NAME OF AUTHOR: Carl W. Ross

TITLE OF THESIS: Problems in the Administration of Civilian Personnel in the Department of National Defence in Perspective

UNIVERSITY: Carleton University

DEGREE: M.A. YEAR GRANTED: 1969

Permission is hereby granted to THE NATIONAL LIBRARY OF CANADA to microfilm this thesis and to lend or sell copies of the film.

The author reserves other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.

(Signed) Ross

PERMANENT ADDRESS:

506 Piccadilly Avenue,

Ottawa 3, Canada.

DATED: April 25, 1969

L-91
PROBLEMS IN THE ADMINISTRATION OF CIVILIAN PERSONNEL
IN THE DEPARTMENT OF NATIONAL DEFENCE IN PERSPECTIVE

by Carl W. Ross

A thesis submitted to Carleton University
in partial fulfilment of the requirements
for the degree of Master of Arts in Public Administration

The contents of this thesis are the views of the author
and do not necessarily represent the opinion or policy of the
Department of National Defence.

CARLETON UNIVERSITY
SCHOOL OF PUBLIC ADMINISTRATION
APRIL 1969
ABSTRACT

National Defence utilizes three basic forms of Manpower - Military, Public Servants, and employees of a "separate employer", the Defence Research Board.

This thesis outlines the major problem areas associated with the administration of the non-military personnel resources, in relation to the total management of the Department.

The difficulties, (as seen from the management point of view) inherent in the manner in which the Civilian personnel function is organized, are discussed and the issues, as seen from the "employees" point of view, are also presented.

The impact of the Public Service Staff Relations Act on personnel administration in the Department is outlined.

A process for deriving a plausible solution to the problems is developed, utilizing a "systems approach".

Civilian manpower resources are of the order of 36,000 in a total establishment of 135,000 thus forming an important element of Canadian defence. The problems demand rational solutions if National Defence objectives are to be realized in an efficient manner.
FOREWORD

Since 1648, when a primitive militia organisation took the form of a patrol to protect the white population on the trail between Montreal and Quebec against marauding Iroquois bands, civilians have played an important (some say indispensable) part in Canadian defence. In the main, other than political figures, the role of civilians in Canadian military matters has gone unheralded and unrecorded.¹

This thesis is submitted in partial fulfilment of the Degree of Master of Arts in Public Administration. However, it has been written in the hope that, in addition to meeting the academic requirements, it will also contribute towards the additional accomplishment of three basic objectives.

First: The problems of civilian personnel administration in the Department of National Defence are difficult and unique. Personnel administrators can not find a ready-made solution from experience in other Departments, or even in other Western countries. By attempting to place the Department's civilian personnel problems in perspective, some assistance may be provided to those charged with the difficult task of finding solutions.

Second: The problems of administration of the civilian component of the Department of National Defence, demonstrate the

¹ A perusal of the records of the Directorate of History, Canadian Forces Headquarters, reveals one report devoted to the civilian aspects of National Defence which covers only the office of the Deputy Minister. At the end of WW II narrative reports on a number of directorates covering their military/civilian activities from 1939 to 1945 were received and filed. There appears to have been little attempt at further research or documentation of the contribution of civilians to National Defence.
gap that exists between the patterns of thinking and methodology of
the academic and the "practical" application of modern management
concepts by government administrators. By presenting the subject
in the light of the teachings and readings of the School of Public
Administration at Carleton University, and over twenty years
experience as a "line" manager in National Defence, it may be
possible to make a small contribution to the bridging of this
academic/administrator gap.

Third: A number of civilians in the Department of National
Defence feel that their particular plight is not appreciated, under-
stood, or even given adequate consideration by senior defence
management. By expressing the situation in an unclassified document
and demonstrating the considerable effort that is being made to
find and implement solutions, some assistance and encouragement
that improvements are coming may be given to civilians of the
Canadian Armed Forces.

Some readers may have a clear concept of the so-called
"military mind" and may find areas of this document which they
would label as "military bias". As I do not understand these
concepts, no attempt has been made to remove military thinking
from the thesis. Any totally acceptable solution to civilian
personnel problems in National Defence must meet the military
requirements of the Department. If this means "military bias" or
the "military mind in action" then so be it.

The thesis covers the problems and trends in civilian personnel management in National Defence, and attempts to place them in perspective with the total management problem of the Department. It mainly concerns itself with situations that are unique to a military/civilian organization. For this reason, the reader who is looking for a check-off list of personnel administration problems will not find it in this document. With due respect to the behavioural scientist and the personnel administrator, such major areas as pay plans, classification, rating systems, health and safety, employee conduct, motivation and productivity, French language training, etc., are not covered, except where they relate directly to the unique issues of personnel administration covered in this thesis.

As the author is not a specialist in personnel administration, the subject is presented primarily from the point of view of "management", leaving to the qualified personnel administrator the role of interpreting the problems and solutions presented, and stating the action required in their own specialized terminology.

The research for this thesis, unknowingly, commenced in 1946, when the author first realized the fact that civilians played an important role in National Defence activities. Since that time, numerous occasions have arisen where close association with "civilian officers and men of the Navy" and Defence Research
Board scientists has been required, on the basis of duties assigned. This association developed a deep and profound respect for the ability, knowledge and devotion of the un-uniformed component of the service. It was observed that, contrary to the popular belief of some uniformed personnel, when there was a job to be done, the civilian component reacted in much the same manner as the military. Loyalty, energy, courage, flexibility, concern, attention to duty, were words that were as applicable to the civilian as to the military. The image of "service to Canada" conjured in the mind (of some) on sighting a uniform, was absent when viewing a "white" or "blue" collar, a grey flannel suit, or even a "Government of Canada" briefcase. Why? Were the roles assigned that different? Were the duties performed more important or more hazardous? Were the motivations to serve as a member of the military different from the motivations to serve as a defence scientist, a Royal Military College professor, a dockyard foreman, a ship designer or a weapons engineer? Possibly the answer to these questions in wartime would be Yes, but even under such circumstances the complexities of individual behaviour defy positive statements. If we could not answer the questions why, then, such wide variations in conditions of employment? The answer, it appeared to the author, was due partly to: a wake of history; a requirement for ease of administration, the lack of understanding of the problem; and the lack of any voice being raised against the
situation.

In youth, a "cause" appeared exciting, and action was taken to document the issues. However, with time, the "cause" became more frustrating than exciting and documentation became less thorough. Situations also changed, making past documentation useless and altering, in some cases, the basic problem. The "cause" became narrower in scope and more in the nature of day-to-day corrective action on small issues than a concentrated effort on the real problem.

The academic requirement for a thesis provided the motivation: to renew the issue; to concentrate on classifying the problem areas; and to attempt to derive a process that could lead to a plausible solution. The dramatic changes in public personnel administration concepts in Canada suggested that the timing was right for presenting the case of the "unheralded and unrecorded" civilians of National Defence.

To properly document all of the issues raised in this thesis was found to be an impractical concept on two counts. First, the broadness and dynamic nature of the topic demanded a classification system for the problems that would withstand the test of time if the issues were to be truly placed in "perspective". This prevented the meaningful use of personnel cases that had been documented in the past as references to justify concepts in today's highly altered environment. To reference a particular
case, demonstrating the military/civilian relationship problem, would mean comparing services and organisations that no longer existed with today's integrated force organisation. It is felt that such comparisons would be a futile and unrewarding task which would contribute very little to the enhancement of the theme of the thesis. Second, many personnel cases in the Department are associated with documents that also refer to classified projects and, hence, are not available as sources for further study for anyone not possessing the proper security clearance and "need to know".

It is hoped that the nature of the descriptions used will overcome the lack of particular references in justifying, in the mind of the reader, the concepts and issues presented. The lack of references has demanded, in a number of areas, that the concepts be accepted on the basis of opinion, and such areas have been so noted.

My thanks to the large number of military and civilian members of National Defence who contributed, directly or indirectly, knowingly or unknowingly, to the concepts presented. A list of individuals who were interviewed and provided assistance, in relation to specific problem areas in this document is included in Appendix A.
CONTENTS

ABSTRACT

FOREWORD

CHAPTER I BACKGROUND 1

AIM: (1) To present an overview of the environment in which National Defence management must operate

(2) To present some relevant issues associated with public personnel administration in Canada.

THE ENVIRONMENT 1

PUBLIC PERSONNEL ADMINISTRATION IN CANADA 8

Centralized vs Decentralized Personnel Management.
Treasury Board vs Public Service Commission.
Patronage and Special Status vs The Merit Principle.
Other issues.

SUMMARY 14

CHAPTER II BASIC PROBLEMS IN THE MANAGEMENT OF CIVILIAN PERSONNEL IN NATIONAL DEFENCE 16

AIM: To present the problems of civilian personnel administration in relation to the total management of the Department of National Defence.

INTRODUCTION 16
THE TOTAL MANAGEMENT PROBLEM
Strategic Studies
Rationale for Canadian Military Forces
Capabilities Plan
Implementation Plan
Implementation Management
Result Analysis
Principles
Problems

THE TOTAL PERSONNEL RESOURCES MANAGEMENT PROBLEM

THE ROLE OF CIVILIANS AND THEIR CAREER PLANNING PROBLEM

THE MILITARY/CIVILIAN RELATIONSHIP PROBLEM

THE CIVILIAN TRAINING PROBLEM

THE WORKLOAD/PERFORMANCE MEASUREMENT PROBLEM

CHAPTER III THE CIVILIAN PERSONNEL FUNCTION IN NATIONAL DEFENCE

AIM: To outline the problem areas associated with the manner in which the personnel function is organized and performed in National Defence.

THE CARSON MODEL

PERSONNEL FUNCTION IN DND

Total Management Problem.
Total Personnel Resources Management Problem
The Role of Civilians and the Career Planning Problem.
The Civilian/Military Relationship Problem.
The Civilian Training Problem.

THE RESULTS

CHAPTER IV THE DEFENCE RESEARCH BOARD AND THE TOTAL MANAGEMENT PROCESS

AIM: To demonstrate that the concept of separate administration of DRB personnel merits detailed investigation as to its applicability to the idealized National Defence management process.
BACKGROUND 97
CLASSIFICATION 103
COLLECTIVE BARGAINING 109
THE GRIEVANCE PROCESS 113
SUMMARY 115

CHAPTER VII DERIVING OF A PLAUSIBLE SOLUTION 117

AIM: To outline a process by which a plausible solution to the problems of the administration of civilian personnel in National Defence may be derived.

INTRODUCTION 117

THE SYSTEMS APPROACH 118

The Scenario
The "Equipment" System
The Simplified "Organization" System

THE PROBLEM 129

Achieving Objectives.
Maintaining the Internal System.
Adapting to The Environment.
Viability, Flexibility, and Relative Value

THE PROCESS 146

Phase I System Definition
Phase II Manpower Planning
Phase III Implementation
Phase IV Result Analysis

SUMMARY 158

CHAPTER VIII SUMMARY AND CONCLUSIONS 160

APPENDIX A — RESEARCH PROCESS AND ACKNOWLEDGEMENTS

APPENDIX B — ORGANIZATION OF DEPARTMENT OF NATIONAL DEFENCE
APPENDIX C - SUMMARY OF RECOMMENDATIONS OF STUDY
TEAM REPORT CIVILIAN PERSONNEL
FUNCTION DEPARTMENT OF NATIONAL
DEFENCE, FEBRUARY, 1968

APPENDIX D - DEPUTY MINISTER'S OFFICE, ORGANIZATION CHART

APPENDIX E - DISCUSSION MATRIX - PERSONNEL PROBLEMS vs
SYSTEM FACTORS

APPENDIX F - BIBLIOGRAPHY
BACKGROUND

AIM: (1) To present an overview of the environment in which National Defence management must operate.
(2) To present some relevant issues associated with public personnel administration in Canada.

THE ENVIRONMENT

Whether we like it or not we are living in a technological era. After over 2500 years of travelling at less than thirty miles per hour, man, in this last fifty years, has increased his speed to over 20,000 miles per hour. A major medical breakthrough occurs every few weeks. With the rapid changes occurring in cybernetics, McLuhan's concept of a "Global Village" is almost believable.

Technological innovations are accompanied and influenced, if not preceded, by changes in values and modes of organization. Galbraith, in The New Industrial State\(^1\) traces the transition of the power of capital from the autocratic hand of the feudal landholder; to the entrepreneur of the industrial revolution; to the industrial barons of the late 19th century; to the managerial elite of the late 1930s and post World War II, to what he terms the "Technostructure" of the present day. He suggests that power is no longer held by the stockholder, the manager, the banker or government, but by the expertise of a highly trained anonymous group who are planning and absorbing the financial hazards of technological and scientific development. This raises the

---

question of the right relationship between knowledge, power and wealth and the correct role for government in the Canadian social system in this era of rapidly changing technology.

The consideration should include "the influence of the technological revolution in accelerating and intensifying that concentration of wealth and power in the hands of a few". Porter, in the penultimate paragraph of The Vertical Mosaic suggested "The Nineteenth-century notion of a liberal citizen-participating democracy is obviously not a satisfactory model by which to examine the processes of decision-making in either the economic or political contexts. Given the complexities of modern society it is unlikely that widespread participation can develop without very great changes and constitutional experimentation".

The Royal Commission on Government Organization reported:

Economic and social changes have created new public wants .... at the same time new resources have become available to meet public needs. The persistence of change and the need for adjustment to change are, in fact, the only future certainties known to any organisation .... both within the public service and beyond it there must be a continuous assessment of the role of the federal government in the life of Canada to ensure that the machinery of government remains responsive to the ends it must serve.

The issue - the right relationship between knowledge, power and wealth achieved by government through the use of modern

2. Carl I. Becker, Modern Democracy (New Haven, 1941) p.52
5. ibid. - Vol V. p 26
tools, and a public service imbued with a sense of responsibility that permits decisions to be made at the political level. The question – What has the Canadian Government done about the issue?

At one time it may have been possible to make a distinction between policy and administration; between the political determination of what the Government should do and the administrative means involved in carrying out such policy. In Canada, as in other democratic countries, this essentially apolitical conception is theoretically inadequate. It has become clear that public administration works in a highly political environment; even routine decisions may have a political connotation.

In Canada, the organization of the Executive Branch has been a complex mixture of our democratic political thought and the various approaches to management theory and practice.

Our political thinking has constantly made us attempt to include in our organizational concepts, the feeling of Canadians for individual rights, the rule of law, the supremacy of Parliament, the concepts of ministerial responsibility; as well as the average Canadian's fear of bureaucrats and the delegation of judicial and legislative powers to them.

Over the years, there appears to have been an adherence to some of the changing concepts of management. We followed the traditional authoritarian approach, partially accepted the
school of scientific management and were influenced by the writings of behavioural scientists. Today, we appear to be accepting the modern complex, (yet to be explained) concepts of decision-making/decision-implementing, planning programming budgeting, cost/benefit analysis, automated management information systems, developmental personnel programs, etc. As the scientific management era developed, we accepted work measurement concepts, time and motion study and later "management engineering" groups appeared in various organizations. The human relations period introduced government/staff associations consultation, which moved rapidly toward collective bargaining for public servants. Inventory, appraisal, and employee development programs are gradually being introduced.

Since the cry of Glassco "Let the Managers manage", re-organization of the Government to make Treasury Board the senior management of Government activities, with the powers of delegation of authority to the Departments, has essentially created a new era in the management of public affairs in Canada. It is difficult, if not impossible, to find academic or practical arguments against the ideas presented by Treasury Board or their staff. However, problems do arise from the manner in which the Treasury Board and departmental administrators attempt to implement the concepts. It has been suggested that the administration must provide better "tools" to permit greater decision-making ability
at the political level. The Government appears to have already made the decision that part of the solution lies in the acceptance of modern management concepts. Such items as planned program budgeting, cost/benefit analysis, are becoming everyday terms in the vocabulary of public administrators, either with or without knowledge of their meaning. The Planning Programming Budgeting Guide illustrates the more important concepts. 6

The economic situation has presented an additional difficult problem to the Government. In parallel with attempting to introduce "modern management concepts" the Government is also attempting to economize on the cost of administration. Reduced budgets and personnel freezes, are also terms which the senior administrator has as part of his everyday vocabulary, but these are terms that are all too well understood and the reductions can, therefore, proceed at a much higher rate than, for example, program budgeting, albeit without a comparable change in Departmental objectives. These two government activities are not compatible, and pose major problems to all Departmental management.

In addition to the above, considerable effort is being expended by a number of Government departments in attempting to prepare their estimates in the form required for program budgeting at a time when Parliament has not yet (March, 1969) granted approval for the presentation of estimates in any form other than the vote/

object requirements of the past. There is also gnawing doubt that major changes are being implemented even before the objectives of the various Departments and programs have been firmly established.

It is hoped that our Treasury Board and Departmental administrators will not adopt the tendency of some U.S. administrators to accept proposals submitted to them under the guise of "analysis" without understanding the limitations of the studies themselves and the manner in which policy makers can logically use them. 7

Added to this "new era of management of public affairs" National Defence operates in an environment which imposes several additional constraints not found, to the same extent, in other Departments. As the degree of acceptance of these constraints is not vital to the objectives of this thesis, it appears sufficient to list them without a detailed justification. They are:

First: The scale of the DND operation (1.7 billion of a total 1968/69 federal estimate of 10.3 billion) makes the Department "fair game" for any major decrease in expenditures.

Second: Peacetime conscription has never been a policy of the Canadian Government. This has essentially resulted in there being no "military establishment" in Canadian society. It is, therefore, difficult to obtain a broad based public

reaction to Canadian military matters.

Third: Canadian Defence is based on alliances. Canada has no direct military threat in isolation from her allies and we, therefore, inherit an "undesignated" portion of a threat. This introduces complications in attempting to completely justify any particular item of defence equipment or any particular manning level for the Department.

Fourth: The impact of changes in Defence expenditures on the industrial base and regional economics makes even minor defence decisions highly political and economic in nature.

Fifth: The number of people, the organization and the skills are based on war time tasks with the consequence that utilization in peacetime needs special attention.

Sixth: The concept of "civilian control of the military" is fundamental to our social system and must be strictly enforced even at the cost of efficiency.

National Defence has had an integrated Service since 1964, and
has been working towards a unified Service since Bill C243 was passed in the Spring of 1967.

There is a strong tendency for both the military and civilian members of National Defence and the general public to look upon integration and unification as involving primarily organizational changes, and the introduction of new uniforms and ranks. However, these are merely visible manifestations of the more significant changes that are taking place in the methods and process of planning, making decisions, and managing the Service. The real issue of integration and unification is that there must be an agreed total management process which, of necessity, will be different from any that has existed in the past.

Having outlined the environment in which National Defence operates, we will now consider the environment in which civilian personnel management must exist.

PUBLIC PERSONNEL ADMINISTRATION IN CANADA

It is not intended in this section to present the development of personnel administration in Canada, but rather to touch only the highlights of the broad problems that have been encountered and the situation as it appears to this writer, to exist today, which has an impact on the management of civilian personnel
in National Defence.

Through the years, public personnel administration in Canada has, essentially, been the seeking of a balance between equally legitimate but often conflicting concepts, such as: (1) centralised vs decentralised personnel management; (2) patronage and special status vs the merit principle; (3) Treasury Board control vs Public Service Commission control; and (4) collective bargaining vs arbitrary Government decision; to name a few of the more important issues. The flow and ebb of reform in the Public Service has established quite clearly, the aims and desires of the Canadian Government with regard to the administration of Public Servants. These desires are: to make personnel management a part of total management; to remove patronage; to develop and promote on merit; to maintain good morale; and to allow participation of employees in the determination of their conditions of employment.

The present concept of administration of public servants is embodied in The Public Service Staff Relations Act, the Public Service Employment Act, together with an amendment to the Financial

Centralized vs Decentralized
Personnel Management

The above noted Acts make it quite clear that the intention of the Government of Canada is that personnel management shall be an integral part of the total management process. The Treasury Board now acts as "the employer" of personnel in the Public Service, with authority to delegate to the various Departments functions which they consider the Departments competent to handle. This essentially brings personnel management back into the sphere of total management. Historically, personnel management was removed from the Departments by early Civil Service Acts, with the responsibility being placed in the then Civil Service Commission. The claim at the time was to protect the Service against patronage and ensure the application of the Merit Principle. We have now gone a complete cycle with personnel management being returned to line management.

Treasury Board vs The Public Service Commission

Historically, since the Act of 1918, the Civil Service Commission has been responsible for personnel management in the

Chapter 71 Public Service Employment Act, 23 February 1967
Chapter 72 Public Service Staff Relations Act, 23 February 1967
Chapter 74 An Act to Amend the Financial Administration Act
1 March 1967
Public Service, their responsibility being direct to Parliament. Treasury Board, on the other hand, had the financial responsibility. Essentially, the Public Service Employment Act, and the Public Service Staff Relations Act strip the Public Service Commission of all of its functions with the exception of staffing, training, language training and appeals, the Treasury Board taking on all the responsibility for personnel policy including manpower planning and development, staff relations, compensation and conditions of employment, and classification. There is some shared responsibility with respect to senior level training.

Patronage and Special Status vs The Merit Principle

While the Government of Canada appears to have accepted a merit principle, which is really three interrelated principles –

(1) Canadian citizens should have a reasonable opportunity to be considered for employment in the Public Service.
(2) Selection must be based exclusively on merit, or fitness to do the job.
(3) Those employed will receive equitable pay for the work they do,¹⁰

it has not implemented the principle to the fullest extent.

¹⁰. R.H. Dowdell. The Elements of Personnel Management in the Civil Service of Canada. Carleton University. Ottawa, Canada. p.10
In Canada, the merit system that has been developed is essentially a collection of administrative tasks and methods used to implement a modified merit principle. There are deviations from the merit principle which include: (1) Veterans' Preference; (2) Canadian citizens are given some form of advantage; (3) In some cases, local residents are given preference; (4) Until recently, married women were given a lower order of preference to men and unmarried women; and (5) Personnel already employed in the Service are given preference for filling positions before advertising outside of the Service.

