weapons position, the United

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[20] S. Possony, J. Pournelle, Op. cit., p. 187.

[21] Morton Halperin, Contemporary Military Strategy, Boston: Little, Brown and Co., 1967, p. 57.

States had serious concerns about the escalating arms race and feared that it could lead to the outbreak of an all-out nuclear war.

The strategic policy of the United States in the early sixties was one of assured destruction.[22] This was almost exclusively an offensive strategy in that the United States relied on its offensive capability to assure the destruction of some specified fraction of the population and industry of the potential enemy after the United States had absorbed the best blows the enemy could offer.[23]

This policy of assured destruction was a limited policy in that it offered no counter force capabilities to destroy the enemy's strike force and the American response to any threat was strictly a singular one, all out nuclear war.

However, since the United States still enjoyed a comfortable weapons advantage over the Soviet Union due basically to its military technology, which had devised new types of nuclear missiles that were more accurate and more easily controlled in terms of damage limitation, the United States indicated a willingness to negotiate on arms limitation with the Soviet Union.[24] A general sophistication and refinement in nuclear weapons technology had made it possible to negotiate down from all-out nuclear war by introducing new partial strategies that offered greater flexibility in response.

In June of 1962, American Secretary of Defense Robert McNamara introduced his famous controlled flexible response strategy whereby the

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[22] S. Possony, J. Pournelle, Op. cit., p. 111.

[23] Ibid., p. 111.

[24] Morton Halperin, Op. cit., p. 81.

United States would agree not to target its massive offensive nuclear capability on the heavily populated areas of the Soviet Union.[25] It was the hope of the Kennedy administration that the Soviets would respond in kind, however the Soviet Union flatly rejected the American proposal because of its inferior technological position.[26]

In the latter part of the sixties and early seventies, the United States continued to indicate a willingness to negotiate with the Soviet Union on arms limitation but the Soviets displayed little interest in limiting weapons development.[27]

Soviet strategic policy, on the other hand, has assumed a different approach than that of the Americans. The strategic policy of the Soviet Union is a policy of assured survival and not assured destruction.[28] This policy is explainable in that the Soviet Union, having been in an inferior technological position for a long period of time, conceded the United States a first strike capability but recognized that the United States had weaknesses in areas of active defence.

The Soviet Union responded to this weakness by installing substantial defences and counterforce weapons to ensure that the United

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[25] Ibid., p. 77.

[26] Ibid., p. 85.

[27] During the Nixon administration of 1968 and the Ford administration of 1974, United States authorities have talked of establishing a position of guaranteed parity or 'mutual equivalence' with the Soviet Union. The Soviet Union's failure to respond to such initiatives seems to be indicative of their attitude regarding the inevitability of conflict. For more details on U.S. negotiating stance, refer to Secretary of Defence, James Schlesinger in his report to Congress: The Annual Defense Department Report for the Year 1975, Washington: D.C.: United States Government Printing Office, 1974.

[28] S. Possony, J. Pournelle, Op. cit., p. 113.

States would be unable to destroy more than a portion of the Soviet Union and its satellite countries.[29]

In many ways, the Soviet strategy is a logical one. If the Soviet Union can continue to reduce the credibility of the U.S. assured destruction capability by increasing her active defence measures at home then the United States assured destruction capability could become a form of national suicide.[30]

In recent years, U.S. strategic policy has lost any flexibility it may have had. The Soviet Union, on the other hand, with its emphasis on survivability and improving her defensive capabilities may tend to dominate military strategy in the near future. For

> ". . . the technical future, at least most immediately, clearly lies with greater accuracy, with defence, and with counter-force capabilities (or at least potential)."[31]

Furthermore, the Soviet Union has certain other advantages in developing her military technology that the United States does not have. For example, the Soviets, unlike the Americans, have a very centralized or focalized approach for developing military technology and all technology in general.

This is in part due to the strong reciprocal relationship between Soviet technology and those political objectives being sought by the Soviet Union. All aspects of Soviet life are made to conform to these

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[29] Ibid., p. 113.

[30] Ibid., p. 114.

[31] Desmond Ball "United States Strategic Doctrine and Policy - With Some Implications for Australia" in R. O'Neill (ed.) The Strategic Nuclear Balance: An Australian Perspective, Papers from the Conference at Strategic and Defence Studies Center Research School of Pacific Studies, Australian National University, Canberra, 1974, p. 42.

political objectives. The Soviet economic system reflects this conformity.

> "The decisive advantage of the Soviet socialist state over the bourgeois states is the fact that the socialist structure assumes a more perfect economic organization of society; this is of decisive significance for the defensive power of a state."[32]

North American democratic societies, on the other hand, tend to be dominated by the parts (i.e. individuals) rather than by the whole (i.e. the state). As a result, the approach to problem solving tends to be more varied and disseminated in the sense that greater variety and divergence seems to prevail.

As stated in the previous section of this chapter, Soviet Communism regards conflict as an ongoing state of human affairs. Since conflict is inevitable then it is imperative that the Soviet Union persevere in any conflict situation. Technology and the mastery of it holds the key to Soviet attainment of this goal.

As a result, the Soviet Union has focused a large proportion of her GNP (Gross National Product) on the development of heavy industry, air defence, and maintaining large conventional ground forces.[33]

What this has meant for the Soviet Union is that certain sacrifices be made in areas of human need and consumer technology so that a technological advantage in weapons systems could be acquired. The United States,

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[32] Marshall V.D. Sokolovsky, Op. cit., p. 30.

[33] M. Halperin, Op. cit., p. 59. The Soviet Union, unlike the United States, regards defence policy decisions as not basically economic decisions but rather tends to regard them as political decisions. U.S. operational researchers and systems analysists often view U.S. policy options more in terms of cost effectiveness than objective effectiveness. For more details on United States defence policy planning see E.S. Quade, W. Boucher (eds.) Systems Analysis and Policy Planning Applications in Defence (New York: Elsevier Pub. Co., 1968), pp. 1-19 inclusive.

having more economic resources than the Soviet Union, has tended to scatter her research and technological developments in various areas of human need to improve individual life styles.

These different approaches to technology and its uses have created a legitimate concern about the future.

> "The point is despite the enormous western superiority in total quantity of technological resources, the USSR has been able to concentrate more effort than we have on selected portions of weapons technology and to gain local superiority in many phases of military technology."[34]

This situation works in the interests of Soviet Communism. The United States, being a 'capitalist bourgeois society' must be destroyed, thus ending the inevitable dilemma of comparisons between two ideological systems that are asymetrical to each other.

Also, many in the west hold the view that technology can be halted by signing agreements and treaties.[35] But this is a false perspective in the sense that technology may be slowed down but it never can be halted. To halt technology would mean to stop growth and development which are two essential isomorphic characteristics visible to some degree in all living organisms.[36]

A closer examination of the objectives of Soviet military policy indicates how comprehensive the Soviet threat is. The four basic objectives of Soviet military policy are built one upon the other to indicate a multi-tiered type of total strategy. These objectives are the following:

(a) avoid nuclear war

(b) build up mutual deterrence capability to offset

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[34] S. Possony, J. Pournelle, Op. cit., p. 22.

