



CANBERRA PAPERS ON STRATEGY AND DEFENCE NO. 50

ORGANISING AN ARMY: THE AUSTRALIAN EXPERIENCE 19571965

J. C. BLAXLAND

Published by
The Strategic and Defence Studies Centre
The Research School of Pacific Studies
The Australian National University
Canberra
1989

Printed and Published in Australia at the Australian National University 1989

© J.C. Blaxland 1989

This book is copyright. Apart from any fair dealing for the purposes of private study, research, criticism, or review as permitted under the Copyright Act, no part may be reproduced by any process without written permission. Inquiries should be made to the publisher.

National Library of Australia Cataloguing-in-Publication entry

Blaxland, John Charles, 1963- .
Organising an army: the Australian experience 1957-1965.

Bibliography. ISBN 07315 0530.1. ISSN 0069 0104

1. Australia - Armed Forces - Organization. I. Australian National University. Strategic and Defence Studies Centre. II. Title. (Series: Canberra papers on strategy and defence; no. 50).

355'3'0994

Designed by ANU Graphic Design Printed by ANU Central Printery Published and distributed by: Strategic and Defence Studies Centre, Research School of Pacific Studies, The Australian National University, GPO Box 4, Canberra, ACT, 2601, Australia. Telephone (062) 493690. Lieutenant Blaxland postulates that over the last two centuries, since the introduction of the concept of "divisions" by Napoleon, armies have been shaped in response to the interaction of four main factors. These are:

- 1. the nation's strategic outlook and perceived combat roles,
- 2. the economic determinants of finance and manpower,
- the impact of technological developments on organisational theories, and
- 4. the bureaucratic power play that goes on behind the scenes.

The thesis examines three separate reorganisations that occurred in the Australian Army between 1957 and 1965, and the interplay of these four factors in the lead up to each organisational change. In brief, the changes involved the reduction in 1957 of the National Service Training Scheme (based on the Citizen Military Forces), its abandonment in 1960 and its resurrection late in 1964 as a means to supplement the Regular Army (ARA). Simultaneously, the Regular Army Field Force was expanded from an under strength brigade to a significant force ready to fight in two or more theatres at one time. Central to the ascendancy of the ARA was the introduction in 1960 and abandonment in December 1964 of the Australian pentropic organisation, based on the United States' short lived pentomic structure. The changes that occurred during this period set the scene for Australia's military involvement in the Vietnam War, and provided a basic organisational structure for the Army's combat elements that remains today essentially as it was in 1965.

Lieutenant John Blaxland is an Intelligence Corps Officer serving as a Troop Commander with the Royal Australian Corps of Signals in Melbourne. He graduated from the Royal Military College, Duntroon in 1986 and completed his Honours course for his Bachelor of Arts degree at the Australian Defence Force Academy in 1987.

ACKNOWLEDGEMENTS

I wish to gratefully acknowledge the assistance I have received from a number of people in the preparation of the thesis which formed the basis of this monograph. I wish to thank my supervisor, Lieutenant Colonel D.M. Horner for his invaluable aid and supervision. I would also like to thank Professor A.D. Gilbert for his encouragement and guidance.

A large number of people were also helpful in answering letters and giving up their time for interviews. A full list of these is located in the bibliography, however, I would especially like to thank Major General A.L. Morrison for taking the time to read through and comment on a draft of my thesis.

For assistance with access to archival material I am very grateful to Mrs Helen Creagh of the Australian War Memorial Annex at Mitchell (ACT). I would also like to thank the staff of the Australian Defence Force Academy Library and of the Australian Archives, Mitchell.

I also wish to thank my wife Diane who assisted in editing the manuscript.

JOHN C. BLAXLAND

Canberra Papers on Strategy and Defence are a series of monograph publications which arise out of the work of the Strategic and Defence Studies Centre, Research School of Pacific Studies, The Australian National University. Previous Canberra Papers have covered topics such as the relationship of the superpowers, arms control at both the superpower and Southeast Asian regional level, regional strategic relationships and major aspects of Australian defence policy. For a complete list refer to the last pages of this volume.

Unless otherwise stated, publications of the Centre are presented without endorsement as contributions to the public record and debate. Authors are responsible for their own analysis and conclusions.

The views expressed in this monograph have no official status or endorsement from either the Strategic and Defence Studies Centre, the Minister for Defence or the Department of Defence.

CONTENTS

Glossary o	f Terms	
Chapter 1:	Introduction	1
Chapter 2:	Military Organisational Developments to 1960	ŝ
Chapter 3:	Focus on the Regulars: The Australian Army 1957-1960	3 0
Chapter 4:		63
Chapter 5:		the 8 9
Chapter 6	Conclusion	115
BC DEFGHIJKL	The Pentomic Division-1959 The Pentropic Division Pentomic Battalion Organisation from December 1958 Pentropic Battalion Organisation 1960-1965 United States Infantry Division-1962 Australian Tropical Infantry Division-1965 United States Infantry Battalion Organisation-1962 Australian Army Battalion Organisation-1965 Comparative Power: Pentomic-Pentropic Pentomic-Pentropic Comparison: Personnel Combat Power Comparison & "Lbs/Rds Per Minute" Veapon Range Comparison: Tropic-Pentropic	118 119 120 121 122 123 124 125 126 127 128 129
Bibliogra	phy	131
Strategic	and Defence Studies Centre Publications	142

GLOSSARY OF TERMS

A.B.C.A. America Britain Canada Australia.

A.I.F. Australian Imperial Force.
A.M.F. Australian Military Forces.

A.N.Z.A.M. Australian New Zealand (and the British

Military Organisation) in Malaya.

A.N.Z.U.S. Australia New Zealand United States Treaty.

A.P.C. Armoured Personnel Carrier.
A.R.A. Australian Regular Army.
A.W.M. Australian War Memorial.

B.C.F.E.S.R. British Commonwealth Far Eastern Strategic

Reserve.

B.C.O.F. British Commonwealth Occupation Forces-

Japan.

C.G.S. Chief of the General Staff. C.M.F. Citizen Military Forces.

C.O.N.A.R.C. (U.S.) Continental Army Command. Commonwealth Record Series.

D.M.O. & P Directorate of Military Operations and Plans.

D.M.T. Directorate of Military Training.
D.S.D. Directorate of Staff Duties.

G.O.C. General Officer Commanding.
G.P.M.G. General Purpose Machine Gun.

G.S.O. General Staff Officer.

N.A.T.O. North Atlantic Treaty Organisation.

P.M.F. Permanent Military Forces. R.A.A.F. Royal Australian Air Force. R.A.R. Royal Australian Regiment.

R.O.A.D. (U.S.) Reorganisation Objective Army Divisions.

R.O.C.A.D. (U.S.) Reorganisation Current Armored

Divisions.

S.E.A.T.O. South East Asian Treaty Organisation.

T.E. Tropical Establishment.

T.W. Tropical Warfare (Establishment)

X.O. Executive Officer.

CHAPTER 1 INTRODUCTION

This sub-thesis is concerned with the age-old problem of organising an army so that it may be capable of performing its designated combat roles. As an example of a modern solution to this problem, it describes the events surrounding the Australian Armv's experience of organisational change between 1957 and This period was a significant one: for the first time. Australia broke away from the example of Britain and decided on a new military structure to suit its own changing needs. The implementation of the new structure marked a shift in Australia's strategic outlook as military strategists increasingly focused on the immediate strategic environment. The events further marked the decline and eclipse of the Citizen Military Forces (C.M.F.), as the Australian Regular Army (A.R.A.) became, also for the first time, first priority in the Army's defence planning. There are many internal and external factors which cause an army to change its structure as Australia's did in these years. Military organisational developments that have occured over the last two centuries provide helpful illustrations of these factors at work.

Chapter Two thus provides a background explanation of military developments in the western world to 1960, and an analysis of the key factors that determined how and why the organisation of armies changed during this period. The chapter concludes with the discovery that there are at least four main factors which combine to determine the organisation which an Army adopts. These are:

- i) the strategic outlook and perceived combat roles adopted by the country,
- ii) the economic determinants of finance and manpower,
- iii) the impact of technological developments on organisational theories, and
- iv) the bureaucratic power play that goes on behind the scenes.

The remaining chapters illustrate how these factors interacted to produce the Australian experience of three separate reorganisations between 1957 and 1965. Before beginning this analysis, however, Australia's particular military organisational history needs to be outlined.

Australia's military development since Federation has been heavily influenced by that of the two major powers to which it has been allied: Britain and the United States. During World War I our organisational structure and tactics were virtual replicas of the British model - a convenient arrangement, as our forces worked intimately with the British throughout the war. Our divisions, like the British, usually included three brigades, with each brigade usually made up of four battalions (three battalions from 1918). In the interwar period our military organisation continued to follow the British lead, although we baulked at participating in a central Imperial defence authority, based in Britain.

In World War II it appeared at first that Australia would play a similar role to that which it had played in World War I, as an integral part of the Imperial forces. However, following Japan's entry into the war, Australia became increasingly involved with the United States' armed forces, in the Pacific region. Consequently Australia began to be influenced by the U.S. as its Army became more and more familiar with their equipment, organisations and tactics.² Nevertheless, we retained the British standard infantry organisation of three brigades per division, and three battalions per brigade (although we did

Lieutenant General Sir John Monash, The Australian Victories in France in 1918, Hutchinson, London, 1920, pp. 2 & 15.

² R. Babbage, "Australian Defence Planning, Force Structure and Equipment: The American Effect," in <u>Australian Outlook</u>, Vol 38, 1984, pp. 135-214.

develop our own "Tropical Establishment" (T.E.) division, as a variation on the British theme). 3

Together with the beginnings of change in the Australian Army's structure, there had emerged after World War I a developing conflict between its professional and citizen components as to who would have ultimate command and control of the Army's direction. Jealousies and tensions between the Militia and the Staff Corps (Regulars) had developed largely as a result of government policy in the inter-war period, when disparities arising from financial restrictions on and slow promotions for the Staff Corps as compared to the Militia officers aroused resentment, bitterness and suspicion. The antagonism was heightened during the raising of the Second A.I.F. by a government decision that no officer of the regular establishment was to be appointed to any command in the Sixth Division above company level or equivalent.⁴

D.M. Horner has noted, however, that these tensions were by no means the most significant tensions of the war years and that in any case by January 1945 there were a significant number of command positions held by regular officers. Of the seven divisional commanders, five were regular or ex-regular militia officers. The figures were different, however for the lower command levels. Out of 59 infantry battalion commands, for example, only two were held by regulars (who comprised

J. Sanders, <u>8th Army in the Desert</u>, Patrick Stephen Ltd, Cambridge, 1976, pp. 33-34.

Major D.M. Horner, "Staff Corps Versus Militia: The Australian Experience in World War II," in <u>Defence Force Journal</u>, No 26, January/February 1981, p. 16; F. Legg, <u>The Gordon Bennett Story</u>, Angus & Robertson, Sydney, 1965, p. 160; and I.D. Chapman, <u>Iven MacKay: Citizen & Soldier</u>, Melway, Melbourne, 1975, pp. 151-152.

Horner, "Staff Corps Versus Militia," p. 18.

one-fifth of all lieutenant colonels). Horner has again rightly argued, however, that an officers' competence was a weightier factor in achieving promotion than his professional background.⁶

Following the cessation of hostilities in 1945. Australia's military organisational ties with Britain were reaffirmed by our commitment to go to Japan as part of the British Commonwealth Occupation Force (B.C.O.F.). attempt to clarify the organisational confusion of the immediate post-war years, the 1947 Five Year Defence Plan established a permanent field force of one independent brigade group and a citizen force of two divisions, one armoured brigade and selected corps units. (This contrasted to the position prior to World War II, when the Army had consisted of a peacetime civilian force trained and administered by a small corps of regulars.) The target for the Permanent Military Forces (P.M.F.) (changed in 1948 to the Australian Regular Army - (A.R.A.)) was set at 19,000 men (a huge increase in comparison to the pre-war years), and for the C.M.F. 50,000 men. Thus, although a Regular force was established, the main emphasis remained with the C.M.F.⁷ The Regular Army had, however, gained in influence, particularly in the higher command echelons

In September 1950 it was decided that, from then on, all voluntary recruits would enlist "for service anywhere", in sharp contrast to the restrictions placed on overseas involvement for our forces from 1946 to 1950.8 Australian troops thus fought beside the British in Korea, and in the

⁶ Ibid., p. 21.

J.E. Murphy, "History of the Post War Army," unpublished document of the Military Board, P. 65.

⁸ CRS A6059, 14/301/406,"The Defence Call To The Nation," Broadcast by the Rt Hon R.G. Menzies dated 22 September 1950.

Malayan Emergency. During these conflicts, the Australian Army employed the same basic British infantry organisational structure that it had used during World War II, however, all command and staff positions in the forces available for overseas service were now filled by regular officers, or A.I.F. officers who had chosen to remain in the A.R.A. The nature of the Australian Military Forces (A.M.F.) had begun to change from one based principally upon citizen soldiers, to one based upon regulars. The stage was now set for the adoption of a radical, Regular Army oriented, new organisation that had already been trialled in the United States - the pentropic division.

CHAPTER TWO

MILITARY ORGANISATIONAL DEVELOPMENTS TO 1960

Military organisational concepts were revolutionised at the beginning of the nineteenth century by the introduction firstly of the "levee en masse," and secondly of the "divisional" organisation. Prior to the introduction of divisions, armies marched as one body, with cavalry positioned ahead and on the flanks, while the infantry and artillery held the centre. Napoleon, however, formed a number of divisions, each of approximately 6,000 men, containing set proportions of infantry, cavalry and artillery. These were self-contained, balanced forces of arms, which were able to march as separate entities, on parallel routes. This reduced road congestion, while improving mobility, flexibility and surprise. 1

A parallel development, the reduction of the ratio of forces to space, was taking place throughout the same century. In 1800, the normal ratio required to hold a defensive position was about 20,000 fighting troops to the mile. By the time of the

Major-General J.F.C. Fuller, <u>The Conduct of War. 1789-1961</u>, Eyre & Spottiswoode, London, 1962, p. 45; G.E. Rothenberg, <u>The Art of Warfare in the Age of Napoleon</u>, Indiana University Press, Bloomington, 1980, pp.14-16, & 28: A Vagts, <u>A History of Militarism</u>, <u>Civilian and Military</u>, Hollis and Carter, London, 1959, pp. 111-117; B.H. Liddell Hart "How to Quicken Manoeuvre and Gain Flexibility in Land Warfare" in <u>The Army Quarterly</u>, Vol LX, April & July 1950; Adrian Hill, "Could Napoleons Army Win Today?"in <u>Royal United Service Institute</u>, Vol 22, No1, March 1977; and Major Saxon T. Smith," Prelude to the Pentropic Division," in <u>Australian Army Journal</u>, No133, June 1960.

Boer War (1899-1902) British forces were repelled by troops spread out 600 to 800 men per mile.²

Throughout the nineteenth and early twentieth centuries, technological developments further combined to produce a watershed in the conduct of wars. Breech loading rifles, rifled and indirect firing artillery, the development of railways and the advent of the telegraph all helped to increase the size and complexity of army structures. New organisational concepts such as the Corps structure and the General Staff system, developed in the early to mid 1800s, provided an improved system of strategic command in these larger armies.³

During the World War I armies were forced to develop still more elaborate command, control, and communications systems to cope with the ever increasing complexity of military operations. The old nineteenth-century organisational concepts

Fuller, <u>The Conduct of War. 1789-1961</u>, p. 105. See also B.H. Liddell Hart <u>Deterrent or Defence</u>, Stevens, London, 1960 for a more detailed explanation of the concept of ratio of forces to space.

M. Van Creveld, Command in War, Harvard, 1985, pp. 104-109, & 140-147; J. Terraine, "Indirect Fire as a Battle Winner/ Loser," in C. Barnett et al, Old Battles and New Defences, Brasseys Defence Publishers, London, 1986, pp. 7-31; M. Kitchen, A Military History of Germany: From the eighteenth century to the present day, Indiana University Press, Bloomington, 1975, p. 119; C. Barnett, Britain and Her Army 1509-1970: A Military, Political and Social Survey, Penguin, London, 1970, pp. 325-330; J. Luvaas, The Military Legacy of the Civil war, University of Chicago Press, 1959, pp. 226-233; Field Marshal B.L. Montgomery, A History of Warfare, Book Club Associates London, 1982, pp. 416-430, 444-447 & 458-459; and Rothenberg, op.cit., pp. 242-245.

8

could not accommodate the effects of new technology on the battlefield, yet new concepts took some years to develop. It was not until 1918 that the Germans, under Ludendorff, reintroduced mobility to the battlefield, using innovative new tactics on the Western Front. On the Allied side, commanders such as General Monash also applied new theories at this time, successfully leading "combined arms" attacks against well-entrenched positions, using infantry, artillery, armour and air power together to break through the German defences.⁴

Regarding the Army's structure, World War I divisions usually contained three brigades, with each brigade made up of four battalions. In 1918, however, the Imperial Divisions reduced their infantry brigades by one battalion, down to three battalions as an economy measure, due to the depletion of human material. The Americans, however, maintained a four-brigade (U.S. regiments) division with each brigade made up of three battalions, as they as they did not have the same manpower shortages.⁵

Van Creveld, Command in War, pp. 186-187; T. Ropp, War in the Modern World, Collier, New York, 1962, pp. 267-269; M. Howard, War in European History, OUP, 1976, p.131; C. Barnett, "A Successful Counterstroke: 18 July 1918," in C.Barnett et al, Old Battles and New Defences, pp. 3-37; Barnett, Britain and Her Army, pp. 406-409; M. Howard, Studies in War and Peace, Temple Smith, London, 1970, pp. 107-108; Montgomery, A History of Warfare, p. 493; E.M. Spiers, The Army and Society 1815-1914, Longman, London, 1980,pp. 293-294; and Fuller, The Conduct of War, pp. 175-176 & 239-240.

Lieutenant-General Sir John Monash, <u>The Australian Victories in France in 1918</u>, Hutchinson, London, 1920, pp. 2 & 15; Lieutenant Colonel Vernon Pizer <u>The United States Army</u>, Praeger, New York, 1967; James W. Rainey "Ambivalent Warfare: The Tactical Doctrine of the AEF in the

In the inter-war period there was a widespread reluctance across western countries to adopt more ambitious organisational ideas as the strategic outlook appeared calm. Significant debate had, however, arisen during these years.⁶ In Britain, for instance, a purely armoured organisation was advocated by Fuller, Broad and other officers, while Captain Basil Liddell Hart advocated a combined arms force, which included artillery and mechanised infantry with armour, and employed new tactical concepts such as the notion of deep penetration into the enemy's rear areas, avoiding his strongpoints, and the notion of tactical bombing of enemy forces in support of the spearhead. Reliance was placed on surprise and demoralisation to retain the initiative.⁷

British cavalry officers moreover wanted lightly armed armoured vehicles, while infantry officers saw a need for

World War I "in <u>Parameters</u>, Vol XIII, No3, September 1983; Liddell Hart "How to quicken Manoeuvre", <u>op.cit.</u>, pp 185-186; Van Creveld, <u>Fighting Power: German and U.S. Army Performance</u>, 1939-1945, Arms and Armour Press, London, p. 51; and J.M. House, "Towards Combined Arms Warfare: A Survey of Tactics, Doctrine, and Organisation in the 20th Century," Master of Military Art and Science thesis, Fort Leavenworth, Kansas, 1984, pp. 60-61.

Howard, <u>War in European History</u>, p. 131; and Fuller, <u>The Conduct of War</u>, p. 243.

B. Bond, Liddell Hart. A Study of His Military Thought, Cassell, London, 1977, p. 6; Howard, War in European History, p. 132; Ropp, War in the Modern World, pp. 300-301; Barnett, Britain and Her Army, pp. 412-415; J. Luvaas, The Education of an Army: British Military Thought 1815-1940, Cassell, London, 1965, pp. 345-359 & 379-406; and R. Preston & S.F. Wise, Men In Arms, (4th ed), Holt, Reinhardt & Winston, 1979, p. 285.

armour to act in the infantry support role. Yet, during this period, innovation in Britain was constrained firstly by the fact that her army was required to be both the "imperial policeman" and also a continental force, and secondly by the fact that her financial resources could no longer stretch as far as previously. Moreover, Britain, as an island state, considered the Army to be secondary in importance to the Navy.⁸

In the United States in the inter-war period, the government's policies became increasingly isolationist, which resulted in the army reverting to its original, pre-war perceptions of its combat roles.9 Soon after World War I. men such as General G.S. Patton unsuccessfully advocated the exploitation of tanks in enemy rear areas, to paralyse enemy command centres, although his theory was not as refined as that of Liddell Hart. His innovative concept was rejected largely due to financial constraints. However, in the years immediately prior to America's declaration of war in 1941, military developments in the war in Europe completely reshaped the thinking of United States combat developers (as had similarly occurred prior to 1917). In response to lessons learnt from their observations, the U.S. was able to adjust its organisations and concepts accordingly prior to its involvement in North Africa in 1942 10

Preston & Wise, Men In Arms, pp. 285-286; Barnett, Britain and Her Army, pp. 420-421; and Bond, op.cit., pp. 223-224.

V. Ney, Evolution of the United States Army Field Manual:

Valley Forge to Vietnam, Combat Operations Research Group
(CORG) Memorandom 224 for U. S. Army Combat
Development Command, Fort Belvoir, Virginia, January
1966, p. 109.

M. Blumenson, <u>Patton: The Man Behind the Legend 1885-1945</u>, William Morrow, New York, 1985, pp. 125, 127 & 141; Lieutenant John C. Binkley " A History of U.S. Army Force Structuring" in <u>Military Review</u>, Vol LVII, February

The French had retreated into the "Maginot line" mentality during the inter-war period, thus hindering their organisational development. Although their tanks were a match for those of the Germans, French armour was still deployed in a dispersed manner, as infantry support, in 1940. They had failed to reorganise their forces to maximise the advantages of developing weapons technology - their tactical and organisational concepts were based on the assumption that their combat roles would be a repetition of those employed in 1918.¹

Germany, however, during the inter-war period, was not constrained by any pre-determined organisational legacy, as its Army had been dismantled under the Versailles Treaty. This 'clean slate' situation encouraged them to come up with a number of revolutionary ideas and, further, to put them into practice. The harsh treatment meted out by the Allies at Versailles had provided the incentive for study, improvisation and secret experimentation. The efforts of such men as Guderian and the Reichswehr commander, General Von Seeckt, combined with the political will of Hitler (overriding the objections of the German

11

^{1977,}No 2, p.71, John B.Wilson, "Mobility Versus Firepower: The Post World War One Infantry Division" in Parameters, Vol XIII, September 1983, No 3, pp 47-52; and K. R. Greenfield, et al, United States Army in World War II: The Army Ground Forces. The Organisation of Ground Combat Troops, Army Historical Division, Washington, D. C., 1947..

B. H. Liddel Hart, <u>Defence of the West</u>, William Morrow, New York, 1950, pp. 5-6; Ropp, <u>War in the Modern World</u>, p. 304; Preston & Wise, <u>Men In Arms</u>, pp. 285-286; Fuller, <u>The Conduct of War</u>, pp. 245-246; House, <u>op.cit.</u>, pp 89-96; Barnett, <u>Britain and Her Army</u>, pp. 415-416 &421; B. Bond & I. Roy (eds) <u>War and Society: A Yearbook of Military History</u>, Croom Helm, London, 1975, pp. 219-220.