Patronage in 1969 is not the major issue associated with the administration of Public Servants. While delegation reduces the ability to control patronage the checks and balances provided by the Public Service Staff Relations Act, the Public Service Employment Act, together with highly qualified senior government administrators, should serve to prevent a return to an era of patronage.

Collective Bargaining vs Arbitrary Government Decisions

The Public Service Staff Relations Act of 1967 attempts to protect the public interest, while responding to the aims and aspirations of organized employees. It attempts to provide the Government with the capacity to function and at the same time, respect the principles of labor relations as practised in Canada.
However, Parliament still has the right to declare null and void any agreement entered into by the Government employer (the Treasury Board) and the Staff Associations. On reading the Act, there appears to be a tendency to overprotect, to limit what can be bargained for, to ensure that the Merit System is protected. Superannuation and classification are not bargainable. For these reasons this Act may, over the years, well prove to be more the shadow than the substance of genuine collective bargaining and may not lead to sound employer/employee relationships. There is little doubt that it is a step in the right direction, but it is too early to tell if the introduction of collective bargaining to the Public Service will be a blessing or a plague.

Other Issues

In addition to the above, the Royal Commission on Government Organization reported a number of issues that have a bearing on the concept presented in this thesis. These include:

1. Government lacks the information it requires for adequate personnel management and planning ..... there has been too little appreciation of the existence of essential tools of day-to-day personnel management which can be used for success-fully matching resources and requirements.

(2) The knowledge being made available to managers today by social scientists and the increasing body of experience in commerce and industry have scarcely been tapped.\textsuperscript{12}

(3) Your commissioners are forced to conclude that, in general, training and development have received inadequate attention in the public service for many years.\textsuperscript{13}

In the seven years since these words were written, considerable improvement has taken place in the quantity and quality of personnel administration in the Public Service of Canada.

**SUMMARY**

In summary then, the management of the Public Service is undergoing dramatic changes. It is attempting to use modern techniques to solve the age-old problems of distribution of wealth and power; to find and utilize the right relationship between knowledge and power; and to find methods of permeating the Public Service with a sense of responsibility and permit greater decision-making at the political level.

It can only be hoped that these management changes will assist Canadians in this technological era, to discover the pace of alteration that will enable them to "change together through the common sense of conviction resulting from discussion and consent."\textsuperscript{14}

\textsuperscript{12} ibid. - p.276

\textsuperscript{13} ibid. - p.271

\textsuperscript{14} Pendleton Herring, *The Politics of Democracy*, (New York, 1940) p.435
This background chapter represents the author's views of the milieu in which National Defence must operate and forms the broad reference system within which an attempt will be made to place the problems in the administration of civilian personnel in perspective.
This background chapter represents the author's views of the milieu in which National Defence must operate and forms the broad reference system within which an attempt will be made to place the problems in the administration of civilian personnel in perspective.
CHAPTER II

BASIC PROBLEMS IN THE MANAGEMENT OF CIVILIAN PERSONNEL IN NATIONAL DEFENCE

AIM: To present the problems of civilian personnel administration in relation to the total management of the Department of National Defence.

INTRODUCTION

On the 8th of May, 1967, assent was given to the Canadian Forces Re-organization Act. It stated that "The Canadian Forces are the Armed Forces of Her Majesty raised by Canada and consist of one Service called the Canadian Armed Forces". This essentially committed the Department of National Defence to a dramatic change in its management process. While organization, uniforms and rank structure received the publicity, of far more importance were the basic changes in the management process and philosophy which had been in progress, and which the Act now formalized.

Before discussing the management process and associated problems, it appears worthwhile to outline the general manner in which the Government is organized to deal with defence problems.

Similar to other Departments, executive power for National Defence in Canada is vested in the Queen by the British North America Act. The Governor-in-Council exercises executive functions on behalf of the Queen. In actual constitutional
practice the executive body is composed of those members who make up the Administration of the day, that is, the Cabinet.

Other than meetings of the Cabinet, the policy considerations with regard to National Defence, are considered by a Cabinet committee known as the Cabinet Committee on External Affairs and Defence. The Prime Minister is Chairman of the Committee and the Secretary of State for External Affairs and the Minister of National Defence are vice-chairmen. The Associate Minister of National Defence is a member and other Ministers, whose interests relate to Defence and Foreign Affairs, also attend. Officials of Departments represented by Ministers on the committee attend as required, as does the Secretary to the Cabinet and members of his staff who perform secretarial duties.

Other Cabinet committees that deal with certain aspects of National Defence include: The Cabinet Committee on Emergency Planning, the Cabinet Committee on Security and Intelligence and the Advisory Committee on Northern Development.

Over the years there have been a number of special committees formed by the House of Commons to deal with various subjects and, on occasion, the main estimates of certain Departments. Such a Special Committee was formed in June, 1963 to consider matters relating to Defence. Again in 1964 a Special Committee was appointed to continue consideration of matters relating to Defence.
that began in the previous Session. This Committee was formalized in June 1965 and is now referred to as the Parliamentary Standing Committee on National Defence.

Under the authority of the National Defence Act there is a Department of National Defence, the overall administration of which is the responsibility of the Minister of National Defence. To be specific, the Minister is responsible for the control and management of the Canadian Forces, the Defence Research Board and all matters relating to national defence establishments and work for the defence of Canada. He is also responsible for certain civil emergency powers, duties and functions. The Minister is responsible for presenting before Cabinet matters of major defence policy for which Cabinet direction is required.

The National Defence Act provides for the appointment of an Associate Minister of National Defence. At the present time (February 1969) no one has been appointed Associate Minister of National Defence.

Although the two Ministers are equal in status, and have exactly the same powers, and either can act as Minister of National Defence, in the past the general practice has been a division of responsibilities, at the Ministerial level in the Department, in that the Minister is mainly responsible for defence matters of an
operational and international character, such as those involved in the United Nations and NATO, while the Associate Minister, when one is appointed, deals mainly with non-operational matters affecting the Department.

Of importance to the discussion which follows is the fact that one of the main differences in the Department of National Defence in relation to other Departments is, that while total management responsibility rests with the Minister, he has responsible to him not one individual, but three - the Deputy Minister, the Chief of Defence Staff and the Chairman of the Defence Research Board. The problems that arise from this "troika" concept of organization are discussed in a number of areas in this and future chapters of the thesis.

While not mutually exclusive, for purposes of discussions, the problems have been divided into the following headings:

1. The Total Management Problem
2. The Total Personnel Resources Management Problem
3. The Role of Civilians and Their Career Planning Problem
4. The Civilian/Military Relationship Problem
5. The Civilian Training Problem, and

THE TOTAL MANAGEMENT PROBLEM

To form a background upon which to discuss management problems, it appears worthwhile to present the idealized management process
towards which the Department of National Defence appears to be moving.  

If one were to make the assumption that there was no Canadian Defence Force, and it was necessary to give full consideration to the creation of such a unit, then there appears to be six basic steps in an ideal management process. These are:

1. Strategic Studies
2. Rationale for Canadian Military Forces
3. Capabilities Plan
4. Implementation Plan (Integrated Defence Program)
5. Implementation Management
6. Result Analysis.

**Strategic Studies**

The issue that arises here is "What can happen in the world in the next ten or fifteen years?" Today's trends predict that there will be tensions, where will they be, what will be their nature, will they be economic, military or social tensions, what will be the reaction to them in various areas of the world or in particular countries, what will be the affect of technological and social development? No one can, with certainty, predict the future, but some rationalized "guesstimates" can be made. Possible trends can be identified, probabilities assessed, and a range of the most probable trends stated. In other words,

---

2. The main source of information for this section is a briefing by LT GEN F.R. Sharp, Vice Chief of the Defence Staff, at the National Defence College, *A Management System for the Canadian Armed Forces*, (Kingston, 1968). However, any errors in interpretation are the author's.
our first step in the idealized management process would be to conduct, in depth, strategic studies.

**Rationale For Canadian Military Forces**

The second step in the Idealized Management Process would be to determine what affect the future might have on the Canadian posture, and to determine from this whether there was a need for Canadian defence force. Is there a military, political or economic reason for Canadian Military Forces? The question arises: what is likely to occur in the future that would require a Canadian Defence Force? What, in fact, would be the rationale for the existence of the Canadian Armed Forces?

**Capabilities Plan**

Assuming that the decision was made for a rationale for Canadian Defence Forces, and military roles or missions then given to the Department of National Defence by the Government, the next step would be to define what our Defence Forces are to be able to do, to what level, how much, and where? This would mean the stating of the desired capabilities of a Canadian Defence Force.

**Implementation Plan**

The next step would be to determine how we should reach this desired posture, and what is involved in attaining it -
what fighting forces do we require, what facilities, what training, what logistical and communications support, etc. In other words, it is necessary to develop an implementation plan which would be the plan for progressing to the desired capability levels for our Forces. In the present situation where there are Forces in being, it would be necessary to subtract the present capabilities from the desired capabilities to determine our deficiencies and from this, decide what action needs to be taken to make up the difference. The Implementation Plan would then become a Plan to bring us from the present military status to the military status that we have decided is desirable. This plan would take into consideration our resources constraints, and as resources will always be less than required, we will not be able to achieve all that is desired. This would demand the introduction of the concept of priorities and the provision of Ministerial guidance on which to base the development of the Implementation Plan.

Implementation Management

Having followed through the above four steps, the next step would be to manage the implementation of the Plan derived.

Result Analysis

Of paramount importance to a Management process is its feedback capability. It will be necessary to ensure that we are, in fact, doing what we desire to do, while remaining within the
available resources and constraints. Such a process demands a technique of measuring results. Performance standards against which results can be measured are required.

The above are the idealized steps in a management process for National Defence. For ease of presentation, the six basic steps have been suggested as a straight series, open-loop system. In actual practice, it would be an on-going process, a complex, closed-loop system, with each item interacting on the other items.

Principles

In fulfilling this "idealized management process" there are, of course, a number of guiding principles and factors that should be applied. The use of such principles and factors as the total systems approach, the use of analysis, delegation and decision-making, management by objectives, internal and public relations, specialization, cost analysis, priorities, etc., are examples. In short, the practical application of all the modern management tools that are available.

General Problems

Before discussing the detailed problems of personnel management in National Defence, a few words on the broad problem areas of implementing an idealized management process should assist in placing the later discussions in perspective.
The unique situation with regard to External Affairs and Defence in Canada prevent direct extrapolation for Canadian use of the results of strategic studies made by other countries. To date, it appears that major decisions are being made in National Defence on what we think is going to happen in the future. Mainly, this is done intuitively and not as a result of an organized and comprehensive look into the future. As mentioned previously, Canadian society does not have what could be called a "military establishment", and difficulties arise when attempts are made to analyze trends occurring throughout the world and reach a consensus that could be accepted by Cabinet and Parliament. However, the fact that it is difficult should not stop us from attempting it, because without such studies, planning in National Defence would essentially be planning in a vacuum. On the other hand, the production of such papers at regular intervals will not be the answer to all our problems. The best that can be expected is that they would provide some logical assistance.

Without an agreed scenario and rationale for Canadian Defence Forces, a Capabilities Plan becomes extremely difficult to prepare and justify. Here the forces in being pose a major problem, in that there would always be a tendency within the Military to not lose a capability already in existence, and a fair proportion of the allowable resources would be expended on maintaining or updating that
capability which, without the scenario and rationale, would be equally hard to discourage.

As Canadian Defence has been committed for a number of years to some basic concepts, either right or wrong, there are a large number of programs in being, many of them having reached the point of no return. For this reason, the step of drawing up an Implementation Plan in our idealized system is probably the easiest to achieve. Programs are generally in being that utilize the full National Defence budget, so this Implementation Plan during a period of reducing budget and reducing personnel levels merely degenerates to the assignment of priorities with regard to the programs already in being.

Implementation Management, albeit without benefit of the previous steps in our idealized process, has been an area of much enthusiastic re-organization. "When you don't know where you're going, it doesn't really matter how you get there, and you might as well do it in an enthusiastic manner" is an overstatement of the issue. However, the concept that problems can be solved by re-organizing has, of course, had a major place in the unification/integration process, of National Defence. Those who purport to understand the modern concepts of decision-making/decision-implementing, cost/benefit analysis, have enthusiastically sold organization changes based on limited studies of this complex
process. The experimentation in this area during the past four years has, in my opinion, made a major contribution towards understanding the problems. It appears that the time for innovation in this area is past, and that the demand for stability far exceeds the limited gains that will come about by further reorganization. The impact of the computer has also been a major contributing factor to many of the re-organization concepts proposed and adopted - again without the full realization, at all levels, of the potential of the computer in the management process.

Result analysis has always been a military commitment in peacetime. Large numbers of man hours are spent on "military exercises", each of which constantly advances our knowledge with regard to our capability. It is mandatory that this stage of the process continue as it becomes the major contributor to informed decision-making.

In summary then, the Department of National Defence is well aware of the idealized requirements of its management process. The difficulties that stand in the way of implementing such a process are gradually being reduced, and much progress can be expected in the next few years. We now turn to some of the basic problems that face the senior defence management with respect to personnel.
THE TOTAL PERSONNEL RESOURCES MANAGEMENT PROBLEM

In this era few managers in National Defence would question the concept of total personnel resources management as a requirement to good management of the Department. However, one fundamental fact prevents the logical implementation of the total personnel resources management concept. This is the divided responsibility of the three main divisions of National Defence, the Deputy Minister, the Chief of Defence Staff and the Chairman, Defence Research Board.

There exists in National Defence, under the responsibility of the Minister of National Defence, three types of Personnel Resources - all three with different terms and conditions of employment and rules and regulations governing their activities. These are the Military personnel, who are governed by the National Defence Act, the DRB Personnel who operate under the concept of "separate employer" within the National Defence Act, and the Public Servants in National Defence, with terms described by the Public Service Employment Act and Public Service Staff Relations Act. The problem is how, under such a situation, can the three groups of Personnel Resources be molded into a single resource and utilized in the most effective manner to meet the objectives of the Department.

Stripped of all the barnacles and fancy talk, the essential,
rockbottom responsibility of any manager is to mobilize, apply and control the resources of raw materials, facilities, money and manpower necessary to accomplish the objectives of whatever organization he is managing. Just accomplishment is not enough. He must accomplish objectives with these resources, within the requirements of quality, cost, time and the legal limitations placed upon him. He must decide when, where and how and what mix of these resources should be applied at any given time to achieve the results expected of him. In most organizations this is an incredibly complex and dynamic job, requiring exceptional intellectual and leadership capabilities. The manager must be continually developing, applying and even disposing of the "executive strategies", necessary to get the desired results from the mixed resources available. Developing, testing and applying these strategies and their respective mixes, requires planning, engineering and control.

Without a clear, concise, easily understood statement of the objectives of the three subdivisions of National Defence, personnel of each division are bound to feel that the work that they are performing must have the highest priority and is of the greatest importance to overall objectives of the Department. Personnel management under such a situation, to say the least, is difficult. It is to the credit of past and present manage-
ment of these three divisions that National Defence has progressed to its present efficiency level, despite the overlapping division of responsibilities.

Organizational "techniques" have been evolved to overcome the most glaring difficulties. Interchange of personnel between the three divisions, individuals assigned interlocking responsibilities, attempts to develop esprit-de-corps to functions as opposed to the basic responsibility of the divisions, and finally, an ever-continuing attempt to avoid confrontation at all levels of management between the three divisions, have all been used to overcome, or attempt to overcome the fundamental deficiency.

This is not a new problem. Historically, it has gone on since Confederation, itself. This is exemplified by the views of the Chief of Staff (MAJ GEN J.H. MacBrien in 1925) on the position of the Deputy Minister, which were clearly and somewhat truculently set forth in an exchange of memoranda about, of all items, the Departmental Library - "I have been appointed Chief of Staff of the Department of National Defence. .... If you are to take over military duties there would appear to be no need for a Chief of Staff. As stated before, I object to the Deputy Minister of this Department taking over any of the duties which properly belong to military officers".  

To date, it appears that no Minister of National Defence has considered the problem of such a magnitude as to make an issue which would support the changes in the appropriate Act. This is probably due to the pragmatic attitudes taken by the various incumbents of the positions over the years. However, it is considered that, this "lack of unity of Command" is one of the basic problems that prevents National Defence from moving towards an even more efficient and effective management process, and will appear, as an issue, on a number of occasions in the following discussions in this thesis.

THE ROLE OF CIVILIANS AND THEIR CAREER PLANNING PROBLEM

Over the years the National Defence Organisation structure has developed without the influence of a firm policy on the role of civilians in the Department. This has given rise to: an almost random distribution of civilian positions throughout the Organisation; different ratios of military to civilian positions in areas of similar work; variations in responsibility actually assigned to similar classifications; wide variations in the degree of military control of civilians, and civilian control of the military; and in the formation of large numbers of small pockets of civilian positions with limited career potential.4

4. An illustration of the problem can be found by a perusal of the Department of National Defence Telephone Directory, as well as the Giassce Report, Vol. IV, pp.80-85 and Appendix B of this thesis.
The problems are recognized by senior defence management and a general directive titled "Employment of Civilians in the Department of National Defence" sets out the guidelines for equal consideration of military and civilian career structure. The Manpower Planning Directorate in the Deputy Minister's organization is working towards defining the problem in further detail and proposing solutions. It appears sufficient, at this point, to say that the complexity of the problem, and the number of variables are such as to require considerable time and effort to ensure a reasonable solution.

The basic problem is to define exactly what role civilians should play in the Department and the development of a career plan that is at least comparable to military careers.

The spectrum of possibilities for the use of civilian personnel in National Defence is very broad. At one end of the spectrum an organization could be developed in which specific functions were carried out by civilians and specific functions by the military - at the other end of the spectrum - complete integration and unification of the civilian and military. Somewhere within this spectrum of possibilities lies the correct answer. With no firm policy in this regard having been established, career planning is extremely difficult. There appears to have been no consistency in the manner in which the three Services or, indeed Commands and separate organizations have actually used civilians.

---

Small pockets or groups of civilians appear in the detailed organization breakdowns of the various divisions. In many cases, these civilians are highly specialized, carrying out a particular role. However, one can find in another portion of the organization the military performing a similar function. Such small pockets of civilians and civilian/military mixtures makes career planning difficult. Usually the total numbers in any one group will not permit the development of a reasonable career pyramid that could be logically implemented.

The second problem that arises in relation to civilian career planning is the interrelationship with military career planning. On the military side, a structure has been developed which provides for careers based on such factors as retirement ages, training demands, sea/shore ratios of employment, etc. The factors which are taken into consideration on the civilian side must, of necessity, be totally different, as terms of employment are different, and such factors as sea/shore ratios need not be considered. This wide variation then, in career pyramids, makes the marriage of the two systems a formidable task.

The classification revision program, collective bargaining, career development programs, and manpower inventory and appraisal programs are activities that are progressing without the advantage of an overall civilian career policy in National
Defence. This is occurring at the same time that both the manpower and budget allocations of the Department are being reduced, without a proportional reduction in commitments or objectives. While the concepts of these programs are based on well-intentioned personnel policies, the attention to detail from the point of view of the ability of the Department to administer them, leaves much to be desired. It is of little import to a civilian to be allowed to express his aims and aspirations and have them assessed or, to be told of a management training course which he should apply for, only to find that the commitments of the Department prevent the recommendations of personnel management from being implemented.

Another problem in relation to the role of civilians and their career planning is the lack of statistics. This point was raised by the Glassco Commission and is no less true in the Department of National Defence than in other Departments. Action is being taken to correct this situation but, at the present time (December 68) it is very difficult to establish the requirements, the manning situation, and the demographic data associated with any particular category, group or specialization.

It is suggested from the above, that in the Department of National Defence, the idealized concepts of the behavioural scientist or the personnel administrator have reached an impasse with respect to practical administration until a firm role for

civilians can be defined in relation to the total management process in DND.

THE MILITARY/CIVILIAN RELATIONSHIP PROBLEM

Many civilians in National Defence have a very close relationship with the military and either control or are controlled by it. While detailed statistics are not readily available, the personal experience of this writer indicates that, over the years, the number of civilians who have had military service, is rapidly decreasing and, as a result, the mutual understanding that existed through common training and experience, is widening. There is an inherent danger that, under such a situation, the aims and desires of the Government could become increasingly more difficult to administer in a fair and equitable manner. There is also danger that the efficiency of National Defence effort could decrease.

With the wide diversity of employment of civilians in National Defence - which range from large numbers of prevailing rate tradesmen in dockyards and repair depots, under the control of military managers, to the senior engineers, technical officers and administrative officers in the headquarters environment - it has been necessary for the Department to issue a manual titled "Civilian Personnel Administrative and Accounting Manual". The pertinent aspect of this document is its demonstration of the degree of interrelationship necessary between the military and the civilian and, in a number of areas,

7. According to the records as of December 1968, some 9,000 of 36,000 civilians may have had some form of military service. However, back records on this factor are not readily available and the concept that a reduction is occurring can only be expressed as an opinion at this time.
the amount of military control over the civilian.\textsuperscript{8} It is true that channels for grievance exist. However, the real issue is the development of mutual understanding and camaraderie between the two elements. The average military officer or man receives little, if any, training with regard to his obligations to the civilian, and his first exposure to the problem comes when he finds himself in charge of a civilian group or section.

From the civilian's point of view, his status, and the degree to which he is used, is a variable. He appears to have little, if any control over his day-to-day working conditions, and may find difficulty in locating a sympathetic ear at senior management level.

There is also a concept that there is a widespread practice of employing military personnel in decision-making positions with civilians being used as "reference sources", and for the "providing of continuity". This generalized charge may be true or untrue in the total picture. From the experience of the author it is certainly of such a magnitude that it deserves consideration.

Another aspect, possibly of more importance than the policy derived with regard to civilians, is that the civilian should have a say in the developing of policies. There has been a strong tendency in the past for committees to be formed to investigate the

\textsuperscript{8} Department of National Defence Civilian Personnel Administrative and Accounting Manual, in particular, Chapter 7 'Discipline and Security'.
shortages in career possibilities of civilians, with only the most limited representation from the civilians affected. One senior civilian, expressing his dissatisfaction with limited civilian participation, stated "Quite frankly, I see it as a process of consulting cats to enquire about a shortage in mice". If the civilian is to have confidence that his particular plight in the welter of military hierarchy is to be sympathetically dealt with - it is highly desirable that he have a major say in the policies established.