[35] Ibid., p. 26.

[36] L. Von Bertalanffy, Modern Theories of Development. . . . Op. cit., p. 158.

U.S. nuclear capability

(c) maintain a strong continental military position in Europe and Asia

(d) the Soviet Union must continue to develop more mobile and versatile conventional forces, i.e. naval and maritime capabilities to support its interests in the Third World and to sustain its role as a global competitor to the U.S.[37]

This is significant if one recalls that Communism refers to flexibility or the ability to act offensively in as many spheres as possible at all times, as being one of the principal guidelines for promoting conflict.[38]

In recent years, the Soviet Union has embarked on an impressive type of 'Blue Water Strategy' whereby its naval forces have been expanded to act as an instrument for the global support of Soviet interests rather than as merely an adjunct to Soviet land power.[39]

This development should not be underestimated in its importance for in the present era of strategic nuclear deterrence, control of the world's oceans could alter existing world political strategy and disturb economic and social conditions in Third World countries.[40]

To meet this Soviet threat, it is essential that western democratic

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[37] Thomas Wolfe, Soviet Power and Europe, Baltimore: Johns Hopkins University Press, 1970, p. 428.

[38] Lt. Gen. D.G. Loomis, Op. cit., p. 309.

[39] Thomas Wolfe, Op. cit., p. 442. The Soviet merchant marine has been expanded in recent years to complement her already impressive navy.

[40] General A. Beaufre, Strategy for Tomorrow with introduction by R. Foster, New York: Crane, Russat and Co., 1974, p. 65.

nations such as the United States and Canada devise a total strategy that is capable of covering not merely the phenomenon of the nuclear weapon and its possible successors (outer-space, biological warfare etc.) but also the more limited problems of indirect warfare.[41]

Nothing less than a total strategy will suffice in the present era of nuclear technology. Nuclear weapons are total weapons; total in their effect and total in the effort required to sophisticate them and maintain them.

In the previous period of conventional weapons, the quantity of weapons and not necessarily the quality of the weapon used often turned the course of battle. An enemy could be overcome by the sheer force of numbers.

In the present nuclear age, weapons numbers, although still significant, have given way to other equally crucial considerations such as the quality of weapon systems being used and their survivability under conditions of attack.[42]

Presently, military technology and subsequently military strategy is being revolutionized by the use of the computer. Computer technology is bringing strange and highly complex weapon systems out of the pages

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[41] General A. Beaufre, An Introduction to Strategy With Particular Reference to Problems of Defence, Politics, Economics and Diplomacy in the Nuclear Age, translated by Major General R.H. Barry with preface by B.H. Liddell Hart, London: Faber and Faber Publishing Co., 1966, p. 99.

[42] S. Possony, J. Pournelle, Op. cit., p. 10.

of science fiction and applying them in the global battlefield.[43]

Total weapons require total strategies from nations that hope to control their use and not to be controlled by them. It is in this context of a total weapon requiring a total strategy that Canada's defence policy can play a vital role in defending Canada from her enemies and contributing to the defence of the western world.

Trade-off

(3) Recommendations in Canadian Defence Policy

Since the prevailing military technology significantly affects the determination of viable defence policy options, a nation must bring its defence policy in line with both this prevailing military technology as well as those general political objectives being sought by the nation as a whole.

As stated previously in chapter one, finalities (i.e. political objectives) play a very significant part in the behavioural activity of all open living systems. Although the behavioural activity of all open living systems is both naturally purposive and goal directed, man's

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[43] For example, the United States is experimenting with computer operated bombers which can fly long range bombing missions without requiring any type of human intervention. Also, the United States army has designed a lightweight laser gun that enables individual battlefield soldiers to hit and destroy their target from one mile away. Although these advances along with numerous others of varying complexity seem bizarre to a conventional war mentality, they do exist and thus become a part of the military strategy of the nations that possess them. For more details on computer weaponry, refer to Phil Stanford "The Global Automated Battlefield" in D. Johnson, B. Schneider (eds.) Current Issues in U.S. Defence Policy, Center for Defense Information, New York: Praeger Publishing Co., 1976, pp. 202-207 inclusive.

social systems allow for the possibility of human intervention and the superimposition of new finalities on top of nature's pre-existing ones.

If a nation's defence policy and subsequently its foreign policy do no more than respond to changes in weapon system technologies then over time such stimulus-response behaviour will prove to be both costly and ineffective. This is a problem of organization, or more specifically, a lack of it.

For too long, Canada's defence policy has assumed an 'ad hoc' nature in responding to conflict situations after they have occurred.[44] In general systems theory, this type of system behaviour results from a lack of foresight of the goal sought by the dominant system parts, namely its decision makers.

(a) A National Security Policy for Canada

At present, Canada lacks a national security policy which could be directed towards creating a unified and harmonious Canadian society and assisting in minimizing the potential for conflict in the world.[45] A national security policy would be more relevant than reaffirming often ambiguous and ill-defined political objectives in a defence policy review which is done every four or five years.[46]

It would involve devising a total technological strategy to draw upon every aspect of Canadian life. The major objectives of such a

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[44] Lt. Col. D.G. Loomis, On Conflict . . . . Op. cit., p. 255.

[45] Ibid., p. 256.

[46] Denis Stairs, "The Military as an Instrument . . . ," Loc. cit., p. 87.

national security policy would be threefold in approach;[47]

(i) To prevent war - Canada would continue to uphold existing mutual deterrence responsibilities in the NATO/NORAD Alliances.[48] However, Canada would be required to field modern armed forces with modern high energy weapons.[49]

(ii) To devise a national indirect strategy - This is a multi-faceted approach to 'legitimize' the defence of Canada by making Canadians aware of it. This would be done by the creation of various government policies to inform the Canadian public about the facts of modern war and conflict with the purpose of strengthening the Canadian will

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[47] General headings adapted from General A. Beaufre, Deterrence and Strategy . . . . Op. cit., p. 127.

[48] It is no longer a question of whether or not Canada should remain in these two alliance systems because they have succeeded in keeping the peace for the last two decades. But rather the questions involving Canada's continuing contributions to the NATO/NORAD Alliances relates to questions of logistics, namely what force levels should be maintained, what roles and missions performed and the geographic distribution of resources. For more details refer to Lt. Col. D.G. Loomis, Op. cit., p. 267.