Army's High Command), produced the combined arms force known as the panzer division, at a time when other strategists were thinking in terms of forces solely of armour or of armour as a mere infantry support weapon. In contrast to other nations, the Germans took hold of the opportunity provided by national reconstruction after World War II to design their forces for specific combat roles, which would be consistent with their strategic outlook, economic capabilities and unique geographic location. Germany's overwhelming victories against Poland in 1939, and France in 1940, using 'blitzkrieg' tactics (when stuka dive bombers acted as artillery for close support, and tanks were used to probe, pierce and exploit weaknesses), convincingly illustrated her superior fighting power to the rest of the world. 12

Meanwhile, the Soviet Army had similarly envisioned "deep" ("blitzkrieg"-like) battles involving combined arms mechanised forces (including artillery, paratroops and air strikes) and large-scale manoeuvre. However, any advantage gained from this foresight was negated by a political power struggle which resulted in the "great purge" of the Red Army in the late 1930s. Consequently, the Soviets were ill prepared for the German onslaught of 1941.¹³

The Germans compensated for their economic limitations by using new weapons and tactics while their opponents still

Howard, War In European History, p. 132; Ropp, War in the Modern World, p. 301; Bond, op.cit., p. 218; Fuller, The Conduct of War, p. 244-245; and House, op.cit., pp 80-88. "Fighting Power" is defined by Van Creveld as the total mental qualities that make armies fight. See Van Creveld, Fighting Power, p. 3. See also Preston & Wise, Men In Arms, pp. 296-297; and Barnett, Britain and Her Army, pp. 416-417 & 422.

Fuller, The Conduct of War, p. 247; and House, op.cit.. p 283 & 99-106.

relied on static and linear defence. The Blitzkrieg tactic, for example, achieved success through its concentration of scarce resources, and by the speed of its onslaught. In 1940, for instance, it was the Allies' failure to realise the tempo of mechanised operations, rather than a deficiency in their means, that proved decisive. 14

An advantage of the German organisation was that it could simultaneously be both rigid and flexible. They were able to tailor the structure of a force to accomplish a particular mission, using basic building blocks which were as similar to each other as possible. In doing so they fully utilised their resources. In contrast to this, the Allied forces were both rigid and cumbersome. American commanders were able to improvise battle groups, but, unlike the Germans, they left manpower standing idle at critical stages. The U.S. forces emphasised firepower, rather than the troops' own fighting power. Men became adjuncts of their machines while 'mechanical' efficiency was emphasized. Scant attention was paid to the social and psychological problems inherent in this approach. 15

Throughout World War II there were significant problems with resupply, lines of communication and sluggish command and control of units, due to now outmoded organisational structures inherited from World War I. In 1944, the Allies' long, narrow chain of command in their armies advancing from Normandy to the Rhine served to delay

Preston & Wise, Men in Arms. p. 299; Ropp, War In the Modern World, p. 302.; Van Creveld, Fighting Power, pp. 4-5; Liddell-Hart, Deterrent or Defence, p.104; Binkley, op.cit., p.74; Smith, op.cit., pp 20-21; and B. Bond & I. Roy, War and Society, p. 220.

Fuller, <u>The Conduct of War</u>, p. 246; House, <u>op.cit.</u>, pp 121-133; and Van Creveld, <u>Fighting Power</u>, pp. 9, 44-46 & 166-170.

the advance, despite mobile equipment and an exhausted opponent. To overcome this problem, Montgomery, for instance, often quickened things up by taking short cuts down the chain of command. 16

The Germans' main problems toward the end of the war were manpower and equipment shortages. To reduce the effect of these shortages, it was decided to eliminate brigades. Divisions were reduced in size, with each divisional headquarters now controlling anywhere between three and seven "battle groups". These battle groups were combined arms teams, varying in size and composition. This was again an entirely new concept, developed out of practical expediency. The groups' motorization and shortened chains of command increased both their tactical flexibility, and their mobility, enabling the German commanders to regain some of the initiative against the sluggish Allied organisations. These developments occurred too late to turn the tide of the war, but they left a favourable impression with many Allied officers. 17

In an article published in 1950, Liddell Hart developed these German concepts further and, in so doing, laid the foundations for both the pentomic and the pentropic divisional organisations. In regard to numbers of sub units at each level in a fighting force, he argued that "threes" are unnecessarily narrow, "fours" are too balanced and discourage the commander from concentrating his force, "sixes" facilitate two groups of three, and "sevens" are good for tactical flexibility but are difficult to control. Thus he concluded that the best compromise was "fives". General Westphal, in commenting on Liddell Hart's article said that "there seems to be no other solution than to

B.H. Lidell Hart, " How to quicken manoeuvre", pp182-183.

See Smith, op.cit., pp 20-21, Liddell Hart, <u>Deterrent Or Defence</u>, pp180-184; Liddell Hart, " How to Quicken Manoeuvre and Gain Flexibility", pp 181-195; and Van Creveld, <u>Fighting Power</u>, pp.163-165.

decrease the number of headquarters,...I am therefore in full agreement with [his] extremely convincing exposition about division in fives." 18

Liddell Hart and Westphal's concern had been sparked by the fact that at battalion level, the organisations of World War II had become highly diversified. (This diversification created great logistic problems for the higher headquarters.) Their inventories, for instance, included rifles, grenades, two types of mortars, two kinds of machine gun, light tracked vehicles, antitank guns, hand-held anti-tank weapons and several types of mines. The demands of armoured units had become more complex, and those of amphibious and airborne units more complex still. ¹⁹ New technology had encouraged specialisation, and thus decreased flexibility and all-round capability. The advent of nuclear weapons at the close of World War II had heralded an era in which these problems would grow to a crisis point.

In the immediate post-war years in Britain, theorists had believed that tactical nuclear weapons represented unusable military power on the battlefield. Later, however, these atomic weapons came to be regarded simply as bigger and better forms of artillery. ²⁰ In the mid 1950s the U.K. infantry brigade was integrated with armour and given its own artillery, equipped with tactical nuclear weapons. ²¹

¹⁸ Cited in Liddell Hart, op.cit., in The Army Quarterly, p.194.

¹⁹ Howard, War in European History, p. 133.

G. Jones, "The British Army Since 1945", in M. Howard,(ed)

The Theory and Practice of War, Cassell, London, 1965, pp

314-317; and Howard, War in European History, p. 135.

C. Barnett, <u>Britain and Her Army.</u> p. 490; and O. Heilbrun, <u>Conventional Warfare in the Nuclear Age.</u> Allen & Unwin, London,1965, pp. 114-115. Liddell Hart, <u>Defence of the West</u>, 1950, cited in G. Jones, <u>op.cit.</u>, p.319. Liddell Hart

In response to the nuclear threat, the N.A.T.O. forces had organised their units, below divisional level, into a form of the German World War II battle groups. These were supposed to be small enough to minimise the effect of enemy nuclear weapons yet powerful enough to conduct independent operations effectively. The advent of nuclear weapons to the battlefield meant that the ratio of forces to space had again changed: even fewer troops were required to defend a given area.²²

Throughout the 1950s, Britain was gaining valuable experience in anti-guerilla warfare (from her colonial military entanglements), which would contribute to the development of new organisations. In 1957, for instance, it was stipulated that units acting independently against a guerilla force should have the means for tactical mobility, reliable communication, and close air support, as well as having tanks to support the infantry.²³

In the same year, as a result of the implementation of the White Paper, presented by the Defence Minister Mr Duncan Sandys, the "nation in arms" in Britain began to be dismantled. The main thrust of the White Paper was that the use of overwhelming forces was now obsolete, and that military forces

was a severe critic of the policy of masive retaliation. See Bond, op.cit., pp. 21 & 166; and J. Lider, <u>British Military Thought After World War II</u>, Gower Press, Swedish Institute of International Affairs, 1985, pp. 198-200, 467, 512, & 516-518.

Heilbrun, op.cit., p. 114; Liddell Hart cited in Bond, op.cit., p. 202; and Hill, op.cit., p. 20.

²³ G. Jones, op.cit., p. 325.

were no longer designed to wage war, but to prevent it. This was known as the British 'New Look'.²⁴

The British government had decided to act on the assumption that nuclear weapons could take the place of men in the military arrangements of a country, thus saving its government a lot of money. Included in the plan was a proposal to reduce the size of the Regular Army (down to 165,000 men) and to abolish National Service by 1960 (a precedent that was immediately followed by Australia). It was assumed that as long as the United States had a greater nuclear capability, the threat of massive U.S. retaliation against Britain's aggressor would be a very effective deterrent.²⁵

It should be noted here that 20th century divisional organisations have largely followed one of the following three basic structures. First, a three combat team structure - one element holds or guards the enemy, another element hits with a left or right flanking 'hook,' and a third element acts as a 'reserve' or a force to provide depth to an attacking or enveloping force. Second, a structure of four combat elements enabling both reinforcement ('depth'), and a reserve for any unforeseen circumstances. Third, a structure of five combat elements adding a fifth element to provide the base defence, logistic elements protection, or an extra reserve.²⁶

The application of atomic firepower to the battlefield had continued to be the most challenging issue of the 1950s for the

Lider, op.cit., pp. 201-207, 318,338, 521-523, 525, & 528-533.

Montgomery, "Organization For War In Modern Times," In <u>The Journal of the Royal United Service Institution</u>, Vol 50, November, 1955, No 600, p. 517; Bond, <u>op.cit.</u>, p. 170-171, 195, & 321-324; Howard, <u>Studies in War and Peace</u>, pp. 161-164; and Jones op.cit., pp 320-321.

Wilson, in Parameters, p. 47.

U.S. Army (under the Eisenhower administration), as policy makers attempted to reconcile the U.S.'s foreign policy objectives and strategic outlook with her combat force capabilities and economic constraints.²⁷ By the late 1950s, tactical nuclear weapons had become standard equipment for both NATO and American military forces.²⁸ General Gavin has noted that "a bigger bang for a buck" became the catchcry of NATO planning. "Trip wire" and "plate glass" were the terms used to describe the tactical role of ground forces in this setting where nuclear air-delivered weapons (such as ballistic missiles) became the cornerstone of policy.²⁹

By 1956, the Cold War had brought about further changes of doctrine in the U.S. Army. The U.S. Army Combat Development Command sought the elimination of regiments

Ropp, War in the Modern World, p. 400; Preston & Wise, Men in Arms, pp. 347-348; Bond, op.cit., p. 95; R.F. Weigley, The American Way of War. A History of United States Military Strategy and Policy, Macmillan, New York, pp. 399-417; and V. Ney, Evolution of the United States Army Field Manual: Valley Forge to Vietnam, Combat Operations Research Group (CORG) Memorandum 224 for Headquarters United States Army Combat Development Command, Fort Belvoir, Virginia, January 1966, pp. 94 & 112.

M.H. Halperin, <u>Limited War in the Nuclear Age</u>, John Wiley & Sons, New York, 1963, p. 59; and B. B. Fall, "Indochina: The Seven Year Dilemma", in <u>Military Review</u>, Vol 33, October 1953, p. 35, cited in A. J. Bacevich, <u>The Pentomic Era: The U.S. Army Betwen Korea and Vietnam</u>, National Defense University Press, Washington, D.C. 1986, p. 168.

Lieutenant-General J.M. Gavin, War & Peace in the Space Age, Hutchinson, London, 1959, p. 147: and J. P. Rose, The Evolution of U. S. Army Nuclear Doctrine, 1945-1980, Westview Press, Colorado, p. 57. See also Bacevich, op.cit., pp. 54-55.

(Australian brigade equivalent) in favour of the creation of "more flexible" combat units, and the integration of tactical nuclear weapons at division and battalion level.

This became the basis for the U.S. government's "New Look" defence forces, based on the strategic doctrine of massive retaliation. Emphasis was placed on building up the capability of the Air Force and to a lesser extent the Navy. This period was what General Taylor called the "Babylonian Captivity." Army budgets and manpower ceilings were reduced, and widespread doubts about its future utility prevailed. By 1961 (the last year of the Eisenhower administration) Army strength had bottomed out at 859,000, compared with 1.5 million soldiers during the Korean War. 30

Both General Taylor (Army Chief of Staff 1955-1959), and his predecessor General Ridgway, had relentlessly attacked the doctrine of massive retaliation (which the pentomic organisation was designed to accommodate), criticizing it as ineffective, unrealistic, and immoral. American monopoly of nuclear weapons had not deterred the Korean conflict, and in 1954 her nuclear capability had proved irrelevant to the outcome of the war involving the French in Indochina. Yet in 1956, a bias toward advanced technology, put together with popular assumptions regarding communist tactics, led the army to favour the use of tactical nuclear weapons even as they were questioning their utility and the very concept of massive retaliation. Reservations were swept aside - as Bacevich has noted, "the Army believed that the only question to be answered was the technical one of learning how to pass the exploitation forces through an area scorched by nuclear fires." The available

General M. D. Taylor, <u>The Uncertain Trumpet</u>, New York, 1959, p. 108; and Gavin, <u>War & Peace in the Space Age</u>, p. 148.

Bacevich, op.cit., p. 13 & 26; and Weigley, The American Way of War, pp. 417-422.

technology was inadequate to cope with the problems of troops fighting in the face of strong radiation.³²

A new concept, tailored to the strategic doctrine of "massive retaliation" adhered to by the Eisenhower administration, had been conceived in February 1955, and was approved by the Army Chief of Staff, General Maxwell Taylor, in June 1956. It was initially known as the "Pentana Army" and was characterised by a pentagonal structure (based on Liddell Hart's "fives" concept) and the elimination of the brigade echelon, to facilitate an atomic warfare capability. ³³ It was assumed that atomic war was the most likely form of future warfare, and that tactical nuclear weapons would be used. The structure later came to be known as the 'Pentomic' organisation.³⁴

Bacevich, op.cit., pp. 110-112; Bond, op.cit., pp. 53-54, 57, 63,196 &199; and P. Paret, (ed) Makers of Modern Strategy: From Machiavelli to the Nuclear Age. Princeton, 1986, pp 784-785.

J. A. English, <u>A Perspective on Infantry</u>, Praeger, New York, 1981, p. 275. See also House, <u>op.cit.</u>, p. 237; Ney, <u>op.cit.</u>, pp. 96 & 112; W. L. Mayew, "The Regimental System in the United States Army, Its Evolution and Future", United States Command and General Staff College, (Master of Military Art and Science Thesis), 1972. (See also <u>Army Lineage Series. Infantry</u>, P. 89, cited in Mayew, <u>op.cit.</u>); and Binkley, <u>op.cit.</u>, p. 78.

J. K. Mahan & R. Danysh, Army Lineage Series: Infantry.

Part I: Regular Army, Office of the Chief of Military History,
United States Army, Washington, D. C., 1972, p. 100; and
Lieutenant General C. D. Eddleman, "The Pentomic
Reorganization- A Status Report", in Army Information
Digest, September 1958, p. 3.

With the advent of tactical nuclear weapons the choice between divisional structures had became more complicated. Who could say that one force structure was superior to another when the type of warfare envisaged was without precedent? This was the dilemma facing combat development organisations in the 1950s. Responses differed, yet there was a consistent emphasis on mobility, and the capability of units to operate in a semi-autonomous dispersed tactical scenario. Unlike the Americans, the British decided to integrated their changes within the existing regimental system, as it was politically unacceptable to abolish such an established tradition as the regiment.35 The Canadians, like the British, decided to remain with the brigade group system, modifying and changing it to meet new conditions. (Australia was to take a different approach.)

The U.S. Federal Government had considered that the best way to stimulate economic growth was by cutting government expenditure. The Eisenhower administration, therefore, had sought a military capability that would counter the existing Soviet threat, but as cheaply as possible. The planned pentomic reorganisation suited well, as it was proposed to cut the strength of divisions from 17,460 to 13,748 men.³⁶ According to Bacevich, the pentomic division was one of the few Army initiatives of the 1950s to attract President Eisenhower's

Montgomery, "Organization For War In Modern Times," p. 514.

Bacevich, op.cit, pp. 12-15 & 19; Gavin, op.cit., p. 150; and General W. G. Wyman, "The United States Army: Its Doctrine and Influence on U. S. Military Strategy", in Military Review, Vol 37, No 12, March 1958, pp.4-6 (General Wyman was Commanding General, United States Continental Army Comand at the time of writing).

enthusiastic support, as he saw it as a means of reducing the army's size while retaining the same number of divisions.³⁷

The U.S. infantry division now contained five infantry "battle groups," (a further refinement of the original German concept) (previously infantry "battalions") each containing 1400 men, divided amongst five sub units. It also included one battalion each for engineering, signalling, and ordnance, with two artillery battalions, one tank battalion, a cavalry battalion and medical and transportation services (See Appendix A). The battle group organisation seemed highly suitable both for dispersion and for all-round defence - "three to attack, one to hold and one to defend". Furthermore, it allowed for a reduction in manpower of 3,700 men per division without a loss of strength in the rifle platoons.³⁸

The new "battle group" concept was somewhere in between an old style battalion and a brigade, but in "foxhole" strength (number of fighting men) was equal to two battalions of the triangular division (1,427 men but later reduced to 1,356 men). It was a self-contained unit that (after 1959), consisted of a headquarters and service company, five infantry companies, each of three rifle platoons plus a heavy weapons platoon, and a 4.2 inch mortar battery (including eight mortars). The battle group combined the functions of both the brigade and the battalion and in so doing, eliminated a whole

See Goodpaster, "Memorandum of Conference with the President", 11 October 1956, Box 19, Ann Whitman File (Eisenhower Diary), Eisenhower Papers, cited in Bacevich, op.cit., p. 170; and "Smaller 'Pentomic' Divisions on the Way", in Army. Navy. Air Force Journal, Vol 94, No 18, December 1956.

Major J. H. Cushman, "Pentomic Infantry Division in Combat", in Military Review, January 1958, p. 19; Heilbrun, op.cit., pp.114-115; and "New Divisional Organisation", in Army Information Digest, Vol 12, No 5, May 1957, p. 17.

command echelon. Its pattern of five subordinate elements did, however, greatly increase the number of demands on commanders.³⁹

The service company included a number of specialist sub units, such as the reconnaissance platoon, integrated light tanks, an 81 mm mortar, and an armoured infantry squad, as well as an assault gun platoon. The intention was that the organic and supporting weapons would enable the battle group to withstand prolonged attacks while dispersed, and then to concentrate rapidly with neighbouring units when required to do so.⁴⁰ In reality, however, mobility was limited, as the division was only provided with sufficient armoured personnel carriers to lift one infantry "battle group" (battalion) at a time.⁴¹

The infantry division was integrated with two artillery battalions in 1956, but in 1959 this was raised to five direct support battalions, each having one 105mm and one 155mm

Cushman, op.cit., pp. 20-21. See also House, op.cit., p. 238 & 240; Mahon & Danysh, op.cit., p. 91; C. D. Eddleman, "The U.S. Army Pentomic Division", in <u>Australian Army Journal</u>, No 127, December 1959, p. 10. and "New Divisional Organization", in <u>Army Information Digest</u>, Vol 12, No5, May 1957, pp19-20. A.J. Bacevich has claimed that there were five platoons per rifle company within the Pentomic battle groups. See Bacevich, op.cit., p. 105 & 106.

The M59 amphibious APC was used but was soon to be replaced by the lighter and less expensive amphibious APC, the M113. See Mahon, & Danysh, op.cit., p. 94. See also Eddleman, "The U.S. Army Pentomic Division", p. 7.

⁴¹ R. M. Ogorkiewicz, "Armoured Infantry Carriers," in <u>The Army Quarterly and Defence Journal</u>, Vol 80, April and July 1960, p. 183; House, <u>op.cit.</u>, p. 241; Cushman, <u>op.cit.</u>, p. 26; and Eddleman, "The Pentomic Organisation- A Status report," p. 6.

howitzer battery. In addition, the division had one general support battalion which contained one eight inch howitzer battery, and one "Honest John" atomic rocket battery. 4 2 Previously the divisional organisation had only three 105mm howitzer battalions and one 155mm howitzer battalions. The proliferation of artillery was due to the emphasis on dispersion, as battalion areas had to be far enough apart to ensure that no two of them could be hit by one atomic bomb. 43

Within the infantry division, Aviation was also to play a role in the dispersed warfare that was now envisaged. Hence both fixed and rotary winged resources were centralised in the combat aviation company.⁴⁴ Furthermore, there was now an armoured battalion in the division, consisting of five tank companies. A cavalry squadron containing three troops was also included. Aviation, armour and cavalry could be pooled under

The Honest John truck-launched rocket with a range of 22 miles. See Bacevich, <u>op.cit.</u>, p. 95; Major R. M. Young, "Artillery of the Pentomic Infantry Division", in <u>Military Review</u>, Vol 38, April 1958, No 1, pp. 33-35; Pizer, <u>op.cit.</u>, pp. 37-38.

C. M. Mattimoe, "Atomic War Tactics", in Military Review, Vol 36, February 1957, No 11, p. 89; Cushman, op.cit., p. 21; House, op.cit., p. 227; General Sir Dudley Ward, "Divisional Organisation," in Military Review, August 1957, p. 77. See also Wyman, "The United States Army, Its Doctrine and Influence on U. S. Military Strategy," p. 9; and M. G. Marken, Sr, "The Atomic Age Divisions", in Army Information Digest, Vol 20, No 9, September 1965, p. 61.

W. L. Boyston, "Armor in the Atomic Battlefield", in Armor, Vol 46, May- June 1957, No 3, p. 29. See also Mahon & Danysh, op.cit., p. 92; Cushman, op.cit., p. 22; and House, op.cit., p. 241.

divisional control or attached to battle groups, as could engineers and other supporting units (See Appendix A).⁴⁵

Other U.S. division types were also affected by the pentomic reorganisation. Within Airborne infantry divisions, the five airborne 'battle groups' (each of about 1,400 men) were completely air transportable by Air Force medium transport aircraft, such as the C-130 Hercules. However, the "Reorganized Current Armored Division" (R.O.C.A.D.), unlike the infantry and airborne divisions, underwent only minor changes. The same pentagonal structure was not adopted, and manpower changed only slightly from 14,683 to 14,617.47

With a dispersed posture in an atomic environment, the biggest problem, however, was that the "cure" could become "worse than the disease". Concentration, with its risks, had to be tolerated at some level, as without it there could be no defensive strength. 48 The answer appeared to be "area defence."

Cushman, op.cit., p. 21; and Eddleman, "The U. S. Army Pentomic Division", p. 10.

Mahon & Danysh, op.cit., pp. 92-93; Binkley, op.cit., p. 78; Marken, op.cit., p. 60; Bacevich, op.cit., pp. 100 &106-108; and "New Divisional Organisation", in Army Information Digest, Vol 12, No 5, May 1957, p. 18.

Boyston, op.cit., p. 23; Mahon & Danysh, op.cit., p. 93;"New Divisional Organization", in <u>Army Information Digest</u>, p. 21; Mattimoe, op.cit., pp. 92-93. and Mayew, op.cit., p. 84.

Mattimoe, op.cit., p. 89; W. G. Wyman, "Highlights of Army Doctrine," in <u>Armor</u>, Vol 67, March-April 1958, p. 16, cited in Bacevich, op.cit., p. 67; Wyman, in <u>Military Review</u>, Vol 37, March 1958, pp. 10-11; W. M. Brucker (then Secretary of the Army cited in <u>Military Review</u>, January 1958, p. 30; Eddleman, "The Pentomic Reorganization- A Status Report",

This tactic consisted of establishing "small islands of resistance widely separated over the most favourable terrain." In these circumstances it was envisaged that, to compensate for the lack of men on the ground, the "new style concentration" would be atomic firepower.⁴⁹

Dispersion was not, however, an unquestioned principle. It dissipates strength and combat power, thus making the conduct of operations more difficult. The commandant of the U.S. Army Infantry School declared that considerations of survivability prescribed "three to five miles between battalion centres of mass"- and yet it was acknowledged that the available direct-fire weapons could not cover such distances. As General Eddleman admitted: "There is a gap between our more advanced concepts and our present capabilities." 50

Improved communications were also required to overcome the problems associated with both dispersion and mobility, and to reduce the isolation of the commander from his subordinates. Due to technological limitations, however, communications did not completely compensate for these problems. Nevertheless, the assistant divisional commander could relieve the burden of the divisional commander by forming a brigade-type task force of two or more battle groups.⁵¹

p. 4; Eddleman, "The U. S. Army Pentomic division", p. 6; and Mattimoe, op.cit., pp. 89-92.