Another issue that raises problems in the administration of civilian personnel is the practice of permitting military and Royal Canadian Mounted Police personnel to apply for positions in closed competitions. Most individuals agree that the practice enables the most suitable candidate for the position to be selected. However, without the existence of a firm policy on the role of the civilian, and a training plan to meet the requirements, they consider that this practice represents "unfair competition". This is one of the issues being raised by the Staff Associations.

**THE CIVILIAN TRAINING PROBLEM**

In National Defence, developmental schemes for civilian personnel are relatively new. Ignoring the activity associated
with French language training, the training of civilian personnel is considered to be less than adequate. There are specialized courses for individuals associated with the technical aspects of various DND programs. However, there appears to be an extremely limited opportunity for basic improvement in the educational level of individuals. The exception is an "assist" program for further education at Canadian universities, on a part-time basis. A number of civilians have also attended Management courses at the Kemptville Senior Officers' course in Government Administration, the Career Assignment Program and the National Defence College.

The issue of mobility creates a number of problem areas when one attempts to actually develop a career and training plan in a military environment. In order to accomplish any reasonable plan, there appears to be a requirement for mobility of civilians that at least approximates that available in the military.

There is a basic limitation to the training that can be carried out by civilians. The present establishment for civilians does not permit positions in the junior levels for training purposes. In times of heavy workload and, even more important, a reducing force, it is extremely difficult to find the available man hours for training, as loss of an individual for training means essentially his loss from establishment. A requirement exists for the establishment of a defined number of training

---

9. Direct training costs for civilians were less than $1.00 per employee per year in 1966-67. This does not include the cost of courses in military establishments, and other training provided by Government establishments.
positions to permit a reasonable training/work cycle.

If, in the future, understanding and trust are to be developed between military and civilian components of National Defence, a considerable amount of common training is desirable. This also appears necessary due to the special nature of the work undertaken by DND.

This problem can be summed up by saying that a training plan for civilians in National Defence should be high on the list of priorities for Defence Management.

THE WORKLOAD/PERFORMANCE MEASUREMENT PROBLEM

In the area of technical and creative work, management is confronted with the additional problem of determining the number of professional personnel necessary to accomplish the objectives and the most economical mix of the various skills. Sophisticated cost-control techniques have been applied to clerical and shop personnel, primarily through the use of work standards and work measurement. However, these techniques are not applicable to areas of work that are complex and creative in nature.

Without a technique for matching workload to resources and suitable standards of performance, during a period of re-organization and personnel reductions, many areas can become over or understaffed to various degrees without true control by management.
To ensure correction of such anomalies, some technique to permit performance measurement and the matching of workload to resources in the area of professional work, is required.

The above outlines the Basic problems associated with civilian personnel in National Defence and leads us to the topic of how the civilian personnel function is organized in National Defence.
THE CIVILIAN PERSONNEL FUNCTION IN
NATIONAL DEFENCE

AIM: To outline the manner in which the personnel function is performed in National Defence and the attendant problems.

THE CARSON MODEL

The effects of the Public Service Staff Relations Act, the Public Service Employment Act and the National Defence Reorganization Act have demanded a complete re-appraisal of the manner in which the civilian personnel function is to be carried out in National Defence. The clarifying of the role of Treasury Board and the Public Service Commission as central agencies with authority to determine policy and procedures and, most important, delegation of authority to the Department, has stimulated considerable "self analysis" and, in a number of areas, positive action by personnel authorities in the Department.

In the introduction to the personnel management portion of the report of the Royal Commission on Government Organization, we find the comments that:

The effective use of people is, then, the primary determinant of the success with which the public service fulfills its obligations to the citizens of Canada..

Two things are necessary to effective performance by the Public Service. First, skills of high quality must be appropriately combined and balanced in ways
best suited to arrange the tasks to be done: good initial recruiting, proper training, and opportunities for personnel development will ensure that these conditions are met. Second, the talents available must be intelligently used, and the efforts put forth by public servants must be wisely guided.¹

In referring to the Departments themselves, the commissioners went on to state:

The Deputy Minister, except in very small departments, will require a Chief Personnel Officer. Such an officer must be capable of providing competent counsel and staff assistance for the personnel aspects of management within his department. He should be given an independent status, not inconsistent with responsibility to his deputy, which will confer on him genuine influence in his department and with the Personnel Division of Treasury Board.

The Personnel function in the department will embrace a wide range of specialized tasks, . . . . It will include: recruitment, selection, promotion, classification, compensation and benefits, training and development, employee communications and staff relations. Resources will be required for analysing manpower data and maintaining appropriate personnel records.

These proposals are founded on a concept of the personnel function that has not been generally recognized in the federal public service.²

---

Mr John J. Carson, who undertook extensive field investigations of personnel management for the Glassco Commission, and later became Chairman of the Public Service Commission, has expanded on these concepts in a paper presented to the Public Personnel Institute on the 15th June, 1965.3

In the presentation Mr Carson suggested: "Increasingly, emphasis will be placed on providing policy guide lines, direction and coordination to the personnel management function throughout the public service . . . . . There remains the "transformation" of the departmental personnel function".4 He then set forth six fundamental postulates:

1. Effective personnel management is one of the most important challenges facing any administrator in the public service today. Manpower costs represent by far the greatest portion of his budget and in the long run the effectiveness of his program will be determined by the quality and motivation of his staff.

2. The problems of personnel management are growing more and more complex and will continue to do so. The problems can no longer be solved by good intentions and common sense alone. Specialist advice and assistance are required.

3. Such advice and assistance should be directly available to line officers at all levels of the departmental organization starting with the deputy head or chief executive officer and continuing down to each significant administrative unit, whether geographic or functional.

4. ibid. - p.5
4. A rough guide to the quantitative adequacy of the personnel staff at any organizational level is one to every one hundred operating employees.

5. Provision should be made for a functional or technical channel of communication between the various levels of specialist advisers but at each level the senior adviser should be administratively responsible to the line official in charge of operations.

6. The co-ordinative designation for all the specialist elements in this area of advice and assistance in the public service should be Personnel Administration. Thus, the senior personnel adviser in a department would become the Director, Director-General or Assistant Deputy Minister - Personnel Administration, depending on the size and significance of the manpower element in a department's total program.

Mr Carson then proposed his function groupings of an organization for personnel administration in a department. It was shown in diagrammatic form in his presentation and is reproduced as Figure I (amended by the addition of 3 sections under Staff Relations) on the next page of this thesis. Figure I has generally become recognized as the "Carson Model". There is nothing sacred in the way the activities are grouped but he maintains that all of them should be carried out as part of a personnel function and coordinated by a senior personnel administrator.

5. ibid. - pp.5-6
The terms used in Figure I are generally self-explanatory. However, for purposes of this thesis, it is important to appreciate Mr Carson's concepts of Manpower Planning and Development and his comments on the four subdivisions follows:

(a) By Organisation Planning I mean analysis and advice-giving on organisation structure for both short and long term program objectives. For many personnel administrators this may be a new area of specialization but it is one that is increasingly recognized as an integral part of his work.

(b) Manpower Appraisal is the process through which the personnel administrator assists and advises the line organization in a planned program of staff appraisal. It is not the personnel administrator's responsibility to personally appraise the performance of operating employees (other than his own staff); but he does have a responsibility to make sure that a well designed appraisal program is available to his supervisory colleagues, that they have been properly coached in its application, and that the results are available in a usable and reliable form.

(c) Manpower Planning is the process of matching our inventory of manpower resources (derived in part from the Appraisal program) against our projected manpower requirements as determined by Organization Planning. The inter-relationship of these three steps is readily apparent.

(d) Training and Development can now be undertaken in an atmosphere of reality. Through the three previous steps we have identified the department's short and long term manpower requirements. Against the known shortfall of skills or resources we can plan training and development programs (both individual and group) with precision and an informed sense of timing. It is in this area that the personnel admin-
istrator can help the line organization to achieve the real "pay-off" from a Manpower Planning and Development Program. It is a staff function of the highest order and one that he neglects to the peril of his own effectiveness and ultimately to that of his department.6

If we consider that Mr. Carson was, indeed, discussing the total personnel resources of a Department, we could logically ask how close the organization for the personnel function in National Defence meets his idealized model.

**THE PERSONNEL FUNCTION IN DND**

To provide a better understanding of the size and scope of the personnel administration problem in National Defence, Appendix B, which is an outline of the general organization of National Defence as of 1 October, 1968, has been included. A perusal of this chart immediately demonstrates the remoteness of the DND organization, for the personnel function, from the "Carson Model".

For example, from Appendix B we find based on titles alone, the following organizations, which could logically be engaged in the personnel "staff" aspect of manpower planning and development:

- Asst Deputy Minister Personnel and staff
- Chief of Personnel (DRB) and staff

---

6. ibid. - pp.9-10
Chief of Personnel (Military) and staff

Comptroller General
   Director General Organization Manpower
   and Management

Chief of Technical Services
   Director of Technical Resources Management

Vice Chief of Defence Staff
   Deputy Chief Plans

The main issue appears to be the distribution of responsibility and overlapping terms of reference as well as the amount of "coordination" that is necessary for the accomplishment of even the simplest change in policies or administrative routines associated with personnel in National Defence.

From the point of view of the line manager, in headquarters or in the commands, manpower issues must present a picture of a bewildering array of organizations to which he can address his problem or from which he can expect to receive directions, guidance and/or additional problems.

Senior Management has been aware of this problem for some time, and on November 27, 1967, the Deputy Minister of National Defence arranged with the Secretary of the Treasury Board for a review of the personnel functions in the Department, in order to establish an organization which would enable maximum support to line management.
The task of the study team was "to recommend an appropriate organizational framework for the personnel function, and describe the responsibilities and authority relationship of the principal officers reporting to the Assistant Deputy Minister (Personnel). Recommendations should be made regarding the location of sub-functions in the proposed organization and the need for further examination of these sub-functions identified where deemed necessary". The study team completed its deliberation and made its report titled "Study Team Report, Civilian Personnel Function, Department of National Defence, February 1968. The study team, chaired by Mr C.C. Tuck, Director of the Bureau of Classification Revision, held a series of interviews and visits in the Department of National Defence, Ottawa, Treasury Board, Public Service Commission, Employee Groups, and a number of field visits across Canada. While limited in scope by their basic terms of references, the factors considered; the conclusions, and the recommendations, cover a number of the problem areas which form the basis of this thesis. The presentation and interpretation of their findings in relation to the basic problems should assist in clarifying the issues. It is, therefore, intended to discuss the findings of the report under appropriate sub-headings of Chapter II. These are: (1) The total management problem; (2) The total personnel resources

management problem; (3) The role of civilians and their career planning problem; (4) The Civilian/Military relationship problem; and (5) The Civilian Training problem.

The Total Management Problem

As the terms of reference of the team did not demand an investigation, discussion or recommendations on the total management problem, it is not surprising that there is only one comment that makes reference to the total management problem. The team states:

In the Department, the White Paper on Defence of 1964, amendment to the National Defence Act culminating in a unified Defence Force concept, evidence given to the Special Committee on Defence, and the introduction of new program-budgeting and personnel management concepts, all have contributed to the need for critical assessments of the method of conducting business in National Defence. In the personnel administration field, perhaps as critically as in any area of the Department's activities, the need for a major overhaul has become evident.8

The very fact that the total management problem was recognized by the Study Team adds considerable credence to their findings and their recommendations, despite the limits placed by their terms of reference. Discussions with some members of the team indicated that the broader problems were recognized, but time and terms of reference limited investigations in these areas.

8. ibid. - p.2
Total Personnel Resources Management

As one would expect, a major portion of the report centers about the basic issue of total personnel resources management. The opening paragraph of their conclusions states "The Department of National Defence must be considered as a force of 135,000 persons, not a force of 100,000 military personnel, and a separate force of 35,000 civilians". Had terms of reference permitted, they undoubtedly would have at least mentioned the 3,000 DRB personnel existing as a "separate" personnel resource.

With respect to the Deputy Minister/CDS relationship, they state:

All powers vested by statutes in the Minister, unless the vesting authorities specifically provided that the Minister must act personally, may be exercised by the Deputy Minister. The Deputy Minister has general control of the business of the Department, except that he has not the power to oversee the Armed Forces or to issue orders to them, except through the Chief of the Defence Staff. The Deputy Minister's responsibility includes the ensuring that all resources - financial, manpower and materiel available to the Department, are used to the best advantage. By law he is responsible for civilians in the Department. At the present time, all management outside of Ottawa is military management, and the Ottawa management is mainly military. However, contact outside of the Department must be channelled through the office of the Deputy Minister. This includes contact with central agencies, other Government departments, provincial, municipal and foreign governments.

9. ibid. - p. 23
10. ibid. - p. 9
In relation to the coordination problem they commented:

The Study Team has observed that at DND Headquarters in Ottawa, military and civilian manpower planning appears to be done in isolation. Even at the point where planners do come together, the military package may be near completion with the civilian implications having to be considered as a secondary matter. Because military and civilian planning do not run parallel, the two may well come into conflict and no systematic means now exists for the recognition and resolution of such conflicts.11

The solution to the problem, as proposed by the Study Team, was simple and direct. They recommended:

The Assistant Deputy Minister (Personnel) be named Assistant Deputy Minister (Manpower) to give recognition in the title to responsibilities beyond those normally associated with the term 'Personnel', in that he would be responsible for:

a. Development and review of policies on the use of manpower, civilian and military, in the department;
b. review and control of manpower in carrying out departmental programs;
c. development, determination and review of civilian personnel policies in the Department; and
d. analysis of, and advice to the Deputy Minister on military personnel policies in the Department.12

Having established the responsibility center for overall policy planning, etc., they then go on to recommend that "Operational responsibility for civilian personnel administration in

11. ibid. - p.14
12. ibid. - p. 3
the Department, be transferred from the Deputy Minister to the Chief of Personnel, Department of National Defence. 13

A plausible solution? Possibly an improvement on the present situation, but pregnant with the possibilities of misunderstandings associated with the use of the terms 'policy', 'review and control of manpower' as opposed to 'operational responsibility'. It also leaves unresolved the overlapping responsibilities of a number of agencies.

As the Comptroller General is the responsible authority for "establishments" the Study Team recognized that close cooperation would be necessary. They also recognized that close cooperation with ADM/Finance was also a requirement.

The Role of Civilians and the Career Planning Problem

The Study Team had a number of comments with respect to the career planning problem. However, they appeared to be under the false impression that a firm policy on the role that civilians were to play in National Defence, had been clearly established. Some of their comments included:

Re-organization and integration of the military forces over the last four years has been accompanied by the integration of the civilian support services. Prior to military re-organization, civilians, for purposes of work conditions and rates of pay, particularly in the operating groups, were employed under three different and varied policy administrative and management structures. Integration of the military has

13. ibid. - p. 4
resulted in the integration of civilians for work purposes, but there still remains, in a number of areas, civilians who are employed on exactly the same type of work, side by side, yet receiving different rates of pay. Integration of the military forces has also resulted in re-adjustment of workloads for civilians without accompanying changes and classification. In effect, the problems which have been developing for civilians have been outside the control and influence of the military management.14

While the above comments may be true, the "integration of civilians" has occurred without a clearly defined policy on the role civilians were to play in National Defence. The report goes on to state:

The role of civilian specialists has become increasingly important to military management. This is particularly true in the field of engineering where military engineers work side by side with their civilian counterparts. The military engineer on one hand has a clearly defined career pyramid, the civilian on the other hand does not necessarily have a career pyramid which can be clearly defined in the Department.15

In another section of the report they add to this theme by stating:

There are factors which influence the employment of civilians vs military. These factors include economics, overseas location requirements, sea/shore ratio, northern and isolated postings, skills that are short term vs long term, adjustment or reduction in total numbers, and career development.

14. ibid. - p. 9
15. ibid. - p.10
.... military personnel in DND have a clearly defined career pyramid, the civilians do not. As a result, there is a tendency for civilians in the professional and technical groups to plan their own careers and seek promotion by going to other Government departments. The Department of National Defence does not attract or retain personnel in the professional and technical skill groups to the same extent as do other departments. Although civilian career pyramids should blend with the military career pyramids, as well as with those of other Government departments, it is evident that individual civilian career pyramids must be identifiable within DND.

Of the 35,000 civilians in DND, about 3,000 are executive, professional, senior administrative and technical personnel, for whom career opportunities must be developed within the Department. It is evident to the Study Team that career planning for civilians has not progressed much beyond the embryo stage when compared with other Government departments. It is obvious that there is much work to be done in this area if the Department hopes to retain the best skills needed, in the accomplishment of its mission. ..... An effective career planning organization within the Department is most important if the Department is to retain the 3,000 civilians whose career possibilities may include the whole Government service.16

In this area, the findings of the Study Team appear quite rational. However, it is difficult to understand why there would only be 3,000 out of 35,000 civilians who should have a proper career plan. The military career plan considers all levels from the rank of private to a 4-star General and it is hard to visualize why only specific groups of civilians should be singled out to have their careers planned.

16. ibid. - pp. 14-15
It is also questionable that merely stating the fact that careers do not exist and should be developed, will solve the problem. The issue is that a total management process should exist that ensures that as much attention is paid to career development and the obtaining and retaining of qualified military and civilian personnel as is paid to the obtaining and maintaining proper equipment for the Forces. Without such a continuous process, results are bound to be haphazard and unsatisfactory.

The Civilian/Military Relationship Problem

In the area of the civilian/military relationship, the Study Team had some interesting comments. These included:

Government policy developed since the Glassco Report is resulting in decentralization of management responsibility and decision. This decentralization will have a further effect on the relationship between the military and civilians. The military manager who considered that he had little authority over civilians in the past will now become very much involved in all administrative matters affecting civilians, e.g., classification, staff relations, etc. In matters of collective bargaining, it is a fact that the first, second and third level of grievance procedure will be handled by military management. Only at the fourth level will decisions come from civilian management, and these will come from the office of the Deputy Minister. Collective bargaining is but one example of the need to appraise military management of their new responsibilities in the administration of civilians.

Military managers are aware of their changing
responsibilities for the management of civilian personnel. They are also aware that new skills and improved skills will be required to carry out their new managerial duties effectively. Military management recognizes that the level of expert advice needed at Commands and bases is not now available. Military officers are fully prepared to be held accountable for their decisions in civilian administration but they are also of the opinion that to be held accountable they must be given the authority, policy guidance, and readily available specialist advice.17

With regard to the civilian personnel administrative and accounting manual (the "Bible" of civilian/military relationships) it was the view of the Study Team "based on detailed comments from the vast majority of line managers consulted that the present Manual is too complicated mainly because it includes both policy and operating instructions".18 In my opinion they could have added, that it restricts rather than enhances logical relationships between military and civilian personnel.

A key issue in the civilian/military relationship must be the effectiveness of the organization for, and the manner in which, the duties of personnel administration are carried out by both military and civilian personnel officers. The Study Team's comments in this area are of interest. They said:

Personal administrators should be the catalysts to help management in the improvement of managerial skills and the improvement of employee skills. Outside

17. ibid. - pp.10-12
18. ibid. - p. 7
of Ottawa, the personnel services with two exceptions, consists of some staffing assistance, the keeping of personnel records, such staff relations advice as was required, some assistance with the chronic employee absenteeism and problem employees. In only a small number of locations is there any substantial breadth and depth of personnel skills .... New demands on managerial skills are resulting in a requirement for new personnel skills and an improvement in the present available skills. Managers require new and improved support in staff relations, manpower planning and development, training, and an entirely new field service in classification. 19

The annoyances that developed, in many cases, involved pure personnel administration items such as delays in re-classification, inequalities in the classifications established, etc., particularly in field organization. The solutions proposed - "Personnel administration resources be organized regionally". 20 This recommendation is an obvious step in the right direction. However, the long term solution involves the total management process and an awareness, on the part of all civilian and military management, of the importance of the relationship and the implementation of policies and procedures that recognize the integration of individual and organizational goals.

The Civilian Training Problem

While not concerned with the details of training plans

19. ibid. - pp. 12-13
20. ibid. - p. 15
for civilians the Study Team did note the limitation in the arrangements for civilian training. They stated:

In general, the civilian personnel services in National Defence would not compare favorably with that of a large and similar organization which has a fully integrated personnel problem. For example, a training program which one may expect is non-existent, and there is no effective career planning for civilians.\footnote{21}

For the military there is a highly specialized career planning and a training organization which is used almost exclusively for military personnel development. On the civilian side there is a skeleton organization which has been set up to do this work, but to date its programs have not been put into effect. If the military and civilian personnel function remain separated at CFHQ, there will continue to be duplication of effort particularly in the area of training. There are many military training establishments which could be used for civilian training from time to time throughout the year, for example, the Royal Military College could be used in the summertime, and certain schools and training centers at other times of the year. The Team feels that if career planning and training for civilians and military could be brought together at DND Headquarters, an economy of effort and saving, at least in the cost of facilities, would result. A link at CFHQ would also have the effect of unifying the Force in uniform with those in civilian clothes, to be identified as a single work force in the Department.\footnote{22}

THE RESULTS

After some ten months of discussion on the recommendations of the Study Team, a number of changes have taken place and re-allocation of responsibilities, together with the inevitable reorganization, is

\footnote{22. ibid. - p. 15}
being implemented.

While a number of the Study Team's recommendations are of secondary importance to this thesis, their complete summary of recommendations is included as Appendix C to provide a more complete picture of the problems as they found them.

The major change that is being made is the reorganization of the ADM(Personnel) to become ADM(Manpower) and this can be seen from the complete organization of the Deputy Minister's office as reproduced in Appendix D. Changes in the organization of the Chief of Personnel will include a Deputy Chief of Personnel (Civilian). This implies that the Deputy Minister has agreed to delegate authority for the operational aspects of civilian personnel to the Chief of Defence Staff and that he has agreed to accept the commitment. This is undoubtedly a step in the right direction, but is a long way from solving the basic problems of integrating the administration of civilian personnel with military personnel to meet the requirements of the new total management process.