[49] S. Possony, J. Pournelle, Op. cit., p. 6. It is no longer sufficient to rely on mass mobilization as in previous World Wars. Present military technology does not allow sufficient time for a nation to mobilize. Canada must maintain sufficient conventional forces to ensure against a surprise action. Sufficient conventional forces does not infer large numbers but rather a superior fighting force equipped with the most up-to-date weapons.

to resist.[50]

Educational programs should be instituted to educate the Canadian public on the value in having a truly 'professional' armed forces. Hopefully, such programs would restore a sense of self identity and a professional 'esprit de corps' within the rank and file of Canada's armed forces.[51]

(iii) To win the war - This would involve the development of a highly sophisticated and modern technological base that would be capable of providing Canada's armed forces with multi-level support in both weapons and other technical support. This

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[50] Herman Kahn has made the interesting observation that after the first use of nuclear weapons against the west, there is likely to be 'a shock reaction' among western populations. Although the damage may only be limited, the citizenry, unaccustomed to such damage may tend to exaggerate the damage impact. This 'shock reaction' combined with a general lack of public knowledge of what options of counter-attack are available may pressure western leaders to negotiate for peace. The national will to resist is at its strongest when there is an informed public. For more details on Kahn's argument, see Brig. Gen. D.G. Loomis, "Reorganization on Basis of a Total Force Concept" in Canadian Defence Quarterly Vol. V #3 Winter 1975/76, p. 14.

[51] Since the Second World War, the Canadian military has suffered from problems of poor morale and a high rate of attrition as a result of not being able to establish a self identity and personal relevance in Canadian society. The primary nature of defensive activity has not been given the significant position among government policies that it deserves. Hopefully, future research in defence policy will concern itself with developing a general theory of defence. For more details on the military's search for recognition, see R.B. Byers, Colin Gray, Canadian Military Professionalism: The Search for Identity, Toronto: Canadian Institute of International Affairs, 1973.

recommendation could be perceived by the Canadian government as being a sensitive one since it relates to the possible resurrection of a viable defence production industry in Canada.[52]

An objective analysis of Canada's weapons requirements combined with an appreciation of what roles and capabilities she best performs is required so that Canadian industry can be utilized to produce those weapons most suitable to performing Canada's defence roles. It is questionable that a country such as Canada, with one of the highest GNP's should continue to make the lowest contribution of that GNP for such a primary task as defence.

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[52] Defence production in Canada is a highly sensitive political issue. Its ramifications cut across the breadth of Canadian economic life. Since Canada signed the Defence Production Sharing Agreement in 1958-1963, she has found herself in an unusual economic relationship with her partner, the United States. At present, various Canadian industries (e.g. the electronics industry) build component parts for American weapon systems, selling those component parts to the United States and then turning around and buying back the finished product to fulfil Canada's defence commitments. It seems that for every Canadian dollar made on the sale of component parts to the United States, two or more dollars are spent by the Canadian government to buy back a finished product that the Canadian government had initially financed to build. It may be more economically and socially feasible if these Canadian defence dollars were spent in Canada to finance Canadian defence production industries, thereby creating new jobs for Canada's unemployed. For more details on defence production sharing, refer to A. Axline (ed.) Continental Community: Independence and Integration in North America, Toronto: McClelland and Stewart Ltd., 1974, pp. 116-135.

(b) Strategic Re-Organization and a Total Force Concept[53]

Although it would be advantageous for Canada to have a national security policy, it would be of little value unless some form of organizational structure existed to turn political and military objectives into operational policy. As stated earlier, organization is the essence of all life.

However, any organization is of little value unless that organization is directed towards those desired goals selected by the dominant parts of the system. If there is a lack of foresight or some confusion exists as to what those goals or objectives are, then as is often the case in large organizations, organizational structure can motivate the day-to-day activity of such organizations.[54]

Since large organizations such as defence establishments are composed of individual members, these individuals naturally bring their own goals and objectives to the organization.

> "The specificity and grouping of such individuals assumes a finality, as they do of every group of people which tries to find the conditions necessary for survival."[55]

As a result, the component parts of the organization become preoccupied with questions of form such as organizational structure while

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[53] The total force concept is adapted from the article by Brig. General D.G. Loomis, "Reorganization on Basis of a Total Force Concept", Op. cit., pp. 1-14.

[54] L. Von Bertalanffy, General Systems Theory . . . . , Op. cit., p. 78.

[55] J.P. Moreigne, "Military Management: A Fantasm or a Necessity?" in M.R. Van Gils (ed.) The Perceived Role of the Military, Rotterdam University Press, 1971, p. 237.

questions of policy and substance tend to become a secondary concern.

If the dominant parts of the system (i.e. the political decision makers) do not exercise sufficient control and direction over the system parts (i.e. government departments, committees, subcommittees etc.) then the essential continuity between intent of an action, the idea motivating it, the form taken to administer it and the action itself, is severed by this lack of control.

In the Department of National Defence, certain technical responsibilities could be more clearly differentiated from each other and reclassified. For example, it has been recommended that the task of strategic analysis be further subdivided into strategic planning and strategic control.[56] Strategic planning would involve the scientist, technologist, and political theorist wading through the complicated scientific and technical jargon of military technology with the purpose of making recommendations on policy. This process of strategic planning would be open to all elements of Canadian society to contribute in making a truly national defence policy.[57] (See Figure A-3)

However, defence policy is much more than merely a series of responses to changes in initial conditions, be they strategic or technological in nature. A nation's defence policy is a political issue as well. The political aspect of defence policy planning relates to the need for strategic control.[58]