Wyman, in Military Review, p. 9.

Colonel M. A. Mattimoe, <u>Military Review</u>, June 1951, cited in Rose, <u>op.cit.</u>, pp. 67-68; Bacevich, <u>op.cit.</u>, pp. 115-117; Eddleman, in <u>Military Review</u>, p. 4; and Eddleman, "The U. S. Army Pentomic Division", pp.9-10, &12.

Colonel C.M.I. Pearson, & Colonel W.J. Morrow, "The Pentropic Division-Another Point of View," in <u>Australian Army Journal</u>, No 187, December 1964,pp. 5-6. See also

Another problem was that the battle group headquarters was overwhelmed by logistic requirements. The initial idea had been to shift some of the responsibility for supply onto the divisional headquarters. However, divisional headquarters could not adequately fulfil its tactical role whilst providing the additional logistic support. Thus, during exercises, the assistant divisional commander found himself dealing with logistic problems, rather than performing any tactical role.⁵²

The Army was aware of some of its equipment's technological limitations, and, further, that atomic weapons could not be used at all without presidential authorisation. However, as Major General J.B. Medaris, Chief of the Army's Missile Command, has said,"it is far easier to justify a budget with modern [atomic] items that are popular [than with conventional weapons that are effective]." Consequently, the Army invested in developing rockets and guided missiles at the expense of more conventional equipment. One side effect of this emphasis on atomic weapons was that the Army made slow advances in other fields of technology, and in terms of mobility, did not advance far at all.⁵³

It is clear, then, that the pentomic organisation had serious problems with its implementation. Although it was designed to enable the U.S Army to fight a tactical nuclear battle, its theoretical combat capabilities (including mobility, flexibility, and firepower) could not be attained in practice.

Mayew, op.cit., p. 83; Kleinman, op.cit., p. 50; and Cushman, op.cit., p. 22.

Eddleman, "The U. S. Army Pentomic Division", p. 10; General Sir Dudley Ward, "Divisional Organisation," in Military Review, August 1957, p. 78; House, op.cit., p. 240; and Rose, op.cit., p. 70.

Bacevich, <u>op.cit.</u>, pp. 72, 94-96, & 98-100; and Ogorkiewicz, <u>op.cit.</u>, p. 183.

Furthermore, the organisation was ill-suited to adaptation for use in other types of warfare, such as counter-insurgency operations. Further still, by the early 1960s the combat structure no longer conformed to the U.S. Army's perceived combat roles, which were in turn based on U.S. foreign policy. As a consequence, the pentomic organisation was abandoned in 1961.

This chapter has provided a brief analysis of how armies have been organised since 1800 and of the factors which determined their organisations. From this analysis the following four factors have been identified as crucial to organisational change.

The first and most important factor appears to be a nation's strategic outlook and perceived combat roles. The German Army of the late 1930s, for instance, was tailored to comply with Hitler's ideas of limited lightning war in accord with his plans for European dominance. In the same period, the United States reverted to its pre-war political isolationism, which resulted in the Army losing much of its organisational direction and purpose. The French, in 1940, unfortunately considered that the main purpose of tanks was to support the infantry in a re-enactment of the battles of 1918. In 1956, the United States adopted the pentomic organisation as nuclear war then appeared to be the most likely role of a modern army.

The geographic location of a country plays an integral role in determining both the strategic outlook and the perceived combat roles of a nation's forces. North Germany, for instance, was for centuries the central battleground of Europe. In both World Wars, the Germans fought against opponents to the north, south, east and west. The island state of Britain, in contrast to Germany, is protected by sea and therefore its army's development followed different priorities.

The second factor noted is that economic determinants of finance and manpower play a vital role in any reorganisation process. Germany's army, for example, had a manpower ceiling imposed by the Versailles Treaty. Moreover, Britain's military development in the inter-war period, was limited by its lack of financial resources. In the United States in the mid 1950s, economy drives made the streamlined pentomic organisation appear attractive to the government.

A third factor observed is that technological developments have, it seems, repeatedly helped to revolutionise military organisations. Breech loading rifles, cannons, railways, the telegraph, the advent of flight, the invention of machine guns, tanks and barbed wire, and the arrival of nuclear weaponry have all made an impact in different ways. Earlier in this century, men such as Liddell Hart conceived of the idea of a "lightning all arms war," exploiting the latest technological innovations in a way that altered western army organisational structures once again. Further organisational changes have surfaced in the nuclear age.

Finally, the bureaucratic power play behind the scenes is often a significant factor in achieving organisational change. Guderian, for example, managed to implement his organisational theories due to the support given him by Hitler in the early 1930s in overcoming the conservatism of the German High Command. In the United States in 1956, the Army pentomic organisation was introduced partly in an effort to impress and to gain support from President Eisenhower, who had considered the Air Force as the all important service in his theory of "Massive Retaliation." As a result of the interaction of these and other factors, organisational theories, revolutionised by the notion of a "levee en masse," have continued to develop in sophistication since Napoleon first introduced the concept of a "division."

These four factors all helped to determine the way the Australian Army was organised between 1957 and 1965. How they interacted is the subject of the following chapters.

CHAPTER THREE

FOCUS ON THE REGULARS: THE AUSTRALIAN ARMY 1957-1960

In the late 1950s, the Australian Army underwent a major adjustment in terms of its organisation, capabilities and priorities. This was a result of the interaction of four important factors. These four factors combined to produce a heady mix that shaped the outlook of both senior servicemen and politicians. The result was firstly the adoption of the pentropic establishment, and secondly its abandonment. In this chapter the particular factors which resulted in the 1957 and 1960 reorganisations are considered.

Australian troops fought in the Korean War as part of the British Commonwealth Division. The Australian Defence Forces thereafter continued to maintain a battalion of men as part of the 28th Commonwealth Brigade in Malaya, and also an Air Force base at Butterworth. The Australian role was seen to be to halt the southward advance of communism, in cooperation with both Britain and New Zealand. 1 Australia had residual interests in following the British organisational lead, but also found it to be to her advantage to keep abreast of developments in the United States. It was seen that Australia's emphasis on "forward defence" implied that there was a need for her military structure to be compatible with that of the United States, so as to ensure that in any future combined operations, logistic and organisational coordination would be as straight forward as possible. Hence, in 1956, when the "New Look" Pentomic organisation was introduced into the United States Army, Australia looked favourably upon the scheme.

D. Hawkins, <u>The Defence of Malaysia and Singapore: From AMDA to ANZUK</u>, Royal United Service Institute, London, 1972, pp 16-17.

Cooperation in Commonwealth defence had always taken the practical form of promotion of uniformity of organisations, training and equipment of military forces. This cooperation between the staffs had enabled them to promote a common doctrine, which provided the framework for Australia to formulate its own defence strategies and policies after World War II.² Thus, in February 1950, the Prime Minister, R.G. Menzies, introduced a National Service Training Scheme to add to Australia's defence preparedness, and to improve the physical fitness of the nation's young manhood. The political outlook of that time indicated that another global war was imminent, conceived of vaguely as a repetition of World War II.3 The Labor Party, under Chifley, had raised an Army in 1946 for service in Australia only, however it was now decided that, as of September 1950, the Army (both volunteer C.M.F. and A.R.A.) was to be available to be sent overseas for service. Menzies' view was that, "an Australian Army raised only for service in Australia would, in all probability, be raised for no service at As Millar has noted, however, in developing a large National Service Training Scheme, with very limited training. and service restricted to Australia, Menzies was building the very "wooden gun" he had so derided.4

In the 1950s the Australian Army's Directorate of Combat Development increasingly focused its attention on developments in the United States, such as the pentagonal

J. Lider, <u>British Military Thought After World War II</u>, Gower Press, London, 1977, p. 316.

N. Shileds in R. Forward & B. Reece (eds), <u>Conscription in Australia</u>, University of Queensland Press, 1968, p. 67.

Millar, "Australian Defence, 1945-1965," in G. Greenwood & N. Harper, (eds), <u>Australia In World Affairs</u>, 1961-1965, Cheshire, Melbourne, 1968, pp. 261-263.

("pentomic") divisional organisation for atomic warfare.⁵ Sir Robert Menzies summed up the views of many when, in 1955, he stated that

we are a proud member of the Commonwealth, and will ever continue to be so. Yet...it would be hard to find any Australian of this generation who did not recognise that the friendship and co-operation of the United States are vital to our own safety.⁶

The presence of the United States' military power in South- East Asia, and her continued assurances of support in the event of communist aggression, were perceived to be the two most vital factors in the maintenance of the security of the nations in the region. In contrast to this, the United Kingdom's limited resources would no longer permit her to make a major contribution to security in the Far East, in view of the priority of the demands of the European and Middle Eastern regions. Peter Lyon has pointed out that Australia and Britain's cooperation

in military matters, Staff College interchanges, weapons research and development, recent comradeship in arms, and similarities in equipment and training, resulted in intimacies and workaday

CRS A6059,41/441/11,letter from Colonel C.E. Long, Australian Military Representative, Washington, D.C., to AHQ Melbourne, 28 November 1955.

^{6 &}lt;u>Commonwealth Parliamentary Debates</u>, (Hansard), H of R, 20 April 1955, p. 44, cited in Sir Alan Watt, "Australian Defence Policy, 1951-1963: Major International Aspects," <u>Working Paper No 4</u>, Department of International Relations, Australian National University, 1964.

Department of Defence "Key Elements in the Triennial Reviews of Strategic Guidance Since 1945", April 1986, p. 6.

mutual understandings more far reaching than those between countries ostensibly linked in much more onerous alliances.⁸

Similarly, T. B. Millar wrote in 1965 that "Australian servicemen have been brought up on British traditions, arms, equipment, ships and doctrine. These things are not lightly or quickly discarded", and "there is still a greater degree of affinity, of identity of thinking and feeling on defence matters, with Britain than with the United States or any foreign country". He went on to say, however, that "the United States, unlike Britain, cannot avoid being a Pacific nation. Irrespective of what Britain does. America will continue to exercise power in the Pacific area". Britain appeared increasingly to be neither a counterbalance to American influence, nor a real alternative to American power for quaranteeing Australian security.9 Australia was compelled to recognise the diminution of British military might, and the accompanying development of the United States' as a new world military power. 10 As Barclay put it, "it would not be the British who would always be there in the Pacific as a great and powerful ally for Australia. It would be the United States or nothing at all."11

In October 1953, the Chief of the Imperial General Staff, Field Marshal Sir John Harding, had visited Australia. The

P. Lyon, "Great Britain and Australia", in H. G. Gelber (ed), Problems of Australian Defence, OUP, Melbourne, 1970, pp 70-71.

T. B. Millar, <u>Australia's Defence</u>, Melbourne University Press,1965, pp 38-41; and "Australian Defence 1945-1965," p. 257.

¹⁰ Watt, op.cit., p. 66.

G St J Barclay, <u>Friends in High Places: Austarlian-American Diplomatic Relations since 1945</u>, Melbourne, OUP, 1985, pp. 105.

meetings held at that time appear to have contributed towards the later shift in Australian strategic planning away from the Middle East. They perhaps also led to an agreement in principle to a combined land force in the Malayan area, for which the military staff talks began early in 1954.¹²

The experience of the Suez crisis in 1956 finally discouraged Britain from maintaining a large military presence in the Pacific. It also served to illustrate Australia's limited military capabilities: Menzies' offer of troops to support Britain was made on the understanding that it would take four weeks' preparation to send only one battalion.¹³

The realisation of our limitations provided impetus for the looming revolutionary switch in Australian strategic policy. Australian troops had been considered as part of a British defence force in the Middle East, but from the mid 1950s onwards the notion of the Middle East as an Australian responsibility was progressively abandoned. Malaya then became the pivotal point of Australia's forward defence effort. 14 Despite this strategic shift, however, it was still considered important that our diplomacy be designed to display support for both the United States and Britain retaining a presence in the South-East Asian area. 15

Meanwhile, in 1956, the Army planners were considering their two options for the reorganisation of the

¹² Millar, "Australian Defence, 1945-1965," p. 271.

Barclay, <u>op.cit.</u>, p. 128; and T.B. Millar, "Australian Defence, 1945-1965," p. 274.

Barclay, op.cit., p. 50. See also Commonwealth Parliamentary Debates, Vol H of R 26 & 27, p. 827; and Barnett, Britain and Her Army, p. 486.

T. B. Millar, <u>Australia's Defence</u>, Melbourne University Press, 1965, p. 41.

Regular Field Force. "Plan A" consisted of establishing a force of two brigade groups, supplemented by National Servicemen serving with the A.R.A. for two years at a time. "Plan B" consisted of establishing a force of one brigade group (apart from the battalion in Malaya), using only A.R.A. personnel. The C.M.F. component of both plans involved the retention of the three-divisional structure, but with a reduction in strength from 82,000 to 51,000, and the disbandment of some units. The National Service Training Scheme was to continue on a reduced scale, with a total intake of 12,000 per year. Regarding capital equipment expenditure planning, while it was recognised that modern weapons and support items were necessary, the emphasis was now being placed on standardisation or compatibility with the United States.16 The C.M.F. Member of the Military Board, Major General Sir Ivan Dougherty, did not favour Plan B, which he considered would harm the C.M.F., and not achieve a brigade group.17

On 4 April 1957, the Prime Minister, R.G. Menzies, announced an official review of defence policy. The threat of global war was now considered unlikely, owing to the nuclear deterrent; however it was predicted that a limited war could occur in our region at any time, based on communist efforts at expansion. It was felt that Australia was, therefore, responsible for preventing the occurrence of such outbreaks. It was further felt that "in the upshot, speed and a capacity to hit [would] determine victory." It was therefore seen to be necessary to

^{16 (}TS) CRS A6059, 41/441/18, "AHQ Basis for the Preparation of War Plans - The Reorganisation of the Australian Army," Appendix A to Supplement No 4 to Military Board Agendum 43/1956.

^{17 (}S) CRS A6059, 41/441/18, Board Minute Supplement No 4 to Military Board Agendum 43/1956.

36

have available for immediate employment highly trained, effective and compact units. 18

In his presentation of the review to parliament, Menzies set out the main points on which Australia's military planning would henceforth be based. These were that participation in regional collective defence arrangements was the most effective method of securing Australia's safety; association with the United States was a vital factor in these arrangements; the United Kingdom was still expected to maintain substantial and flexible striking power in the region; and that Australia should standardise (her equipment, organisation and techniques) as much as possible with the Americans.¹⁹ The Prime Minister's statement reflected a growing emphasis on the need for a rapid deployment capability of regular forces to the South-East Asian region, highlighted in 1957.²⁰

Consequently, in September 1957, Mr J. O. Cramer, Minister for the Army, announced a new mobile regular brigade group organisation (based on the previously mentioned "Plan B"), "designed to produce the best balance [of capabilities] for possible operations in the varied terrain of the South-East Asian

Commonwealth Parliamentary Debates, Vol H of R 14, p. 573, cited by N.T. Shields in Conscription in Australia, pp. 69-70.

Australian White Paper. Statement by Prime Minister, 4
April, 1957, cited in Colonel F. W. Speed, "Australian Army
Administration in an Allied Theatre of War", in <u>Australian Army Journal</u>, No 113, October 1958, p.30. See also (TS)
AWM 121, 11/A/2, "Strategic Basis of Australian Defence Policy", p.20. See also Defence Review by Mr Townley,
Commonwealth Parliamentary Debates (Hansard), Vol H of R
26 & 27, dated 29 March 1960, p. 648.

[&]quot;Key Elements in the Triennial Reviews of Strategic Guidance Since 1945", April 1986, p.6.

area." In this respect its role differed from that of the previous conventional C.M.F. brigade type, which was organised for employment either in the Middle East, or South-East Asia, and which was not designed for independent operations. (The Regular Army Field Force had, in theory, consisted of a "brigade group" of sorts since 1947 which in effect was a standard brigade with certain attachments. This idea had been reinforced in 1950 when it was agreed that the Field Force in Australia should be brought to a complete brigade group by the addition of a third battalion and that a second brigade group should be recruited as soon as the first brigade group was brought up to strength).²¹

This new brigade group was to be mobile, hard hitting and air portable to the greatest possible degree. The concept was in line with the general trend being followed in both the United States and Britain, where emphasis was being placed on both mobility and firepower. The following units were to be included under the command of the brigade commander:

- a one infantry brigade headquarters,
- b two infantry battalions.
- c one armoured regiment,
- d one field artillery regiment,
 e one field engineer regiment,
- f one Special Air Service (S.A.S.) squadron,
- g one supply and transport company,
- h one field ambulance.
- i ordnance and workshops for the various units,
- j one postal unit detachment,
- k one light anti-aircraft battery,
- I one field security section,

²¹ CRS A 6059, 41/441/28, "The Infantry Brigade Group" - Statement By Minister For the Army, The Honourable J. O. Cramer, dated 4 September 1957. See also J. E. Murphy, "History of the Post War Army," (unpublished work for the Australian Military Board), 1955, p.28.

38

m a percentage of a dental unit, and n one independent field squadron.

These units were mostly based in Eastern Command, but were spread out between Holsworthy, Enoggera, Puckapunyal, Casula, Middle Head, Swanbourne, Randwick and Moorebank.22

In order to achieve the formation of this group, the National Service Training Scheme had to be scaled down, so as to make available 2,000 regular soldiers for other duties. money saved from these cutbacks could be used, it was argued, to buy modern equipment. (These same arguments were to be used again, in 1959, to justify the eventual abolition of the National Service Training Scheme.)²³ The new defence program allowed for a reduction in the strength of the C.M.F. from 82,000 to 51,000, because of the reduced National Service intake. It was hoped that the reduction of the National Service component would encourage volunteers to join the C.M.F.to make up the 51.000.24 In a report in the Sydney Morning Herald in 1957, it was claimed that even this reduction was not enough, and that "politically it may be considered expedient; militarily it is hard to see the value of men who will be given only seventy seven days continuous training."25

This change in the National Service Training Scheme and introduction of the regular brigade group organisation was a reaction to numerous "trends of significance" seen by policy makers as ominous for Australia's security. China's military power, for instance, was perceived to be "already far superior

⁽S) CRS A6059, 41/441/18, Board Minute on Supplement No 3 to Military Board Agendum 43/1956, 1 November 1956; and (C) CRS A6059, 41/441/176, AMF Military Board: One Infantry Brigade Group, 1 April 1957.

Shields, Conscription in Australia, p. 70.

^{24 &}lt;u>Ibid.</u>, pp. 71-72.

²⁵ Sydney Morning Herald cited in Shields, op.cit., p. 73.

to all non-communist indigenous forces in the Far East and Australasia." Developments in South-East Asia were considered to be equally foreboding. Thailand, Laos, Cambodia and South Vietnam were vulnerable to communist pressures.²⁶ Singapore was also increasingly perceived to be at the mercy of communist forces.

Indonesia, while not yet seen as being able to pose a significant threat to the Australian mainland, had acquired modern jet fighters and transport aircraft, and had executed amphibious and airborne operations in the Indonesian archipelago.²⁷ Her internal problems were seen to have the potential to induce her to risk external adventures, directed at the Netherlands New Guinea (Irian Java), or Malaya. The United States was not willing to take a firm stance against Indonesia, as she produced commodities necessary to American industry. America was further concerned that withdrawal of support from President Sukarno might cause a communist takeover, and "deprive the United States of an area of the highest political. economic and strategic importance."28 Thus Australia was faced with the distinct possibility of needing to commit ground forces in three places simultaneously; that is: in the South East Asian Treaty Organisation (S.E.A.T.O.) area (in particular Thailand and South Vietnam), in Malaya, and, perhaps on our own, in New

²⁶ R.G. Boyd, "Problems of Australian Foreign Policy, July-December 1959," in <u>The Australian Journal of Politics and History</u>, Vol 6, No 1, May 1960, pp. 1-3; and Millar, "Australian Defence, 1945-1965," pp. 284-286.

T.R. Reese, <u>Australia, New Zealand and the United States</u>, A <u>Study of International Relations 1941-1968</u>, OUP, 1969, Ch 12; and Millar, "Australian Defence, 1945-1965," pp. 280-283.

[&]quot;Are We Ready to Face a Military Crisis", in <u>Sydney Morning Herald</u>, 4 August, 1959, p. 2; Barclay, <u>op.cit.</u>, p. 101 & ch. 6; and Boyd, <u>op.cit.</u>, pp. 5-6.

Guinea.²⁹ In the light of this predicament, Australia saw the maintenance of both British and United States' interest in the area as essential.³⁰

From the Australian viewpoint, although A.N.Z.U.S. complemented arrangements with the United Kingdom under "A.N.Z.A.M." (Australia, New Zealand and [the British military organisation in Malaya),31 S.E.A.T.O. bridged the gap between these two, that is the British defence line that stretched eastwards to Singapore and the American line stretching westwards to the Philippines. It committed the United States to the defence of the South-East Asian mainland as well as to the defence of Australia and New Zealand. Furthermore, S.E.A.T.O. enabled Australia and New Zealand to build up their military contacts, coordinate their planning, and develop common practices which were not provided for in A.N.Z.U.S. Although it was not quite the system that either of the partners would have preferred, it was the best that could be obtained at the time.32 S.E.A.T.O. was, therefore, a stronger agreement than the A.N.Z.A.M. agreement. The A.N.Z.A.M. agreement was, according to Sir Richard Hull, Chief of the Imperial General Staff,

²⁹ Millar, Australia's Defence, p. 22.

H. G. Gelber(ed), <u>Problems of Australian Defence</u>, OUP, Melbourne, 1970, p. 103.

Millar, "Australian Defence, 1945-1965," p. 257. According to R. O'Neill, ANZAM connotes Australian and New Zealand interest in the Malayan region, after Britain's opposition to calling it ANZAC area. See O'Neill, Australia in the Korean War. 1950-1953, Vol 1, Strategy and Diplomacy, Australian War Memorial, Canberra, 1981, p. 39.

B. Chakravorty, <u>Australia's Military Alliances</u>, New Delhi, 1977, p 10; and Millar, "Australian Defence, 1945-1965," pp. 265 & 269.

not a treaty but ... consultative arrangements for coordinating the defence interests of Australia, New Zealand and the United Kingdom. No formal arrangements of any kind existed...it covered no precise area, but related naturally to common defence interests.³³

(Nevertheless, Australian forces stationed in Malaya were there, according to the Prime Minister, Robert Menzies, "as part of a strategic reserve with the United Kingdom and New Zealand and as a contribution to the defence of the South-East Asian area.") $^{\rm 34}$

In contrast to this, S.E.A.T.O. was a formal treaty, and, as Sir Ragnar Garrett, former Chief of the General Staff, pointed out in 1963,

it is our policy today that with the help of our friends, we keep the potential aggressor as far from our shores as possible. SEATO is a forward bastion for our safety, and if we are not prepared to support our partners in it then we cannot expect their support if the time comes when we may sorely need it... Under these circumstances we must regard the United States as our principal guardian.³⁵

In order to enable Australia to perform this strategic role using available mobile regular forces equipped with modern

³³ Sir Richard Hull, <u>Canberra Times</u>, dated 28 February 1963, cited in Watt, <u>op.cit.</u>, p. 54.

 [&]quot;Prime Minister Menzies Statement on Defence of Malaysia,"
 Canberra, 25 September 1963, cited in Watt, op.cit., p. 88.

Lieutenant-General Sir Ragnar Garrett, "Australia's Defence," in <u>Sydney Morning Herald</u>, 12 December, 1963, p. 2.