In this chapter, there has been an attempt to outline the main problem areas associated with the manner in which the personnel function is performed in National Defence by presenting the comments of a Study Team for the civilian personnel function, who were primarily looking at the problem from the point of view of organizational arrangements. However, the issues raised continue to
build the case that the basic problems are total personnel resources management, roles for civilians, their training and career planning, and civilian/military relationships. We have dealt primarily with the public servant and the military, leaving the Defence Research Board personnel as a separate issue, which will be dealt with in the following chapter.
CHAPTER IV

THE DEFENCE RESEARCH BOARD

AND THE TOTAL MANAGEMENT PROCESS

AIM: To demonstrate that the concept of separate administration of Defence Research Board Personnel merits detailed investigation as to its applicability to the idealized National Defence management process.¹

BACKGROUND

As pointed out by Glassco:

Military scientific research in Canada has evolved in three stages. Up to World War II military science was the sole responsibility of the Armed Services, and the amount of defence research and engineering carried out was almost negligible. A modest research program was in hand at the National Research Council Laboratories during the period 1936–39 which laid the foundations for the large-scale wartime defence scientific effort. During WW II the responsibility for defence research and development continued in the hands of the National Research Council. Since the formation of the Defence Research Board in 1947, defence research has been almost exclusively the responsibility of that body.²

The statutory functions and powers of the Defence Research Board are contained in Part III (Sections 53, 54 and 55) of the

National Defence Act which states:

"There shall be a Defence Research Board, which shall carry out such duties in connection with research relating to defence of Canada and development of or improvement in materiel as the Minister

1. The opinions expressed in this chapter are the responsibility of the author and, to the best of my knowledge, are not endorsed by any DRB or other DND management. Specifically, they have not been endorsed by any personnel listed in Appendix A.

may assign to it, and shall advise the
Minister on all matters relating to
scientific, technical and other research
and development that, in its opinion,
may affect national defence. 3

The Board itself consists of a Chairman and Vice Chairman
appointed by the Governor-in-Council and the President of the National
Research Council, the Deputy Minister of National Defence, such
members as may be appointed by the Minister as ex-officio members
representing the Canadian Forces, and such additional members
representative of University, Industry and other Research interests
as the Governor-in-Council appoints.

The Act goes on to state that with the approval of the
Minister, the Board may "notwithstanding the Public Service Employment
Act or any other section of this Act, or any other Statute of Law,
appoint and employ the professional, scientific, technical clerical
and other employees required to carry out efficiently the duties of the
Board, prescribe their duties and, subject to the approval of the
Governor-in-Council, prescribe their terms of appointment and service,
and fix their remuneration." 4 This, in effect, makes the Defence
Research Board a "separate employer".

The Act also allows the Defence Research Board to make by-laws
or rules for the regulation of its proceedings and for the performance
of its function.

3. Revised Statutes of Canada 1952. Chapter 184, Part III Sec 53
4. ibid. - Section 54 revised by SC 1966-67 C71 S4-7(3)
may assign to it, and shall advise the
Minister on all matters relating to
scientific, technical and other research
and development that, in its opinion,
may affect national defence. 3

The Board itself consists of a Chairman and Vice Chairman
appointed by the Governor-in-Council and the President of the National
Research Council, the Deputy Minister of National Defence, such
members as may be appointed by the Minister as ex-officio members
representing the Canadian Forces, and such additional members
representative of University, Industry and other Research interests
as the Governor-in-Council appoints.

The Act goes on to state that with the approval of the
Minister, the Board may "notwithstanding the Public Service Employment
Act or any other section of this Act, or any other Statute of Law,
appoint and employ the professional, scientific, technical clerical
and other employees required to carry out efficiently the duties of the
Board, prescribe their duties and, subject to the approval of the
Governor-in-Council, prescribe their terms of appointment and service,
and fix their remuneration". 4 This, in effect, makes the Defence
Research Board a "separate employer".

The Act also allows the Defence Research Board to make by-laws
or rules for the regulation of its proceedings and for the performance
of its function.

3. Revised Statutes of Canada 1952. Chapter 184, Part III Sec 53
4. ibid. - Section 54 revised by SC 1966-67 C71 S4-7(3)
The organization of the Defence Research Board, as of December 1968, is shown in Appendix B.

There are few who would question the contributions that the Defence Research Board has made. These contributions range from variable depth sonar to high altitude rockets, and have, unquestionably, improved the fighting capability of the Canadian Armed Forces. An excellent summary, of all aspects of DRB activities, may be found in the recent submission to the Special Committee on Science Policy of the Senate of Canada.\(^5\)

It is not the intention of this thesis to attempt to determine the required organization for military research in Canada or even draw any conclusions with respect to military research and development requirements. However, it is the opinion of the author that modern technology has changed since 1947 to such a degree that the classical evolutionary process from "basic research" to "operational equipment" may no longer be a valid process on which to divide organizational responsibilities. The theme of the following sections of this chapter will be the existence of the requirement for "scientific talent" at many points in the management process of National Defence. If the theme is correct the present organizational concept, of military research and scientific personnel resources as a separate function, may be worthy of investigation.

---

5. DR. No. 191 Submission of the Department of National Defence to the Special Committee on Science Policy of the Senate of Canada (Ottawa, October 1968).
THE TOTAL MANAGEMENT PROCESS

As outlined in Chapter II, the idealized management process, proposed by General Sharp, consisted of six steps:

(1) Strategic Studies
(2) Rationale for Canadian Military Forces
(3) Capabilities Plan
(4) Implementation Plan
(5) Implementation Management
(6) Result Analysis

As the security aspects of DRB functions will not permit detailed examples of the roles played by DRB scientists in each of steps of the management process, the case for the requirement existing must rest on the approved organization of DRB and the comments made to the Senate Committee on Science Policy.

Figure 1 is an organization chart of the Defence Research Analysis Establishment. The dotted lines represent tasking, the solid lines the organizational control. While the Chairman DRB has the organizational control, the analysis establishment is tasked by a committee, and one division (Operational Research Division) is under the control of both the Chief, DRAE and VCDS. It is not suggested that this multi tasking and control presents a problem, but it does indicate the use of "techniques" to overcome organizational anomalies and the growing demand for the integration of functions, that 20 years ago were thought of as the purview of pure scientists, but are today, capabilities required at many levels of management.
DEFENCE RESEARCH ANALYSIS ESTABLISHMENT

DEFENCE COUNCIL

CDRB  DM  CDS

DEFENCE ANALYSIS AND OPERATIONAL RESEARCH COMMITTEE

LEGEND: ........ = TASKING

VCDS

DCFD

DEFENCE RESEARCH ANALYSIS ESTABLISHMENT

SORS

CHIEF, DRAE

DEPUTY C/DRAE

ADMINISTRATION

GENERAL ANALYSIS DIVISION

DIRECTOR GENERAL OF GENERAL ANALYSIS (DGGA)

DIRECTOR OF STRATEGIC OPERATIONAL RESEARCH (DSOR)

DIRECTOR OF MATHEMATICS AND STATISTICS (DMS)

DIRECTOR OF LOGISTIC ANALYSIS (DLA)

OPERATIONAL RESEARCH DIVISION

DIRECTOR GENERAL OF OPERATIONAL RESEARCH (DGOR)

DIRECTOR OF MARITIME OPERATIONAL RESEARCH (DMOR)

DIRECTOR OF LAND OPERATIONAL RESEARCH (DLOR)

DIRECTOR OF AIR OPERATIONAL RESEARCH (DAOR)

(DETACHMENTS AT FIELD FORMATIONS)

NORAD

ADC/NNR

TRAINCOM

MARCOM

MARPAC

MOBCOM

LIFTCOM

FIGURE 1
It is possible to find many areas such as Plans, Force Development, etc., where the integration of analyst and military officer is required. The talents required for strategic studies is similar in nature to that required for operations research. This is demonstrated in figure 1 by the existence of the Director of Strategic Operational Research (DSOR).

The development of a rationale for Canadian Military Forces, as with strategic studies, demands a high level of "analysis" and, hence, scientifically trained personnel within the DRB definition of defence scientist. A Capabilities Plan demands not only "scientific" investigations of capability of equipments, but the application of operational research and analysis of the highest quality. The relative performance of various systems under a variety of operational research scenarios must be analyzed. The process of deriving an implementation plan suggests many forms of feasibility studies and the application of nearly every area of scientific and military knowledge, as well as the application of the results of modern research. This requirement is met, in part, by the use of "Scientific Assistants" shown in Appendix B, as well as the detachments at field formations shown in figure 1.

It is in the implementation stage where a requirement for "scientific" excellence is placed on specialists in both the scientific and military community. The resources of DRB are used,
but, in the opinion of the author, the "specialised arrangements" can often become bewildering. Interchange of personnel, assignment of sub-systems to various DRB laboratories, project managers with dual or even triple responsibilities, scientific assistants with dual responsibilities, are some of the techniques employed. Problems can arise with communication if demands are made to "follow the organisational hierarchy" in the communications process.

Result analyses form a part of the DRB contribution to National Defence. Operational research personnel make recommendations in the commands on day-to-day activities as well as in longer term studies of performance. (See figure 1, Detachments at Field Formations).

The suggestion that scientific expertise is required at all phases of the management process is certainly not a justification that the optimum manner of providing this service is not through a "scientific service" such as DRB. However, the trend of an increasing requirement for scientifically trained personnel appears to be placing demands on DRB that are not easy to meet without reducing some of the basic commitments or increasing their resources.

In the DRB report to the Committee on Science Policy they stated:

In 1967 policy concerning the operations
of the Board was critically and thoroughly reviewed. The outcome was the adoption of a policy of decentralisation by which the responsibilities for program implementation and associated staff duties were transferred from headquarters to the establishments while retaining the responsibilities for program implementation and associated staff duties were transferred from headquarters to the establishments while retaining the responsibilities for program planning and review, military support planning, and personnel and financial management in headquarters.

These changes were made to accomplish several purposes. One purpose was to develop closer links between DRB and the services at both the higher "management" levels and the working scientist level. Two benefits are expected - our scientific support to the services will be strengthened and, conversely, the needs of the services will become known at all levels within DRB - but particularly in the laboratories where ideas and work will be influenced. In other words, we want our scientists to be familiar with military problems, attitudes and thinking so that they will be defence scientists, rather than just scientists in a defence establishment.6

It is hoped that this "policy of decentralisation" will permit the continuation of research and, at the same time (with reducing resources) meet the desires of DRB and the services for closer relations.

Another aspect of the total management problem is the resources in industry available to defence management for technical and scientific support. Canadian industry, supported in many cases by parent firms in the U.S., can provide more up-to-
date technology at a faster rate than DRB laboratories in areas that have not had continuous support by research projects. In this regard the Board stated:

Because of the creation of new scientific agencies and the rapid growth of civilian research, the relative impact of DRB's activities is decreasing.7

There is a danger under such a situation that the DRB effort could be integrated with other scientific agencies to provide an apparent "cost/effectiveness" improvement to the total Canadian research effort but at a loss to National Defence effort.

The issue appears to be a demand on Defence Management to establish the total need for "defence scientists" and determine if the most viable process for meeting this need is a "scientific service" such as DRB. Other plausible techniques such as contracts with universities or industry, military personnel, or even the integration of scientific personnel with the other personnel resources of National Defence should be considered.

PROBLEMS ASSOCIATED WITH THE ADMINISTRATION OF DRB PERSONNEL

Having dwelt at length in the previous chapters with the administrative problems associated with Public Servants in National Defence, and their relation to the Total Management problem, we have now, by introducing the Defence Research Board with its

7. ibid. - Summary of Part I P(viii)
statutory right to act as a "separate employer" converted the problem from what is called, in scientific jargon, the "two-body problem" to a "three-body problem".

There are, in National Defence, three types of manpower with different terms and conditions of employment, attempting to work side by side in meeting the Department's objectives. It appears logical at this point, to follow the format used in Chapter II, and consider the problems under the heading of: (1) the total personnel resources management problem; (2) the role of scientists and their career-planning problem (3) the civilian scientist/military relationship problem; and (4) the scientist training problem. By utilizing a similar breakdown, it is not intended, in any way, to imply that the problems associated with scientific personnel are of the same order of magnitude as in the case of Public Servants. Indeed, the very scale of the problem suggests that this is not the case. There are some 600 scientific officers and 800 technical support, (the remainder of the 2,900 DRB establishment being in the administrative, foreign service, and operational categories) as compared to over 35,000 "Public Servants" in all categories within DND. However, recognizing that the size of the establishment diminishes greatly the relative importance of the problem, we shall consider what appears to the author to be some of the fundamental issues associated with the DRB.
The Total Personnel Resources Management Problem

If one agrees that the basic responsibility of any Manager is to mobilize, apply and control all the resources, of raw materials, facilities, money and manpower necessary to accomplish the objectives of whatever organization he is managing, the ability to apply all the personnel resources of the Department, including scientific, to meet both the immediate and long term objectives, becomes an issue. The ability to immediately apply the scientific resources on the most urgent issues of defence, appears mandatory. On the other hand, the necessity of bringing to bear the most up-to-date operational talent on a research problem is equally justifiable.

As already mentioned, in some of the more demanding areas, permanent allocation of DRB personnel to operational and headquarters staffs has already been implemented. If the problem is of sufficient urgency to demand consideration at Defence Council level, the solution is obvious, the Chairman DRB takes the necessary steps to provide the personnel required. However, what is left unresolved is the large number of technical and operational problems, not of sufficient magnitude to be brought to the attention of Defence Council, that demand the application of scientific talent. The responsible manager is unable to obtain the necessary services without considerable effort and special requests.
It appears less than sound management to have highly qualified personnel working within a department on a required, but lower priority, project and be unable to apply those resources on an urgent, tightly scheduled development program of immediate urgency, without taking extraordinary administrative measures. Conversely, to have a high priority research project delayed because of a lack of quick response to operational information which can only be supplied by an experienced military officer, is less than rational.

A system whereby all personnel resources in National Defence can be applied, as required, on the most urgent problems, should be high on the list of the capabilities required by Defence Management.

The Role of the Scientist and the Career Planning Problem

As opposed to the problem of the public servant the civilian scientist in National Defence has a clearly defined role and a career plan in an "all civilian" sub-division of National Defence. Any military within the DRB organisation are "on loan" and do not interfere with advancement of individual scientists. From the point of view of the individual it is undoubtedly the most satisfactory arrangement. It is probably quite adequate for meeting the limited objectives of Defence Research and other objectives of DRB. However, when the objectives are broadened to those of
the total objectives of National Defence, it becomes a moot point if research scientists are being utilized in the most effective manner.

Quotations from the DRB report to the Science Committee illustrates their personnel policies with regard to scientists.

They state:

DRB makes every effort to employ first class scientists of proven ability. To obtain them in the face of the severe competition that characterizes professional recruitment today, it must recruit efficiently, ensure good working conditions with competitive remuneration and offer attractive careers in both research and administration. In practice, the Board works closely and harmoniously with the National Research Council and the Public Service Commission with respect to grades and salary scales but is independent in the exercise of judgment with respect to individual scientists.8

Recruitment of Scientists

The Chief of Personnel has on his staff three personnel officers who devote about half their time to recruitment of scientists. Literature describing the research program of the Defence Research Board is made available annually to graduating students through university placement officers. Students showing interest are interviewed by DRB representatives, and applications for employment are sought from those who appear suitable. Employment offers are usually restricted to students who are judged finally by the Selection Committee (para 2) to be in the top quarter of their classes as evidenced by class records and faculty appraisals. In some cases appraisal of students for full-time employment is assisted by the prior opportunity to assess them in summer work at DRB establishments.

8. ibid. – Annex III – 1
Criteria For Researchers

No research has been undertaken to develop special criteria or selection methods for use in recruitment of defence scientists, since there has been little indication that the quality of those hired leaves much to be desired in general. Particular interest has, however, been taken in systematic improvement in the methods of appraising the achievement of scientists after employment. Rating and other assessment techniques have been examined, and an analysis of the volume of production of patents, reports and publications and patents by individuals and groups has been made.

Identification of Potential Research Administrators

Both research workers and research administrators are graded and paid on the same scale. It is, therefore, quite possible for a scientist to be promoted to the most senior level on the ground of scientific prowess alone. In practice, however, it is very rare for an individual to attain on this basis a level equivalent to that of director general of an establishment; it is less uncommon for him to reach the pay level immediately below this. There is, therefore, an incentive for the scientist to undertake management responsibilities.\(^9\)

From the above, and the personal experience of the author, it appears that the Defence Research Board has done an excellent job in recruiting, selecting and employing research scientists, in accordance with allocated responsibilities.

The Scientist/Military Relationship Problem

The limited number of military officers and senior Public Servants who are in close contact with the scientific officers of

\(^9\) ibid. - Annex III 2-3
the Defence Research Board develop profound and deep respect for the capabilities of the individuals concerned. The only regret is that a larger number do not have this close association. There are no Canadian studies available to establish the desires of DRB scientists with regard to their relationship with the military. However, one suspects that there are a number of scientists with a yearning for a closer association with the operational aspects of the Department which they serve. To foster, encourage and utilize this motivation should be an objective of Defence Management. Again, it is suspected that the converse is also true. A number of military officers and senior Public Servants may well have a desire to spend a portion of their career applying their talents in the research field.

In the DRB laboratories only a very limited number of military personnel are employed in scientific activities. If military personnel are assigned to DRB, it is generally in an administrative, project manager, or coordinator capacity. Other than operational research and scientific advisor functions, few DRB personnel are employed in "line" functions in the other Branches of National Defence. As a result, there appears to be only limited interdependence in the day-to-day effort of the two forms of manpower. Relationships are, therefore, slower in developing, less demanding and more formal in nature than between
the public servant and the military.

As there is not the same degree of "side by side" association between DRB scientists and the military as there is between Public Servants and the military, or the same degree of "control" one over the other, the problems are of much lesser importance to the overall effectiveness of the Department.

The Scientific Officer Training Problem

Relative to the Public Servant in National Defence, the training programs in the Defence Research Board are well defined and well administered. The DRB report to the Committee on Science stated:

Encouragement is given to the acquisition of additional academic training by defrayment of one half of the fees incurred for relevant evening courses. Individuals are also sent from time to time on short courses which will benefit their work directly, and full expenses are paid. Up to 15 scientists may be given longer term educational leave at any one time for purposes of attaining a higher degree level and are assisted by provision of scholarships amounting to 40 to 60 percent of normal salary together with part or all of travel expenses and university fees. Most establishments hold seminars from time to time on relevant scientific issues or programs and outside participants may be invited. Mature scientists who, after some years' work, especially on applied problems, exhibit a need for refreshment or extention of their knowledge, may be sent away for periods of approximately one year's additional training on full salary.10

10. ibid. - Annex III 3-4
A table of funds expended for further professional University education of the DRB staff was also included in the report and indicated an expenditure in 1967-68 of $153,881.00. Improvement in the capacity and performance of the public servants in National Defence would undoubtedly occur if similar programs were provided for the CDS and DM organizations.

SUMMARY

While there is no question about the contribution, the efficiency and effectiveness of the Defence Research Board, the above comments suggest that: in this era of rapid technological advances, and the dramatic changes occurring in the Department of National Defence, including the demand for a new management process; scientific personnel may not demand consideration as a separate entity. In particular, the delegation of control of scientific personnel to an organization remote from those which control other personnel resources in the Department, is questioned. A detailed investigation appears to be worthwhile.

11. ibid. - Annex VI - 7 Table 5
CHAPTER V

RECRUITMENT TO RETIREMENT

AIM: To present the problems associated with a career in National Defence from the point of view of individual Public Servants.

GENERAL COMMENTS

The size, wide geographical and organizational dispersion, scope and variety of work performed by the civilian component of National Defence, prevents meaningful generalizations on individual careers.

The Department of National Defence utilizes Public Servants from each of the six categories, and nearly all of some seventy groups. Conditions of employment vary widely in different organizational Commands and units. The nature of National Defence work demands a constantly changing requirement for knowledge and skills. However, there is no doubt that, over the years, there will be a continuous requirement for a wide range of professional, technical and tradesmen skills, as well as administrative skills and the attendant problems will not "just disappear".

It is not intended to present in this chapter the results of research based on an approved behavioural science approach. However, it is an attempt at expressing the problems, presented in this thesis, from the point of view of the employee. What follows should be labelled as "opinion", some informed, some not so
informed but nevertheless "opinion". It could be argued that, without statistically justifiable documentation, the "opinions" do not contribute to the validity of the total arguments. This may be so. However, as the language used in expressing the "opinions" is derived from words used by concerned individuals, it should assist, to some small degree, in placing the issues in a clearer perspective.¹

The discussion will be divided into the following categories: (1) Recruitment and Selection; (2) Indoctrination; (3) Employment, promotion and training; and (4) Retirement.

RECRUITMENT AND SELECTION

In view of the variety and number of positions in National Defence, and the rate of separations, recruitment, as a function, takes place on a continuous basis. As with other Departments, the Public Service Commission and the Canada Manpower Centres are the recruiting agencies for civilians in National Defence. All of the standard forms and process for announcing and advertising positions are utilized. Attempts are also made at direct recruit-

¹. The sources for these "opinions" fall into four categories. First; Comments arising from "Civilian Advisory Panels". These are panels formed by some organizations in National Defence to - "advise directors on problem areas associated with civilian personnel matters" - and usually consist of only civilian members. Second; recommendations that have been made from time to time, to National Defence, by Staff Associations. Third; letters written by individuals solicited and unsolicited, on their particular plight or personal attitude. Fourth; personal experiences of the author as a military "line" manager in National Defence.
ment where the job is specialized and demands particular skills. This system does not appear to pose any problems that are peculiar to National Defence.

The volume of applicants to the various positions in National Defence, it is assumed, will vary directly with the manner in which the general public perceives the functions performed by the Department. Statistics are not available, but one would expect that, during the Korean conflict, few problems associated with a negative public attitude would arise in recruiting across Canada. It could also be expected that in 1968, with integration and Cabinet review of roles and missions, enticement of the youth of Canada to careers as civilians in National Defence would be slightly more difficult. The situation will change as the public image of Canadian defence alters.