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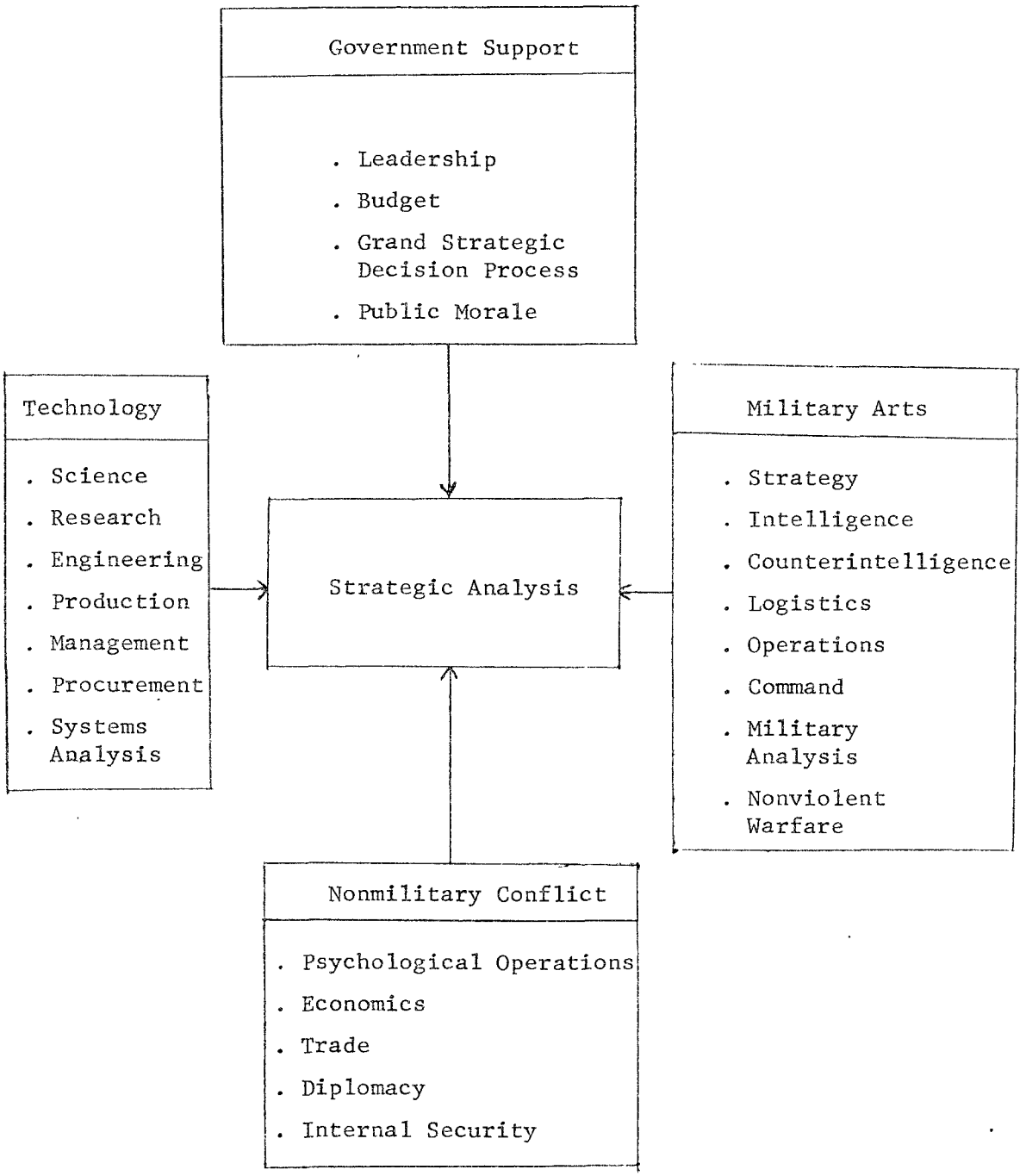
[56] Lt. General D.G. Loomis, On Conflict . . . . , Op. cit., pp. 256-257.

[57] Ibid., p. 257.

[58] Ibid., p. 258.

FIGURE A-3:

The Elements of a Technological Strategy



Reproduced from S. Possony, J. Pournelle, The Strategy of Technology . . . . , Op. cit., p. 60.

When all available information has been gathered, analyzed and policy recommendations have been made, political authority must be exercised to turn recommendations into operational policy.

Today, unlike ever before, the demands on a political decision maker's time and competency are extremely great. In matters of military strategy, he must be capable of transcending the immediate concerns of logistics which tend to prevail yet be able to see all the possible futures that technology and the technologists will thrust upon him.[59]

He must be a generalist who is both capable of understanding the nuances involved in issues of particular interest while understanding those same issues in the totality of all things. At the best of times, this description is one of an extraordinary man.

The awesome nature of this responsibility combined with the fact that Canada's political decision makers have indicated an aversion towards the politically sensitive problem of defence , it is recommended that a National Defence Council of Canada (NDCC) or a Security Council of Canada (SCC) be established along the lines of its American counterpart, the National Security Council.[60] (Refer to Figure A-4.)

The NDCC or SCC would shift the singular burden of responsibility for defence from the shoulders of a political decision maker with partisan interests to the collective shoulders of high ranking decision makers (i.e. parliamentary leaders), strategists, and scientists alike. To avoid the problem of political partisanship, the NDCC or SCC would be responsible to Parliament in general and not just to the government in power.

These recommendations for change in those organizations responsible for making defence policy, administering it, and analyzing its possible

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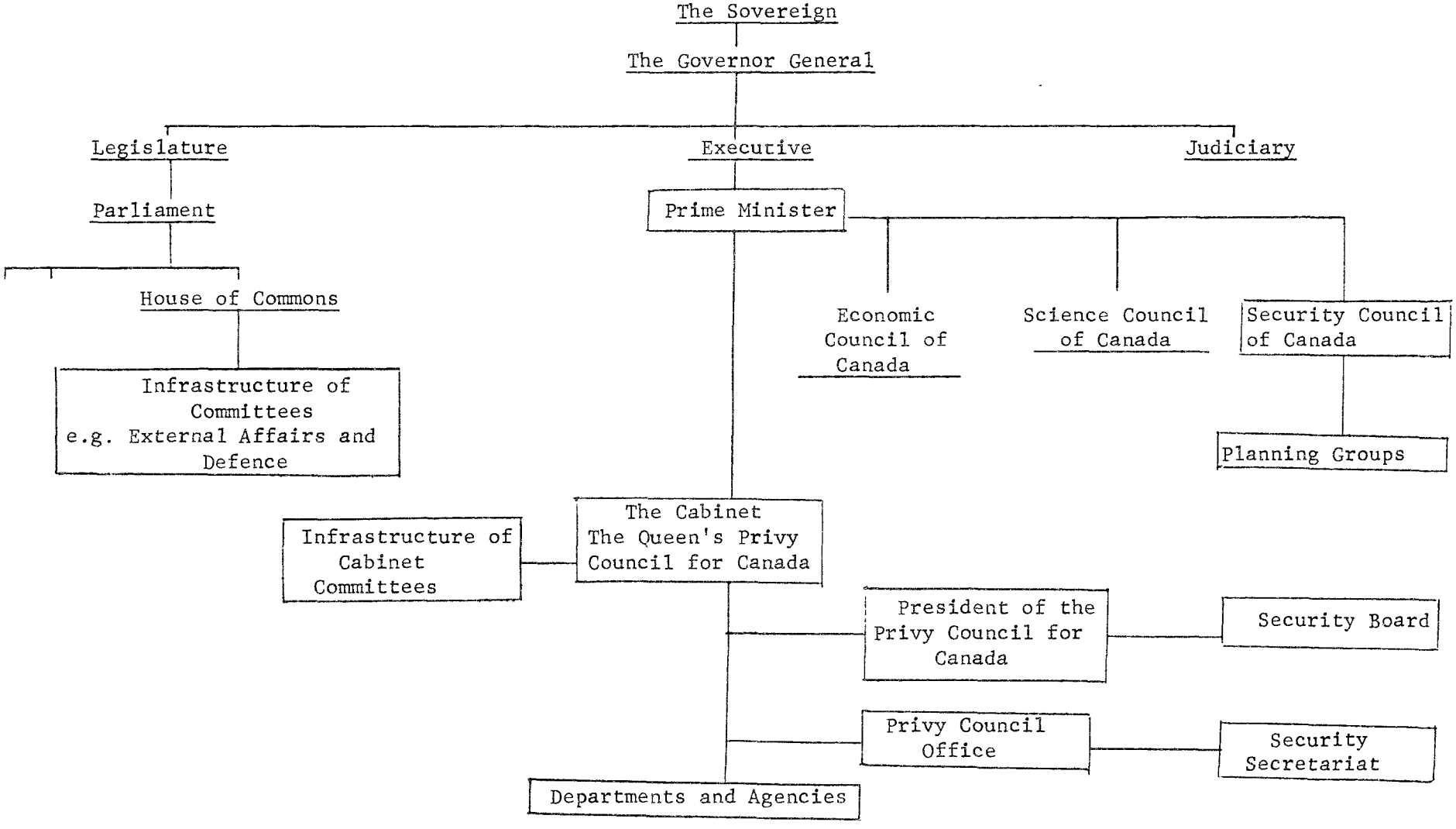
[59] S. Possony, J. Pournelle, Op. cit., pp. 88-89.