42

weapons, rather than a major force available within six to twelve months and based largely on the C.M.F., radical priorities were laid down in 1959 for the allocation of resources. The assessment made of the strategic situation in 1959 concluded that Australia must be prepared for involvement in a cold or limited war in South-East Asia, planning for which should be accorded priority in force structure development. It was argued that allied support would be less fundamental to Australia's security in such circumstances. Consequently, it was assessed that "as our forces could be reshaped only over a long period of years they should be designed primarily with the ability to act independently of allies." In the assessment, however, it was also concluded that Australia's ultimate security was still linked to the presence of the United States and the United Kingdom forces in the region. Therefore, it was argued, Australia should have "as far as possible the necessary organisation and techniques to operate effectively with major allies."36

On 26 November 1959, Mr Athol Townley, the Minister for Defence, announced a new three year defence plan, based on the strategic assessment made in the same year.³⁷ Its major proposals included the abolition of the National Service Training Scheme, a 35 per cent increase in the strength of the Regular

^{36 &}quot;Key Elements", p. 7.

See Commonwealth Parliamentary Debates, Vol H of R 26 & 27, pp. 3185-3188; and "Minister Gives Details of New Defence Policy", in Sydney Morning Herald, 27 November 1959, pp. 2 &19. The Strategic Basis Paper was based on intelligence assessments of foreign military strengths and capabilities, industrial and economic potential, current projected attitudes and actions. From this study, probable threats emerged and the strategy required was calculated to meet the threats. The process of consultation included consultation with the Chiefs of Staff Comittee, the Defence Committee and Cabinet. See Garrett, "Australia's Defence," in Sydney Morning Herald, 11 December, 1963, p. 2.

Army brigade group and a 50 per cent increase in the volunteer strength of the C.M.F.³⁸ In the announcement, he also foreshadowed the introduction of the pentropic organisation which Army planners were in the process of finalising and preparing for promulgation.³⁹ The aims of the 1959 reorganisation, according to Mr Townley, were twofold: firstly, to improve the capability of the regular forces to respond swiftly, and secondly, to make the reserve forces more readily available.⁴⁰ It was considered that the Army would have to act promptly in any future limited war, and that in order for Australia's Army to provide the well trained, well equipped, mobile fighting force required to perform the strategic role laid down, the expensive and perhaps ineffective National Service Training Scheme had to be abolished.⁴¹

An important feature of these announcements was that the government's appreciation of the strategic threat had remained virtually unchanged since the 1957 defence review. The implication appeared to be that the 1957 pruning of the National Service Training Scheme had been a mere compromise measure; the reasons used in 1957 for the partial cutback, were the same as those used in 1959 for its destruction.⁴²

The government's view, that a major reorganisation of the Army was necessary to enable it to concentrate on the development of a regular force which was readily available and properly equipped to meet the strategic situation, was

³⁸ Sydney Morning Herald, 27 November, 1959, p. 1.

Interview with Major General D. Vincent, dated 5 August 1987.

Commonwealth Parliamentary Debates, (Hansard) Vol H of Rp. 3185.

⁴¹ Millar, "Australian Defence, 1945-1965," p. 275.

Shields, Conscription in Australia, p. 76.

reflected, it seems, in the opinions of some senior regular officers, who saw the Army's structure as anachronistic and inadequate to meet Australia's needs. The Army had, in the view of the Director of Military Operations and Plans (D.M.O.&P.), Brigadier N.A. Vickery, been "hacked about, reorganised, built up, and progressively run down," and had therefore become awkward, cumbersome and completely inefficient.43 As Maior General Falkland, Commanding Officer of 1 Field Regiment from 1964 to 1965 has stated, "there was a feeling that if we went to the pentropic concept we might at least have an all arms capability within the Regular Army."44 The Chiefs of Staff, in June 1959, argued "the primary emphasis must henceforth be placed on the Regular Army itself, its secondary task being to train and administer a C.M.F. to support it if necessary." This was the reverse of what had been the case until 1959, and it was to signify the final victory for the Regular Army over the CM F 45

On 22 March 1960, it was noted in the <u>Sydney Morning Herald</u> that senior C.M.F. officers had reportedly protested unsuccessfully to the Minister for the Army, J.O. Cramer, concerning the abolition of more than thirty C.M.F. infantry battalions, and the closing of 54 of the 292 training centres throughout Australia, due in part to the elimination of the

⁽S) CRS A6059, 41/441/70, "Organisation of the Army," letter from the Director of Military Operations and Plans to the Deputy Chief of General Staff, in 1959, p. 1.

Interview with Major General Falkland on 16 April 1987.

See (S) CRS A6059. 41/441/69, "The Reorganisation of the Australian Military Forces, 59/60-61/62", General Staff Instruction, No 1, dated 22 December 1959, p. 1. See also (TS)AWM 121, 28/A/2, "Composition of the Australian Defence Forces: Report By the Chairman, Chief of Staff Committee to the Minister for Defence," June 1959, pp. 9-10.

National Service Training Scheme.⁴⁶ The Defence Joint Planning Committee had been unanimous, however, in its decision of June 1959: the government's demand for priority for regular forces, as indicated in the Strategic Basis Paper, must be met.⁴⁷ The scheme ceased entirely in June 1960, despite objections from parliamentary back benchers and the Returned Services League, who argued that "the Government appeared to have lost the concept of giving Australian youth some sort of training." This decision effectively reduced the strength of the C.M.F. from 50,000 to only 20,000 men.⁴⁸

The then Chief of the General Staff, Lieutenant-General Garrett, claimed afterwards that "as a military contribution to defence, [National Service] had little, if any, value." According to Mr Townley, it had handicapped the development of a more effective and readily deployable Army, due to the demands it had made both on Regular Army finances (over nine million pounds per year - one seventh of the Army vote) and on manpower (almost 3,000 Regular Army personnel), without providing adequate compensatory military advantage. 50

Sydney Morning Herald, 22 March 1960, p. 1 and 30 March 1960, p. 1; and Commonwealth Parliamentary Debates. (Hansard), Vol H of R 26 & 27, p. 829.

^{47 (}TS) AWM 121, 28/A/2, "Composition of the Forces", Annex A, p. 6.

⁽TS) AWM 121, 28/A/3, "Composition of the Australian Defence Forces: Cabinet Decisions," November 1959; Sydney Morning Herald, 19 November 1959, p. 5; Sydney Morning Herald, 28 November 1959, p. 3; and Sydney Morning Herald, 22 March 1960, p. 7.

Sydney Morning Herald, 13 December 1963, p. 2.

Commonwealth Parliamentary Debates, (Hansard), Vol H of R
 p. 3186; and "Defence Changes", in <u>Bulletin</u>, 2
 December, 1959, p. 7. An Army vote of 70.26 million

One editorial went so far as to say that the National Training Scheme had "made nonsense" of both the C.M.F., whose volunteer component had been progressively "diluted", and the Regular Army, which had devoted a large part of its administration and training to National Servicemen.51 It had been a "luxury which a country of limited resources cannot afford" and had prejudiced not only the establishment of regular combat units but also the purchase of modern equipment.52 It had been introduced at a time when global war was considered likely, whereas the strategic outlook as envisaged in 1959 contained limited or local wars requiring, above all, a fast reaction capability. 53 In March 1960 Mr Cramer was to deny that the introduction of the pentropic organisation had dictated the cessation of National Service. He stated then that the steps of eliminating the National Service Training Scheme, of placing priority on the Regular Army field force, and of introducing the pentropic organisation, were taken in that order, and mainly due to considerations of finance and manpower. (The suspension of National Service was estimated to result in an immediate saving of four million pounds as well as further indirect savings.)54

pounds would have been required to retain national service training and raise a third battalion at the same time. See (TS) AWM 121, 28/A/2, "Composition of the Australian Defence Forces,"Annex A p. 6.

⁵¹ Sydney Morning Herald, 30 November 1959, p. 2.

^{52 &}lt;u>Ibid</u>, 27 November 1959, p. 2; and <u>Commonwealth</u> <u>Parliamentary Debates</u>, (Hansard), Vol H of R 26 & 27, p. 649.

The Sydney Morning Herald, 30 March, 1960, p. 20; "Defence Changes," in <u>The Bulletin</u>, 2 December 1959, p. 7; and Millar, <u>Australia's Defence</u>, pp. 121 & 122.

Commonwealth Parliamentary Debates (Hansard), Vol H of R
 26 & 27, p. 828; and AWM 121, 28/A/2, "Composition of the Forces," Annex A, p. 5.

In November 1959, the initial reorganisation had been euphemistically described as giving the C.M.F. a "new and honourable role." It had further been claimed that the C.M.F. was no longer to be treated as a "poor relation of the Regular Army." 55

This was not, however, the opinion of all service personnel, and in particular, not of C.M.F. members. Major General P.A. Cullen, C.M.F. Member of the Military Board from 1964 to 1966, commented that "some C.M.F. officers considered it was part of a deliberate plot by certain Regulars at Army Headquarters to reduce the capacity of the C.M.F. to a nullity." The resentment and displeasure of these senior C.M.F. officers was such that, during Major-General Denzil Macarthur-Onslow's term as the C.M.F. Member of the Military Board, there was a substantive move to have Major General Sir Ivan Dougherty, (C.M.F. Member from 1954 to 1957), appointed as Chief of the General Staff, as General Garrett's replacement. The attempt did not succeed, however, and the ascendancy of the Regulars was subsequently confirmed.

In parliament, members of the opposition also condemned the changes, claiming that

When we turn to the C.M.F. units, we see that their old regimental ties have been broken and their battle honours have been dispersed into a new, composite

⁵⁵ Sydney Morning Herald, 30 November 1959, p. 2.

Letter from Major General P. A. Cullen, dated 14 April 1987. There had been a C.M.F. Member of the Military Board since the reintroduction of the C.M.F. in 1948. See Millar, Committee of Enquiry into the Citizen Military Forces, Canberra, 1974, p. 15.

Millar, <u>Australia's Defence</u>, p. 122; and <u>Sydney Morning</u> Herald, 21 March 1960, p. 2.

and scrabbled unit of the ARA and the C.M.F....Half of them are integrated into the new pentropic battalions, and half of them are left...to hang on the vine and die, and finally to disintegrate.

Another spoke of the C.M.F. as "just a rabble of reinforcements for the pentropic force. Nothing else remains." In May 1960, however, Mr Cramer said that the Military Board, with Major General D Macarthur-Onslow, the C.M.F. Member, in attendance, "fully endorsed" the reorganisation and that senior C.M.F. representatives in each command had been fully consulted in the planned cuts. The Government, according to one editorial, had "made a wise and courageous decision." Nevertheless, the manpower and resource cuts that did occur seem to indicate that the fears of C.M.F. members were justified: the changes allowed the Regular Army to reorganise and then dominate Australia's Army. The subsequent management of the war effort in South Vietnam by the Regular army, without a major involvement by the C.M.F., served to confirm the Regular's superiority.

After the November 1959 announcement of the new three year defence plan, the organisational emphasis was temporarily on increasing the strength of the two battalion brigade group by adding an extra battalion, as the final plans for the introduction of the pentropic organisation, foreshadowed by Mr Townley in his speech in November 1959, were still being prepared. It was decided that the brigade group would be increased from

^{58 &}lt;u>Commonwealth Parliamentary Debates.</u> (Hansard), Vol H of R 26 & 27, pp. 806 & 808.

^{59 &}lt;u>Sydney Morning Herald</u>, 17 May 1960, p. 2, and 30 March 1960, p. 2.

^{60 &}lt;u>Ibid</u>, 23 March 1960, p. 2.

^{61 (}S) CRS6059, 41/441/70, "Outline to Meet Order of Battle and Strategic Basis Time Scale Priorities," 1959, p. 1.

4,000 men to 5,500, with a logistic support force of 3,000.62 This was to be in addition to the battalion group maintained in Malaya as part of the British Commonwealth Far Eastern Strategic Reserve (B.C.F.E.S.R.). These plans were overtaken in 1960 by the implementation of the pentropic division.

Underlying the pentropic restructuring was a perceived need for the Army to be capable of participating in two types of limited war. In an April 1959 report entitled "Composition of the Army," it had been argued that the Army

must be capable of providing a prompt contribution to South-East Asian defence, in concert with our major allies. It must [also] be able to act independently against aggression in the North West approaches. 63

As part of its ability to act in concert with allies, Australian forces would most likely be required in "anti insurgency" operations. The Army, therefore, had to provide highly trained, mobile and lightly equipped self-supporting forces at a high state of readiness. These would also have to be equipped and trained for sustained limited (conventional) warfare, in case the enemy scaled up its attack.⁶⁴

In order for Australia's military forces to perform these functions, a decision had had to be made as to the most efficient internal organisation for the purpose. Consequently, a tactical research section had been established within the Directorate of

^{62 (}C)AWM 125, 47/1, "Composition of the Army", Part II, dated 8 April 1959, pp. 1-3.

⁽C)AWM 125, 47/1, "Composition of the Army, Part II", dated 8 April 1959, p. 1. See also (TS) AWM 121, 28/A/2, "Composition of the Australian Defence Forces," June 1959, p. 1.

^{64 &}quot;Key Elements" p. 7.

50

Military Operations and Plans (D.M.O.&P.), to study recent world military organisational developments. One pertinent development had occured in January 1957, when the British Army had announced that it would adopt a new brigade group organisation to replace its standard infantry division. The new British tactical doctrine developed at Camberley was based on brigade groups suitable for deployment on a European battlefield, and thus included two infantry and one armoured brigade per infantry division, with two armoured and one infantry brigade per armoured division.

The Australian Army had been training to fight in South-East Asia using an organisation very similar to the now obsolete British standard infantry division. The Directorate of Military Training (D.M.T.) considered, however, that the new British brigade group structure was unsuitable for Australia's role in South-East Asia.66 The United States Army, on the other hand, had recently adopted an organisational concept known as the "pentana" division (later named "pentomic"). According to Major General Vincent, Director of Staff Duties from October 1958 to April 1960, the CGS had made it clear in 1958 that he wanted to arrange the Army to have three battalions in a brigade, as well as a battalion in Malaya, but that he had no fixed ideas on the type of divisions to be formed. The design parameters were broadly set as follows: the division must be able to fight a conventional war on the plains of Thailand in a SEATO context; to fight on its own and provide its own protection; and to be used either within the South East Asian area, or on mainland Australia. It was further stipulated that it

See (S) CRS A6059, 41/441/88. The Tactical Research section was transferred in 1961 to the Directorate of Military Training and was then called the Combat Development section.

^{66 (}S) AWM 121, 13/C/4, "Notes on Some of the Events Preceding the Development of the Pentropic Division," 19 June 1961, DMO, Colonel Lynch, p. 2.

must include its own integral aviation element, and that it must be capable of resupplying one battalion continuously, or three battalions for about thirty days. 67

The Australian Army had therefore been left with three alternatives, which were subsequently presented to the C.G.S., Lieutenant General Garrett. Australia could either maintain compatibility with the British, develop its own organisation, or follow the United States' lead.⁶⁸ The first alternative had been rejected, as the new British tactical doctrine had not been developed specifically for South-East Asia, nor could they be relied on to provide reinforcements to fight with us, if the need arose. The second alternative meant that the Australian Army would need to further develop its own tactics and organisation. going beyond the reorganisation proposed in the 1957 Strategic Basis Paper. According to General Vincent, this had been proposed by the D.M.O.&P. Brigadier C.E. Long in 1957, and approved, in theory, by the C.G.S., Lieutenant General Wells, although initially with the instruction to limit the size of the battalions to that of the reorganised British battalions.69 This suggestion had, however, had a number of problems: it would have resulted in Australian forces incompatible with both their British and American counterparts in an allied operation, and would have meant that Australia would be unable to test the organisation on a large scale, due to its lack of available Furthermore, "the ability to change fundamental policies on equipment and organisation [was] a luxury which Australia [could] not afford. So long as our military policies

⁶⁷ Interview with General D. Vincent, 5 August 1987.

⁽S) AWM 121, 13/C/4, "Notes on Some of the Events Preceding the Development of the Pentropic Division," p. 4.

⁶⁹ Ibid.

52.

were dependent on the thinking ... of our allies,...we had to go along with what was decided by those on whom we depended."⁷⁰

The third alternative had been for the Australian Army to base its organisation on the United States' organisation and tactics. This, it was hoped, would reduce the cumbersome size of individual units, wipe out intermediate layers of administration, improve flexibility by increasing the ratio of fighting to support personnel, and shorten the chain of command. The organisation had already been developed, and applied, at least in a limited way, in the formation of a pentomic division trained for tropical warfare, based in Hawaii. The proposal was not a complete surprise: the Australian Army had been analysing the Pentomic organisation since its inception. To

One feature which had commended itself to the political and military decision makers, was that the pentomic "battle group" was constituted of an all-round hard-hitting force of about the size that Australia could comfortably supply to a joint operation with our allies in S.E.A.T.O. It was not a huge force, but it was large enough to be noticed, to "count for something" politically and militarily. The provision of anything smaller would be militarily unimportant and politically

P. Robinson, in T. B. Millar,(ed), <u>Britain's withdrawal From Asia: Its Implications For Australia</u>, Strategic and Defence Studies Centre, Australian National University, September 1967, p. 92.

F. K. Kleinman, & R. S. Horowitz, <u>The Modern United States</u>
<u>Army</u>, Princeton, 1967, pp. 51 & 91.

See (S) CRS A6059, 41/441/11,letter from Brigadier Taylor, Commandant Australian Staff College, to CGS dated 19 September 1957; and letter from Colonel C.E. Long, Australian Military Representative, Australian Military mission, Washington D.C. on 28 November 1955 to Army Headquarters Melbourne.

embarrassing.⁷³ The battle group was also larger than the traditional Australian battalion, which some servicemen had found to be too small for effective jungle action.⁷⁴ It had further been suggested that the United States could guarantee to supply in bulk what we needed in terms of expensive military equipment whereas the United Kingdom could not.⁷⁵

A conference of the Military Board and the General Officers Commanding the regional commands was convened on 25 September 1959 to discuss the proposed adoption of the new organisation. The proposal was "strongly recommended" by the Arms Corps directors and was supported by the G.O.C.'s of Northern, Eastern and Southern Commands. discussion it was unanimously agreed that the proposed organisation was superior both for conventional and nuclear warfare. The C.G.S., Lieutenant General Garrett, pointed out that prior to the conference the Chief of the Imperial General Staff had, in conversation, expressed to him that Britain had no fixed preference as to Australia's choice of organisation. He stated, moreover, that the New Zealand C.G.S. was impressed with the proposal and had indicated that if it was adopted by Australia, then the New Zealand Army would reorganise along similar lines. Lieutenant General Garrett stated that in his opinion the proposal could be achieved and that it would boost the morale of the whole Army. 76 On the Minister, Mr Cramer's, recommendation however, a final decision was delayed until other considerations such as economic and political factors could

Millar, <u>Australia's Defence</u>, p. 128; and "Australian Defence, 1945-1965," p. 277.

⁷⁴ Sydney Morning Herald, 13 October, 1959, p. 2.

⁷⁵ Millar, Australia's Defence, p. 40.

Interview with General D. Vincent, 5 August 1987. See also (S) CRS A6059, 41/441/69, "The Reorganisation of the AMF 59/60-61/62", General Staff Instruction No 1, dated 22 December 1959.

be taken into account. At the close of the meeting, the C.G.S. committed the Army to the implementation of the Pentomic model, should it be approved.⁷⁷

As previously mentioned, the need for Australia to be compatible with a future ally had been an important factor in the decision making process. The experience of World War II, in which there had been significant differences with staff organisations, procedures, munitions, tactics and equipment, had been that such differences produced misunderstanding and frustration. As a result, men such as Colonel Speed were recommending as early as 1958 that the Australian Army should adopt the U. S. logistical system in its entirety, and also such of its army organisation as would be necessary to function on parallel lines. P

Gelber has cited five main reasons for the standardisation of our equipment and procedures with the United States. Firstly, the kinds of threat Australia envisaged required particular emphasis upon the deployment of advanced weapons systems; secondly, Australia had adopted a broad strategic alignment with the United States; thirdly, the Australian government believed that in most fields of sophisticated weaponry the best cost/effectiveness ratio lay with procurement from the United States; fourthly, the government believed that it would reduce the expense and effort required for the research and development of major weaponry; and fifthly,

⁽S)AWM 121, 13/C/4, "Briefs: General Post War History of the Army." See also (S) CRS A2653, Vol 4, Agendum 47, 1959, pp 1-2.

J.E.B. "The Critical Area of Compatibility", in <u>Australian</u>
<u>Army Journal</u>, No 148, September 1961, pp. 37-40.

⁷⁹ Speed, op.cit., p. 31.

such a procurement policy, once adopted, would generate its own momentum.⁸⁰

Another significant factor, which may have influenced the decision, was that the C.G.S., General Garrett, had been faced with the need to obtain more funds for the Army, which at the time, was still using worn out World War II weapons, equipment and vehicles. According to Generals MacDonald and Vincent, the pentropic restructuring did achieve this result, and Garrett may not otherwise have been able to obtain the necessary monies from parliament. Furthermore, from the Army's viewpoint, it ensured that the money saved from the abolition of National Service training did not go to Navy or Air Force projects. ^{8 1} There was a feeling that if a "reorganisation" was introduced, then it would invite a lot more interest and support than mere cutbacks in National Service, and this certainly appears to have been the case. ⁸²

Once the decision to introduce the pentropic organisation had been agreed upon in principle, the Minister for Defence, Mr Townley, announced the plan in Parliament on 26 November 1959, in the following terms:

A proposal designed to increase the efficiency of the Army is under consideration. This relates to a reorganisation of the operational units in the order of battle, both A.R.A. and C.M.F., on lines similar to the United States Army, which is based on the pentomic division, comprising five battle groups, instead of the division-brigade-battalion structure. Advantages of this new form of organization are stated to be greater flexibility, and therefore greater

H.G. Gelber, <u>The Australian American Alliance: Costs and Benefits</u>, Penguin, 1968, pp. 34-37.

Letter from General Sir Arthur MacDonald, 7 April 1987; and interview with General D. Vincent, 5 August 1987.

⁸² Interview with Major General P. Falkland on 16 April 1987.

sustainability in mobile war conditions; and the saving of manpower without loss of combat The capacity to co-operate with other British Commonwealth forces would be retained [by maintaining one battalion in the Tropical Establishment (T.E.), so as to be compatible with the Commonwealth units in Reorganization of the Australian Army along these lines would be accomplished within the strength figures that I have already given [A.R.A. 21,000, and C.M.F. 30,000]. The Government is convinced that the decisions on the Army which I have announced accord with the present strategic requirement, and will produce regular and C.M.F. forces well organized, trained and equipped, which will be able to play a prompt and effective part with our allies in any hostilities in which we may become involved 83

On 29 March 1960, the Army Minister Mr Cramer, confirmed the November 1959 announcement that both Australia's equipment and organisation would be along the lines of those of the United States.⁸⁴ Along with this announcement the streamlining that was to occur was further explained. The objective was to increase the strength and effectiveness of combat elements, while reducing the strength of the command, training and administrative organisation. This was to be done by:

1. increasing the strength of the Field Force;

Commonwealth Parliamentary Debates (Hansard), Vol H of R 25, pp. 3185 - 3188.

Commonwealth Parliamentary Debates, (Hansard) Vol H of R
 26 & 27, p. 828; and (TS) AWM 121, 28/A/3, "Composition of the Forces" No 106/1959 -Appendix B, September 1959, p. 2.

- 2. reorganising it to improve its tactical flexibility in operations;
- 3. raising a logistic support force;
- 4. improving mobility by providing light aircraft, both fixed and rotary wing, and amphibious watercraft; and
- 5. providing additional types of modern equipment.85

As Sir Ragnar Garrett pointed out in 1963, "It [was] only commonsense that our...policy [was] that our equipment should be similar to, or at least compatible with [the United States]."86 The 1960 pentropic plan was seen as representing a genuine attempt at modernisation and integration with our major ally (See Appendices I and J).87

The Army was subsequently reorganised into two pentropic divisions, each of five battle groups (explained in the following chapter). The Regular Army component of the First Division was comprised of two battle groups, and the necessary combat and logistic support units. The regular forces would make an immediate contribution in any limited or local wars. The reorganized volunteer C.M.F., as part of the new, integrated Army, would also be more quickly available and better equipped than previously for deployment as reinforcements, if necessary.⁸⁸ This change in emphasis accorded well with the sequence of priorities that had been established by the Defence Committee in 1959, and with the desires of senior Regular Army staff.