After the initial indication of a desire for public service, recruitment becomes individualized. After the recruiting process has proceeded to the point where an individual has become interested, forwards an application, and possibly reaches the stage of being interviewed, he will generally seek information with respect to the immediate job, as well as the career potential it offers. On finding the situation that exists in National Defence, he will immediately perceive of a career blockage due to the military hierarchy associated with many of the positions. The author, on
numerous occasions, has had the applicant for a position reverse the interview process by asking - "Why should he join an organization where, in effect, he can not aspire to even the highest position within his own group or section, as the section head, director, or director general, is a military officer?" Until National Defence has clearly defined the role of civilians, and provided a career pattern which permits military and civilian to progress side by side at approximately an equal rate, there will be no answer to this question that will satisfy a potential employee. Thus, the particular problem of recruitment of civilians in National Defence relates to the fundamental issue of career planning and civilian/military relationships.

**INDOCTRINATION**

Having gone through the recruiting and selection process and receiving an appointment to a position in National Defence, the new employee arrives for his first day at work in his Department. It is here that he is confronted with a bewildering array of organizations, procedures, jargon, attitudes and approaches that, unless he has had prior military service, can only frustrate and discourage rather than motivate and encourage.

To this "new" employee, he perceives that management of National Defence expects him to understand the aims and objectives, the administrative processes, the attitudes and behavioural patterns
of the Department, by some process of osmosis, for in many cases, he is in no way formally indoctrinated into the job. Generally he is turned over to some individual, within his small group, who is told to "find him a place to work and get him started". In an organization the size of National Defence, the dynamic nature of the work makes the random approach to introducing new employees totally unsatisfactory. Lack of indoctrination leads, in many cases, to inefficient operations, as well as the employee's personal problem that, during the time of probation, and usually high motivation, he is limited in his performance by a lack of understanding of some of the basic policies, procedures and objectives of the organization which he has joined.

There appears to be a requirement for an indoctrination course for all new employees entering the Department of National Defence. This course should be directed towards explaining to the employee the part his particular area plays in the whole operation. The course should be designed in such a way that a balance is provided between suggesting blind obedience to the system vs uninhibited initiative. It should be of such a nature that it removes from the employee that feeling of isolation and frustration that must be present on entering a large organization with as many diverse activities as National Defence.
EMPLOYMENT, PROMOTION AND TRAINING

To discuss such a broad topic it is necessary to establish some form of classification of problems. While not mutually exclusive areas, this section is sub-divided into four sub-sections—
(1) Delegation of responsibility and promotion (2) Training (3) Military Control of Civilians (4) A civilian voice in his own affairs. For sake of completeness, some of the concepts presented in Chapter II have been re-stated.

Delegation of Responsibility and Promotion

In the most extreme case, the civilian has been referred to as the "lost soul" in National Defence. He "takes little or no part in management, and little or no part in the decision-making activity, with the exception of the chosen few in the Deputy Minister's office". It has been suggested that the civilian in National Defence "tends to become specialized" and, presumably, therefore, unfit for broad responsibility. It has also been implied that it is "improper and unworkable to place a civilian in charge of military officers and men". Another suggestion states that "one of the principle sources of dissatisfaction on the part of the civilian staff is the lack of the delegation of responsibility to the civilian staff commensurate with their position and abilities". This feeling arises from what appears to them to be the usual practice of employing military personnel
at all decision-making levels with the civilian being used as "reference sources". Are these the statements of angry, disillusioned employees, or is there an element of truth that merits consideration?

There is no doubt that the individuals who will one day serve in a ship, an aircraft or a battalion must be intimately involved in stating: the requirements; design; procurement; maintenance and operation; of all aspects of the fighting system. Among rational civilians, one finds complete agreement, but in the same breath they will ask, "Are there not many areas where civilians can make a contribution?" They suggest that the "experience of an able civilian stands every conceivable statistical chance of being equal to or better, in both quality and quantity to that of his military colleagues in specified areas simply because he is continuously involved". He not only remembers the anguish of past problems, if he has any will at all he struggles to avoid them in the future. He does this, not because he is somehow more clever or more virtuous than his military colleagues, but because he knows that he can not look forward to some re-appointment that will allow him to escape, having to live with the consequences of too much expedience. Frequently, he can discern policies and procedures, or even simple ways and means of not running into administrative and
technical difficulties. This, in essence, is the argument of "continuity" as a justification for the civilian, an argument to which National Defence management should not turn a blind eye. However, at the senior civilian level, there appears to be a trend towards a higher level of mobility than in the past and in such positions the "continuity" argument may not be as valid.

When a situation exists where the contribution of the civilian can, indeed, be greater than his military counterpart - is there a viable argument that he should not be in control? It is beyond the scope of this thesis to present a list of arguments pro and con. It appears sufficient to say that a cursory study of the broad spectrum of responsibilities of the various organizations in National Defence would lead one to the decision that large areas of endeavour could well be under the control of civilians with military personnel serving in those areas where operational experience is required, the civilian establishing policies and procedures, and the military becoming the "reference sources".

Does "specialization" reduce an individual's effectiveness in broader responsibilities? One would find difficulty justifying this situation in an organization such as that in existence at Cape Kennedy for the Space Program. It is doubtful if they demand of each director that he have experience and a breadth of training
of the astronaut to fulfil his function. From the civilian's point of view, he can ask "What is a military man of any sort, if he is not "specialized". In today's technological society, who isn't specialized?" To pursue this illogical notion to the root of its absurdity, it would be necessary to claim that he who knows nothing is best fitted for highest responsibility. The "specialized civilian" should have equal opportunity for consideration for a promotion, based on his ability to do the job.

It may be said that, as with the military, in specific cases, specific civilians are not of the calibre necessary for the higher office. However, this does not prevent the creating of the position, and the recruiting and/or training of a suitable man, rather than to use the argument as an excuse for not establishing civilian positions.

On the positive side of the ledger, there is the "Manpower Inventory and Appraisal Program". This involves the interviewing of individuals and their supervisors, with the main intent of determining the individual's personal ability and qualification for advancement, determining his strong and weak points, areas where he requires training to do his present job, and training which would lead to higher positions in National Defence. In addition, the individual is asked about his own hopes and aspirations and, wherever practical, attempts are being made to
achieve these ends. Lack of statistics, standards of performance and work measurement prevent rapid progress.

While one can praise this program, there is a gnawing doubt that it is yet another example of an "academic/administrator gap". From a behavioural point of view, one can see the arguments for interviewing the individual and preparing a document which makes serious recommendations about his future, which involve not only the aims and objectives of the Department, but also the aspirations of the individual. However, before it can be effective, it is essential that the tools be available to "make it so". It is of little benefit to raise the hopes of the individual for training courses and more senior positions only to find that the courses, funds for training and the positions that require such advanced training are not available. As an example, one finds difficulty in believing in a program when the recommendation, for an excellent 56-year old engineer with considerable detailed knowledge of his profession (has proven himself beyond a doubt as a definite asset to an organization as an engineer) is that he attend a "Management course" to broaden himself for higher positions in the "managerial" hierarchy.

The issue is to provide a technique for resources control that recognizes a role for civilian and military, and a career plan that relates the resources to workload, together with a
training plan that balances the manpower inventory with the require-
ment. At the senior level this should be integrated with the
requirements of the total public service. This leads us to the
problem of training.

Training

Next to the issue of responsibility and career, one finds
the annoyance of the individual civilian directed at the lack of
what they consider a suitable training program.

The remarks in this section are directed mainly at the
professional, technical and support groups which, as a sample,
indicate the degree of the problem in National Defence.

To the civilian, it appears that "training courses by the
round dozen are available to military personnel". There are
few of them, other than the management courses, equipment,
training, etc., to which civilians are invited. Why? Four issues
related to training appear to be the pith and substance of the
employee's annoyance in this area.

First, the organizational establishment is not related to
workload and, therefore, does not permit civilian billets in the
junior level for training purposes. In times of heavy workload,
this means that sufficient time for training of civilians can not
be made available, as the loss of an individual for training
means, essentially, a loss from the establishment. The intelligent civilian observes his workload and it becomes readily apparent to him what the "management" decision would be, if he made application for desired training.

The second point is that if mutual understanding and trust is to be developed between the civilian and the military component of National Defence, a considerable amount of common training is desirable. This is also necessary due to the special nature of the work undertaken by DND. The Professional Institute of the Public Service of Canada has recommended that training facilities for Civil Servants should be comparable to those for military personnel. It does create a problem when the civilian sees his military counterpart off on a series of courses designed and integrated with what he perceives as a total career plan while, in many cases, he is forced to carry a heavier workload, while the military member of the office is absent.

The third point of significance to a civilian is the extensive use made of technical representatives from industry. The wide fluctuations in workload prevent an establishment being provided that would cater for peak periods. In a number of organizations this overflow work is taken up by representatives from industry under contract. As would be expected, the pay
for these individuals is generally somewhat higher than that paid to a Public Servant. In many cases, the qualifications of the contracted individual are comparable with those of the civilians employed in the Department, and the civilian quite rightly observes that, with a slight amount of additional training, he would be fully capable of performing these functions.

The fourth issue that leads to dissatisfaction is the practice of permitting military and Royal Canadian Mounted Police personnel to apply for positions in closed competitions. Most individuals agree that the practice enables the most suitable candidates for the position to be selected. However, without the existence of a firm policy on the role of civilians, a career plan and a training plan to meet the requirements, they consider that unfair competition is created. One can understand the annoyance of a civilian when he sees the military man or officer sitting in the office, performing similar functions, awarded a competition for the boss's civilian position, especially if the military man has recently been absent from the office, undertaking a course leading directly to the requirement for the senior position. The issue demands a rational resolution that recognizes the role of the military and the civilian in National Defence in relation to the whole Public Service and the proper training to meet the required roles which should also be
integrated with the requirements of the total public service at the more senior levels.

**Military Control of Civilians**

A high degree of interrelationship between the military and civilian members of National Defence must exist, at all levels, if National Defence objectives are to be met. This requires civilian control of military and military control of civilians to varying degrees depending on the function being performed. Camaraderie and mutual understanding between the two elements is essential.

The most outspoken presentation of this issue, from the point of view of a civilian that I have read, was expressed in a letter from a senior engineer, with over 25 years in the Department, addressed to the Deputy Chief of Engineering. He said:

> Congeniality between professional civilians and military officers is sadly lacking. I don't experience much of this sad fact myself because I'm too old to believe that military officers are not much like me - human and fallible, but what I hear and see conveys the notion that many civilians work in a kind of military feudalism. I have actually heard it said by an officer in uniform "Don't give him such a good fitness report, it diminishes your prestige". In the United States Bureau of Ships, such an attitude would be regarded as incomprehensible. I have read in the press that certain pieces of naval equipment were regarded with rare good humour as a "civil servant because it would not work and could
not be fired". Is this the Services' propagated view of the Civil Servant? When this kind of thing escapes into public attention, it is small wonder that civilians of all stripes are inclined to the generalized view that "brass hats are expressly meant for brass heads". It does not seem to occur to the collective military mind, if there is such a thing, that failure to respect and esteem the civilian in his midst is measured out in failure to achieve a satisfactory public image. When that failure is manifest in a technical milieu, there emerges a general conviction, totally false, that the Service must be a non-technical crowd. When I consider all the courses available to military personnel, in which the psychological content of good management is constantly stressed, I am surprised to see so little of it practised. Is this because a good officer, upon reaching the rank of Commander becomes so concerned about his future that he is upward-motivated, and not downward-motivated? If this is so, the value of the civilian becomes even greater, because a civilian is less likely to mouth the words he hopes his masters want to hear. After all, there are no stripes in the game for him.

While the above is perhaps an extreme view of an individual, the very fact that it would find its way into the files of National Defence should suggest that the problem expressed is not one which should be taken lightly by senior departmental management. The answer can only be found by developing a milieu in which the civilian and the military can operate side by side with mutual respect - not an easy problem to solve. Mismanagement, yes - possibly mismanagement by a particular individual, but symbolic on the whole, of the frustrations that the civilian must bear in an organization where philosophies, training, behavioural patterns and outlook
vary so widely between the two groups.

A Civilian Voice in Civilian Affairs

When the Canadian Armed Forces moved toward integration and became concerned about the effects of integration on the personnel issues, joint senior committees were formed to investigate the problem. The Minister's Manpower Study (Officers) The Minister's Manpower Study (Men) are typical examples. These were committees staffed largely by military personnel, the military investigating military problems. From the civilian point of view he sees, from time to time, a variety of committees formed to investigate his particular plight and, on many occasions, the majority of members of such a committee are military - in the minds of many, a questionable practice. The issue is that if a civilian is to have confidence that at last his particular plight in the welter of military hierarchy is to be sympathetically dealt with, he should be given the opportunity, at least, to feel that his own kind, with his own point of view, will be engaged in presenting the problems, if not the solution.

The behavioural scientists tell us of the importance of participation in motivating and meeting the needs of employees. The Canadian Government, itself, in passing the Public Service Staff Relations Act, indicated a strong desire that employees themselves will have a say in the conditions of employment.
Is this not sufficient to indicate that management in considering the role, the career and the training of civilian personnel should permit the civilians themselves to have a say in the issues, the problems, and the solutions? To the civilians it appears that integration, "which should have been an exciting challenge, as well as an opportunity to them, has become, instead, merely another ordeal in which they were not consulted at all". The majority of civilians identify upon the Service with great pride. They gladly accept military leadership when it is in clear evidence. In many cases, they make their contribution without recognition, without prestige, without promotion, without esprit de corps. It is well for Management to consider how elegant and effective a contribution they could make were this motivation recognized and used. It is also well to consider how readily we could attract into our midst highly qualified, young professional civilians were there a place for them in the milieu of National Defence.

It could be argued that the Treasury Board, Public Service Commission, Staff Associations have some responsibility in this regard and, undoubtedly, under the present environment of BCR and Collective Bargaining, many of the problems will rise to the surface in a more rapid and a more dynamic manner than in the past. However, this is not an excuse for departmental
management itself not to take the initiative and ensure that the major problems are well on the road to solution even before they are raised at the bargaining table. Staff associations will, undoubtedly, be more than pleased to present the issues to management, and what better way to show good faith in the present collective bargaining era than to commence the consideration before they become major issues.

RETIREMENT

No particular issue is raised in National Defence associated with superannuation. However, it may be of importance to understand the problem of the older employee of the Department. During his working career he has been associated mainly with the military. He is retiring at an age that may have as much as a twenty-year difference from the retirement age of the military in his group. This poses unique problems for the individual in the issues that surround a change of status. It is not a basic management problem, but one that should be remembered in attempting to assess why individual employees react, in the manner they do, to management change proposals. The personnel retirement factors of the individual employee in National Defence are different from those normally encountered in other Departments. As an example, at the time of an individual's retirement, there may be no military members around who even
remember the tremendous contribution made by the individual in the past.

**SUMMARY**

This chapter has raised the problems associated with the career of the civilian in National Defence from his point of view. The main issues from recruitment to retirement were presented. The view of the individual is more important to the objectives of National Defence than at any time in the past, not only because of the nature of his contribution, but he now has a recognized voice in presenting his views on the conditions of employment. This leads to the subject of Staff Associations and Collective Bargaining.
CHAPTER VI

STAFF ASSOCIATIONS
AND COLLECTIVE BARGAINING

AIM: To outline the problems created by the 1967 Public Service Staff Relations Act in personnel administration in National Defence, in relation to the total management process.

BACKGROUND

The right for employees to organize for collective actions,

1. The sources for the material in this section were derived from personal experiences as well as discussions with members of staff associations and a number of basic references. As it is only intended to outline the general background, detailed references on each item are not included. However, for the student who desires to investigate the development of the Public Service staff relations problem, the author found the following documents most helpful:


Saul J. Frankel, Staff Relations in the Civil Service The Canadian Experience, McGill University Press, (Montreal, 1962).


Report of the Preparatory Committee on Collective Bargaining in the Public Service, (A.D.P. Heeney, Chairman), Queen's Printer, (Ottawa, July, 1965).


Statutes of Canada 1966-67, 14, 15, 16, ELIZABETH II, Chapter 72, Public Service Staff Relations Act.
and to forward their interests, and the obligation of management to negotiate agreements with them, covering wages and other conditions of employment, has long been an established part of Canadian labour law and practice. Employee associations have become an important element of the institutional framework of Canadian society. Public Service staff association development has been much slower in progressing than the industrial counterpart.

Although associations such as the Railway Mail Clerks held their first annual meeting in 1889, it was not until 1907, with the formation of the Civil Service Association of Canada, that an organization was provided, which would accept members from any Department. A year or two later, because of the difficulty in communication with areas outside Ottawa and their different status, the Ottawa group changed its name to the Civil Service Association of Ottawa (CSAO). In 1909, a convention of existing associations gave birth to a Civil Service Federation of Canada (CSFC). A loose alliance continued to provide an important channel for the unified expression of staff views until 1954, when conflict with departmental associations for membership in the Ottawa area led to the withdrawal of the CSAO. Two years later, the CSAO and the Amalgamated Civil Servants initiated discussions which led to the union of the two groups as a Civil
Service Association of Canada (CSAC).

The CSFC and the CSAC were organized along fundamentally different lines, the CSFC being a federation of departmental associations, each with its own autonomy. The CSAC, on the other hand, was a unitary organization and its members had no identification with a subordinate departmental body. In November 1966, the CSFC and the CSAC amalgamated to form the Public Service Alliance of Canada (PSAC).

The main departmental component of this group that affects National Defence, is the group formed at the Civil Service Federation convention in Quebec City in August, 1963, when National Defence employees from Halifax, Victoria, Toronto, Winnipeg and Edmonton, representing about 4 to 5,0000 members, joined to form the National Defence Employees Association (NDEA). In 1966 it was estimated that this association represented about 13,000 employees. Today, this group has become the Union of National Defence Employees (UNDE) (estimated membership 14,000) and is associated with the PSAC and the Canadian Labour Congress (CLC).

Serving the tradesmen and craftsmen within National Defence are the abovementioned organizations, but some also retain their membership in industrial trade unions. Councils representing
trade unions have been formed to represent their members in Naval Dockyards at Halifax and Esquimalt. These groups have been certified as bargaining agent for the shipyard trades group and pose a unique issue in the collective bargaining process in National Defence.

Another form of organization is represented by the Professional Institute of the Public Service of Canada (PIPSC). Formed in 1920 to serve the special interests of professional civil servants, the Institute has, as a major purpose, the improvement of professional status and qualifications in the Service. However, in recent years, it has become the spokesman for professional employees in matters of salaries and working conditions. Its internal organization consists of various groups, each of which reflects a recognized professional occupation with its own executive, but which are not autonomous affiliates in the manner of the CSFC.

Prior to World War II, National Defence employees had very limited representation in staff associations. The expansion during WW II brought employees from industrial areas, many with trade union association. After WW II the trade-union-oriented employees formed groups or councils to deal with problems in establishments in which they were employed. These were largely in the prevailing rate categories. Administrative and clerical
personnel generally turned to the CSFC to resolve their problems. The professional personnel, in limited numbers, were associated with the PIPSC.

In the main, the associations utilised the quiet discussion technique to present their problems to Defence Management. As a result, the public was not generally aware of any dissatisfaction or unique problems on the part of National Defence employees. The exceptions to this rule have been the actions of the Councils and unions associated with prevailing rate trades in Naval Dockyards on both coasts.

The development of formal employee/employer relations has been slow. For many years the activities of staff associations, on behalf of their members, were limited to petitions and representations, and often only the strongest efforts succeeded in obtaining a hearing from Management. In 1944 the Government established, by Order-in-Council, the National Joint Council. This Council consists of an equal number of management and staff associations representative under joint chairmanship. The staff side groups rotate their chairmanship among the members of organizations. The Council is a forum for discussion from which joint recommendations could be made to the Government on any aspects of personnel policies or conditions of employment, except pay. The Council has given careful and intensive study
to a great variety of subjects, and has made recommendations on many important topics, - as examples - Group Hospital Medical Plan, check-off of Staff Association dues and a 5-day work week. However, it was considered that the Council was too large numerically to serve as an effective medium for negotiating binding agreements.

In 1958 the Civil Service Commission proposed that, owing to its neutral position in the machinery of Government, and its statutory responsibility to make recommendations on rates of pay, it was ideally suited to preside over consultive discussions between Management and Staff. The 1961 Act did not accept this proposal, but did demand Treasury Board to consult singly or jointly with any Staff Association which requested such consultation. This meant that the Staff Associations had to consult both with the Civil Service Commission and the Treasury Board, and they found the machinery cumbersome and frustrating, and only served to strengthen their pressure for a form of collective bargaining more closely allied to that in the private sector.

In 1948 Parliament passed the Industrial Relations and Disputes Investigation Act, which established the industrial form of collective bargaining in Canada.

Some 15 years later, the Government announced that a form of collective bargaining, appropriate to the needs and circum-
stances of the Public Service, would be introduced. They es-
ablished a preparatory committee and finally, in 1967, passed the 
Public Service Staff Relations Act.

The introduction of the Public Service Staff Relations 
Act is having, and will continue to have, a dramatic affect on 
personnel administration in National Defence. While it is still 
too early to state the exact nature of the changes that will arise, 
it is possible to comment on general problem areas where one can 
anticipate that issues that will arise in DND will be different 
from those in other Departments.

Although there is considerable interrelation, for sake of 
clarity, the problem areas will be discussed under the following 
headings: (1) Classification (2) Collective Bargaining 
(3) Grievance Procedure.

CLASSIFICATION

The objectives of a personnel classification system should 
be to: support the securing and retaining of capable employees; 
to provide Management with appropriate tools for allocating, 
auditing and controlling manpower resources; and assist in the 
dermination of a fair and equitable remuneration for employees. 2

As National Defence employs personnel in all of the six 
categories, and seventy-two groups, all of the abovementioned

---

2. Government of Canada, Handbook of Classification and Pay Adminis-
tration in the Public Service of Canada. Bureau of Classification 
Revision, (Ottawa, 1967), p. 1.3
objectives become vital to National Defence management. Hence, considerable effort at all levels of management will be essential to ensure proper classification of the civilian employees.