[60] N. Nyiri, Alternatives to Nuclear Warfare . . . , Occasional Paper #2, Op. cit., p. 460.



Reproduced from Lt. Col. D. G. Loomis, On Conflict, unpublished manuscript, Canada. Department of National Defence, Ottawa: April 1, 1969, p. 260.

weaknesses will not, by themselves, constitute a successful defence policy. As stated previously in chapter one, defensive activity as a primary function of all open living systems occurs on all hierarchial levels.

Defence of the sovereign nation state must be regarded by western democratic nations as a total system activity requiring a total system response. Mass mobilization of a national population and the Napoleonic concept of the 'Levée en masse' are outmoded in the present weapons age where response time is a matter of minutes if not seconds.

A military technology of total weapons requires both a response in terms of a total strategy and a total force.

> "The concept of a total force embodies the idea of generating military forces in a number of pre-planned stages to meet various levels of emergency."[61]

The total force concept is a radically new idea in the history of military strategy. It does not mean having numerically large armed forces but rather a well equipped, well organized armed forces capable of responding by stages to any given crisis situation.[62]

However, a national militia by itself without a civilian support counterpart does not constitute a total force.

> "To meet the requirements for these new dynamic organizations in an economic and safe fashion a mobilization base is required within our society which includes not only that traditional militia but also its equivalent civil components."[63]

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[61] Brig. General D.G. Loomis, "Re-organization on Basis of a Total Force Concept . . . ," Op. cit., p. 9.

[62] Ibid., p. 9.

[63] Lt. General D.G. Loomis, Op. cit., p. 282.

To organize Canada's armed forces along the lines of a total force concept would require categorizing the type of potential conflict that could occur between situations of absolute peace and total war and then responding to each corresponding threat with the appropriate force commitment. (See Figure A-5.) This represents a marked departure from the previous home defence commitment of earlier Canadian governments that regarded "the defence of Canada and Western Europe as ultimately one operation."[64]

A major advantage of the total force concept is that it offers a certain degree of flexible response.[65] Also, total force could prove to be an economical system of organization capable of coping with internal and external conflict situations as well as providing a sense of self identity for Canada's armed forces.

(4) Summary

The future of Canada's defence policy will very much be dependent on international political and strategic conditions that will not be of her own choosing. At present, two antithetical political systems, Soviet Communism and Western Liberal Democracy are in constant competition with each other for systems dominance.

While Soviet Communism is philosophically committed to the promotion of conflict, western liberal democracies regard social consensus as a more desirable state of human affairs.

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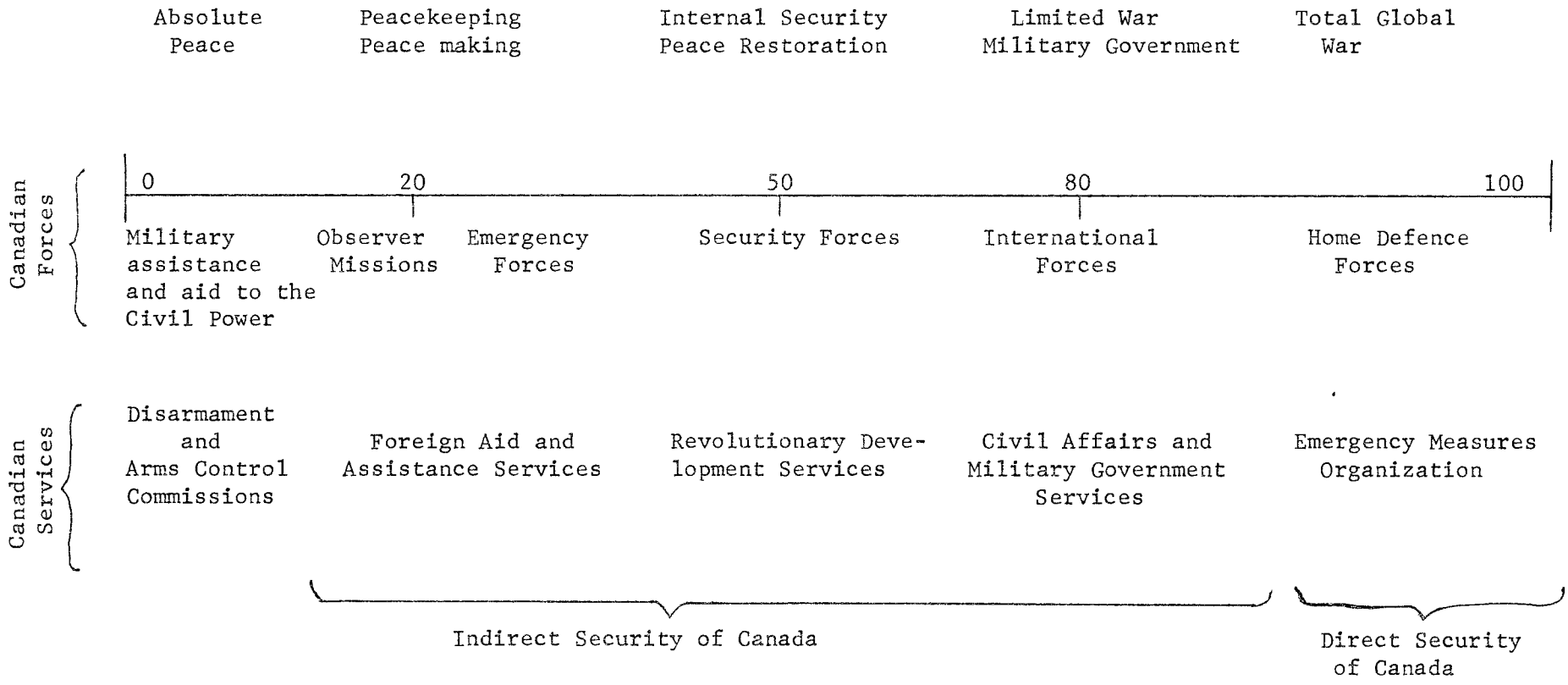
[64] The Honourable Brooke Claxton, Canada's Defence Programme, Ottawa: Queen's Printer, 1949, p. 12.