Commonwealth Parliamentary Debates (Hansard), Vol H of R,
 26 & 27, p. 649; and interview with General T. Vincent, 5
 August 1987.

⁸⁶ Garrett, op.cit., p. 2.

The Defence Scheme", Bulletin, 6 April 1960, p. 6.

Commonwealth Parliamentary Debates (Hansard), Vol H of R 29, p. 1855; and "Defence Programme Statement Made to House", Sydney Morning Herald, 30 March 1960, p. 20.

At the time of the announcement and subsequent implementation of the reorganisation, opposition politicians were keen to press the issue of the government's alleged neglect of the Army. Mr Haylen, for instance, argued in early 1960, that "we have had no planning for ten years. We have had ten years of stupidity and immoral laziness by a government that has failed to ensure that we are properly defended."89 The opposition leader, Mr Calwell, claimed in early 1960, that "the country is as defenceless today...as it was on the eve of 1939." and that "there was nothing to show for the millions of pounds spent on defence."90 Others pointed out the restrictions placed on the armed forces in terms of defence budget expenditure. which had fallen away from £203 million in 1952-53, fluctuating between £170 and £200 million until 1961-62.91 Yet, as had been pointed out early in 1959 by the Director of Staff Duties, Colonel Vincent, serious dangers lav in the Army rectifying the situation by implementing a reorganisation tested only by judgement and not by trial.92

In an answer to a question as to in what way the 1960 pentropic division would be superior to a 1945 infantry division in manpower, firepower and mobility, Mr Cramer asserted that:

Commonwealth Parliamentary Debates, (Hansard), Vol H of R 26 & 27, p. 808. See also "'Back to Brisbane Line' Says Calwell In Defence Attack," Sydney Morning Herald, 30 November 1959, p. 4.

⁹⁰ Sydney Morning Herald, 26 May 1960, p. 18.

⁹¹ See B. Beddie, "The Defence Bureaucracy," <u>Bulletin</u>, 8 February 1964, pp. 16-18.

^{92 (}S) CRS A6059, 41/441/70, "Minutes of Reorganisation Conference", dated 12 March 1959, p. 2.

The pentropic division is especially designed for employment in tropical terrain and to meet the particular needs of South-East Asia. It is a lean, versatile and powerful organisation. Its designers had experience with, and gave cognizance to, the lessons gained from the employment of the jungle division. Moreover, the concept of the pentropic division acknowledges and reflects the need under conditions of modern war to reduce vulnerability and increase flexibility.

The strength of the pentropic division is approximately 14,000 as compared with 13,000 in the jungle division. The pentropic division has more rifle sections, more field guns, machine guns and medium mortars. It also includes tanks and a light aircraft unit, neither of which formed part of the iunale division establishment. The superiority in mobility of the pentropic division is conferred by the combination of transportation resources available to the division - its communications equipment...In the field of communications alone, the new and improved signal equipment in the pentropic division makes possible the ability to control directly five tactical units (the battle groups), instead of the previous three brigades, thus granting the Commander ubiquity which he did not possess previously.93

According to the U.S. journal Military Review, the operational strength of the Regular Army was to be increased by one-third, and approximately 67.5 million (U.S) dollars was planned to be

^{93 &}lt;u>Commonwealth Parliamentary Debates</u> (Hansard), Vol H of R 29, pp. 3375-3376.

60

invested in modernization of equipment during the subsequent three years. 94

The Army planners could not have been expected to know that "in 1961 the United States of America was going to scrap the pentomic organisation, and that we in Australia would be the only country in the world which retained the pent or five-sided structure."95 The proposed abandonment of the pentomic model by the United States Army was first reported in the United States on 3 June 1961. Apparently, following the election of President J. F. Kennedy and the new administration's subsequent commitment to 'flexible response' as opposed to massive retaliation as the basis of U.S. strategic policy, the United States Secretary of Defense, Robert McNamara, had instructed U.S. Army planners to bring forward from 1965 to 1962 another proposed reorganisation which would abandon the heavily nuclear-oriented pentomic divisions. 96 Colonel J.F. White, the Australian Military Attache in Washington during that period, sent a copy of the subsequent Army Navy Air Force Journal, published on 17 June 1961, which elaborated on the proposed U.S. reorganisation, to Australian Army Headquarters. 97 As a minute was sent in October of that year from the Directorate of Military Training (D.M.T.) to the Directorate of Staff Duties in which it was stated that from the D.M.T.

[&]quot;Australia: Major Reorganization of the Army," in <u>Military</u> <u>Review</u>, June 1960, p. 76.

^{95 &}lt;u>Commonwealth Parliamentary Debates</u>, (Hansard), Vol H of R 44, p. 2531.

[&]quot;Inside Story on Army-Marine Manpower Decisions," in Army Navy Air Force Journal, 3 June 1961, Vol 98, p.11. See also CRS A6059, 41/441/152, "Division remake Advanced Three Years," in Army Times, 8 June 1961, cited in Annex B to AHQ A240/1/712, of 20 June 1961; and House, op.cit., p. 243.

^{97 (}S) CRS A 6059. 41/441/152, dated 26 June 1961.

viewpoint, "no new factors have arisen in Australia which make necessary any changes in the basic structure of the Pentropic Division, and none are proposed." Furthermore it was noted that "the Director of Infantry and his staff have no knowledge of discussion of this subject at the Infantry conference [at which U.S. Army officers attended], except on an informal basis (not related to any known U. S. intentions) between individual officers." The evidence indicates that at the time of the official announcement of the pentropic reorganisation in March 1960, the Australian Army Combat Development Branch was possibly vaguely aware of a planned future U.S. reorganisation away from the pentomic divisions, but that they could not have been expected to have predicted the sudden change in U.S. strategic policy (and hence Army organisation) that occured in 1961.99

Major General Cullen has pointed out, that "it was always incomprehensible to senior C.M.F. officers as to why Australia would adopt the pentropic establishment for a division...when the United States had already decided, after considerable trials, that it was not an appropriate design." It must be noted, however, that neither the Regulars nor the C.M.F. nor indeed the U.S. Army itself had any knowledge in 1960 of the imminent abandonment of the pentomic division. However, Major General Pearson's, (Commanding Officer of the First Battalion Royal Australian Regiment, July 1962 to May 1964) comment, that "we in Australia changed the whole organisation of our Army without waiting for the American trials to be completed... we didn't take a small group and try it for ourselves, before implementing the changes," seems to be a

⁹⁸ CRS A6059, 41/441/152, Minute, 13 October 1961.

ORS A6059, 41/441/11, letter from Colonel White, Washington D.C., 13 March 1961.

Letter from Major General P. A. Cullen, 14 April 1987.

justifiable criticism of the implementation process adopted. 101 In hindsight it could be seen that the official statement made by Mr Townley in Parliament concerning the introduction of the pentropic divisional organisation was based on optimistic assessments of the organisation's worth within the current strategic context. The haste involved in the decision to

implement has an aspect that many senior servicemen were later to regret.

62

Nevertheless, the introduction of the organisation was a further step in a gradual process of change that had gained momentum in 1957 as a result of the critical interaction of the four key organisational factors previously mentioned. This was a time of reorientation of the Army's power base, as National Service training was abolished, C.M.F. units were disbanded or reorganised, and the Regular Army gained preeminence in the strategic planning priorities of the government. It has been suggested that this desire for preeminence amongst the A.R.A. may have contributed to the introduction of the pentropic division. It can be said with more certainty, however, that the combat roles for which the pentropic organisation had been designed seemed appropriate for Australia's strategic outlook at the time. It also suited the interests of Regular Army chiefs, who were endeavouring to retain the funds which had previously been allocated to the National Service Training Scheme. Furthermore, the pentagonal concept of combat organisations was developed partly as a result of changing technological capabilities related to nuclear-age Moreover, the changes reflected the shift in strategic priority towards the Regulars as the primary combat force of the Army. How these changes affected the Army in the period from 1960 to early 1965 is the subject of the following chapter.

¹⁰¹ Interview with Major General C.M.I. Pearson, 28 March 1987.

CHAPTER FOUR

THE PENTROPIC EXPERIENCE: ITS IMPACT QUANTIFIED

Both the 1960 changeover to the pentropic establishment, and the abolition of the National Service Training Scheme in the same year, had far reaching effects for the C.M.F. and the Regular Army. Many of the changes met strong internal resistance from various elements in the Army. In this chapter an attempt is made to quantify the impact of the pentropic establishment on individual units of the Army. An attempt is made to analyse the degree to which the new structure and the new capabilities of the field force in particular (both Regular Army and C.M.F.), met the stated and other objectives of the reorganisation. Some of the stated objectives included achieving survivability in a nuclear situation and suitability for South-East Asian conditions, while unstated objectives included the achievement of preeminence for the A.R.A. and the securing of additional funds for the Army.

The Military Board determined, in 1959, that first priority in the new pentropic structure would be the development of an expeditionary "Task Force" within the First Division, made up of two Regular Army pentropic battle groups (each of which would consist of a pentropic battalion and supporting arms) and a logistic support force. Second priority was to develop the remainder of the First Division (including three C.M.F. pentropic battalions), and third priority was the Third Division, which was also to act as the expansion base group. 1 (See Appendix B for a diagramatic layout of the pentropic divisional organisation.)

⁽S) CRS A6059, 41/441/69, "The Reorganisation of the A.M.F. 59/60-61/62," General Staff Instruction No 1, 22 December 1959, p. 1.

These changes away from the Tropical Establishment caused tremendous upheaval. Amongst other things, they necessitated the disbandment of the Second Division (comprised entirely of C.M.F. brigades), and its conversion to the less prestigious Headquarters Communications Zone. The disbandment of the old brigades was a factor which may have helped to discourage many volunteer C.M.F. members from continuing to serve.² Once the Second Division was disbanded in 1960, the strength of the C.M.F. fell from about 50,000 to about 20,000 (although the abolition of the National Service Training Scheme was a major cause of this shrinkage). The manpower target for the C.M.F. was now set at 25,000 for 1960-61, and 30,000 for 1961-62, but by June 1964 it had reached a strength of just 27,505 personnel.³

One of the other brigades disbanded was the First Brigade which was the only A.R.A. field formation at the time. Most of these Regular Army Field Force units were to become part of the First Division, now under the command of a Regular Army major general. Included in the Regular component of the division were two pentropic battalions (one located at Holsworthy and the other at Enoggera), two field regiments of artillery, an armoured regiment, and other supporting arms and services. The remainder of the First Division and all of the

Letter from General Sir Arthur MacDonald, (Director of Staff Duties from July 1960 to November 1961), dated 7 April, 1987. See also (S) CRS A6059, 41/441/69, "The Reorganisation of the AMF 59/60-61/62," General Staff Instruction No 1, dated 22 December 1959 pp. 2 & 8.

Defence Report 1964, Canberra, p. 27; (S) CRS A6059, 41/441/69, "Reorganisation of the AMF, 59/60-61/62, General Staff Instruction No 1," dated 22 December 1959, p. 3; (S) AWM 121, 28/A/3, "Composition of the Australian Defence Forces, Cabinet Decisions, November 1959"; and Commonwealth Parliamentary Debates, Vol H of R, 26 & 27, pp. 650 & 823.

Third Division were to consist of C.M.F. troops. (The First Division was based in New South Wales and the other, retaining its title of Third Division, was based in Victoria). Two of the three C.M.F. battalions in the First Division had their headquarters in Sydney, where four of the ten rifle companies were deployed, while the remaining six were deployed in country areas. The third C.M.F. battalion belonging to First Division was based in Brisbane. The other five C.M.F. battalions were now part of Third Division, with two battalions located in Victoria, and one each in Queensland, South Australia and Western Australia. In addition, a restricted battalion was established in Tasmania.

During the pentropic years, a Regular tropical establishment (T.E.) battalion was maintained separately in Malaya (containing four rifle companies as opposed to five in the pentropic battalions), so as to be compatible with the British and New Zealand units which formed part of the British Commonwealth Far Eastern Strategic Reserve (B.C.F.E.S.R.). A further T.E. battalion was raised in Woodside, South Australia, in March 1964 to provide for a rotational arrangement with the one in Malaya, without having to break up the pentropic battalions each time the battalion in Malaya was relieved. 6

It should be explained at this point that the U.S. idea of referring to battalions themselves as "battle groups" was not

Millar, op.cit., p. 126. See also, Commonwealth Parliamentary Debates. (Hansard), Vol H of R 26 & 27, p. 828; and (TS) AWM 102(6), 40/441/6, Annex A to CGS Minute 1/64 dated January 1964.

^{5 &}lt;u>Commonwealth Parliamentary Debates</u>, (Hansard), Vol H of R 26 & 27 p. 828.

This had been under consideration since 1961. See (S) CRS A6059, 65/441/150, HQ Eastern Command, "Annual Training Reports," 19 July 1961, p. 1.

66

followed by the Australian adoption conference convened at Army Headquarters in 1959. In Australia, the title of "battle group" was reserved for the combined formation which normally included an infantry battalion, an artillery regiment and various other elements. 7 Brigade headquarters were, however, eliminated, as in the U.S., and the division was reconstituted using the U.S. pentagonal concept, of five, instead of nine battalions. Nor did we adopt the U.S. staff system: the Australian Army retained the system inherited from the British Army. This included a general staff or G branch, which was reponsible for staff duties, intelligence, operations, training, and setting up the radiological centre; an adjutant general's staff or A branch, responsible for personnel services administration, and manpower; and a quartermaster general's staff or Q branch, responsible for supply matters and civil affairs. The U.S. system covered the same areas, but was organised into five general staffs as follows: G1 for personnel, G2 for intelligence. G3 for organisation, training and operations, G4 for logistic planning, and G5 for civil affairs.8

The pentropic divisions included one supporting artillery regiment and one engineer squadron for each of their five infantry battalions. Each division also included an armoured regiment, a reconnaissance squadron, and a divisional signals regiment.⁹ The divisions further contained a "Logistic Support

⁷ The conference included the Military Board and the General Officers Commanding the various State commands. Interview with Major General D. Vincent, 5 August 1987.

Staff Duties in the Field, Australian Army Headquarters, 1956, pp. 15 & 102; and Staff Officers Field Manual- Staff Organisation, U.S. Department of Army, FM 101-5, 1961, p. 21, cited in Shelton, op.cit., p. 19.

Millar, op.cit., p. 128. See also (S) AWM 102(6), 40/441/6, "State of Readiness of the Army, the ARA Component of the Field Force," dated 31 July 1961, p. 1.

Force" which included three divisional transport companies, and a new light aircraft company, as well as medical, supply, electrical and mechanical engineers, and ordnance units. 10 On paper, the strength of the pentropic division was 14,030. 11

The February 1960 edition of the <u>Australian Army Journal</u> was devoted solely to an explanation of the workings of the new pentropic organisation. In the introduction it was claimed that the pentropic organisation was being implemented "to reduce the vulnerability of our field forces to nuclear attack, and to improve their capacity to meet the particular requirements of a war in South-East Asia." It was supposedly a "lean, powerful, versatile organisation, readily adaptable to any type of operation in which it is likely to be involved in South-East Asia." The decision to implement had already been taken.

[&]quot;The Pentropic Division,"in <u>Australian Army Journal</u>, No129, February 1960, pp.7-10.

¹¹ Infantry Training, Vol IV, Part 1, The Battalion (Provisional), 1961, p. 11, cited in Major H. R. Shelton, "The United States Infantry Division and the Australian Pentropic Division--Similarities and Differences," Master of Military Art and Science Thesis, Fort Leavenworth, Kansas, 1964. equipment used in the pentropic organisation is discussed in Australian Army Journal, No 134, July 1960. There were 243 personnel in the divisions headquarters, 1,304 personnel in each of the infantry battalions, 449 in the Armoured Regiment, 203 in the reconnaissance squadron, 2,135 in the divisional artillery, 161 in the light aircraft squadron, 804 in the divisional enginers, 862 in the divisional signals regiment, 57 in the divisional intelligence unit, and 162 in the provost company. The remainder consisted of ordnance, medical, service corps, postal, pay and electrical and mechanical engineering elements.

^{12 &}quot;The Pentropic Division," in <u>Australian Army Journal</u>, No 129, February 1960, p. 7.

68

It was only now that the Army began field tests to determine whether or not the organisation would in all ways be the best possible for its requirements. Officers responsible for assessing the organisation's efficiency on exercises were exhorted in the Journal to match the flexibility inherent in the organisation with a flexibility of thought on their part. 13

The command functions of the pentropic division had been altered from those used in the earlier T.E. division. The divisional commander's (a major-general) headquarters was increased in size, in anticipation of an increase in the complexity of combat operations under the pentropic system. Firstly, a small independent staff called a "task force" headquarters was created. This headquarters had a number of functions, including the command of a task force; command of other subordinate units; operation as an alternate divisional headquarters in emergencies; supervision of specific activities of the division (such as training or the rehabilitation of units); long-range planning; and such other tasks as may have been alloted by the divisional commander. 14

The second addition to the divisional command elements was a deputy divisional commander (a brigadier) who was to command the task force headquarters, as required, but who, in practice was given responsibility for much of the administration that was beyond the capacity of the battalion headquarters to handle. His duties normally consisted of advising the commander on policy matters, and supervising

^{13 &}lt;u>Ibid.</u>, p. 52.

[&]quot;The Pentropic Division", in <u>Australian Army Journal</u>, No 129, February 1960, p. 49; and "Command and Grouping For Battle in the Pentropic Division," (article prepared by the Directorate of Military Training) in <u>Australian Army Journal</u>, No 135, August 1960, pp. 8-9.

matters of particular interest to the commander, such as training and long-term planning. 15

The third addition was a chief of staff (a colonel). He was responsible to the divisional commander for the direction, coordination and execution of all staff work within the divisional headquarters, so as to enable the divisional commander to handle the division's tactical situation, and to deal with major aspects of battlefield policy and planning. 16

The fourth addition was a radiological centre, equipped with the appropriate plotting and computing equipment, which was designed to provide the commander with accurate and upto-date information regarding any areas which constituted a radiological hazard.¹⁷ (In late 1960, preparations were also underway for the publication of an "A.M.F. Nuclear Handbook" to elaborate on the procedures and equipment required for passive nuclear defensive measures.)¹⁸

It had been envisaged that on active operations the forward echelon of divisional headquarters would normally be deployed in two locations at once, that is at both the main and the task force headquarters. This was to reduce the possibility of

The Pentropic Division," <u>ibid</u>, pp. 49-50; and "Command and Grouping For Battle in the Pentropic Division," in <u>ibid</u>, p. 5.

[&]quot;Command and Grouping For Battle in the Pentropic Division," ibid, pp. 6-7. See also The Pentropic Division in Battle (Provisional) Part 2 Administration, Australian Army Headquarters, 1961, pp. 17-18.

[&]quot;The Pentropic Division," <u>Australian Army Journal</u>, No 129, February 1960, pp. 48-50; and "Command and Grouping For Battle in the Pentropic Division," <u>Australian Army Journal</u>, p. 5.

¹⁸ CRS A6059, 41/441/95, "Responsibilities in Nuclear Warfare," November 1960, p. 1.

both headquarters being destroyed in a single atomic attack. It was further planned that the divisional commander would establish a small tactical command post in any rapidly moving situation.¹⁹

One of the keys to these changes was that they gave the commander greater flexibility in grouping for combat, allowing him to tailor the various divisional elements to meet the specific requirements of his plan. The five infantry battalions, the armoured regiment, the reconnaissance squadron and the five artillery regiments could be combined in varying proportions into battle groups, along with engineer, aviation and service elements as required.

This concept of a battle group was the central innovation associated with the pentropic division.²⁰ Effective control was supposed to be gained by grouping the various elements under the command of the infantry battalion commander (a colonel), who would act as the "battle group" commander (with a lieutenant colonel as his second in command). This structure was, however, to prove more cumbersome than the planners had envisaged. Infantry battalion commanders such as the then Colonel C.M.I. Pearson were later to testify that the pentropic organisation failed precisely because of the problems of command associated with such a large and diverse organisation as the battle group.²¹

Having considered some of the changes to the divisional headquarters resulting from the formation of the battle group, it

[&]quot;The Pentropic Division," <u>Australian Army Journal</u>, No 129, pp. 48-49.

[&]quot;Command and Grouping For Battle in the Pentropic Division," op.cit., p. 10.

Interview with Major-General C.M.I. Pearson (Commanding Officer of 1st Battalion, Royal Australian Regiment from July 1962 until May 1964).

is appropriate to consider the way the various Arms corps elements in the division were affected. The Royal Australian Armoured Corps had not been awarded a high priority throughout the 1950s, as the chiefs of staff considered the need for armour in a South-East Asian operational setting as minimal. This culminated in the abolition of both the armoured brigade headquarters, and a reduction of the total of ten C.M.F. armoured units to seven, in 1957. The 1960 pentropic reorganisation did not alter this trend: Australia neglected the U.S. pentomic principle of increasing mobility, yet maintaining a high proportion of armour. Unlike the U.S. pentomic infantry division, which had five armoured battalions, a reconnaissance squadron and a medium tank regiment were the only armoured elements organic to the pentropic division. The remainder of the reconnaissance regiment, a limited capacity armoured personnel carrier (A.P.C.) regiment, and an anti-tank regiment were all allocated to the Combat Support Group, outside the division. It was not until 1964 that the M113 series of light armoured vehicles replaced the old Saladin armoured cars. Saracen wheeled A.P.C.'s and Ferret scout cars, and provided the Support Group with the capacity to transport 1,100 personnel 22

[&]quot;The Pentropic Division: Armour in the Combat Support Group," in Australian Army Journal, No 133, June 1960, p. 10. The anti-tank regiment was originally designated to be only a squadron. The Combat Support Group consisted of elements not directly belonging to the division but which were available to support it. See "The Pentropic Division," in Australian Army Journal, No 129, February 12960, p. 52; Major General R.N.L. Hopkins, Australian Armour: A History of the Royal Australian Armoured Corps, 1927-1972, Australian War Memorial, Canberra, 1978, pp. 213-223; and General Staff Instruction 65/25, "Reorganisation of the Royal Australian Armoured Corps," Army Headquarters 603/R3/6 cited in Hopkins, op.cit., p. 223.

The armoured regiment's structure was not varied greatly from its structure within the Tropical Establishment, which had contained four armoured squadrons. It had been decided, for a number of reasons, not to change to a five squadron regiment. These included high manpower and equipment costs, and the strong body of General Staff opinion that tanks were not suited to jungle conditions.23 Instead, it had been planned to reduce the number of armoured regiments in the Army from five to two, and so to halve the number of fighting tanks. This left the pentropic organisation with much less tank support than the previous organisation - only the light tanks remained.²⁴ An important positive change, however, was the restoration to the armoured regiment of the ability to operate in a mobile role (supported by other arms), by including tanks on the establishment of the regimental headquarters and increasing to three the number of tanks in squadron headquarters, so raising the total number of tanks in the regiment from 39 to 47. Another important change was the substitution of tracked load carriers for some of the wheeled re-supply vehicles in the administrative troops of the tank squadrons.25

In contrast to armour, the infantry element of the pentropic division underwent significant reorganisation, although its tasks remained essentially the same. It was molded into five battalions (of which only two were Regular Army battalions) controlled directly by divisional headquarters. Numerically each new battalion was equal to about one and a half

⁽S) CRS A6059, 15/441/90, "Report on the RAAC Conference, 13 June-16 June 1960," p. 7; and Hopkins, op.cit., p. 220..

²⁴ Hopkins, op.cit., pp. 214-215, 219 & 223.