While classification is a delegated Departmental responsibility, conversion is the responsibility of the Bureau of Classification Revision. It, therefore, becomes essential that the personnel associated with the conversion program become familiar with the wide requirements of DND. The size, nature, variety of occupations, and degrees of geographical divisions, makes the understanding of all the ramifications of the various positions a difficult task.

Of even more importance are the basic issues described earlier in this thesis. The roles for civilians have not been clearly established and the resulting complex and variety of interrelationships between military and civilian personnel is not widely understood or documented. In a department with more than 300 directorates or units distributed across Canada, all utilizing civilian personnel, the task is enormous.

Among the units, the degree of responsibility placed on civilians, varies widely and, in the main, may be based on history and experience (not always recorded) that demands special consideration. With no single source responsible for total management of civilian and military personnel, no one agency,
other than the lowest level of management that employs a civilian, can speak responsibly about the position in the degree necessary for proper use of the classification tool. The classification process will, therefore, demand the input from large numbers of military and civilian managers. This is a situation which could be misconstrued as an attempt to "flannel" classification boards.

As the Government has not completed its review of the policy on External Affairs and National Defence, it appears reasonable to state that the objectives of the Department will not be as clearly defined as some other departments. This can reflect itself in the relative importance assigned to specific functions or positions in the minds of classification board members. As the classification procedures are only a tool and still demand considerable judgement on the part of the individual raters, this could result in improper classification, not only relative to other Government departments, but within sub-divisions of the Department of National Defence itself. Highly qualified classification officers with considerable experience could well reduce the magnitude of this problem.

As the workload in National Defence is extremely dynamic, the situation could also arise where varying degrees of importance are attached to the work required to meet the demands of the classification system, resulting in a wide variety in the degrees of
thoroughness and quality of the job descriptions themselves. A division not as heavily loaded as another could well concentrate on the preparation of job descriptions, thus presenting excellent descriptions of the work performed, while another division, heavily loaded with a high priority item, may give less than adequate attention, with the resulting low quality of job description.

In addition, two major factors not previously mentioned make classification difficult in National Defence:

First: - historically, jobs for civilians and jobs for military followed separate procedures for approval, the military requiring a rank structure evaluation involving primarily the military and Treasury Board, while the civilian positions required an establishment review which involved DND military and civilian, as well as the Public Service Commission and Treasury Board. The result of this dual process is a wide variation in the manner in which job descriptions have been prepared. It is difficult, if not impossible, in many cases, to relate in a single organization the actual relationship, of authority, responsibilities, and functions,
between the military and civilian. This is particularly true if only references to written documents are made. Equivalent ranks for civilians have never been established and, therefore, grade or pay does not determine the position in the organizational hierarchy. Over the years establishment committees have recognized this problem and, in many cases, made their decisions, with respect to rank, grades, and numbers of position on the basis of an "on the spot" investigation. The dynamic nature of the organizational changes during integration has made it impossible to have "establishment and organizational reviews" of most of the DND organizations. This has resulted in the organization, rank, grade and number of positions becoming a matter for the decision of individual line managers within the constraints placed on him by past establishments and reductions.

Second: the reorganizations due to integration have occurred during periods of reduction in both military and civilian establishments.
These reductions took the form of "across the board percentage cuts". This has resulted in a situation where, in many cases, there is little or no relationship between the workload and resources of the single unit or directorate. During a reduction few managers would give up (if he could help it) any positions other than vacancies and of junior level. The redistribution of work would thus demand senior personnel to perform the junior tasks part of the time. This would tend, in any job evaluation, to downgrade the level of the positions, thus preventing the retention of the qualifications required. Time has not permitted the organizations to "stabilize" such that rank, grade and numbers have matched the workload or, indeed, permitted qualified people to be trained to meet the requirement.

The time limit placed on BCR action has introduced the requirement to prepare job descriptions out of phase with an orderly process of matching workload to resources. In many cases the "time" specifications demanded that BCR action be taken on organizations which had already been drastically altered or
This is the milieu in which the BCR and departmental classification officers are required to operate. The program will test the basic stability of military/civilian relationship and highlight the fundamental issues with respect to civilian personnel administration in National Defence.

COLLECTIVE BARGAINING

It is too early in the process to decide the basic effects on National Defence management from the collective bargaining process.

It appears at this point that National Defence will have to administer some 70 agreements. With the present highly de-centralized (both functional and geographical) type of organization in existence in National Defence, one is immediately struck with the problem associated with communication. This will take two forms:

First: it will be necessary to ensure that all of the requirements associated with the various groups in National Defence are made known to the Treasury Board negotiators in such a manner that they are prepared to negotiate for the needs, special as they may be, of National
Defence. To provide military assistance at the bargaining table (as has been the case to date with the agreement on the ship repair group) will not be practical in all cases.

To assimilate, document, and present the required information will, in itself, pose a major workload for which it is doubtful that the manpower resources exist.

Second: after the agreements are negotiated, to communicate the contents and interpretation to all management levels responsible for implementation will pose major problems.

In a "normal" situation (if such ever exists) the problem would be difficult enough, but to meet the requirement in parallel with the dramatic reductions in manpower resources that have occurred, poses special problems.

Another issue that may well arise from the collective bargaining process is an indication of the variations in conditions of employment that some civilians in DND feel exist, not only within the components of the Department, but between National Defence and other Government Departments. Areas such as overtime, the demand for civilians to occupy military accommodation when travelling for the Department, are typical.
As an example, in 1962 the author was assigned the duty of inquiring into the reason for a number of civilian employees stating they would not carry out the duties assigned to them in a naval vessel undergoing refit in a civilian yard. The civilian employees had been directed to proceed to an area remote from their homes and carry out specified functions. As part of their conditions of employment (to reduce the costs) they were directed to live in the ship in military accommodations. On arrival, it was discovered that, due to the nature of the refit, sufficient power was not available for suitable heating of the vessel, and the civilians had been assigned bunks in the mess deck, and issued with only one blanket. Owing to the fact that the military, due to the nature of their work, become used to operating for short periods under such conditions of "hardship", it had not even occurred to Management that the civilian members of the force would find such a situation objectionable. It was obvious on investigation that their complaints were quite logical and corrective action was taken. Under the terms of a collective agreement, one can hardly visualize such a situation ever arising. However, situations will continue to arise where civilians are required to perform their duties under difficult environmental conditions, and, undoubtedly, collective agreements will cater for such situations and remuneration will be
in accordance with the hardships endured.

It is envisioned that agreements, no matter how well written, will be open to wide variations of interpretation. It will become a matter of some urgency that, both the military and civilian components of National Defence become indoctrinated in an attitude of mutual understanding and goodwill, if any reasonable levels of efficiency of effort are to prevail. A concern of senior management must be to develop this mutual understanding, and to ensure that any latent animosities of both the military and civilian components against each other are not allowed to cause open conflict between the two groups.

It will also be regrettable if, through the medium of collective bargaining, we arrive at the first instance, where civilians are allowed to have a real say in their conditions of employment. There may well be a need to immediately establish suitable investigating committees, staffed by civilians, to look into some of the issues already raised by the Staff Associations and the civilian members of National Defence. The early appreciation of the problem could well prevent misunderstandings at the bargaining table.

In summary, the collective bargaining process will highlight some of the major problems in the administration of civilian
personnel in National Defence. In particular, the demand for establishing a policy in relation to the role of civilians, to establish the ability to manage the total personnel resources, civilians and military, and a need to ensure mutual understanding and respect, all directed at achieving the objectives of National Defence in an efficient manner. The "learning curve" will create problems primarily in "communication" but once solved, it is hoped that collective bargaining will be a vehicle for greater effectiveness.

THE GRIEVANCE PROCESS

Among the less publicized, but more important aspects of the 1967 Public Service Staff Relations Act is a new concept of grievance processing. The Public Service Staff Relations Board issued directives on the procedure to be followed, which essentially establishes in every department, four levels of grievance, the fourth being the Deputy Minister level. Where an employee has presented a grievance, up to and including this final level, and it has not been dealt with to his satisfaction, he may have it referred to adjudication, that is any item in respect to the interpretation of the agreement or disciplinary action, resulting in discharge, suspension or financial penalty. What is new is a well established procedure with specified time limits on each level of grievance, and the ability for the
grievance to go to adjudication to a completely impartial Board.

Over and above the communication problem in establishing these new procedures, this process raises a number of important issues from the management point of view.

First, the authoritarian concept so necessary and prevalent in the military code of discipline, will not be as easily applied by military commanders with civilian staffs as it has been in the past. While many civilians readily accept the application of the military code, it appears logical to suggest that there are a number of civilians employed in National Defence who consciously or unconsciously object to many aspects of it. This will demand the indoctrination of military commanders to consider in every case, the nature of the staff he is directing. This will also apply to the civilian directors who have, by the process of osmosis, acquired the military mode of operation in dealing with both their military and civilian subordinates - no small education process for a number of military and civilian members of National Defence.

Secondly, the results of those cases already heard by arbitration Boards strongly suggest that the documentation that has existed on disciplinary matters in the past, in National Defence, will be less than adequate for the future. While most
military personnel would find it difficult to envision areas that have lead to gross violation of civil rights or the concept of natural justice, there is a gnawing doubt, when one reviews the cases heard to date, that there may be a number of similar cases where strict application of the new procedures would lead to results unthought of in the past. After the initial shock of discovering that the concept of military justice is different than "civilian justice", one can not help but be pleased that this new process is now firmly entrenched in the rules and regulations that govern the Department's civilian employees. On entering military service, one recognizes, or should recognize, that he gives up certain rights and modes of behaviour in order that a military organization may be effective, and that similar behavioural patterns may not be essential or, indeed, desirable, for the civilian component. In the long term, the change should contribute to improvement of the military/civilian relationship. However, it does appear important for all levels of management in National Defence to recognize that a change has occurred.

SUMMARY

In summary, the new Public Service Staff Relations Act has introduced changes that will have a dramatic effect on the administration of civilian personnel in National Defence. This reflects itself, in the total management process, by demanding
changes in modes of behaviour at all levels of management. It is too early to comment on the degree of the problem created by collective bargaining. However, an opportunity exists for National Defence Management and the Staff Associations to demonstrate that an "enlightened" personnel approach can provide an environment in which the organizational goals and the personal goals of the individuals can be combined to provide Canadians with efficient and effective Defence.
CHAPTER VII

DERIVING OF A PLAUSIBLE SOLUTION

AIM: To outline a process by which a plausible solution to the problems of the administration of civilian personnel in National Defence may be derived.

INTRODUCTION

Up to this point in the thesis we have been considering the problems associated with civilian personnel administration from a "real world" point of view, but under the theoretical framework of the organization as it appears to exist in National Defence. This theoretical framework purports to relate the relevant variables associated with the issues in National Defence. Any framework chosen will exist at a level of abstraction remote from the real world. In order to derive a plausible solution it appears necessary to re-look at the problems outlined previously but from a higher level of abstraction.¹

In moving to the higher level of abstraction, the "base point" or "reference point" that has been chosen for the theoretical framework, is the organization in National Defence as a com-

¹. While it is not possible to precisely reference the sources which influenced the selection of the procedures and factors outlined in this section, the personal experience of the author as Director of Systems Engineering and Director of Maritime Combat Systems, Canadian Armed Forces, had a major influence as well as the following authors:

Chris Argyris, Integrating the Individual and the Organization, (New York, 1964)


Bertram M. Gross, Managing of Organizations, the Administrative Struggle (London, 1964)
plete system. The reason for this selection is that a large amount of knowledge exists in National Defence in relation to system concepts. It also appears to the author that a considerable amount of the philosophy and procedures associated with the system concept, in respect to complex equipment, can be directly related to a system concept as applied to organisations.

The procedure to be followed includes: the outlining of the "scenario"; discussing a specific "equipment" system model and an "organisation" system model; and relating the civilian personnel problems in terms of these models. In the second section, a process for deriving a solution will be developed.

THE SYSTEMS APPROACH

The Scenario

To avoid constant repetition in the remainder of this chapter, when referring to the "scenario", we will be discussing a situation defined by: (1) the environment which influences National Defence activities as outlined in Chapter I; (2) the organization of National Defence as shown in Appendix B and implying the total National Defence complex as opposed to merely the organization format; and (3) a typical Canadian weapon system, the DDH (a destroyer carrying a helicopter as a primary weapon system) as "equipment".
The "Equipment" System

In order to make the discussion manageable, it is necessary to highly oversimplify the system approach that would be used in system engineering a DDH. Figure 1 is a diagrammatic presentation of this highly simplified system based on feedback theory.² The DDH itself is considered as the total system which, in turn, is sub-divided into 5 basic sub-systems. First; the hull sub-system, which is the ship's structure itself. Second; the propulsion sub-system, which is obviously necessary to give mobility to the vessel. Third; the combat sub-system which is the helicopter as well as detection devices, guns, missiles and anti-submarine weapon systems. Fourth; the support sub-system which will include all those items necessary to "support" the other systems, such as electric power, lighting, food, air conditioning, fresh water, etc. Fifth; the command and control system to permit control of all sub-systems by the Commanding Officer. The amount of feedback is controlled or filtered through the "sensor".

A number of observations can be made with respect to this system.

First the complete system has a different boundary than any of the sub-systems. The objectives or the performance of the ship

---

The fundamental elements of feedback theory may be found in Robert E. Machol, System Engineering Handbook, (New York, 1965), pp. 29-1 - 29-51.
SIMPLIFIED "EQUIPMENT" (DDH) SYSTEM MODEL

EXTERNAL FORCES
(ENVIRONMENT)

INPUT OBJECTIVES
/DDH PERFORMANCE/

OUTPUT ACTUAL PERFORMANCE
/DDH OPERATIONAL RESULTS/

RESULT ANALYSIS SENSOR

FIGURE 1
as a whole become modified before becoming
the objectives or inputs for each sub-
system. The outputs of each sub-system combine
to yield the actual performance of the DDH.
The size and strength of the hull will obviously
be influenced and modified by the type of weapon
systems or combat systems placed in the ship.
The type of propulsion system will have a major
influence on hull design. The sum of these
interacting systems must meet the total per-
formance requirements.

Second, the total system must be capable of
controlling and maintaining each of the indi-
vidual sub-systems. Spares must be provided
to ensure that maintenance of all of the systems
can be accomplished. Sufficient electrical power
must be developed to meet the requirements of all
the sub-systems. The control system must be of
such a nature that Command is capable of control-
ing each of the sub-systems and the total system
in the operational situation. The loss of control
of any one sub-system can affect the capability
of the total system.

Third, the total system must be capable of adapting
to its environment or modifying the environment to
a level which makes the operation acceptable. For
example, the ship must be capable of withstanding
any sea states expected to be encountered. In the
case of the combat system, operation in higher sea
states may be beyond the capabilities of modern
technology and may require the ship to be fitted
with stabilization to bring ship motion to an
acceptable level.

Fourth, the system must be viable and flexible
under operating conditions, and capable of com-
peting on a cost/effectiveness basis with other
systems. The DDH must be capable of not only the
threat of 1969, but the threat forecast for the
future. It must have a high survivability factor
under the operational situations that it will
meet. The system must also be capable of improve-
ment to meet more complex threats. The hull sub-
system must be large enough to permit some degree of potential growth. The combat sub-system must be capable of extending its performance as the technology of the enemy presents more complex threats. The support sub-system must be capable of meeting increased demands of the other sub-systems. The DDH systems must demonstrate that they provide more defence for the dollar spent than an aircraft carrier, nuclear submarine or, indeed, aircraft or land weapons. (The factors of flexibility and viability and relative value are shown in Figure 1 as part of the forces, acting on the system, created by the environment).

There are numerous other observations that could be made with respect to a weapon system, but the above 4 factors appear to be sufficient to indicate the main issues that are pertinent to a National Defence "organization" system model.

The Simplified "Organization" System

This section is not intended to imply that the science of administration or behavioural research has reached a level of sophistication that permits the development of a systems model for organization which would withstand rigid scrutiny. The simplified model is used merely as a tool or technique for presenting the concepts and issues that are important to the deriving of a plausible solution to the Department of National Defence personnel problems.

It is beyond the scope of this thesis to develop a system
model for the "organization" of National Defence. The reason for the use of the "system" procedure is to obtain a clearer picture of the problems of personnel administration in relation to the National Defence total management problem. Figure 2 presents an "organization" system model similar in concept to the equipment system model in Figure 1.

From a systems point of view, the three categories of manpower in National Defence, the military, the public servant and the DRB employee could be construed as three separate sub-systems within a total system.

Under this hypothesis, the National Defence objectives entering the system are modified before becoming the objectives of each of the three sub-systems. The manner in which each sub-system reacts to these inputs depends on how they were designed to operate. If tight control was maintained during the design it would be possible to predict the performance. However, if each sub-system was allowed to develop, without the benefit of detailed specifications, the response to variations in inputs would not be predictable. In order to control such a system it is necessary to know the performance criteria.

In the case of "equipment" it is of paramount importance to a systems designer that a philosophy under which the system
SIMPLIFIED DND "ORGANIZATION" SYSTEM MODEL
is to operate be clearly established. What is the plan of operation? How is the system to be controlled? What are the objectives? What is the state of technology that is to be applied? What is the criteria for the selection of sub-systems or parts? What are the constraints on the design in terms of resources? A designer without such guidelines faces an impossible task. Similarly, in an organization system, the philosophy under which it is to operate must be clarified. Does management want to set objectives and measure results? Does management want to influence the environment or accept the forces from the environment on the system as received? What is the degree of feedback or influence desired from each sub-system? Is it necessary for one sub-system completely to "control" all other sub-systems?

A solution to a particular problem can be proposed, based on the individual management style of the decision maker, but unless it is consistent with the management style of the remainder of the organization, problems could result. The recommendations of the Civilian Personnel Function Study Team (Appendix "C") indicates a management philosophy of planning, organizing, integrating and measuring, with a strong trend to decentralization. The recommendations may be quite valid within the "terms of reference" of the team, but observed
from the system level, they leave a number of questions unanswered. What is the nature of the interaction between the Chief of Personnel and the Assistant Deputy Minister (Manpower) to be? Is the ADM(Manpower) to control CP? Is CP to control the ADM(Manpower)? Is the CP and ADM(Manpower) to co-exist on an equal basis? These are questions that create an uncomfortable feeling when viewed from the organization level. However, answers are required if the system is to be properly designed.

For an "organization" system to be designed or modified, direction must be given to the designer that answers questions similar in nature to those posed by an equipment system designer. The broad framework under which the system is to operate must be stated and understood. The deriving of a plausible solution to personnel problems utilizing a systems approach demands that - A MANAGEMENT PHILOSOPHY WITHIN WHICH THE SYSTEM IS TO OPERATE BE ESTABLISHED.

In the scenario the ship designer must have detailed information on the environment in which the ship is to operate. In essence, an "Operational Equipment Requirement". The "organization" system designer also requires a firm statement on the environment in which his system must operate. What are the forces acting on the system and how must the system respond?
It is vital that the system respond to the forces from the environment compatible with the manner in which it responds to Government objectives. Differences in the response can create wild fluctuations in the output to such a degree that, in the worst case, the system could be destroyed beyond economical or political repair. A decision to close a particular military base that has not included considerations of, the environmental factor of, regional economics, comparable to the military considerations, could result in a series of decision reversals, a poor public image, and frustration within the Department as a result of numerous alterations to plans and operations. In the "organization" system such a situation could be created by a poor response from only one of the sub-systems. It would appear that acceptance of the systems concept would demand that the inputs of the environment and objectives be determined and stated in a form that can be recognized and responded to by each sub-system in a similar manner. This suggests that a basic requirement associated with the systems approach is that: THE ENVIRONMENTAL FACTORS THAT AFFECT NATIONAL DEFENCE MUST BE DETERMINED AND STATED IN A SIMILAR MANNER TO STATEMENTS OF OBJECTIVES.

A system designer must, at a very early stage, determine the nature the data links are to assume in the various portions of his system. This involves the communication and control
process to be used and the techniques of stating and/or measuring the desired information required in each link. This information is required at the design stage and any time the performance of the system is to be measured. It is not healthy to wait for war to measure the performance of a weapon system. Measuring techniques are an everyday tool of the system engineer. The organization designer must be provided with the necessary information with respect to the process to be used and statements with respect to performance that can be measured. This should include the processes, standards, and performance required of the total system as well as each sub-system. If the above is valid, it can be stated that a basic requirement of the system approach is that:— A MANAGEMENT PROCESS TOGETHER WITH PERFORMANCE STANDARDS AND REQUIREMENTS MUST BE STATED.

And finally, it should be obvious that "equipment" systems do not just occur, they must be "planned". In the "organization" system we will state this basic requirement as "MANPOWER PLANNING".

From the designer's point of view, once the framework or boundary of the system has been stated, from the experience gained from other systems, he is aware of system factors that must be considered during the design.

We can summarize our discussion on the "equipment" and
"organization" system model by stating that solving problems associated with the system demands that the framework or boundary of the system must be defined and the basic system operating factors considered. This includes:

SYSTEM BOUNDARY FACTORS

I MANAGEMENT PHILOSOPHY
II ENVIRONMENT AND OBJECTIVES
III MANAGEMENT PROCESS AND PERFORMANCE
IV MANPOWER PLANNING

SYSTEM OPERATING FACTORS

1. ACHIEVING OBJECTIVES
2. MAINTAINING INTERNAL SYSTEM
3. ADAPTING TO ENVIRONMENT
4. VIABILITY, FLEXIBILITY, AND RELATIVE VALUE

THE PROBLEM

We have dealt at length in chapters II, III and IV of this thesis with the basic problems of personnel administration in National Defence. This section attempts to describe these problems in terms of the basic factors of our "organization" systems model.

The procedure to be followed includes describing what is meant by each of the "system factors" in relation to personnel problems and discussing the "considerations" that would be necessary in arriving at a suitable process for solving the problems. For reference purposes, a discussion matrix is included as Appendix E.
Achieving Objectives

By "achieving objectives" is meant the achieving of objectives related to the total organization, as opposed to objectives of the sub-systems or parts. This includes the determination of the objectives, the communicating of the objectives to all parts of the organization, and the testing of the degree to which the objectives are met.

Observing the total management problem from the system level introduces new aspects to the problem not previously discussed.