[65] Brig. General D.G. Loomis, On Conflict, Op. cit., p. 277.



Reproduced from Lt. Col. D. G. Loomis On Conflict unpublished manuscript, Canada. Department of National Defence, Ottawa: April 1, 1969, p. 280.

The natural competition between these two dominant system parts has extended into military and weapons technology. Under these international conditions, Canada's defence policy must develop a national security policy that would work towards controlling the outbreak of conflict on whatever level it may occur. Also, a national security organization with the responsibility to develop defence policy options should be established.

In the present era of total weapons, Canada must develop both a total strategy and a total force to provide for the direct and indirect defence of Canada.

CHAPTER IV

Observations and Conclusions

Observations

Most of the present research being done in Canadian defence policy has tended to be both partial in nature and singular in approach. Few attempts have been made to study the problem of Canadian defence policy on a higher level of analysis.

What seems to be warranted is a theoretical inquiry that would conceivably explain existing phenomena and offer recommendations for change based upon these observations. As well, a theoretical inquiry would be required to obey certain basic principles for conducting a truly scientific analysis.

General systems theory is the type of analytical theory that closely approximates the objective of attaining the highest level of inquiry while still remaining firmly grounded in the pure sciences. In general systems theory, all living open systems situated on the various levels of nature's hierarchy display certain isomorphic characteristics that they hold in common with each other.

Many of these reoccuring characteristics are antithetical to each other. This is representative of the basic duality that exists everywhere in nature.[1] For example, the characteristics of progressive centralization and progressive individualization, competition of parts

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[1] Taylor, A.M., "Evolution-Revolution, General Systems Theory and Society" in R. Gotesky, E. Laszlo (eds.) Evolution-Revolution, New York: Gordon and Breach Publishing Co., 1971, p. 111.

and domination of parts, entropy and negentropy, anabolism and catabolism in general systems theory are indicative of this basic duality in nature.

Secondly, the other basic principle derived from general systems theory is that organization is the essence of all life. No living open system is totally self-sufficient. Instead, every living open system can acquire a relative degree of self-sufficiency or independence by competing for systems dominance with the other parts of the system. Increased independence of action is only possible through increased interdependence.

Also, the purpose or 'true finality' of every living open system is to ensure its survival by maintaining itself and its identity. As a result of the system's true finality, the defensive activities of every living open system are directed in such a way as to be directly supportive of this purpose.

With all living open systems, the interaction of system parts results in competition within systems and between particular systems for those finite system properties that sustain life. This natural competitiveness gives rise to conditions that are conducive for creating potential conflict between system parts.

From these general systems observations, it is possible to draw certain basic conclusions regarding defence as a total system activity and defence policy as a total system response.

Conclusions

The function of all defensive activity in the nation state system is motivated by the desire to control the potential conflict arising from the natural competitiveness occurring within that

particular nation state system and between competing nation state systems.

More specifically, a nation state's defence policy is a rational response by that nation's political authorities to control the conflict resulting from the natural competitiveness of open systems thus maintaining that political system in its entirety. Defence establishments are merely the organizational means by which the potential for conflict can be 'professionalized' as to make final victory possible.

In the international political system, the two antithetical political forces of Marxist Communism and Western Liberal Democracy compete with each other for systems dominance. As is characteristic in the basic dualism of nature, Soviet Communism and Western Liberal Democracy are completely antithetical to each other.

Soviet Communism regards conflict and the promotion of conflict as an inevitable and desirable state of human affairs. Liberal democracy, on the other hand, regards social consensus and not conflict as more indicative of the human condition.

As a result of these two essential differences, Communist nations and western democratic nations have responded according to their respective beliefs. In the Soviet Union, defence assumes a focal position in Soviet life. It has become a total system activity requiring a total system response.

Soviet military strategy reflects this primary concern with defending the Soviet Union by having developed a highly comprehensive yet flexible total strategy. It is flexible in the sense that it operates at all times in as many spheres of potential conflict as possible.

Furthermore, the Soviet Union has adopted a total system strategy whereby all aspects of Soviet life are considered to be supportive of its political and ideological ambitions. Defence policy decisions are inherently political decisions and not primarily decisions of cost effectiveness and economic feasibility. Western liberal democratic nations such as the United States and Canada represent the opposing position in this aspect of nature's duality.

Defence has not been elevated to a primary function of the nation state system in democratic societies as is the case in Marxist Communist countries. Defence is not seen in its fullest system's context as being a total system activity requiring a total system response.

In the past, western democratic nations have reacted to threats and crises with graduated responses to bring about a resolution of conflict. Although, when these responses were grouped together to constitute an overall strategy, they were highly summative in nature. Seldom have western strategists viewed the threat of Soviet Communism in its totality.

If this were to be done, then western military strategy in the future would no longer consist of a series of responses built one upon another but rather be comprised of a series of responses built in a constitutive sense with the realization that the Soviet Communist threat is a total systems one.

This is understandable since conflict is not accepted in western democratic societies as being an inevitable ongoing process but rather it is considered as a temporary condition brought on either by a breakdown in international communication or a failure to adequately reach a social consensus.

While western military strategy has given the appearance of flexible response to the Soviet nuclear challenge, this has been true more in principle than in fact.

The lack of flexibility in western military strategy can be accounted for by the tendency in western democratic nations to regard defence policy decisions more as economic decisions than as political decisions relating to continued survival.

In most western democratic nations, limited national resources are provided for respective military establishments to carry out the variety of tasks required to successfully challenge the Soviet Communist threat which eclipses all spheres of potential conflict. As a result, certain areas of the west's potential counter-response to the more comprehensive and flexible Soviet Communist challenge is not completely adequate.

Furthermore, the present development of sophisticated military technology has broadened the scope of potential technological response rather than limiting basic response capabilities. The nuclear weapon combined with computer technology has revolutionized military strategic thinking. The greater availability of military technology has encouraged all competing parties to utilize that military technology to gain an advantage.

Western democratic nations, limited by available funding, have specialized their activities in certain areas to gain partial advantages. However, partial advantages may prove to be insufficient in the broader aspect of the west attaining final victory.

It is in this perspective that Canada pursue a defence policy that is both credible in terms of contributing to western military strategy as well as being meaningful for a critical Canadian public.

The Canadian dilemma has been one of attaining sufficient independence or freedom of action in a situation of systems interdependence with the United States.

This is a common dilemma found in all living open systems. As stated previously, organization is the essence of all life. No living open system can be totally self-sufficient or independent from other living open systems.

However, a degree of relative independence is possible within a situation of interdependence. Since there is continuous competition between system parts for systems dominance, it is logical to infer from this fact that Canada could acquire a significant degree of relative independence if she proceeded to play a more significant role in its existing interdependent relationships.

For example, Canadian participation in NORAD could become more active by bolstering her present contributions in terms of force strength and strategic input. NORAD's jurisdiction could conceivably be extended to include much more than those problems relating to the air defence of North America. A revamped NORAD Alliance with a more active Canadian partner could make significant contributions to the west's total system strategy.