See "The Pentropic Division: Armour in the Combat Support Group," in <u>Australian Army Journal</u>, No 133, June 1960, pp. 6-8; and "The Pentropic Division: Armour," in <u>Australian Army Journal</u>, No 129, February 1960, pp. 14-17.

of the old battalions but with more than twice their firepower, as each now contained eighty assault sections as opposed to the original thirty six. In contrast to the old battalion, which could fire 24,312 rounds per minute of small arms fire and 72 mortar rounds per minute, the new pentropic battalion could fire 47,360 rounds per minute of small arms fire and 192 mortar rounds - a significant improvement. 26 (see Appendix K and L) There were now an extra 76 infantry assault sections in the new division which, in addition to the original 324 brought the total to 400.27 The larger battalions supposedly made for extra manoeuvrability, offensive action and protection, while allowing for the customary wastage of manpower in operations. When the battalions were assembled into battle groups (including supporting arms such as armour, engineers and artillery), they provided a hard hitting and relatively self contained force for any independent operations, or as a contribution to an allied force 28

With the abolition of the brigade headquarters, the battalion headquarters was augmented to include an extra three staff officers. These were the Executive Officer (X.O.) (a lieutenant-colonel), the General Staff Officer Class 2 (G.S.O. 2) (a Major), and the Deputy Assistant Adjutant and Quartermaster General (D.A.A. & Q.M.G.) (also a Major).²⁹ The Executive Officer and his staff, together with the support company and administration company commands, stood in the place of the original brigade headquarters staff and provided a more rapid dissemination of information than previously. The

The Pentropic Division: The Infantry," in <u>Australian Army</u> <u>Journal</u>, No 129, February 1960, pp.10-12.

Brigadier M.F. Brogan, "Comparative Firepower," in Australian Army Journal, No 147, August 1961, p. 24.

[&]quot;Reorganizing the Army," in <u>The Bulletin</u>, 9 January, 1965, p. 11.

^{29 &}lt;u>Ibid.</u>

smaller size of this headquarters compared to the old brigade headquarters facilitated easier concealment, movement and defensibility than previously. On the other hand, it was comparatively more cumbersome and difficult to conceal than the old battalion headquarters had been.³⁰

The most fundamental of all the changes caused by the pentropic reorganisation occured within the rifle companies. (See Appendix D) The pentropic battalion had five of these, each of which was comprised of four rifle platoons a weapons platoon and a headquarters commanded by a major. Each of the platoons contained four sections. (The previous structure had contained only four rifle companies, each of three platoons, with each of these made up of three sections.) Supporting weapons (including two mortars and three medium anti-tank weapons) were removed from the rifle platoons and placed in the weapons platoon, and an extra assault section was added in their place. This enabled the platoon commander to increase flexibility and to more easily gain depth in both offensive and defensive operations. The assault sections remained basically unchanged, still carrying FN 7.62mm (L1A1) rifles; however, they did gain the 7.62mm M60 general purpose machine guns, (with an effective range of 800 yards as compared with 600 yards for the Bren gun which it replaced), two of which were also carried company headquarters.31 This meant that platoon commanders were responsible for a powerful and large force which could operate with greater dispersion and more flexibility than before. A major problem was, however, that platoon commanders were usually young and inexperienced, and

Interview with General A.L. Morrison, 28 April 1987; and Pearson & Morrow, op.cit., pp. 6 & 9.

[&]quot;The Pentropic Division: Infantry," op.cit., p. 12; and Brigadier M. F. Brogan "Comparative Firepower," in Australian Army Journal, No 147, August 1961, p. 24. See also (S) CRS A6059, 41/441/168, "Comparison of Pentropic (TE-P) Infantry Battalion with FARELF Infantry Battalion (TE)," pp. 1-3.

found it difficult to command such a large group, particularly in thick scrub where control proved difficult. 32

Company commanders were, however, in general, content with the larger sized companies and the role apportioned to them. According to General Pearson, they had a "powerful little force to handle, with greater flexibility [due to the larger number of sub-units] and more autonomy."

From the battalion commander's point of view matters were more complex. The majority of these officers seemed to have enjoyed the additional responsibilities that came with the increased span of command in the new organisation; however, it was acknowledged that there were also a number of problems associated with it. Brigadier W.J. Morrow, commanding officer of 3 RAR from July 1960 to December 1962, pointed out that "a commanding officer needs personal contact...it's not enough to just pass orders over the radio-they want to see your face."34 General Pearson considered that "the span of control wasn't right...the battle group commander lost touch with the bottom because he had to deal with two or three thousand people. I dont think it would ever have worked in battle because of that."35

The pentropic platoon commander commanded his four sections only by voice or hand signals. Interview with General A.L. Morrison, 28 April 1987.

Interview with Major-General C.M.I. Pearson, 28 March 1987.

³⁴ Interview with Brigadier W.J. Morrow, 31 March 1987.

Interview with Major-General C.M.I. Pearson, 28 March 1987. In 1964, however, in an article commissioned by the C.G.S. and written by Morrow and Pearson in 1964 in defence of the pentropic organisation, they wrote that "we are quite convinced that the increased staff now allows the commanding officer far more time than in the past to visit his sub-units." See Colonel's C.M.I. Pearson & W.J. Morrow.

According to Major-General D. Vincent, however, (a signals officer) the pentropic organisation was simply too much of a shock for conservative infantrymen. Many infantry officers still preferred the old-style infantry battalions. In Vincent's view, they failed to see the significance of five large battle groups, and of the independence of a battalion containing five rifle companies. Furthermore, they failed to look on the new battle groups as small flexible brigades - instead they were perceived as large and clumsy battalions. 36 Support for this view is found in Pearson and Morrow's defence of the pentropic division, written in 1964, where they found it necessary to arque that "[a comparison of] unit versus unit ... doesn't really hold water, because the battle group commander thinks differently from the old battalion commander. He commits his sub-units somewhat like the brigade commander did his units. knowing their capacity is almost double that of the old companies."37

Major General A.L. Morrison, (G.S.O. 2, in 1962-63 and then Executive Officer [X.O.] in 1964, to Colonel Pearson commanding 1 R.A.R.) has stated that the organisation was very difficult to understand initially, yet when mastered it became quite easy to operate. Its strength was that the five companies could perform "meaningful" tasks, as there was now "a proper reserve" as well as an immediate exploitation force for a deliberate attack. Furthermore, the battalion could now protect a defensive position and still have four companies available for other deployment. Further still, in an advance, the battle group commander now had the means of protecting his echelons and

[&]quot;The Pentropic Division-Another Point of View," in Australian Army Journal, No 187, December 1964, p. 7.

³⁶ Interview with Major General D. Vincent, 5 August 1987.

Pearson & Morrow, op.cit., p. 8.

Interview with Major General A.L. Morrison, 28 April 1987.

soft-skinned vehicles, or picketing their route, without seriously affecting the balance of the rest of the force. 39

The support company of each new infantry battalion was also reorganised. It now consisted of an anti-tank platoon, an assault pioneer platoon, a mortar platoon and a signals platoon. The machine gun platoon was eliminated, as the new M60 machine guns allotted to each rifle company as replacements for the old Bren guns were also considered adequate to fulfil the role previously performed by the old Vickers machine guns. This was in spite of the fact that the new gun's range was 800 yards less, and their rate of fire per minute 1500 rounds less than the Vickers. An anti-tank platoon was introduced, using 120mm recoil-less rifles, which were later changed to the 105mm recoil-less rifles able to immobilise enemy tanks at ranges up to 1,200 yards. This platoon was designed to supplement the 70 mm rocket launchers capability of the assault (rifle) sections.

The assault pioneer platoon was increased from four to five sections (one per rifle company) each being equipped with a motor digger, a chain saw, and explosive foxhole diggers with the single bulldozer and tipping truck being eliminated. The mortar platoon remained unchanged, with the exception of the 3 inch mortar, which was replaced by an 81mm weapon with a range of 3,600 yards as opposed to the 2,500 yards of the original.⁴² The signals platoon was reduced in strength by passing responsibility for line maintenance to the companies,

Pearson & Morrow, op.cit., p. 7 & 8.

⁴⁰ Brogan, op.cit., p.24.

Brogan, op.cit. p. 24; and (S) CRS A6059, 41/441/168, "Comparison of Pentropic With Tropical Battalion", pp. 1-3.

^{42 &}lt;u>Ibid.</u>

78

and for the unit signal centre to the signal troop (allotted to support the battalion from the divisional signals regiment).

The battalion's entire communications system was significantly improved at this time as a result of the introduction of the new V.H.F. P.R.C. series of portable radios. These enabled commanders, at all levels, to have a greater degree of flexibility and control than was previously possible.43 Major-General Vincent, Director of Staff Duties in Army Headquarters from October 1958 to April 1960, and previously Director of Signals, has stated that although it was the new radios that made the pentropic organisation possible, they were never fully exploited by the command structure.44 Others, however, have rightly argued that command and control was made more difficult, as the communications technology did not match the requirements of battalions operating in a dispersed setting. The range of the V.H.F. signals equipment, for instance, was about 15 kilometres in jungle terrain while the battalion could be spread out over a 30 kilometre area, making it necessary for orders to be relaved.45

The battalion's administrative company was changed by the allotment of six wheeled ambulances (to help with the expected longer turn-around time for casualty evacuation in dispersed operations), a bearer officer, and all the hygiene dutymen to the medical platoon. Furthermore, the large stores holding in the quartermasters platoon was transferred to the ordnance field park, thus eliminating the need for a "B" echelon for the supply and maintenance of the battalion.

The Pentropic Division," in <u>Australian Army Journal</u>, No 129, February 1960, pp. 26-29.

Interview with Major General D. Vincent, 5 August 1987.

Interview with General A.L. Morrison, 28 April 1987.

The Pentropic Division, in <u>Australian Army Journal</u>, p. 13.

One of the stated advantages of the pentropic organisation supposed increase in mobility afforded by the new organisational structure. Its simplified vehicle and weapon families supposedly reduced administrative overheads, making it easier to move by land, air or sea.⁴⁷ In practice, however. this was not the case. As previously mentioned, the pentropic division was not equipped with an A.P.C. lift capability of even one battalion until 1964. Instead, each infantry battalion was allocated seventy 3/4 ton vehicles, (Land Rovers) which, while increasing the battalions road-lift capability, tied it to the main roads, thus reducing the commander's off-road flexibility. The problem was further exacerbated by the fact that, as a result of the increase of the number of vehicles in the battalion. divisional wheeled transport resources became increasingly hard to obtain for battalion commanders. 48 As a result, Land Rovers were often overloaded (particularly those assigned to the mortar platoon) as there were no trucks immediately available 49

Brigadier Morrow, Commanding Officer of 3 R.A.R. from July 1960 to December 1962, has justly said that the Army was trying to employ a cumbersome organisation designed for open atomic conditions, in a tropical environment where it was constrained by the roads and subject to ambush.⁵⁰ General A.L MacDonald, Commandant of the Jungle Training Centre from

[&]quot;Equipment for the Pentropic Division,"in <u>Australian Army</u>
<u>Journal</u>, No 134, July 1960, p. 6.

[&]quot;The Pentropic Division," in <u>Australian Army Journal</u>, No 129, February 1960, pp. 32-33. See also (R) CRS A6059,65/441/172, "Exercise Nutcracker," Outline of the Pentropic Divisional Organisation (Brief for H.E. the Governor General), p. 21.

Interview with Major-General A.L. Morrison, 28 April 1987.

Interview with Brigadier W.J. Morrow, 31 March 1987. See also Australian Army Journal, No 129, p. 11.

80

March 1959 to July 1960, commented that "we, at Canungra, could not visualise its ready application for jungle warfare...and whatever its virtues might be in a nuclear situation, the pentropic organisation was not the best for conditions in which the Australian Army was likely to fight." 51 Brigadier Morrow further commented that "although it was not so difficult in open country with plenty of roads...the problem of command and control of the pentropic battalion in a tropical environment was its downfall." 52

The divisional artillery also underwent significant rearrangement. The number of field regiments was increased from three to five, the number of guns per field regiment was reduced from 24 to 16, and the type of gun was changed from the 25 pounder to the 105mm M2A2 howitzer and the Italian 105mm pack howitzer (eight of each per regiment). changes resulted in an increase of more than 50 per cent in the divisional artillery's hitting power, although the range of the new guns was less than that of the old 25 pounder. 53 (A potential nuclear capability was also included in the Combat Support Group, outside of the division, with the addition of two LACROSSE launchers).54 Major-General P. Falkland. Commanding Officer of 1 Field Regiment from 1964 to 1965. has said that "the Artillery coped quite satisfactorily and quite easily...it made the whole business of artillery suport much easier than the standard organisation simply beacuse there were

Letter from General Sir Arthur MacDonald, 7 April 1987.

Interview with Brigadier W.J. Morrow, 31 March 1987.

[&]quot;Brigadier M.F. Brogan "Comparative Firepower," in <u>Australian Army Journal</u>, No 147, August 1961, p. 24. The 25 Pounder had a range of 12,100 yards, the 105mm M2A2 howitzer had a range of 11,200 yards and the 105mm pack howitzer had a range of 8,836 yards. (see Appendix L)

The Pentropic Division," in <u>Australian Army Journal</u>, No 129, February 1960, p. 21.

more guns available."⁵⁵ Furthermore, when the artillery regiment combined with the infantry battalion and other elements to form a battle group, it was possible to achieve a greater intimacy, quicker reaction and a better coordinated fireplan than previously, as the artillery and infantry commanders were able to work together more effectively.⁵⁶

With the introduction of the pentropic organisation the Australian Army had, for the first time, its own light aircraft support. The 16 Light Aircraft Squadron was established at Amberley in Queensland in late 1960, and consisted of Bell 47G2 helicopters and Cessna 180-type fixed-wing aircraft.⁵⁷ These provided the division with its own integral aerial observation and reconnaissance unit.

Having considered the impact on the Army's combat force structure of some of the major changes that came about with the introduction of the pentropic establishment, it is now appropriate to consider their effect on the C.M.F. The abolition of the National Service Training Scheme, the closure of many of the C.M.F. training depots, the disbandment of the old battalion organisations and the introduction of the new state-based regiments all contributed to a shift in the balance of power

Interview with Major General P. Falkland, 16 April 1987.

Pearson & Morrow, op.cit., p. 8.

Commonwealth Parliamentary Debates (Hansard), Vol H of R 28 & 29, p. 1883, 1 October 1960; "The Pentropic Division: Aviation," in Australian Army Journal, No 129, February 1960,pp. 46-48; Australian Army Journal, No 134, July 1960, p. 6; and interview with Major General D. Vincent 5 August 1987. For an analysis of the changes which occurred with the other elements of the pentropic divisional organisation see Australian Army Journal. No 129, February 1960.

82

between the C.M.F. and the Regular Army. Some steps in the adjustment process are considered below.

The decision by Cabinet to terminate the National Service Training Scheme was made in November 1959, due to "considerations of finance and man-power." By February 1960, a schedule of 54 C.M.F. centres to be closed had been drawn up by the D.C.G.S., Major-General I.T. Murdoch. The decision as to which centres should be closed was based on eliminating all those with very low attendance (mostly between nine and twenty people) which were relatively close to another larger, remaining centre. 59

In terms of actual units disbanded, the armoured corps fared better than most, as they had already been significantly reduced in 1957. The only C.M.F. armoured units disbanded in 1960 were the two remaining armoured brigade headquarters. Although the other units were retained, most were changed from being armoured regiments to reconnaissance or A.P.C. regiments, with the South Australian Mounted Rifles becoming an anti-tank regiment. Of the 17 C.M.F. artillery regiments, seven were either disbanded or absorbed into other regiments. 60

⁽S) AWM 121, 11/A/1, "Composition of the Australian Defence Forces: Cabinet Decision, November 1959"; Sydney Morning Herald, 7 October 1959, p. 13; and Commonwealth Parliamentary Debates, Vol H of R, 26 & 27, p. 828...

⁽S) CRS A6059, 41/441/69, "Reorganisation of the AMF, 59/60-61/62: Closing of C.M.F. Centres;" and Commonwealth Parliamentary Debates, Vol H of R, 26 & 27, p. 829.

⁽S) CRS A6059,41/441/69, "List of Existing C.M.F. Units of Regimental and Battalion Status Showing Major Changes Resulting from the 1960 Reorganisation," 4 March 1960.

The C.M.F. infantry units fared worse. Out of 31 standard infantry battalions and nine brigade headquarters, only 17 battalions and six brigade headquarters were left unscathed. (This excludes the University Regiments and the Papua New Guinea Volunteer Rifles, all of which remained basically unchanged). These remaining battalions were later reduced to a total of eight, and, reconstituted as pentropic battalions. organised into State regiments bearing the 'Royal' prefix.61 These State regiments replaced virtually all the old infantry regiments that had existed since the introduction of the Kitchener scheme in 1911. In New South Wales, for instance, only three of the original 13 regiments remained. These were the Sydney University Regiment, the University of New South Wales Regiment (both of which became officer training units)62 and the City of Sydney Regiment (the First Battalion Commando Regiment). The other ten units disappeared, along with their colours, affiliations and proud histories. What then emerged was a new, colourless Royal New South Wales Regiment, made up of two pentropic battalions. These contained territorial designations at company level only, in contrast to the previous practice of battalion-level associations.63 As local loyalties and ties between regiments and areas were discarded. the morale of many units began to disintegrate.64

^{61 &}lt;u>Ibid;</u> and <u>Commonwealth Parliamentary Debates</u>, Vol H of R, 26 & 27, p. 650.

^{62 (}R) CRS A6059, 41/441/, "CGS Conference," 1-3 December, 1959, p. 3.

[&]quot;Drastic Reforms Imminent In Australian Army," <u>Sydney Morning Herald</u>, 21 March 1960, p. 2. See also (R) CRS A6059, 41/441/69, "CGS Conference," 1-3 December 1959, p. 3.

^{64 &}lt;u>Commonwealth Parliamentary Debates</u>, Vol H of R, 26 & 27, p. 882.

The reorganisation plan was based on the premise that only one C.M.F. battle group would be made ready for use within three to four months after call-out, and a further battle group after six months. The remaining five battle groups would form a second division (the "Third" Division), as the basis for expansion in a major conflict.⁶⁵ The Prime Minister, however, admitted in parliament in 1964 that the equipment of the C.M.F. battle groups in the First Division were no more than an objective. Furthermore, shortage of modern equipment restricted C.M.F. training periods, and an annual personnel turnover as high as 30 per cent made nonsense of any governmental suggestion that it was an "AIF in being."

The changes also had ramifications in terms of the C.M.F. It was in the nature of the pentropic division that the number of command positions was reduced. In the C.M.F. this was reinforced by the reduction in strength brought about by the cessation of the National Service Training Scheme. As a result there was a huge loss of senior C.M.F. appointments -24 brigadier positions, for example, were eliminated, twelve disappearing in the introduction of the pentropic establishment, and another twelve being lost with the cessation of National Service in June 1960. The reorganisation's effect on the A.R.A., however, was strikingly different. There was an increase from two to eight of the number of senior Regular Army Field Force appointments (colonel and above), compared to a reduction from 38 to 29 and then to 20, in the number of senior C.M.F. appointments in the Field Force.⁶⁷ (This reduction was partly offset by the increase of C.M.F. colonel appointments.) These

^{65 (}S) CRS A6059, 41/441/69, op.cit., pp. 4-5; and p.1 of "Effect on the C.M.F."

[&]quot;Army's Biggest Problem is Lack of Manpower," <u>Sydney</u> <u>Morning Herald</u>, 27 August 1964, p. 2.

^{67 &}lt;u>Commonwealth Parliamentary Debates</u>, Vol H of R, 26 & 27, p. 650.

changes, according to Major-General Vincent, led to the final destruction of the C.M.F.'s already "phoney" career structure.⁶⁸

Perhaps the single most significant change was the replacement of the C.M.F. General Officer Commanding (G.O.C.) (a major-general), with a Regular Army GOC in the First Division. This, louder than all, heralded a dramatic reduction in the power of the C.M.F. From that time onwards, domination of the Army by the Regulars was assured.69 Major-General Vincent has stated that the pentropic reorganisation was not a plot against the C.M.F. -" it was going to happen anyway". Vincent commented further, that, "by 1959-60 these [C.M.F.] officers spent about as much time training as the Regular Army officers spent on leave, but they claimed to be equals."70 The sentiment so expressed reflects the satisfaction of the Regulars of that time with the changes. There can be no doubt that the members of the Military Board responsible for these crucial decisions were not only aware of the implications of their plans but also were willing to oversee the demise of the C.M.F.71 Major-General P.A. Cullen, C.M.F. Member of the Military Board from 1964 to 1966, was right when he said that "of all the reorganisations, this was undoubtedly the most disturbing, and destructive of C.M.F. effectiveness."72

⁶⁸ Interview with Major General D. Vincent, 5 August 1987.

⁽S) CRS A6059, 41/441/69, "Effect of Pentropic Reorganisation on High Rank Structure of the Field Force (C.M.F./A.R.A.)," pp. 1-4 & Annex A; and interview with Major General D. Vincent, 5 August 1987.

⁷⁰ Interview with Major General D. Vincent, 5 August 1987.

⁷¹ See for instance (S) CRS A6059, 41/441/69, "Reorganisation of the AMF 1959/60-1961/62," 29 March 1960, which details the ramifications of the changes on both the C.M.F. and the Regular Army.

⁷² Letter from Major General P.A. Cullen, 14 April 1987.

There were some benefits, however. Late in 1959, the <u>Sydney Morning Herald</u> predicted that the changes which were to be brought about by the cessation of National Service training would be "for the best, in the light of Australia's military needs in a changing world." The C.M.F. had been in the unenviable position of being composed of both volunteer and conscripted troops, of whom only the volunteers were allowed to be sent overseas. This unreasonable situation had persisted throughout the 1950s. The termination of National Service, in mid 1960, did bring about a sudden and quite satisfactory solution to the problem.

The cessation of the National Service Training Scheme also served to release to the A.R.A. both money and manpower for other purposes. 74 From the Army's point of view, the introduction of the pentropic establishment may have seemed to be a good way of ensuring that the spare resources derived from this cutback were not diverted elsewhere. At the same time as the cutbacks were announced, massive expenditure was called for to supply the necessary equipment and manpower required for the new organisation. 75

The integration of the C.M.F. with the Regular Army in the pentropic organisation was a radical and controversial innovation. ⁷⁶ In late October 1959, Dr Forbes stated in parliament that "there is no suggestion of any antagonism

⁷³ Sydney Morning Herald, 27 November 1959, p. 19.

⁷⁴ Sydney Morning Herald, 30 March 1960, p. 1.

⁷⁵ Letter from Major General Sir Arthur MacDonald, 7 April 1987; and interview with Major General P. Falkland, 16 April 1987.

^{76 &}lt;u>Commonwealth Parliamentary Debates</u>, Vol H of R, 26 & 27, p. 823; and (S) AWM 121, 28/A/3, "Composition of the Australian Defence Forces, Cabinet Decisions, November 1959."

between the [C.M.F. and the A.R.A.], and there is no conflict of interests."77 This statement was supported by the First Division Annual Training Report of 1961, which stated that "integration appears to be proving successful, in that C.M.F. elements have benefited by constant contact, during training and off duty periods, with the regulars." 78 General Sir Arthur MacDonald has said that "the reorganisation did...have the effect of bringing the Regular Army and the C.M.F. closer together....as divisional supporting arms, such as engineers and signals were integrated at unit level."79 In 1963, however, Lieutenant Colonels Millar and Strong stated that there were major problems with integration in the areas of command relationships, joint training, and administrative responsibility.80 This view is supported by Major General P.A. Cullen, who has commented recently that

integration...was clumsily done, and was an additional factor causing disillusion, discontent, disruptions and resignations. The effect of integration on the Regular component was also adverse, ...[This] in turn had the effect of further disturbing the Reservists... In some instances in technical units, [Postmaster General] technicians in the signals unit were so superior to the Regular technicians, that it generated friction and jealousy. In ... other units, the superiority of the Regulars had a similar effect.