A management process will only be viable if an accepted management philosophy accompanies it. It is of little value to enter any phase of a management process without the limits of delegated authority clearly defined. If management in one area of the organization delegates authority to the director level while another senior manager delegates to the Director General or Deputy Chief level, the outputs from these areas have a high probability of: being out of phase; having different levels of thoroughness; having different considerations from subordinates; motivating employees associated with the effort in a different manner; thus preventing the achieving of objectives in an orderly systematic fashion. It would be difficult to visualize the achieving of objectives, on a
system basis, with each sub-system operating under a totally different management philosophy. The establishing of a philosophy of management should include a clear statement of objectives, together with a clear statement of the manner in which the system is expected to respond to the environment.

The system approach demonstrates the need for horizontal coordination at the highest level in National Defence. The influence of the three sub-systems on each other is not simple; it is a complex multi-path system. To provide a complete analysis of the relationships and the decision-making process at this level would test the ability of the most expert behavioural scientists. However, any process for deriving a solution to the problem must consider the effect of this senior management structure and the interrelationship between the three individuals in the positions at any one time. These relationships will have a major effect on the results of National Defence effort, especially if there is a "management philosophy vacuum" below the senior level.

Total personnel resources management simply means the utilization of all of the resources within the Department toward achieving Department objectives. That is, complete control of all sub-systems - from a dockyard tradesman to a Commanding Officer of a ship - from an operational research
analyst to a Base Commander - all personnel must be motivated, influenced and directed towards achieving the total system objectives. It would be of little value to establish a Departmental-wide set of objectives if the motivating factors of large portions of the organization are in opposition to the objectives established. To have a commanding officer directed to sail his ship, at peak fighting efficiency, at 1400 on a Friday, at the same time that the motivating factors of the controlling personnel (equipment engineers and tradesmen in the dockyard repairing the ship) are motivated through a collective agreement for maximum overtime work on Saturday and Sunday is not an indication of "goal integration".

Total resources management should not be merely the ability to direct or control all resources, but also the ability to integrate the goals of the individual with organizational goals. In an "organization" system there is a need to define the total system requirement and the requirements of each sub-system. The lack of a firm role for civilians suggests that there is one sub-system floating without a reference point within the total system. It could be compared to a portion of an electrical system that is not grounded.

Within the scenario postulated, a designer must consider a technique for integrating the civilian sub-system with the
remainder of the system. The performance required must be established and arrangements made for obtaining the necessary personnel and maintaining them. This involves: predicting needs; determining available resources; matching needs to resources; and developing resources to meet the shortage. The relationship of achieving objectives to the roles, careers and training of civilians may be summarized as requiring "manpower planning".

The problem of military/civilian relationships can be expressed as an "interface problem" in the system analogy. It is difficult to visualize a system designer who would specify a set of gears which would not mesh. In National Defence, the "teeth" of the personnel "gears" are so soft that the slightest abrasion can cause a mismatch. This faulty meshing can easily prevent the objectives from being achieved.

The fundamental problem of matching workload to resources and measuring the performance is essential to proper manpower planning. In the "equipment" system the problem of mismatching could be compared to a design that required the use of all electrical generating capacity of the ship, by the main propulsion equipments when at full power, while, at the same time, the combat system electrical demand could not be met. This problem must be faced at the planning level as it becomes very difficult and expensive to correct at a later date. In relation
to personnel, the tools and measuring techniques for workload and performance measurement are not fully developed, but the knowledge from behavioural research should at least be used to assist the administrator in making "guesstimates".

**Maintaining The Internal Systems**

In the "organization" system, the maintaining of the internal system refers to the maintaining of the interrelation of all of the sub-systems, in such a manner that the total system is maintained and is controllable. The sub-systems and their interrelationship change with each change in input or modifying influence. They are dynamic in nature and have a response capability that is different for each different type of input. If we define the lowest sub-system as the director level of National Defence we would have, as an estimate, over 120 directors in headquarters alone, and over 300 in the total National Defence complex. The size of the issue can be seen from a review of Appendix B. Maintaining such a large number of sub-systems and ensuring all activities are directed towards assisting the efforts of each other, is the total management problem.

The management process (described in Chapter II) will make major inroads towards the solving of the total management problem as the availability of the information provided by such a process
should reduce the interrelationship requirements between sub-
systems.

In the scenario, a large number of sub-systems must be aware
in detail of the operating requirement for the DDH, and must per-
form specific functions at specific times in order to make the
total system perform. The orderly flow of information, either
in electrical or mechanical form, from the Command decision
"to fire" until the mission is accomplished, is basic to the
requirement. Similarly, the "organization" system should permit
the higher levels of management to influence the sub-systems as
it desires. The degree to which this capability exists will
determine how well the internal system is maintained.

In an "equipment" system it would be unthinkable that
the commanding officer would issue orders over a communication
system, with the transmitter on one frequency, and the three
receivers tuned to three separate frequencies. The three
separate terms and conditions of employment for National Defence
personnel creates a situation where three different reactions
occur to identical commands. It would appear logical from a
systems point of view, to have the three sub-systems at least
on the same "frequency", if not set to the same "gain". In
the scenario, control of the total personnel resources of
the Department could be compared with the control of all sub-systems by the Commanding Officer of a DDH system. It is of little benefit to him to have complete control over, for example, a missile system, at a time when he is unable to control his main propulsion plant, or for that matter, the hull system. Control of his missile system, when his hull system is completely destroyed would be of value in a very limited number of operational situations. These are extreme situations but should serve to illustrate the need for control of all sub-systems to ensure that they respond in a similar manner.

The requirement of a major system to maintain all internal sub-systems demands that: the total requirement for each sub-system be stated; the intersystem relationships be clearly defined; the actual function to be performed by each, be stated in quantitative form; and the parts to be used meet a performance specification and be used in the system within their design limits. These demands can be directly related to the civilian/military; role, career, training; and performance problems. The equipment designer can meet the total design, if he has complete control, by selecting the sub-systems to meet any division of functions he desired. He may decide to integrate a command and control system with a propulsion plant control system, or even consider the hull
and propulsion as a single sub-system. A wide spectrum of choices is available.

In the "organization" system, a spectrum of possibilities also exists. The spectrum of the division of manpower could lie at any point between two concepts. At one end there is the concept of complete isolation of military and civilian personnel, and at the other end, the concept of integration.

The isolation concept envisions an organization and management process that permits specific functions to be assigned to the military and specified functions to be assigned to the civilians. As an example, one could conceive of the total operational function being assigned to military, and the support functions being assigned to the civilian component. The isolation would be complete from the lowest level or unit to the highest level of management in the Department.

At the other end of the spectrum lies the integration concept which visualizes complete mixing of civilian and military, from the lowest unit level to the highest level of management. It envisions the military man working side-by-side with the civilian, each performing those functions which, from the point of view of economy and efficiency, he performs best.
Even the most cursory perusal of the problem would demonstrate enormous difficulties in applying either of the above concepts. On the one hand, to accept an isolation concept where operational roles are assigned to military, and logistics roles to civilians; the cost alone of ensuring that civilians, at all levels in the logistic systems, were aware of the operational needs and capable of understanding them, would be prohibitive and grossly inefficient. Also; to have military men perform all of the tasks required in a logistics system would also be unjustified and prohibitive in cost and time. On the other hand, with the concept of complete integration, the issue could conceivably arise where the function of maintenance of a radar set in a ship at sea could best be performed by a civilian technician. The difficulties in efficiency and the cost associated with preparing the civilian to exist in the naval environment at sea, in wartime, would undoubtedly preclude such a concept from being viable. The solution lies somewhere between these two extreme concepts.

The problem, therefore, becomes one of determining where, in the spectrum of possibilities, the most plausible solution lies.

The "equipment" system designer has a catalogue of components from which to choose parts. Literature from the manufac-
turers also suggest the parts that are being developed. A similar catalogue for the personnel system designer is desirable. What is the nature of the individual who will be available for service in National Defence in five years time? What is occurring in the field of education that would affect the design of a personnel system? In what quantity will personnel be available for National Defence? What is the total manpower market likely to be in five years? To provide a system that will be capable of maintaining itself, an attempt at predicting the future manpower market is necessary.

The next step in a system design would be the decision on the nature of the components to be used in the system. Will we have an electrical, mechanical or hydraulic system, or a combination of all three? From the performance criteria, it is possible to rationalize where each type of component performs best and arrive at a decision on the nature of the sub-system. Should the propulsion system be sail, steam, gas turbine, or nuclear in nature? The answer is to compare the performance of each against the requirements. Similarly; a rationale for the components of a personnel system is required.

Having selected the nature of the parts it becomes necessary to define the requirements for each part in detail.
The specifications must be in a form that can be measured. The personnel system demands a similar "statement of requirement" or capabilities plan if the design of the system is to be meaningful.

It would be difficult to select a propulsion plant for a DDH if we could not at least approximate the ship displacement at the time of selection. The work that the propulsion plant must perform is basic to the selection. Do we require 10, 20, 50, or 100 thousand horsepower? Similarly, the workload for the personnel system must be defined in understandable terms.

It is also of importance to the system that a constant flow of spare parts be available in accordance with a maintenance plan to ensure that it is maintained at peak efficiency throughout its life. In a personnel system, this could be related to a recruiting, training, and development plan. Such a plan would ensure an orderly flow of manpower to meet the needs of the system.

Finally, the system designer must be capable of determining the results of his handiwork. The performance of the system must be measurable. The results of our efforts in respect to personnel should also be measured and analyzed and corrective action taken if the system is to be maintained.
Adapting To The Environment

No system can exist for long if it is not capable of responding to its environment.

All organizations are essentially embedded in an environment that is continually changing and thus continually influencing the organization. A major task is to adapt to the environment, either by changing its own internal arrangement and objectives, or by changing the environment. The author's view of the environment in which National Defence must operate was outlined in Chapter I. It is considered that National Defence does not have (nor should it have) sufficient control over its environment to maintain its own discretion. The Treasury Board is the senior management of Government, the Public Service Commission has the responsibilities, associated with personnel, assigned to it by the Public Service Employment Act. Control of many of the basic factors of management, such as budget and resources, will remain for many years, outside the complete purview of any single Department. In such a situation, the issue becomes one of ensuring that a "case" is made and continues to be made at all levels, for any National Defence objective. It is in this area that the dividends paid by following a management philosophy and a management process will be in direct proportion to the thoroughness in which the process is carried out.
The degree to which the environment can be modified will also depend on the efficiency of National Defence management.

In the "scenario", without the results of strategic studies, a rationale for Canadian Forces, and an approved capabilities plan, it would become difficult, if not impossible, to justify a DDH program in relation to the programs of other Departments. As the economic demands placed on the Government alter, continuous and rational justification will be demanded. In addition, a demonstration that a program was properly planned and implemented, together with the ability to determine the effectiveness of the finished product, is the minimum that the Government should expect from any of its Departments.

The effect of the environment on each of the sub-systems is different. The DRB would certainly not be influenced by personnel decisions of the central agencies to the same degree as the Deputy Minister or the CDS organizations. A personnel freeze or an "across the board" reduction of the entire Public Service, could be completely ignored by the military and DRB in the organization model. The CDS organization would undoubtedly perceive the concept of planning, programming, budgeting from a different viewpoint than the Deputy Minister sub-system or Chairman, DRB sub-system. The CDS and Deputy Minister sub-systems would not be as influenced
by a scientific review as that of the DRB.

Adapting to or modifying the environment, requires the adaptation of the three sub-systems to present a unified response to the environment. This suggests that the outputs from the three sub-systems must be in the same direction and in phase with each other or the results could cancel, creating a picture, external to the Department, of a lack of internal control. It could be argued that making the Deputy Minister sub-system the communication channel to the external environment would resolve the problem. However, from the system approach, it can be seen that, the results would be modified by the existence of the other two sub-systems as the entire system and all internal components can not be completely shielded from the external forces.

In the "organization" system the sub-systems respond to environmental inputs in much the same manner as they respond to basic objectives or inputs from other sub-systems. All of the considerations necessary for achieving objectives and maintaining the internal systems must be reconsidered in terms of environmental demands.

Viability, Flexibility and Relative Value

While it may be the goal of a number of philosophers or
idealists to have world peace and hence, eliminate the requirement for any state to have a Department of National Defence, if history is any indicator, the probability of this occurring within any reasonable period, is extremely low. Hence, the issue of the organization ensuring its ability to exist, or viability, is a real one. If the concepts of roles, missions, objectives of the Department were to change, with the change of each Minister, Deputy Minister or Senior Management, it would be logical to question the very existence of the Department. A management philosophy and management process would make alterations without rationalization difficult and would, therefore, appear to contribute to maintaining the Department's viability.

With respect to the factors of viability, flexibility and relative values, it would be expected that our system would experience three sub-systems, all attempting to remain viable, all attempting to remain flexible, and each considering that its relative value to a total system was of the highest order.

Can we logically expect a system to remain viable when each of the sub-systems has a different life span? In an "equipment" system, the answer is Yes, providing we cater for the situation and plan for and adapt to the requirement. During the total life span of a ship, at least one, and possibly two, major conversions, could be expected, where
complete weapon systems are removed and replaced with more modern systems, the older, less efficient systems being adapted to ships with reduced missions and roles, or sold for scrap. It is not suggested that these options are realistic for personnel resources. However, from a system point of view, when a sub-system is tending to degrade the total system, it is replaced with a sub-system that meets the requirements. Why not a suitable conversion and re-allocation of personnel resources?

A weapon system must pass the test of having a greater cost/effectiveness value than all of its competitors. A missile system would not be accepted unless it was clearly shown that it would outrank, in performance, a competitive missile or gun system. In our personnel system, a position may be classified as a military or civilian position without a comparative test. Such a test should be carried out if our total system is to meet a cost/effectiveness requirement.

The concepts presented in this section have not been completely defined and each recommendation could be compared against a series of equivalent recommendations resulting in involved arguments over "efficiency". However, from the above discussion we can conclude that any process for deriving a plausible solution to the problems of civilian personnel administration in National Defence should consider not only the basic problems in relation
to the actual organization, but also the broader issues that appear when a systems approach is applied to the problems.

THE PROCESS

It must be emphasized that the process to be discussed is not a step by step, static, open loop program, but rather a continuous dynamic, closed loop, multipath, system. The process or system must be completely "integrated" with the total management of National Defence.

While continuous in nature, the process can best be described in four phases:

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>System Definition</td>
</tr>
<tr>
<td>II</td>
<td>Manpower Planning</td>
</tr>
<tr>
<td>III</td>
<td>Implementation</td>
</tr>
<tr>
<td>IV</td>
<td>Result Analysis</td>
</tr>
</tbody>
</table>

Phase I System Definition

The aim of this phase is to establish: the framework or boundary of our personnel system; the factors that affect the system; and the basic parameters that become the inputs to later phases.

From the summary in Appendix E it can be determined that an aspect of considerable importance to the solution of the problems is the requirement for a management philosophy. It is suggested that this is one of the first questions that must be answered by any individual or group attempting to resolve the
issues surrounding personnel administration in National Defence.

By "management philosophy" is meant the manner in which the organization is to view the very nature of the job of "management" in the Department and, particularly, how it is to view personnel resources. Management Philosophy would determine how the objectives of the Department would be stated. Are objectives to be defined in terms that would be suitable for an organization chart, or would they be defined in terms that individual employees could understand? Management Philosophy would establish how activities would be defined. Are responsibilities to be assigned to positions, or groups of positions in terms of detailed functions, or are they to be defined in terms of results expected? Management Philosophy would determine how authority would be delegated. Will authority be scalar, will it follow the top to bottom in hierarchy fashion, will accountability correspond to authority, or will the delegation be real and personal with accountability on the basis of results?

The above questions are intended as examples, and not to be construed as proposals, for, in an organization the size of National Defence, it is not a simple matter to determine what the Management Philosophy is, should be, or, indeed, what senior management desires it to be. However, every effort must be made to establish the philosophy even if the answer is that it can
not be determined.

The process for determining the Management Philosophy can only be one of discussion and observation. A consultant could be hired, at a fee, to develop a questionnaire and interview senior management. However, a more profitable process it is suggested, is to use personnel from the Department who will be available to implement the findings, and who, also, are aware of the details of the Department's problems and hence, are in a position to appreciate the meaning of answers to general questions.

Once the Management Philosophy is determined, it should not remain a secret for the "in group" but become public information for all members of the Department as well as other government agencies and the general public. A viable management philosophy can withstand criticism, if not, it should be modified.

In parallel, action should be taken to determine the management process to be followed in National Defence. The concept outlined by General Sharp has been included in this thesis. Is this the process to be followed? To the author it appears that it is the path down which National Defence is headed. However, the management process should be confirmed. Again the procedure appears to be a matter for an interview
and discussion technique. However, more sophisticated analysis techniques may be available and should be thoroughly investigated before a decision on "method" is adopted.

The next issue of Phase I is to determine the effects of the environment and estimate trends associated with manpower activities in Government and Industry which could demand major changes in personnel policies. In essence, the requirement is for a "strategic study" related to the manpower problem. The basic issue associated with strategic studies is the prediction of the future or, at least, determining the most probable trends. Applying the strategic study concept to personnel administration suggests that for proper planning, a prediction of the main characteristics of individuals who will be available from the Canadian society of the future, is required.

Techniques are available for in-depth strategic studies. The vast amount of knowledge being accumulated from behavioural research and studies on social and technological trends should permit a reasonable study on the nature, aims, aspirations and capabilities of Canadians who would be available for both the military and civilian requirements of National Defence during the next 5 - 10 years.

It could be expected that Senior Defence Management would
obtain from such studies an indication of the major trends that
could influence their decision on personnel administration to
the same degree that the results of the strategic study would
influence their equipment decision-making. A one-time definitive
study is not visualized, but rather a continuing process con-
stantly indicating to Defence Management trends in the personnel
area that could conceivably influence personnel policy and
programs.

The Department of Manpower and Immigration are at the
embryo stage of such studies and many other Departments must
have similar problems. This would suggest that interdepartmental
programs may be justified. If sophisticated research studies are
not possible, as a minimum, well rationalized predictions would
be necessary to form a reference base for realistic manpower
planning. To assume no change in education, knowledge, and
skills does not appear to be realistic, with the dramatic changes
occurring in technology. We appear to be entering an era in
which continuing education may become an accepted way of life.
The motivation for people to engage in such activities will
reflect social and professional values rather than hierarchial
pressures, although the latter will not be absent. Will the
young man entering National Defence in 1975 require the same
training as the man joining today? We predict the nature of
equipments and the demands on the Department created by technological advance - should we not be predicting the major changes in the nature of individuals (our most expensive resource) and the demands they will make for changes in the Department?

It now appears that it would have been possible to predict collective bargaining for public servants at least 5 years before it occurred. Such a prediction followed by appropriate action could have reduced the impact of this major change in personnel policy on departmental activities. Personnel officer training in collective bargaining; attitudes, problems and solutions; could have commenced and thus place the Department in a posture to accept the change as a properly phased evolution. Hindsight! - Yes! - but who is predicting and acting on the next major change in personnel policies?

It is sufficient, for the purposes of this thesis, to suggest that predictions on changes in the "personnel environment" are as important to National Defence as predictions in the technological environment and a Management Philosophy and process that utilizes both is mandatory, if we are to provide a flexible and viable organization.

Having determined the management philosophy and process, predicted (to the best of our ability) the future, the next step in the process is to rationalize the requirements for military,
public servants, and scientific manpower resources.

If there was no Department of National Defence in existence, and Parliament had just passed a National Defence Act, what process should be followed in determining the personnel resources of such a department? With modern: analytic techniques; electronic data processing; cost/benefit approaches; and a host of planning tools available — it is possible to construct a theoretical model and test the requirements against various proposals. We could investigate the requirements across the total spectrum of possibilities: a total civilian department; a total uniformed department; any percentage mixture of uniformed and civilian manpower. In an era when technology permits men to travel around the moon and return to earth with only minute errors in position and time of splash down, our problem is not beyond the state of the art. However, there is one difference — the United States Government had the will to produce Appollo 8. The will to rationalize the personnel requirements is not evident in any documents observed by the author. It is a main theme of this thesis that to rationalize the manpower requirements is as important to the long term objectives of National Defence as the rationalization for any particular military program. (A comparison of personnel costs to capital program cost would justify this statement on
economic grounds alone). This step of the process could be labelled "the development of a rationale for the use of military, civilian and scientific manpower resources in National Defence" and would result in the stating of a definite policy on the role of civilians in the Department.

The personnel administrator should now be in a position to develop a manpower capabilities plan. This plan would establish the capabilities required of all personnel in the Department. The level of specification could be similar to the documents used today for military personnel. The effort being expended in the Public Service Commission on Staffing Standards should be of considerable assistance. However, of importance to the concept being presented is the necessity of stating the capabilities in a form that permits measurement.

Finally, to complete the Phase I cycle, a plan for result analysis is required. The form that the capabilities plan and result analysis plan takes will, of course, depend on: the management philosophy; the management process; the constraints placed on the Department by the environment; and the rationale developed for manpower resources. For example, if a true management by objectives approach is taken, it is conceivable that a capability and result analysis plan would demand a result
oriented appraisal system where the approach is based on quanti-
tative measurable (or at least concrete) performance goals. There
are limitations to such a system; we will not be able to specify
in exact form, units which will demonstrate performance or results;
but this should not prevent the development of a plan that utilizes
the most up-to-date results of behavioural research to at least
provide an indication of how our system is performing.

In summary, Phase I of the proposed process should establish
the framework or boundary of our personnel system and the factors
that become inputs to the later phases.

PHASE II — Manpower Planning

Within the framework or boundary established by Phase I, we
should commence the practice of "manpower planning" as Phase II of
our process for deriving a plausible solution to the personnel
administration problems in National Defence.

For purposes of discussion, this Phase will be divided into
"steps" but it must be emphasized that the process is continuous
and in actual implementation should not be sub-divided into the
phases or steps presented. Three basic steps are suggested:
(1) Manpower Inventory; (2) Manpower Requirements; and (3) Im-
plementation Plan.