Also, increased Canadian participation and a general willingness to initiate new ideas and new strategies would restore U.S. confidence in Canada's commitment to the defence of the west.

On a national level, the defence of Canada should be considered as a total system activity and not as a partial system activity. Present political conditions combined with new military technology requires a total system strategy.

It will no longer be sufficient to make partial summative responses to the constitutive total system threat inherent in Soviet Communism, therefore Canada's defence policy must be elevated beyond being an infrequent crisis oriented activity to a position of primary importance in the list of government concerns.

In regards to the use of general systems theory in social research, there are certain limitations that must be clearly spelled out. For example, the predictive capability of general systems theory is questioned on the same grounds like other theories in the social sciences with reference to their relative capability to make future predictions.

More specifically, the question of entropy and negentropy have not been dequately resolved in the general literature due to the fact of incomplete esearch into the nature and causes of disorder. However, bearing these imitations in mind, there are no positive grounds for rejecting the utility alue of general systems theory in providing a framework for explaining human eality.

The study of Canada's defence policy by the use of general systems theory s only one aspect of this human reality, namely systems survival.

Bibliography

Books

Allard, A. The Human Imperative. New York: Columbia University Press, 1972.

Beaufre, General A. An Introduction to Strategy with Particular Reference to Problems of Defence, Politics, Economics and Diplomacy in the Nuclear Age. Translated by Major General R.H. Barry with preface by B.H. Liddell Hart. London: Faber and Faber Publishing Co., 1966.

_____. Strategy for Tomorrow with introduction by R. Foster. New York: Crane, Russat and Co., 1974.

Bertalanffy, Ludwig Von. General Systems Theory: Foundations, Development, Applications. New York: G. Braziller Publishing Co., 1968.

_____. Modern Theories of Development: An Introduction To Theoretical Biology. Translated and adapted by J.H. Woodger. London: Oxford University Press, 1933.

Bobrow, D. (ed.) Components of Defence Policy. Chicago: Rand McNally Publishing Co., 1965.

Brewin, A. Stand On Guard: The Search for a Canadian Defence Policy. Toronto: McClelland and Stewart Publishing Co., 1965.

Burns, Lt. Gen. E.M.L. Defence in the Nuclear Age: An Introduction for Canadians. Toronto: Clarke Irwin Publishing Co., 1976.

Byers, R.B., Gray, Colin (eds.) Canadian Military Professionalism: The Search for Identity. Toronto: Canadian Institute of International Affairs, 1964.

Cohen, M.R., Nagel, E. An Introduction to Logic and Scientific Method. New York: Harcourt, Brace and World Publishing, 1934.

Crane, Brian. An Introduction to Canadian Defence Policy. Toronto: Canadian Institute of International Affairs, 1964.

Cuff,R.,Granatstein, J. Canadian-American Relations in Wartime: From the Great War to the Cold War. Toronto: Hakkert Publishing Co., 1975.

Dawson, R.M. Canada in World Affairs: Two Years of War (1939-1941). Toronto: Oxford University Press, 1943.

Dewey, John. Logic: The Theory of Inquiry. New York, Holt, Rinehart and Winston Publishing Co., 1938.

Easton, David. A Systems Analysis of Political Life. New York: John Wiley and Sons Publishing Co., 1965.

Eayrs, James. In Defence of Canada: Peacekeeping and Deterrence, Volume III. Toronto: University of Toronto Press, 1972.

Erickson, John (ed.) The Military-Technical Revolution: Its Impact on Strategy and Foreign Policy. New York: F.A. Praeger Publishing Co., 1966.

Glazebrook, G. A History of Canadian External Affairs: The Formative Years to 1914, Volume I, revised edition. Toronto: McClelland and Stewart Ltd., 1966.

Gray, Colin. Canadian Defence Priorities: A Question of Relevance. Toronto: Clarke Irwin Publishing Co., 1972.

Halperin, Morton. Contemporary Military Strategy. Boston: Little, Brown and Co., 1967.

Hobbes, Thomas. Leviathan. With introduction by C.B. Macpherson. Hammondsworth: Penguin Books Ltd., 1968.

Holmes, John. Canada: A Middle Aged Power. Toronto: McClelland and Stewart Publishing Co., 1976.

Isaak, A. Scope and Method of Political Science: An Introduction to the Methodology of Political Inquiry. Homewood, Illinois: Dorsey Press Ltd., 1969.

Johnson, D., Schneider, B. (eds.) Current Issues in U.S. Defence Policy. Center for Defence Information. New York: Praeger Publishing Co., 1976.

Kaplan, A. The Conduct of Inquiry: Methodology for Behavioural Science. San Francisco: Chandler Publishing Co., 1964.

Laszlo, E. A Strategy for the Future: The Systems Approach to World Order. New York: George Braziller Publishing Co., 1974.

_____. Introduction to Systems Philosophy: Toward a New Paradigm of Contemporary Thought. New York: Gordon and Breech Science Publishers, 1972.

Lyon, Peyton. Canada in World Affairs 1961-1963, Volume XII, Toronto: Toronto: Oxford University Press, 1968.

Massey, H. (ed.) The Canadian Military: A Profile. Toronto: Copp-Clark Publishing Co., 1972.

MacPherson, C.B. The Political Theory of Possessive Individualism: Hobbes to Locke. London: Oxford University Press, 1967.

McLin, J.B. Canada's Changing Defence Policy 1957-1963: The Problems of a Middle Power in Alliance. Baltimore: Johns Hopkins University Press, 1967.

Marx, Karl, Engels, F. The Communist Manifesto. With an Introduction by Leon Trotsky. New York: Pathfinder Press Ltd., 1970.

Neatby, H.B. William Lyon MacKenzie King 1924-1932: The Lonely Heights. Toronto: University of Toronto Press, 1970.

Northrop, F.S. The Logic of the Sciences and the Humanities. Cleveland: The World Publishing Co., 1947.

O'Neill, R. The Strategic Nuclear Balance: An Australian Perspective. Papers from the Conference at Strategic and Defence Studies Center Research School of Pacfic Studies, Australian National University, Canberra, 1974.

Possony, S., Pournelle, J. The Strategy of Technology: Winning the Decisive War. Cambridge, Mass.: University Press of Dunellen, 1970.

Preston, R.A. Canada and Imperial Defence: A Study of the Origins of the British Commonwealth Defence Organization 1867-1919. Durham: Duke University Press, 1967.

_____. Canadian Defence Policy and the Development of the Canadian Nation 1867-1917. Ottawa: Canadian Historical Association, #25, 1970.

Quade, E.S., Boucher, W. (eds.) Systems Analysis and Policy Planning in Defense. New York: Elsovier Publishing Co., 1968.

Rapoport, Anatol. Conflict in Man-made Environment. Middlesex, England: Penguin Books Ltd., 1974.