^{77 &}lt;u>Commonwealth Parliamentary Debates</u>, Vol H of R, 48, p. 2397.

^{78 (}S) CRS A6059, 65/441/150, "1 Division Annual Training Report," 8 July 1961, p. 3.

Letter from Major General Sir Arthur MacDonald, 7 April 1987.

Lieutenant-Colonel's C.J. Millar & A.E.G. Strong, "ARA-CMF Integration," in <u>Australian Army Journal</u>, No 168, May 1963, pp. 5-10.

88

There were all types of psychological superiority-inferiority side effects.⁸¹

It is thus clear that the events of 1959 and 1960 signified, among other things, the final, inevitable ascendance of the Regulars over the C.M.F. in a power struggle for a controlling influence over the direction of the Army which dated back to before World War II. The pentropic reorganisation met some of the objectives of the reorganisation but not others. It met (in theory at least) the requirement of survivability in a nuclear situation. It also met the unstated objectives of retaining funds previously allocated to the National Service Training Scheme and of ensuring the predominance of the Regulars. It did not, however, meet the objective of being suitable for South-East Asian conditions, at least not in the jungle conditions found on exercise in Australia.

problems encountered with the pentropic organisation related to mobility (especially in jungle conditions with the oversupply of Land Rovers in the battalions), the wide span of command, inadequate communications, the limited range of the artillery support weapons, and the negative attitude of personnel towards the organisation. On the other hand, the pentropic organisation had its benefits. The infantry battalions had a far greater firepower capability than previously and the elimination of the brigade echelon allowed for quicker dissemination of information. Furthermore, the availability of a fifth sub unit provided commanders with a greater degree of flexibility than previously thought possible. On the whole, however, the pentropic organisation was not as effective as it had been hoped, especially for jungle warfare. The reasons for the later reversals in Army policy are considered in the next chapter.

CHAPTER FIVE

RETURN TO THE STATUS QUO ANTE? THE CHANGE FROM THE PENTROPIC TO THE TROPICAL ESTABLISHMENT

On 10 November 1964, the Prime Minister, R.G. Menzies, announced the re-introduction of selective national service. He emphasised the need for greater flexibility in deployment, and cited recent developments in our strategic position as the cause for a new requirement to meet both cold and limited war situations. Only a few weeks later, in December of that year, Cabinet finally approved the abandonment of the pentropic organisation. The pentropic division was replaced by a triangular Tropical Warfare (T.W.) division, similar to the T.E. division in use prior to 1960.2

According to a report in <u>The Australian Journal of Politics and History</u> in early 1965, the "new" defence programme was, on the whole, well received by both press and public throughout Australia. There had for some time been a widespread feeling that a reorganisation of and an increase in Australia's armed forces was overdue.³ The decisions firstly to

Commonwealth Parliamentary Debates (Hansard), Vol H of R 44, pp. 2715-2720; and Millar, Australia's Defence, p. 129. See also (S) CRS A2653, 604/R6/7, Military Board Minute, 11 Deccember 1964, No 359/1964, "Review of Field Force Organisation;" and "Reorganising the Army," Bulletin, 9 January, 1965, p. 11.

⁽TS) AWM 121, 2/E/1, "Reorganisation of the Army," p. 5; and (S) AWM 121, 28/C/2, "New Divisional Organisation," p. 1.

F. Alexander, "Problems of Australian Foreign Policy, July-December, 1964," in <u>The Australian Journal of Politics and History</u>, Vol 1, No 1, April 1965, p. 2.

90

re-introduce national service and then to abandon the pentropic establishment followed a steady increase in defence expenditure in the preceding few years. Four main factors had interacted to produce this reverse in Army policy. These can be summarised as follows: the changed strategic outlook and new combat roles adopted by Australia; the economic determinants of finance and manpower; the impact of technological developments on world military organisational theories; and the internal political machinations of the Army chiefs as the magnitude of the problems associated with the pentropic organisation was realised. The influence of each of these factors is explored below.

Australia's adoption of the pentropic establishment in late 1959 had come at a time when there was a major reexamination of the appropriate combat roles of forces. throughout the western world. From about 1954 onwards. Liddell Hart had been proclaiming that defence based on massive retaliation was unsound. In 1956 Henry Kissinger, in his book Nuclear Weapons and Foreign Policy, sought to demonstrate the absurdity of relying on deterrence alone, and argued that limited warfare was still possible.⁵ His conclusion was that a nuclear defence "became the last and not the only recourse." 6 According to Michael Carver, the response of governments of the period took two general forms. In Britain, in 1957, Harold MacMillan's Conservative administration took the view that, due to the new emphasis on massive, nuclear retaliation, ponderous forces based on conscription were now obsolete (despite the

⁴ R.G. Neale, "Problems of Australian Foreign Politics, January-June, 1963," in <u>The Australian Journal of Politics and History</u>," Vol 9, No 2, November, 1963, p. 145.

⁵ Preston & Wise, Men in Arms, p. 357.

⁶ H. Kissinger, in Halperin, op.cit., p. 63.

inadequacy of this policy in relation to Britain's colonial interests).⁷

The alternative view, taken by men such as General Maxwell Taylor, Chief of Staff of the U.S. Army, was that reliance should no longer be placed on nuclear weapons, particularly in view of the fact that in 1960 the Soviet Union already possessed the capability to wreak unacceptable destruction on the United States. (The Soviet Premier, Khrushchev, had been arguing at least since 1957 that Russia's nuclear firepower was the key to victory in any war.)8 President Kennedy, and his Defense Secretary, Robert McNamara, agreed with General Taylor. As a result the policy of massive retaliation, which had been adhered to by the Eisenhower administration throughout the 1950s, and which, according to Bacevich, had left the Army "shorn of its selfimage as the nation's primary fighting force", was replaced by a policy of "flexible response."9

The British joint Chiefs of Staff in 1952 had worked out a "New Look" doctrine which was adopted in 1957. It was based on the doctrine of massive retaliation. See Lider, op.cit., p. 213; Ropp, War in the Modern World, p. 401; Preston & Wise, Men in Arms, pp. 358-359; and C. Cook & J. Stevenson, The Longman Handbook of Modern British History. 1714-1980, Longman, London, 1983, p. 219.

⁸ Preston & Wise, Men in Arms, p. 368.

Bacevich, op.cit., pp. 32, 43-44, &145; M. Carver in Paret(ed), op.cit., pp. 784-787; and Halperin, op.cit., p. 63. The policy of flexible response, according to General Taylor, would mean that the U.S. would have the capability to employ whatever means was appropriate to the threat, ranging from diplomatic efforts to clandestine or "special forces" to full scale conventional campaigns anywhere in the world. General Taylor became personal military adviser to

This shift in strategic emphasis encouraged President Kennedy to direct Secretary McNamara to reorganise the Army's divisional structure. In December 1960, Continental Army Command (C.O.N.A.R.C.) began to re-evaluate the current organisation and to make recommendations for an organisation specifically designed for the policy of flexible response. Subsequently, on 25 May 1961, the President announced in Congress the abandonment of the pentomic organisation in favour of a concept, not yet fully developed, known as Reorganisation Objective Army Divisions (R.O.A.D.).¹⁰ The reasons for this change were many, and included the Army's desire to increase its conventional firepower, to improve its tactical mobility, and to overcome the unsatisfactory command structure in the pentomic division. The reorganisation would, it was hoped, facilitate its coordination with major allies, increase its flexibility, and allow the provision of modern mechanised divisions in Europe and new airborne brigades in both Europe and the Pacific 11

In theory the pentomic organisation had a number of significant advantages. In practice, however, the structure proved to be disappointing. Operational command, supposedly designed for optimum flexibility, turned out to be awkward and difficult on exercises. The intermediate command echelon had

President Kennedy in 1961 and in 1962 became Chairman of the Joint Chiefs of Staff. See <u>Bulletin</u>, July 1964, p. 36.

Rose, op.cit., pp. 76 & 79; Mahan & Danysh, op.cit., p. 100; and Ney, op.cit., p. 104. It was initially entitled ROAD-65 but the programme was moved up three years. See CRS A6059,41/441/152, "Division Remake Advanced Three Years."

J.F. Kennedy, in <u>Military Review</u>, Vol 42, No 1 January 1961, p. 6; and (C) CRS A6059, 41/441/152, Annex C to AHQ A240/1/712 of 20 June 1961,"Reorganisation of U.S.Army Divisions."

been abolished, and the divisional commander now found himself directly concerned with the affairs of up to 16 subordinate units. Even with modern communications, this span of control was too wide for efficient operations. The presumed advantages of the battle group organisation in dispersed nuclear operations were disadvantages in a conventional setting. The units found themselves organised almost exclusively for nuclear war, despite the growing belief that the next war would be non-nuclear. Moreover, even the supposed increase in foxhole strength proved illusory; commanders were forced to resort to stripping combat units to bolster service elements too weak to support the division.

Another problem was that the battle groups were regarded and deployed as scaled-down regiments (Australian brigade equivalent) rather than oversized or reinforced battalions. The battle group was not, however, powerful enough in conventional firepower to be an adequate substitute for the old regiment. 12

Bacevich has noted that there was virtually unanimous opposition to the pentomic concept among senior U.S. Army officers, who had always considered it to be an interim measure. One general considered it to be merely "a device to say 'yes, the Army has moved into the nuclear age." General G. H. Decker, successor to General Lemnitzer as Army Chief of Staff, personified the organisation as "a jack of all trades and master of none." It was not "a suitable vehicle for combat." Middleranking officers were also opposed to the pentomic organisation, for within it infantry majors and lieutenant-colonels had limited command opportunities; these were, in the main, allocated to captains and colonels. It was felt that the Army's

Bacevich, op.cit., pp. 134-135; Mahan & Danysh, op.cit., p. 101; Blinkley, op.cit., p. 78; and R.F Weigley, <u>History of The United States Army</u>, Indiana University Press, 1983, p. 559.

94

overwhelming emphasis on new technology had blinded it to the limits of that technology in the overall equation of war. The Army seemed chained to a strategy which had become increasingly questionable.¹³

The initial testing of the R.O.A.D. divisions, with their flexible combat force built on a "semi-fixed common base", took place during 1962. The R.O.A.D. concept discarded the rigid dividing line between pentomic armoured and infantry divisions, and replaced them with a standard divisional structure in which both infantry and armoured units could be incorporated. 14 May 1964, all U.S. divisions were organised in this way. The goal was to be able to tailor a force both for the environment and for the mission, while still improving the U.S.'s limited war capability and increasing its non-nuclear combat power. 15 This was to be done by attaching the appropriate battalion type (such as infantry or armour) to a brigade (see Appendix E). Brigades were then to be added to the division's common base. This common base included a divisional headquarters, three brigade headquarters, an engineer battalion, an aviation battalion, a signal battalion, a cavalry squadron, a military police company, and a support command. This force structuring reflected a continuing trend towards self-sufficiency, made possible by advances in communications as well as in transportation. One important innovation was the inclusion of helicopters in the new aviation battalion.

The R.O.A.D. infantry battalion differed considerably from the pentomic battle group. It was now organised into three

Bacevich, <u>op.cit.</u>, pp. 135, 149 & 151; and Mahan & Danysh, <u>op.cit.</u>, p. 101.

Heilbrun, op.cit., p. 115; and CRS A6059, 41/441/152, "Official Statement on U.S. Army Reorganisation," p. 2.

Marken, <u>op.cit.</u>, pp. 62-64; Pizer, <u>op.cit.</u>, p. 40; and Kleinman & Horowitz, <u>op.cit.</u>, pp. 51 & 94-95.

organic rifle companies, each containing three rifle platoons and a weapons platoon (see Appendix G). The rifle platoon consisted of three rifle squads and a weapon squad, while the weapons platoon had both a mortar and an anti-tank section. 16

Overall, the R.O.A.D. reorganisation provided an increase in firepower, and larger number of armoured tracked vehicles and aircraft, as well as increased cross-country mobility for the division. These, together with the increased organisational flexibility and improved command and control facilities, produced superior combat power.¹⁷

In response to the news of the U.S. reorganisation to R.O.A.D., the Australian Military Board argued, in June 1961, that

The Australian Military Force (A.M.F.), unlike the U.S. Army, is concerned with only one theatre, viz, South-East Asia, and primarily with limited non-nuclear war, or anti-insurgent operations. Hence the AMF has been free to design the division best suited to this one operational environment and to avoid compromises. No new factors have arisen in Australia which make necessary any changes in basic structure of the pentropic division and none are proposed. Study and evaluation will continue,

Mahan & Danysh, op.cit., p. 102; Lieutenant Colonel C. P. Keiser, "The ROAD Ahead," in Military Review, Vol 42, No 1, January 1962, pp. 2-6; Blinkley, op.cit., p. 81; Colonel A.L. Wermuth, "High on the ROAD," in Army, November 1963, p. 39; and Pizer, op.cit., p. 39.

^{17 &}quot;The United States Army Division," in <u>Australian Army</u> <u>Journal</u>, No 154, March 1962, pp. 30-33.

however, with the aim of improving the pentropic organisation. 18

The study and evaluation that followed provided hard evidence that the suspicions of many regarding the pentropic establishment were justified. According to General Sir Arthur MacDonald, writing in 1987, General Wilton, (then the C.G.S.), agreed in late 1963, that change was needed, but Wilton, according to MacDonald, also pointed out that "in the light of all that had been said in support of the pentropic organisation and the equipment orders which had been placed as part of its implementation, it would not be practical at that time to revert to a 'three brigade' division. That would have to be a matter for the future, but he did not doubt that the change would come about. In the meantime it was the Army's job to get on with what it had and make it work as best we could." 19

It was not until October 1964 that Australian strategists responded to the shift in U.S. strategic emphasis, with our own version of "flexible response." In the strategic assessment of that year, the risk of global war was assessed as more likely than previously as the increase in the number of nuclear weapons could increase the risk of miscalculation. However, there was recognition that a policy of collective security left some circumstances in which Australia would not necessarily be guaranteed support. Australia might require a measure of self-reliance "should the west's forward defence strategy fail and if Indonesia should become communist." The view was therefore reinforced that "Australia must rely on her independent military capability and collective security arrangements for her defence and the maintenance of stability in the area."²⁰

^{18 (}C) CRS A6059, 41/441/152, Military Board A240/1/71, dated 20 June 1961, p. 1.

¹⁹ Letter from General Sir Arthur MacDonald, 7 April 1987.

²⁰ "Key Elements", pp. 7-8.

Australia's military resources at that time would have been severely stretched in performing two or more operational tasks in South-East Asia simultaneously. This was a cause for concern, as the government foresaw the possibility of significant problems with Indonesia in relation to Malaysia and West New Guinea.21 Furthermore, the conflict in Indochina was escalating, and it was becoming increasingly apparent that Australian combat troops might be sent in support of the United States' efforts there.22 Moreover, regarding our responsibilities in New Guinea itself, there was no guarantee of reciprocal military assistance from the United States.

Australia, therefore, more than ever needed a capacity for independent action to meet the initial shock of any emergency with which it may have been faced.²³ According to Fred Alexander, events at that time seemed to be carrying Australia inexorably toward the point of significant military involvement against Indonesia in the defence of Malaysia.²⁴ During 1963. according to Peter King, Australia had been at pains to adopt an

²¹ See R. O'Neill, "Malaysia and Singapore," in H.G. Gelber (ed), Problems of Australian Defence, OUP, Melbourne, 1970,pp. 97-106; Sir Alan Watt, Australian Defence Policy 1951-63: Major International Aspects, Working Paper No 4, ANU, 1964, pp. 62-65; "Australians in Action: Indonesian Clash," Sydney Morning Herald, 30 October 1964, p. 1; and Millar, "Partnership in Defence," in N. Harper (ed) Pacific Orbit, Cheshire, Melbourne, 1968, pp. 29-31.

²² Chakravorty, op.cit., pp.12-17; and Millar, "Partnership in Defence," p. 33.

²³ "Defence Plans Need Reassessing," Sydney Morning Herald, 3 September, 1964, p. 2.

²⁴ F. Alexander, "Problems of Australian Foreign Policy, July-December 1964," in The Australian Journal of Politics and History, Vol 11, No 1, April 1965, p. 1.

98

attitude of friendly and helpful interest in the economic problems of nearby Asian countries, but in "hard policy" terms, the government had continued to prepare for possible military intervention to maintain the status quo, with a sophistication bordering on cynicism.²⁵

Reports in the Australian press in early 1964, however, indicated public discontent with the "neglect" experienced by the armed services, both Regulars and C.M.F.. One analyst expressed the view that the government was "trying to get [its] defence on the cheap." There was growing concern that Australia's pentropic organisation would not be adequate to provide the capacity for independent action that may have been urgently required. Whilst the strength of the post-pentropic A.R.A. would be adequate to provide a battalion for continuous operations in South Vietnam, it was not possible to have a battalion permanently stationed in Malaysia, as well.

According to General Vincent, the pentropic organisation was not successful because of four factors. These were:

P. King, "Problems of Australian Foreign Policy, January-June 1964," in <u>The Australian Journal of Politics and</u> History, Vol 10, No 3, December 1964, p. 291.

The RSL national executive had also been calling for reforms to meet the growing commitments. See Sydney Morning Herald, 12 February 1964, p. 9. T.B. Millar made a similar plea for the reintroduction of a national service scheme along the lines of the one set up in 1965. See Millar, "Two Years National Service," Bulletin, 22 August 1964, pp. 35-37. See also "Heavy Obligations; No Means To Fulfill Them," Sydney Morning Herald, 26 August, 1964, p. 2; "Australian Defence Forces 'Woefully Inadequate': U.S. Claim," Time Magazine cited Sydney Morning Herald, 27 May 1964, p. 4; and "Economic Aspects of National Security," Sydney Morning Herald, 1 September 1964, p.2.

commanders failed to see the significance of the five big battle groups and the independence of the five-rifle-company battalion; they failed to regard the battle groups as small brigades rather than big battalions; they failed to exploit fully the new communications equipment (which made the pentropic concept possible); and General Pollard's (Chief of the General Staff from 1960 to 1962) ambivalence. Pollard never gave the necessary instruction to develop a light-scale pentropic division for operations against insurgencies. In late 1964, the need for a light-scale division was highlighted as a factor contributing to the need for re-organisation.²⁷

The Australian pentropic organisation had disrupted the promotion and command posting prospects of infantry corps officers in much the same way it had been done in the U.S. As with the U.S. pentomic structure, it removed the opportunity for lieutenant-colonel level command experience. ²⁸ Streamlining of positions associated with the pentropic reorganisation was further publicly blamed for the forced retirement of eight senior Army officers in 1960. ²⁹ It was another factor contributing to growing discontent with the pentropic establishment.

Interview with Major General D. Vincent, 5 August, 1987. See also (C) CRS A2653, 604/R6/7, "Review of the Pentropic Division." Review of the Field Force Organisation," p. 3.

Interview with Major General P. Falkland, dated 16 April 1987.

[&]quot;MInister Tells House Reasons For Officers' Dismissals," <u>Sydney Morning Herald</u>, 18 March 1960, p. 1; and interview with Major General D. Vincent, dated 5 August 1987. Vincent noted that much bad feeling was generated by Mr Cramer's unbased claim in parliament that the officers were "dismissed" because of inefficiency.

By late 1964, in the view of the then C.G.S., General Wilton, there were four main factors which justified a reorganisation of the field forces. These were listed by him as:

- a) The new strategic basis. The main point [is] that 1 Div [is] more likely to operate in two separate strategic areas than fight as one cohesive formation.
- b) The emphasis on cold war, implying a need for smaller, lightly supported, infantry battalions.
- c) The constantly increasing availability of tactical air transport support, thus allowing an overall reduction in road transport; and
- d) The possibility, although by no means assured, of an alleviation of the manpower problem through some form of selective service.³⁰

General Wilton went on to point out several "weaknesses" with the pentropic division, including "the lack of intermediate headquarters between Division and Battalion"; and the overly wide span of control at various levels.

These weaknesses had been discovered largely through trial and error, as the pentropic battalions were put through their paces on exercises. Lieutenant-General Sir Reginald Pollard's, "C.G.S. Exercise," for example, in August 1962, was aimed at studying the employment of the pentropic division in defensive operations.³² Throughout the pentropic era, exercises continued to be held in such places as the Colo-Putty region, Tianjara, Puckapunyal, Singleton, Coalcliff and Tin Can

^{30 (}C)CRS A2653, 604/R6/7, "Review of the Pentropic Division," Annex A to Military Board Submission, No 13/1964.

³¹ Ibid.

^{32 (}TS) CRS A6059, 65/441/175, "CGS Exercise-1962."

Bay.³³ Brigadier MacDonald, Deputy Divisional Commander in 1963 and 1964, stated recently that "there was a virtually unanimous view, at divisional level, that, whatever its virtues might be in a nuclear situation, the pentropic organisation was not the best for the conditions in which the Australian Army was likely to fight."34 One of the exercises conducted was Exercise NUTCRACKER - a conventional war exercise based on an advance on three axes, held jointly by 1 R.A.R. and 3 R.A.R. in the Colo Putty area. In this exercise 1 R.A.R. operated quite differently to 3 R.A.R. 3 R.A.R. moved in two-company groups, with the fifth company and the administration company in the echelon area. On the other hand the Commanding Officer of 1 R.A.R., the then Colonel C.M.I. Pearson believed that the companies were strong enough to operate independently and so the companies operated separately. Problems arose as sub units, including the artillery batteries, had to leapfrog positions using a single track as their axis. This created definite traffic control problems as there were so many vehicles. According to the G.S.O. 2, Major (later Major General) Morrison, the Military Police were under command during the exercise and the watchword was traffic control 35 Colonel (later Brigadier) W. J. Morrow, Commanding Officer of 3 R.A.R. from July 1960 to December 1962, has noted

> we suddenly had a large number of vehicles, which we hadn't experienced before. Having worked out our road movement and vehicle control, we suddenly found that when in the tropics, the last thing we

³³ Sydney Morning Herald, 15 June 1960, p.27; Hopkins, Australian Armour, p. 217; Defence Report 1964; Defence Report 1965, p. 30; and interviews.

³⁴ Letter from General Sir Arthur MacDonald, 7 April 1987.

³⁵ Interview with Major General A.L. Morrison, 28 April 1987.

wanted was a large number of vehicles. It was cumbersome in close country ...³⁶

In mid 1964, at Tin Can Bay in Queensland, another exercise was held, employing about 3,000 troops (including a squadron of Centurion tanks), under Colonel O. D. Jackson, Commanding Officer of the 2 RAR battle group. According to Brigadier (later General) MacDonald, then the Deputy Commander of the First Division,

it was patently obvious that the battle groups with their supporting arms and services were far too unwieldy and [that they] prevented, or at least hindered, effective tactical control by the battle group commander - even one having the stamina and determination of Colonel Jackson!³⁸

The major divisional exercise for 1964 was exercise LONGSHOT held at Tianjara, south-west of Jervis Bay, this time under the command of Colonel Dunstan, Commanding Officer of the 1 R.A.R. battle group. This was a joint Army - Navy - Air Force exercise slanted at the logistic and administrative aspects of the maintenance of a force overseas. For 1 R.A.R. it was largely a company training exercise with a firepower demonstration. By then, according to MacDonald, the pentropic organisation was "on the way out." As Major General C.M.I. Pearson has noted, "the main problem was the size of the battalion and the extra commands, which made it almost impossible to command every single element." Millar has correctly stated that the

³⁶ Interview with Brigadier W.J. Morrow, 31 March 1987.

Paltridge, Defence Report 1965, Canberra, 1965, p. 30.

Letter from General Sir Arthur MacDonald, 7 April 1987.

³⁹ Ibid.