Having established the boundary of our system, the next
requirement is to determine the resources available within the system, that is, a "manpower inventory". To be meaningful, the inventory must be determined and maintained in terms that are relevant to our capability plan. For example, it is of little value to determine and maintain records on the religious beliefs of an individual if it is not pertinent to the requirements of any position in the Department. Demographic data will be required to ensure logical planning of future requirements and the orderly progress of retirements. The manpower records must show not only the individual capabilities in the terms established by a capabilities plan, but also his achievements, aspirations, and an estimate of his potential in similar terms.

Step 2 involves the comparison of our desired capabilities with the available capabilities to determine the additional capabilities required. While the statement itself is simple, the actual determination of this requirement is a complex process that will demand inputs from the line manager and, in many cases, employees at all levels of the organization. Value judgements on requirements will continue to be a major input to the system but, hopefully, introduced in a rational, orderly fashion, as opposed to a random uncoordinated manner.

Step 3 should be the development of an implementation plan based on the Department's manpower requirements. Such a plan
would be composed of three basic elements: a career plan; a training and development plan; and a recruiting plan.

Suggesting a requirement for a career plan is not to imply that a career is an end in itself. A career plan should indicate the manner in which the organization is formed to use its manpower resources, and should indicate that a career path is available to all personnel who have the capability of meeting the requirements of the Department! This is a broader concept than is normally applied to career planning. It is normally conceived as a planned career for specified individuals who are established as having considerable potential for higher positions at an early stage of their career, and are guided or directed along a path that provides them with the experience for the higher position. This type of planning should, indeed, occur. However, in the particular situation in National Defence, this is not sufficient as long as three separate sources of manpower resources are maintained. In such a situation it becomes necessary to expand the concept of a career plan to that of ensuring that the organization provides a reasonable opportunity for progression, within itself (and for senior personnel within the total public service) for all components of manpower resources. Such a concept demands that the individuals responsible for preparing the basic plan be involved in organization planning.
In the concept presented, a training and development plan should be based on the most efficient and economic manner of meeting the manpower requirements. This will involve constant cost/effectiveness comparisons of training and developing available resources as opposed to recruiting fully trained manpower.

To close our Phase II cycle, a recruiting plan to meet the Department's demands is considered an obvious requirement.

**PHASE III — Implementation**

Managing or administering a personnel system developed in Phase I and II is an important element in the process. It cannot be accomplished by assigning responsibility to a particular manager and directing that he "get on with the job". Implementation of the derived plans will become everybody's business. Personnel matters are too important to be left to the personnel administrator. As the determination of the requirements, as suggested in Phase I and II are progressed, management indoctrination at all levels in the Department will be demanded. The process will be continuous. At any particular time it will not be possible to state that a phase has been completed. There will always be an overlapping and recycling of the processes.
PHASE IV - Result Analysis

Just as in an equipment concept, result analysis forms a vital link in meeting objectives. A constant comparison of the quality and quantity of our manpower against the predicted requirement is essential to the effectiveness of the Department's activities. The implementation of the result analysis procedure developed in Phase I constitutes the feedback that closes the loop in our personnel sub-system and becomes a major component in the feedback loop of the total "organization" system.

SUMMARY

In this Chapter we have attempted to adapt the systems approach to analysing the civilian personnel problems in National Defence. The results summarized in the form of a "Process" are as follows:

PHASE I  SYSTEM DEFINITION

DEFINE THE SYSTEM BY THE FOLLOWING ACTION:

A  DETERMINE AND STATE THE MANAGEMENT PHILOSOPHY OF THE DEPARTMENT OF NATIONAL DEFENCE;

B  DETERMINE AND STATE THE MANAGEMENT PROCESS OF THE DEPARTMENT OF NATIONAL DEFENCE;

C  DETERMINE AND STATE THE OBJECTIVES AND THE MAIN ENVIRONMENTAL INPUTS THAT AFFECT THE DEPARTMENT OF NATIONAL DEFENCE;

D  ESTIMATE THE MAJOR TRENDS IN THE CANADIAN MANPOWER MARKET THAT WILL AFFECT NATIONAL DEFENCE ACTIVITIES;
E ESTABLISH A RATIONALE FOR THE ROLE OF MILITARY, SCIENTIFIC AND CIVILIAN MANPOWER RESOURCES IN NATIONAL DEFENCE;

F ESTABLISH A MANPOWER CAPABILITY PLAN IN MEASURABLE TERMS;

G ESTABLISH A RESULT ANALYSIS PROCEDURE

PHASE II MANPOWER PLANNING

WITHIN THE SYSTEM ESTABLISHED BY PHASE I PRACTICE MANPOWER PLANNING BY:

A ESTABLISHING A MANPOWER INVENTORY WHICH INCLUDES PERSONNEL RECORDS OF INDIVIDUAL'S

(i) DEMOGRAPHIC DATA
(ii) CAPABILITIES IN TERMS OF I E
(iii) ACHIEVEMENTS
(iv) ASPIRATIONS
(v) ESTIMATE OF POTENTIAL

B ESTABLISHING MANPOWER REQUIREMENTS
CAPABILITIES REQUIRED (IE) - CAPABILITIES AVAILABLE (II A)

C ESTABLISHING AN IMPLEMENTATION PLAN BASED ON II B WHICH INCLUDES

(i) CAREER PLAN
(ii) TRAINING AND DEVELOPMENT PLAN
(iii) RECRUITMENT PLAN

PHASE III MANAGE/ADMINISTER THE PERSONNEL SYSTEM ON THE BASIS OF I AND II BEING A CONTINUOUS PROCESS

PHASE IV PERFORM CONTINUOUS RESULT ANALYSIS
CHAPTER VIII

SUMMARY AND CONCLUSIONS

The management of the public service is undergoing dramatic changes. Modern management techniques, including new concepts of personnel administration, are being introduced. The Treasury Board has assumed the role of senior Government management. "Delegation" is the order of the day. A Planning Programming Budgeting approach to resource allocation is being adopted. In parallel, budget reductions and personnel freezes, are being implemented. This is the milieu in which National Defence must operate. To survive, the Department must respond to the demands of the Government and its environment.

In this technological era, employees are more sophisticated than in the past. Their expectations are higher. Their demands for consideration as individuals are constantly increasing. The very nature of National Defence effort requires it to be at the forefront of technology and employees with high levels of education, skills, and a capacity to rapidly adapt to new concepts are essential. To obtain and retain the necessary manpower poses a challenge to National Defence Management.

The lead that the military allegedly possessed, with respect to personnel practices, has become a myth. The demands of the industrial state, coupled with the growing body of behavioural
knowledge, has allowed the intelligent industrial manager to
practise personnel policies that have long since passed the
basic "qualities of leadership" taught to the junior military
officer.

The limited manner in which National Defence has prac-
tised, even the most rudimentary principles of military leader-
ship, with respect to its civilian employees, has created the
problems indicated in this thesis. Why so many intelligent,
highly skilled civilian personnel have continued to give dedicat-
ed service to the Department, while a constant source of
inspiration, has also continued to amaze the author. To utilize
this vital civilian component of National Defence resources to
the fullest extent possible is a major role of senior defence
management.

The proposed process for deriving a plausible solution
is not simple. It demands a level of "management judgement"
and effort that is, at least, equivalent to (if it does not
exceed) that required for equipment decisions. There is no
doubt that the deriving of a solution is well within the
capabilities of Defence Management, but a recognition of the
problem and a "will" to resolve it is essential.
The lack of literature, statistics, and documented evidence to support or disallow the concepts presented in this thesis is surprising. However, it is reassuring to find that a large number of military officers and civilians in senior positions in National Defence are aware of the problems and are taking positive action towards their solutions.

The problems of civilian personnel administration in National Defence raise many complex issues and will require considerable time and effort to derive and implement rational solutions. Nevertheless, it is the responsibility of all levels of National Defence Management to ensure that the solutions create an environment where the dignity of military and civilian service in the Defence of Canada is fostered and maintained.
RESEARCH PROCESS AND ACKNOWLEDGEMENTS

Documents, other than Departmental files, used by the author are included in the Bibliography (Appendix F). In addition, a number of interviews were carried out with personnel in the Department and other agencies. The procedure followed in these interviews was as follows:

1. The aim of the thesis and the particular sections for which information was desired was outlined, and general comments solicited.
2. Particular questions with respect to areas under the cognizance of the individual being interviewed were asked and answers recorded in rough note form.
3. Where applicable, draft sections of the thesis were submitted for comment, and amendments made as a result of the comments.
4. Four individuals were requested to review and comment on the entire draft of the thesis and amendments were made as a result of the comments.

While not exhaustive, the following list includes the name, position, and area of contribution of the individuals from whom assistance and information was solicited. The named individuals in this list do not necessarily agree with the concepts presented, and are not responsible for: any errors; misstatements; or illogical use or interpretation of the information or assistance they so kindly provided:
<table>
<thead>
<tr>
<th>Name</th>
<th>Position Title</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr T.G. Morry</td>
<td>Asst. Deputy Minister (Personnel) Department of National Defence.</td>
<td>Granted permission for the study. Reviewed and commented on the entire draft copy.</td>
</tr>
<tr>
<td>Mr S.S. Wise</td>
<td>Director of the Directorate of History. Department of National Defence.</td>
<td>Granted permission for the use of the records of his Directorate, and the assistance of his Staff.</td>
</tr>
<tr>
<td>Mrs E. A. Sorby</td>
<td>Senior Research Officer, Directorate of History, Department of National Defence</td>
<td>Provided historical reports associated with civilian personnel, and assisted in general perusal of related files.</td>
</tr>
<tr>
<td>Mr G.D. Watson</td>
<td>Chief of Personnel, Defence Research Board.</td>
<td>Provided information for and reviewed Chapter IV.</td>
</tr>
<tr>
<td>Mr D. Cocklin</td>
<td>National Vice-President (Ontario) Union of National Defence Employees.</td>
<td>Provided information for Chapter V and Chapter VI.</td>
</tr>
<tr>
<td>Mr S.J. Evans</td>
<td>ENG 5, Department of National Defence. Member of the Professional Institute of Public Service of Canada.</td>
<td>Provided information for Chapter VI.</td>
</tr>
<tr>
<td>Mr L. Barnes</td>
<td>Executive Director, Professional Institute of the Public Service of Canada.</td>
<td>Provided information for Chapter VI.</td>
</tr>
<tr>
<td>Mr J. Wood</td>
<td>Personnel Officer, Professional Institute of the Public Service of Canada.</td>
<td>Provided information for Chapter VI.</td>
</tr>
<tr>
<td>Name</td>
<td>Position and Office</td>
<td>Assistance Provided</td>
</tr>
<tr>
<td>---------------</td>
<td>------------------------------------------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>Mr K.R. Scobie</td>
<td>Director General Civilian Personnel, Dept. of National Defence</td>
<td>General assistance on all sections.</td>
</tr>
<tr>
<td>Mr R.H. Snidal</td>
<td>Director Manpower Control, Dept. of National Defence</td>
<td>General assistance all sections and, in particular Chapter III</td>
</tr>
<tr>
<td>Mr G.S. Peckham</td>
<td>Asst. Director of Civilian Establishment, Dept. of National Defence</td>
<td>Assistance in areas of statistics and general information on DND civilian personnel.</td>
</tr>
<tr>
<td>Mr Ross Anderson</td>
<td>Director General Staffing Branch Public Service Commission</td>
<td>General assistance all sections, based on previous experience in Dept. of National Defence, the Bureau of Classification Revision, and the Public Service Commission Staffing Branch.</td>
</tr>
<tr>
<td>Mr J.J. Carson</td>
<td>Chairman, Public Service Commission</td>
<td>Provided information and commented on the theme of the thesis in relation to the broader problems of the Public Service of Canada.</td>
</tr>
<tr>
<td>Mr P.J. Chartrand</td>
<td>Director of the Personnel Consulting Division, Bureau of Management Consulting Services</td>
<td>Provided assistance in relation to Chapter VII, reviewed and commented on proposed process for deriving a solution</td>
</tr>
<tr>
<td>Mr R. Judge</td>
<td>ENG 7, Director Maritime Engineering Support</td>
<td>Provided information and assistance in respect to Chapter V.</td>
</tr>
<tr>
<td>Name</td>
<td>Position</td>
<td>Contribution</td>
</tr>
<tr>
<td>---------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Mr R.A. Gould</td>
<td>Chief of the Administrative Co-ordinating Group, General Policy Branch, Personal Policy Branch, Treasury Board.</td>
<td>Reviewed draft thesis and provided assistance and information associated with personnel administration in the Public Service.</td>
</tr>
<tr>
<td>Mr J.F. Monroe</td>
<td>Asst. Chief of Technical Services, Department of National Defence.</td>
<td>Provided information and reviewed draft of thesis.</td>
</tr>
<tr>
<td>CAPT(N) M.T. Gardner</td>
<td>Director of Management Information Systems, Department of National Defence.</td>
<td>Reviewed and commented on Chapter VII.</td>
</tr>
<tr>
<td>CAPT(N) P.R. Hinton</td>
<td>Director of Manpower Programming and Control, Department of National Defence.</td>
<td>Provided statistical information and documentation re Civilian Establishments.</td>
</tr>
<tr>
<td>COL W.A. Boak</td>
<td>Director of Management Engineering, Department of National Defence.</td>
<td>Provided assistance in relation to organization problems of National Defence.</td>
</tr>
<tr>
<td>Mr D. Rhodes</td>
<td>Union of National Defence Employees</td>
<td>Assistance in relation to Chapter VI.</td>
</tr>
<tr>
<td>Mr N. Porter</td>
<td>Union of National Defence Employees</td>
<td>Assistance in relation to Chapter VI.</td>
</tr>
</tbody>
</table>
In addition, I would like to acknowledge the assistance of Professor R.O. MacFarlane, who, as thesis adviser, reacted with patience and understanding to the problems and frustrations of a Naval Officer attempting to be a student.

Finally, I would like to thank Mrs M.P. Shields for her efforts in translating from the often distorted voice on the dictation tapes to the printed page of this document.
APPENDIX B

COMPOSITE ORGANIZATION CHART
OF NATIONAL DEFENCE

This chart is an outline only and does not necessarily indicate chain of command or relationships of commands, councils or advisory committees. In a number of areas the organization is dynamic and, therefore, only approximates the organization that existed in October 1968.
APPENDIX C

STUDY TEAM REPORT

CIVILIAN PERSONNEL FUNCTION

DEPARTMENT OF NATIONAL DEFENCE

FEBRUARY, 1968

SUMMARY OF RECOMMENDATIONS

Study Team recommend that:

1. The Assistant Deputy Minister (Personnel) be named Assistant Deputy Minister (Manpower) to give recognition in the title to responsibilities beyond those normally associated with the term 'Personnel', in that he will be responsible for:

   (a) development and review of policies on the use of manpower, civilian and military, in the Department;
   (b) review and control of manpower in carrying out departmental programs;
   (c) development, determination and review of civilian personnel policies in the Department; and
   (d) analysis of, and advice to the Deputy Minister on military personnel policies in the Department.

2. The Assistant Deputy Minister (Manpower) have four principal officers in charge of the following functions and groupings of sub-functions:

   (a) Manpower Programs and Control

      - Manpower Programs and Statistics
      - Organization and Establishments
      - Military Compensation and Benefits;
(b) Manpower Policy Development and Review

- Manpower Utilization
- Manpower Planning
- Civilian Policy Development
- Senior Appointments;

(c) Staff Relations

- Staff Relations
- Civilian Compensation & Benefits
- Industrial Safety; and

(d) Classification.

3. Operational responsibility for civilian personnel administration in the Department be transferred from the Deputy Minister to the Chief of Personnel, Department of National Defence.

4. A Deputy Chief of Personnel (Civilian) be appointed on the staff of the Chief of Personnel at the same organizational level as the present Deputy Chief of Personnel who would then become Deputy Chief of Personnel (Military);

5. The Deputy Chief of Personnel (Civilian) be supported by officers responsible for the following functions:

   (a) direction of field operations;
   (b) manpower development, career management and training; and
   (c) personnel services and procedures.

6. Line officers be given responsibility and authority for all aspects of civilian personnel management, except position classification; and personnel administrators provide advice and
assistance to line officers in the discharge of their responsibility and the exercise of authority.

7. Departmental authority to classify certain positions be exercised by designated civilian personnel administrators, and that these personnel administrators be required to consult with line managers in making classification decisions.

8. Personnel administration resources be organized regionally under Regional Directors of Civilian Personnel Administration responsible to the Deputy Chief of Personnel (Civilian) through the Director General Field Operations in the Department of National Defence, and that the Regional Directors and their staffs be co-located with command headquarters to serve the Commanders as Command Civilian Personnel Advisors.

9. Regional Directors of Civilian Personnel Administration have staff resources in the fields covered by:

   (a) A Staff Relations Officer;
   (b) Position Classification Administrator(s);
   (c) Personnel Generalist(s) - staffing, training, and general personnel administration; and
   (d) Civilian personnel services and procedures.

10. Base and unit personnel service continue to be provided by a civilian personnel staff which is responsible to base or unit commanders.
11. Staffing activities for the administrative support, operational and junior levels of the technical categories be decentralized as soon as practicable to commands and bases; staffing and career development activities for executive, scientific and professional, administrative and foreign service, and the senior levels of the technical categories, be carried out either centrally or under central co-ordination.

12. (a) The Department accept as much delegated classification authority from the Treasury Board as possible;
(b) the Assistant Deputy Minister (Manpower) retain responsibility for:

(i) Departmental classification policy and programs;
(ii) Classification decisions (or proposals to the Bureau of Classification Revision for undelegated positions) for the executive, professional and scientific, administrative and foreign service and senior levels of the technical categories;
(iii) Review of classification programs delegated to regional offices; and
(iv) Assignment of classification administrators to the regional offices.

(c) The Assistant Deputy Minister (Manpower) designate personnel administrators in regional offices who are authorized to classify positions in the administrative support, operational and junior levels in the technical categories.

13. First priority be given to bringing position classification in the Department to a current state. Public-Service-wide
resources should be drawn on to carry out the initial operation.

14. Line managers, military and civilian, receive training by all means possible, and as soon as possible, in the administration of collective agreements.

15. The function, presently performed by the Director General, Education Programs, of monitoring out-service training for military and civilian personnel be transferred from that office to the Assistant Deputy Minister (Manpower).

16. With the recommended establishment of a Directorate for Civilian Policy Development under the ADM(M), a formal policy guide be developed to include all policy information necessary to management. This policy guide will form the basis for the development of proposed Canadian Forces Administrative Orders (Civilian) to replace the existing Civilian Personnel Administrative and Accounting Manual. It is the view of the Study Team based on detailed comments from the vast majority of line managers consulted that the present manual is too complicated mainly because it includes both policy and operating instructions.

17. The present personnel procedures be re-examined with a view to streamlining them, e.g.: information reported from units on an absentee basis rather than by sending all attendance
18. The proposed organization for the Assistant Deputy Minister (Manpower), the Deputy Chief of Personnel (Civilian), the Regional Directors of Civilian Personnel Administration and the Base Personnel Officer establishments be formed from within existing resources. Analysis of the existing establishments indicates to the Study Team that numerically this can be done as indicated at Appendix "E". Although there is a modest increase in cost, the vacancy factor plus the time it will take to fully implement the Study Team recommendations should obviate any financial strain.

19. A civilian/military team be formed from Departmental resources and be given authority to plan and oversee the implementation of approved recommendations.
This is a proposed organization and had not been fully implemented at time of preparation (January 1969).
## APPENDIX E
### DISCUSSION MATRIX
### PERSONNEL PROBLEMS vs SYSTEM FACTORS

<table>
<thead>
<tr>
<th>SYSTEM FACTORS</th>
<th>PERSONNEL PROBLEMS</th>
<th>TOTAL MANAGEMENT PROBLEM</th>
<th>TOTAL PERSONNEL RESOURCES MANAGEMENT PROBLEM</th>
<th>CIVILIAN ROLE CAREER TRAINING PROBLEM</th>
<th>CIVILIAN/MILITARY RELATIONSHIP PROBLEM</th>
<th>WORKLOAD AND PERFORMANCE MEASUREMENT PROBLEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACHIEVING OBJECTIVES</td>
<td>I</td>
<td></td>
<td>I</td>
<td>IV</td>
<td>I</td>
<td>III</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td></td>
<td></td>
<td></td>
<td>IV</td>
<td></td>
</tr>
<tr>
<td></td>
<td>III</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SENIOR LEVEL INTERRELATIONSHIP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAINTAINING INTERNAL SYSTEM</td>
<td>I</td>
<td></td>
<td>SIMILAR RESPONSE FROM ALL SUB SYSTEMS</td>
<td>SPAN OF POSSIBILITIES PERSONNEL PREDICTIONS</td>
<td>CAPABILITIES PLAN WORK MEASUREMENT MANPOWER PLANNING RESULT ANALYSIS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>II</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>III</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADAPTING TO ENVIRONMENT</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>II</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>III</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VIABILITY FLEXIBILITY RELATIVE VALUE</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>II</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>III</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>IV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### CONSIDERATIONS

I MANAGEMENT PHILOSOPHY  
II ENVIRONMENT AND OBJECTIVES  
III MANAGEMENT PROCESS AND PERFORMANCE  
IV MANPOWER PLANNING

IN THIS APPENDIX THE HORIZONTAL COLUMN REPRESENTS THE PROBLEMS ASSOCIATED WITH PERSONNEL. THE VERTICAL COLUMN REPRESENTS THE SYSTEM OPERATING FACTORS AND THE INDIVIDUAL BLOCKS REPRESENT THE "CONSIDERATIONS" THAT MUST BE INCLUDED IN ANY PROCESS FOR DERIVING A SOLUTION.
APPENDIX F

BIBLIOGRAPHY

Other than files in the Department of National Defence, the Public Service Commission, the Staff Associations and Treasury Board; the literature associated with the civilian component of National Defence is extremely limited. However, documents which give an overview of the problems in this thesis, and in some cases, make particular reference to the Department of National Defence, are as follows:


Canada: Minutes of the 4th and 5th Biennial Conventions of the Civil Service Association of Canada, October, 1964 and November, 1966.


Department of National Defence. Study Team Report Civilian Personnel Function Department of National Defence. February 1968. (Restricted)