Reford, R. Canada and Three Crises. Toronto: Canadian Institute of International Affairs, 1968.

Reynolds, Charles. Theory and Explanation in International Politics. Barnes and Noble Publishers, 1973.

Rosenbluth, Gideon. The Canadian Economy and Disarmament. Toronto: MacMillan of Canada Ltd., 1967.

Rousseau, Jean Jacques. The Social Contract, translated and introduced by M. Cranston. London: Penguin Books Ltd., 1968.

Russett, Bruce. What Price Vigilance? The Burdens of National Defence. New Haven: Yale University Press, 1970.

Snyder, R., Bruck, H., Sapin, B. Foreign Policy Decision Making: An Approach to the Study of International Politics. New York: The Free Press of Glencoe, 1962.

Sokolovsky, Marshall V.D. Soviet Military Strategy, 3rd edition, edited with an Analysis and Commentary by H.F. Scott. New York: Crane, Russak and Co., 1968.

Soward, F., Parkinson, J. et al. Canada In World Affairs: The Pre-War Years. Toronto: Macmillan Publishing Co., 1974.

Stanley, G.F. Canada's Soldiers: The Military History of An Un-Military People. 3rd edition. Toronto: Macmillan Publishing Co., 1974.

Taylor, A.M., Cox, D., Granatstein, J. Peacekeeping: International Challenge and Canadian Response. Toronto: Canadian Institute of International Affairs, 1968.

Thordarson, Bruce. Trudeau and Foreign Policy: A Study in Decision Making. Toronto: Oxford University Press, 1972.

Wolfe, Thomas. Soviet Power and Europe. Baltimore: Johns Hopkins University Press, 1970.

Articles and Periodicals

Ball, Desmond, "United States Strategic Doctrine and Policy - with some implications for Australia" in R. O'Neill (ed.) The Strategic Nuclear Balance: An Australian Perspective. Australian National University, Canberra, 1974.

Canada, Department of External Affairs, "Canada-U.S. Relations: Options for the Future" in International Perspectives. Ottawa: Dept. of External Affairs, Autumn, 1972.

Conant, Melvin, "A Perspective on Defence: The Canada-United States Compact in Behind The Headlines, Volume XXXIII, #4, September, 1974.

Dubois, R. "Man's Nature and Social Institutions" in Ashley Montagu Man and Aggression, Second edition. New York: Oxford University Press, 1973.

Eayrs, James, "Military Policy and Middle Power: The Canadian Experience" in J.K. Gordon (ed.) Canada's Role as a Middle Power. Toronto: Canadian Institute of International Affairs, 1966.

Galay, Nikolai, "The Soviet Approach to the Modern Military Revolution" in John Erickson (ed.) The Military-Technical Revolution: Its Impact on Strategy and Foreign Policy. New York: F.A. Praeger Publishing Co., 1966.

Garthoff, R. "Military Power in Soviet Policy" in John Erickson (ed.) The Military-Technical Revolution: Its Impact on Strategy and Foreign Policy. New York: F.A. Praeger Publishing Co., 1966.

Kirkton, J. "The Consequences of Integration: The Case of the Defence Production Sharing Agreements" in A. Axline et al. Continental Community: Independence and Integration in North America, Toronto: McClelland and Stewart Publishing Co., 1974.

Loomis, Brig. Gen. D.G. "Re-organization on Basis of a Total Force Concept" in The Canadian Defence Quarterly Vol. V, #3 Winter 1975/76.

Moreigne, J.P. "Military Management: A Fantasm or A Necessity?" in M.R. Van Gils (ed.) The Perceived Role of The Military. Rotterdam: Rotterdam University Press, 1971.

Pearson, L.B. "Canada and The North Atlantic Alliance" in Foreign Affairs, Vol. XXVII (April 1949).

Pemberton, J.S. (ed.) "Ogdensburg, Hyde Park ---- and After" in Behind The Headlines (April 1941).

Rapoport, A. "Various Meanings in Theory" in J. Rosenau, International Politics and Foreign Policy, New York: The Free Press Publishing Co., 1968.

Reford, R. "Making Defence Policy in Canada" in Behind The Headlines Vol. XXIII (December 1963).

Roy, R.H. "The Canadian Military Tradition" in H. Massey (ed.) The Canadian Military: A Profile. Toronto: Copp-Clark Publishing Co., 1972.

Sheltus, B. "The Squander Squad: How the Defence Department has blown half a billion dollars" in Toronto Star Magazine, August 14, 1977.

Stairs, Denis,"The Foreign Policy of Canada" in J. Rosenau, K. Thompson and G. Boyd (eds.) World Politics: An Introduction. New York: Free Press Publishers Co., 1976.

_____, "The Military as an Instrument of Canadian Foreign Policy" in H. Massey (ed.) The Canadian Military: A Profile. Toronto: Copp-Clark Publishing Co., 1972.

Stanford, P., "The Global Automated Battlefield" in D. Johnson, B. Schneider (eds.) Current Issues in U.S. Defence Policy. Center for Defense Information. New York: Praeger Publishing Co., 1976.

Sutherland, R.J. "Canada's Long Term Strategic Situation" in International Journal. Vol. XVII (1961/62).

Taylor, A.M. "Evolution-Revolution, General Systems Theory and Society" in R. Gotesky, E. Laszlo. Evolution-Revolution. New York: Gordon and Breach Publishing Co., 1971.

Government Documents

Canada, The British North America Act 1867.

Canada, Department of External Affairs, Statements and Speeches.

Canada, Department of National Defence, White Paper on Defence: Defence in the 70's.

Canada, Department of National Defence, 1964 White Paper on Defence.

Canada, Department of National Defence, Canada's Defence Programme 1949.

Canada, Department of National Defence, Statements and Speeches.

Canada, House of Commons, Debates.

Canada, House of Commons, Special Committee on Defence, Minutes and Proceedings of Evidence.

Canada, House of Commons, Standing Committee on External Affairs and National Defence, Minutes and Proceedings of Evidence.

Canada, Office of The Prime Minister, Statements and Speeches.

United States, Department of Defense, The Annual Defense Department Report for the Year 1975.

Unpublished Works

Loomis, Ltd. Col. D.G. On Conflict, an unpublished manuscript, Canada, Department of National Defence, Ottawa, April 1, 1969.

Nyiri, N. Alternatives to Nuclear Warfare: A Possible Role for Canada in the US/USSR Nuclear Balance (Occasional Paper #1). Waterloo: Waterloo Lutheran University Press, Aug. 1971.

_____. Alternatives to Nuclear Warfare: A Possible Role for Canada in the US/USSR Nuclear Balance (Occasional Paper #2). Waterloo: Waterloo Lutheran University Press, August, 1971.

Other Sources

Telephone conversation with Brig. General George Bell, Director of the Canadian Institute of Strategic Studies, Toronto, Ontario, June 13, 1977.

The Globe and Mail