Interview with Major General C.M.I. Pearson, 28 March 1987.

pentropic organisation was not introduced with a great deal of preliminary assessment, nor testing through map and model exercises.41 This lack of foresight resulted in the end in much frustration and disappointment within the Army, and risked the very preparedness we had sought to gain.

Another contributing factor to the decision to abandon was the difficulty of integrating with our allies in Malaya. The Australian battalion in Malaya was on the British tropical establishment; thus, until an extra T.E. battalion was raised in South Australia in 1964, a pentropic battalion had to be broken down and its training adjusted before it could be sent to Malaya to replace the battalion on rotation. This caused unnecessary turmoil and disrupted unit cohesion 42

At the sixth Quadripartite Infantry Conference in 1964, the problem of interoperability of infantry units of the American British Canadian Australian (A.B.C.A.) armies was examined. As a result, the United States (with its three rifle company battalions) and Australia (with its five rifle company battalions) were invited to examine the concept of a battalion organisation containing four rifle companies, following the pattern of both the United Kingdom and of Canada. Support for a reorganisation was increasing.43

Millar pointed out in November 1964, that "it is absurd for us to continue with an organisation that does not mesh either

⁴¹ Millar, Australia's Defence, p. 129.

⁴² Millar, Australia's Defence, p. 129. See also (C) CRS A2653, 604/R6/7, "Review of the Pentropic Division," Annex A to Military Board Submission No 13/1964, pp. 2-3.

⁴³ (S) CRS A2653, 604/R6/7, Annex D to Military Board Submission No 13/1964.

with the British or the Americans."⁴⁴ An article in the <u>Bulletin</u> in January 1965 stated that, "a gamble was taken which appeared justified in the context of the American pentomic division, but which has not paid off. Perhaps because of faulty liaison, we did not know that the United States was about to discard the pentomic organisation in formations where it had been introduced."⁴⁵

In the end, perhaps one of the most significant factors leading to the elimination of the pentropic organisation was that, in General Wilton's words, "Its not the size of the battalion that counts: its the number."46 Australia was in need of a greater number of units, so that it would be capable of deploying independent forces to a number of different places at any one time. The change from the pentropic to the triangular (T.W.) division (in addition to the reintroduction of national service) enabled the size of infantry battalions to be reduced to approximately 800 men and permitted an additional four Regular battalions and at least 6 C.M.F. battalions to be raised.⁴⁷ In the determination of the combat force structure which Australia was now to adopt, the perceived role of our combat force would be a crucial factor. By December 1964, the emphasis was firmly on the ability to provide forces suitable for cold war operations, but with a capability of engaging in

Millar, "Holding Our Heads a Little Higher," <u>Bulletin</u>, 21 November 1964, p. 24.

^{45 &}quot;Reorganising the Army," <u>Bulletin</u>, 9 January 1965, p.11.

Interview with Major General D. Vincent, 5 August 1987. See also <u>Brief History of the Australian Army</u>, Army Public Relations, p. 23.

^{47 (}S) AWM 121, 28/B/1, Lieutenant-General Wilton, "Composition of the Australian Defence Forces: Progress Report on Achievements of Approved Objectives as at 31 December 1964."

limited war without the need for a further major reorganisation.⁴⁸

In order for the Army to provide the required increase in the number of Regular Army battalions available for service, not only was a reorganisation deemed necessary, but conscription was called for as well. Therefore, in reintroducing conscription on 10 November 1964, the Prime Minister stated that:

it seems clear, on our military advice and our own carefully formed judgements, that we cannot expect by voluntary means to achieve a build up in the Army's strength of the order we require and to the timing which is necessary...The Government has therefore decided that there is no alternative to the introduction of selective compulsory service.⁴⁹

This was not a return to the national service training scheme of the 1950s, which had bolstered the strength of the C.M.F. Now national servicemen were to serve two years with the Regular Army, and were obliged to serve anywhere overseas if required. This decision reinforced the recently won predominance of the Regulars over the C.M.F., as it promised an increase in Regular manpower from 20,000 to 40,000, in contrast to the target manpower ceiling for the C.M.F. of 35,000 men. The move further satisfied the government's assessment of the strategic situation, which indicated the need to have a

^{48 (}S) CRS A2653, 604/R6/7, Military Board Minute, 11 December 1964, No 359/1964, "Review of Field Force Organisation," p. 1.

Commonwealth Parliamentary Debates., (Hansard), Vol H of R 44, pp.2717-1718.

⁵⁰ Millar, "Australian Defence, 1945-1965," p. 295.

substantial body of troops readily available for limited or cold war tasks. 51

The pentropic system had been evolved to meet a limited war contingency at a time of restricted manpower. It had been considered essential, at that time, to determine the smallest possible independent formation for the conduct of a limited war. It was hoped that the pentropic battalion, would be capable of operating independently, (together with its supporting arms), and would require less manpower than the standard brigade group. The reintroduction of national service helped to solve the problem of manpower restrictions, and also helped to pave the way for a reorganisation away from the pentropic model. As the C.G.S., Lieutenant-General Wilton later noted in October 1965, "the new organisation...is directly related to Cabinet approvals to raise the strength of the ARA first to 37,500 and subsequently to 40,000."53

The abandonment of the pentropic organisation followed the completion of the Andersen Report in November 1964, commissioned by the C.G.S., Lieutenant-General Wilton, to review the Army's Field Force organisation.⁵⁴ The general

Senator S. Paltridge, <u>Defence Report 1965</u>, Canberra, 1965, p. 27; Forward & Reese, <u>Conscription in Australia</u>, p. 82; and Millar, "Australian Defence, 1945-1965," p. 296.

⁽S) CRS A2653, 604/R6/7, "Review of the Field Force Organisation," p. 2.

^{53 (}S) AWM 121, 28/C/2, "New Divisional Organisation," p. 3.

The Andersen Report, reviewing the pentropic organisation was submitted at the direction of the C.G.S. (C.G.S. No108/12964 dated 28 October 1964) on 23 November 1964 by the committee under the Chairmanship of Major-General J.S. Andersen, Commander 1 Division. (C) CRS A 2653, 604/R6/7, Annex C to Military Board Submision No 13/1964, 30 November 1964.

conclusions of the Andersen Report (which followed the guidelines listed by the Military Board) were as follows:

> In general we see the infantry division reverting more to the style of the triangular division with a cavalry regiment, three field regiments, three field squadrons of engineers, a completely redesigned signals regiment and ten infantry battalions. controlled by three task force (or brigade) headquarters. We also see as organic to the division an aviation wing comprising a light aircraft squadron and a utility helicopter squadron, commanded and manned by Army personnel [along similar lines to that adopted by the U.S. with the R.O.A.D. organisation1.55

The Report's results contrasted sharply with the praises heaped upon the pentropic organisation by Colonels Pearson and Morrow, in an article, (also commissioned by the C.G.S.), written for the December 1964 edition of the Australian Army Journal entitled "The Pentropic Division: Another Point of View."56 In response to the Andersen Report a planning committee, headed by Brigadier K. Mackay, Director of Military Operations and Plans, was subsequently appointed to examine in detail a framework for a new divisional structure. compelled to adhere to a total manpower limit imposed by the Government, and was given a service objective to make the division air-portable.57 The decision was then made to change

⁵⁵ (C) CRS A2653, 604/R6/7, "The Andersen Report," p. 1.

⁵⁶ Colonels C.M.I. Pearson & W.J. Morrow, "The Pentropic Division, Another Point of View," in the Australian Army Journal, No 187, December 1964, pp. 5-10; and interview with Brigadier W.J. Morrow, 31 March 1987.

⁵⁷ Hopkins, Australian Armour, p. 226; and (C) CRS A2653,604/R6/7, "Annex C to Military Board Submission

to a Tropical Warfare (T.W.) triangular divisional

establishment. In the Military Board Review of the Army's Field Force organisation, on 11 December 1964, it was stressed that:

the announcement of the change must be handled with great care, so as to avoid criticism on the grounds that the Army had not been able to make up its mind and that the change was a retrograde step...The CGS pointed out that it was for this reason that he had [favoured using the term "Task Force"] thus [avoiding] the use of the term 'Brigade', a term analogous to earlier organisations.⁵⁸

According to General MacDonald, it would indeed have been "rubbing a bit too much salt into the wound" to revert to calling the task forces "brigades." Major-General Hopkins, however, has argued that the new task forces were a real innovation, as they could be varied in size and composition, according to the requirements of the particular situation. This was similar to what the United States had done with their R.O.A.D. divisions in 1962. General Falkland has stated that "we all sighed with relief" when the Army reverted to the standard [triangular] organisation. 60

The Australian "Task Force" was to be a balanced force, based on a nucleus of two or more battalions and commanded by a headquarters supposedly capable of operating indefinitely in an independent role (although presumably still within the division). Low priority was given to the idea of the division fighting *en masse* in any limited war engagement.

No 13/1964," 30 November, 1964; and (R) AWM 121, 9/A/28, p. 3.

^{58 (}S) CRS A2653, 604/R6/7, Military Board Minute, 11 December, 1964, No 359/1964, p. 1.

Letter from General Sir Arthur MacDonald, 7 April 1987.

⁶⁰ Interview with Major-General P. Falkland, 16 April 1987.

The operational concepts agreed upon by the Military Board for the new organisation, were as follows:

- Australia's forces were to be organised to operate on a the South-East Asian mainland, in Malaysia, in the Australian Island Territories, or in small scale United Nations tasks anywhere in the world:
- the Regular Field Force was to be capable of b operations simultaneously in at least two areas, for example, South-East Asia and Papua New Guinea and to provide a reserve in Australia:
- limited war operations by Australian forces would be C in concert with the forces of at least one major allied power:
- d an adequate scale of air support by the Royal Australian Air Force (R.A.A.F.) or allied forces would be available; and
- the Tropical Warfare (T.W.) division was able to be organised and equipped to deal with all likely cold war tasks 61

This new Tropical Warfare organisation took on a bias toward counter revolutionary warfare. 62 The reorganised (T.W.) division was organised to meet an operational requirement for an air mobile formation. It relied heavily upon R.A.A.F. air transport support to enable it to realise its full potential. As part of the three year defence programme of 1962/63 to 1964/65, 18 Short Take-off and Landing Caribou

⁶¹ (R) AWM 121, 9/A/28, p. 3.

⁶² Hopkins, Australian Armour, p. 227. See also (R) AWM 121. 9/A/28, "Task Force Organisation," p. 7.

aircraft, eight heavy lift helicopters, 24 Iroquois helicopters and 12 C-130E Hercules were acquired for this purpose. 63

The eventual composition of the new division included ten battalions (although one battalion was allocated to the division for protection tasks), and an armoured cavalry regiment (previously a squadron). The armoured regiment became part of "Corps Troops" and the utility helicopter squadron was retained by the R.A.A.F. for the time being ⁶⁴ (see Appendix F).

The Andersen report also made a number of other recommendations. The changes included the following:

- a) divisional artillery was reduced to three regiments each of three batteries containing six guns (totalling 54 guns);
- b) the infantry battalion was reduced to 841 all ranks;
- c) the number of vehicles in a battalion were restricted to 29;
- d) the rifle company now consisted of three platoons and a small headquarters (basically reverting to the organisation that preceded the pentropic organisation);
- e) the platoon was reduced to three sections each of which was restricted to nine other ranks (as it was felt that three sections was the maximum that a platoon commander could efficiently command); and

^{63 (}C) AWM 121, A Coord 68,"The State of Readiness of the Army, 1 June 1965," pp. 5 & 11; and Millar, "Australian Defence, 1945-1965," p. 290.

⁽C) CRS A2653, 604/R6/7, "Annex C to Military Board Submission No 13/1964," p. 2; (TS) AWM 121, 2/E/1 "Reorganisation of the Army," p. 5; <u>Defence Report 1965</u>, Canberra, 1965, p. 27; and Millar, <u>Australia's Defence</u>, p. 131.

f) one M79 grenade launcher was added to each section (see Appendix H).

In the support company the following changes were made:

- a) the anti-tank platoon was to include eight detachments armed with the Carl-Gustav 84mm recoil-less anti-tank weapon;
- b) the mortar platoon was reduced to six 81mm mortars:
- c) the assault pioneer platoon and the signals platoon remained basically unchanged.65

The reorganisation again had a significant effect on the C.M.F. The additional battalions created on the Tropical Warfare establishment provided them with increased opportunities for service, particularly in country areas.66 Nevertheless, the damage of the 1960 reorganisation had already been done - the C.M.F. units never regained the influence they had exercised in the 1950s. The new conscripts served to strengthen the position of the Regulars, in the main, although the option was given for men to join the C.M.F. for six years instead of being conscripted.67 A C.M.F. officer, Major R.I. Harrison, wrote in 1964 that the plight of the rifle company commander in a C.M.F. infantry battalion, for example, could scarcely be worse. His sub unit had been stripped of its time honoured regional and A.I.F. affiliations, local support had faded, high-calibre men were no longer being recruited, and the high turnover of other

⁶⁵ (S) CRS A2653, 604/R6/7, Andersen Report.

⁶⁶ (S) AWM 121, 28/B/1, "Composition of the Australian Defence Forces: Progress Report on Achievements of Approved Objectives as at 31 March 1965."

⁶⁷ Millar, Committee of Enquiry into the Citizen Military Forces, Canberra, 1974, p. 13.

ranks in his unit seriously affected the standards they could attain in their training.⁶⁸

As the Military Board indicated in 1965, "the Army [was] more than ever dependent on its A.R.A. content." The C.M.F. was, however, not forgotten. Ammendments to the Defence Act now enabled the government to call upon the C.M.F. in a defence emergency, as well as in time of war. In addition, there was no longer a territorial restriction on C.M.F. service and provision was made for raising the maximum strength of the C.M.F. to 37,000 by mid 1967.69

According to the <u>Sydney Morning Herald</u>, the Minister for Defence, Senator Shane Paltridge, told Cabinet in March 1965 that both the United States and the United Kingdom regarded these reorganisation proposals as "satisfactory." The reinstatement of the three platoon rifle company made it easier for Australian troops to fit in with the British and the New Zealanders in Malaysia, while the changed divisional structure reflected changes that had occured with the U.S. R.O.A.D. divisions. The Australian Army had at last managed to establish, to some extent at least, the compatibility which had been one of the prime objectives of the pentropic reorganisation of 1960.

The abandonment of the pentropic organisation in December 1964 was welcomed by most military personnel. The United States' example in the abandonment of its pentomic

Major R.I. Harrison, "The C.M.F. Rifle Company: Triumph or Tragedy?" in <u>Australian Army Journal</u>, No 185, October 1964, pp. 5-7.

⁽C) AWM 121, A Coord 68, "The State of Readiness of the Army, 1 June 1965," pp. 6, 9 & 11; and Millar, "Australian Defence, 1945-1965," p. 295.

[&]quot;Australian Defences Approved," <u>Sydney Morning Herald</u>,10 March 1965, p. 4.

organisation in 1961 had helped to set Australians' minds against the pentropic division from its earliest stages. Furthermore, it was now seen that Australia was equally likely to be fighting alongside the British in the British Commonwealth Strategic Reserve based in Malaysia, as with the U.S. elsewhere in the region; our incompatibility with U.K. forces had become a serious matter. There had also been constant difficulties relating to control and supply of the pentropic organisation. In the minds of many, there was a need to revert to an organisation with which they would "feel more comfortable", and which would be more useful in terms of Australia's foreign policy.

Despite the difficulties associated with the implementation of the pentropic organisation, it had helped to achieve a number of the goals of senior military officers. It had sealed the fate of the C.M.F. and had guaranteed the dominance of the Regular Army. It had further helped the Army to retain resources that had previously gone to the National Service Training Scheme.

The selective National Service scheme introduced in 1965 was not (unlike its predecessor) in conflict with the interests of the Regulars, as the increased manpower was now allocated to the Regular Army instead of to the C.M.F. The changes were thus not quite a return to the status quo ante. The structure and nature of the Army as we know it today was now set. According to Michael Sexton, mention was made on 16 December 1964 in the Defence Committee of the possibility of sending combat troops to South Vietnam.⁷² The committment to support the U.S. in Vietnam by sending an infantry battalion was announced five months later on 29 April 1965.⁷³ The events of

⁷¹ Millar, "Australian Defence, 1945-1965," p. 278.

M. Sexton, <u>War For The Asking</u>, Penguin, Melbourne, 1981, p. 62.

Commonwealth Parliamentary Debates (Hansard), Vol H of R 44, pp. 2715-2720, dated 10 November 1964; Dr Forbes,

the following years served to confirm the changed relationship between the A.R.A. and the C.M.F.

cited in C.A. Hughes, "Political Review," in <u>The Australian Quarterly</u>, Vol 37, No 1, March 1965, p. 82; Forward & Reese, <u>Conscription in Australia</u>, p. 79; and Millar, "Australian Defence, 1945-1965," p. 296.

CHAPTER SIX

CONCLUSION

Although the fact that the Australian Army changed its organisation between 1957 and 1965 has been recounted in a number of books, no attempt has been made to analyse and assess the reasons for the changes. Yet the reasons for the changes are perhaps as important and of as enduring interest as the changes themselves.

The decision in 1957 to reduce the intake of National Service recruits and to place priority on the development of the Regular Army Field Force was due to a change in Australia's strategic outlook. Global war was seen to be increasingly unlikely and Australia began to perceive that the most likely place where combat troops would be deployed would be in South-East Asia, and not in the Middle East. A mass army for which the National Service Training Scheme of the 1950s was designed. was no longer considered necessary, and the Scheme was seen to be a waste of the Army's limited financial resources. It was felt that the money could be better spent on re-equipping and developing the Regular Army. During this period, technological developments such as the advent of tactical nuclear weapons and combat helicopters had prompted Australia's major allies to reexamine their combat force structures. As a consequence, Britain had adopted a new brigade group structure and the United States a more radical 'pentomic' divisional organisation. Australia, it seemed, had been left behind, with an obsolete organisational structure, incompatible with her major allies.

In the mid 1950s, the Army had begun studying an Australian application of the pentomic organisation, as a possible means of achieving compatibility with the United States Army for what appeared to be the most likely turn of events: a war in which Australian forces fought alongside the United States on the South-East Asian mainland.

In 1959, the decision was made to both adopt a new divisional structure known as the pentropic organisation (similar to and compatible with the U.S. pentomic organisation) and to completely abandon the National Service Training Scheme. The Australian Army chiefs were designing a force that would be consistent with the nation's strategic outlook and perceived combat roles, as well as with new technological developments, changing economic determinants and their own interests. These changes meant, in effect, a diminution of power for the C.M.F. and the concomitant increase in the status and influence of the A.R.A.

The pentropic organisation was itself abandoned in 1965 as it was no longer compatible with the United States' Army, which had begun changing to a different structure in late 1961. The pentropic organisation was now considered outmoded, uneconomical and inappropriate for our new strategic outlook, particularly in the light of ominous developments in Indonesia. Perhaps significantly, however, it had achieved what appears to have been the personal aim of some of the generals: to ensure the predominance of the Regulars.

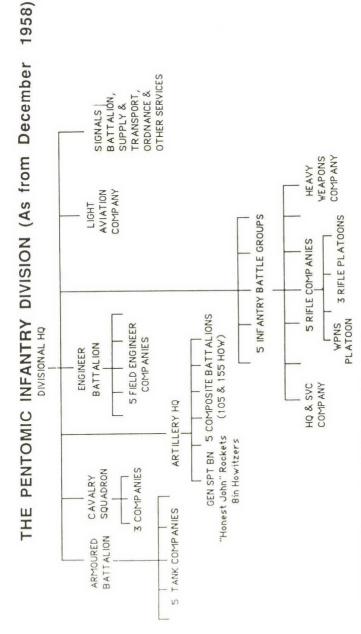
National Service was re-introduced in late 1964. This time the National Servicemen served with the Regular Army and not with the C.M.F. From now on, the Regulars would dominate the Army, as the events in Vietnam were soon to illustrate convincingly.

While the complex underlying reasons for each change cannot be neatly categorised, it is possible to point to the influence of a number of factors. These are: changes in organisational theories arising from technological developments, altered perceptions of both the strategic outlook and combat roles, the fluctuating economic determinants of finance and manpower, and new bureaucratic power plays. These factors do not, however, operate independently but all

interact upon each other, and the Australian experience between 1957 and 1965 is an example of this interaction.

Since the 1957-1965 period, changes have been made to the higher levels of the Defence organisation, such as the introduction of Functional Commands in the Army in 1973 and the reorganisation of the Department of Defence in the 1974-1975 period. Nevertheless, the basic organisational structure of the Army's combat elements remain essentially as it was in 1965.

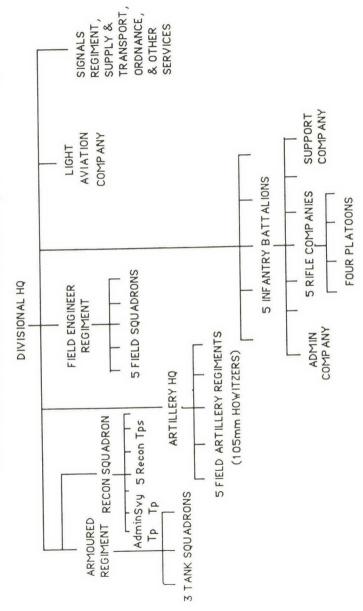
Perhaps the experience of events between 1957 and 1965 was too traumatic to bear repeating. Perhaps armies are simply too conservative, or perhaps there is a basic combat structure that has evolved to its ultimate state. Nevertheless. General Vincent has argued that it was the failure of men to employ their imaginations in implementing the pentropic structure, rather than any basic flaw in its design, that led to its demise. It could also be said that as the United States moved away from their pentomic experiment to a more conventional triangular system. Australia was eventually compelled to follow suit. Although the pentropic organisation was considered to be inappropriate for the perceived combat roles of the mid 1960s, it is by no means certain that a refined pentropic concept would not be appropriate for Australia today, given the current emphasis on continental defence and independent operations in arid and dispersed settings.



SOURCES: Blinkley, op.cit., p. 79; House, op.cit., p. 239;

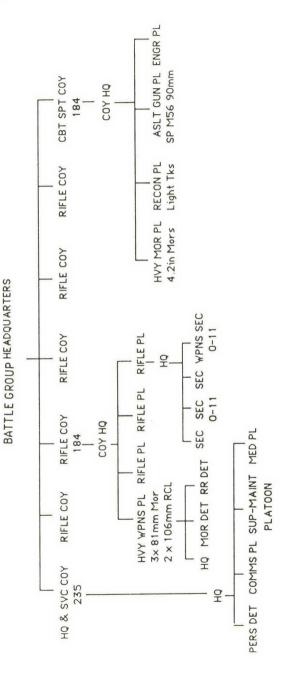
Cushman, op cit, p. 21

PENTROPIC DIVISION (1960 - 1965) THE



"Reorganising the Army"in <u>The Bulletin</u>, 9 January 1965, p.11; & CRS A6059, 41/441/11, "TOE 7T ROCID."

PENTOMIC BATTLE GROUP ORGANISATION (From December 1958)



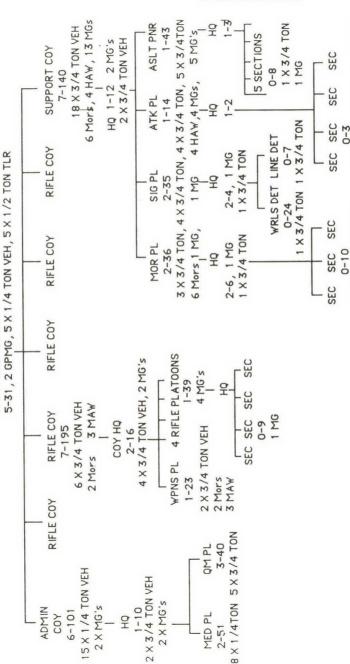
SOURCES: CRS A6059, 41/441/11, "TOE 7T ROCID;" "New Divisional Organisation," in Army Information Digest, Vol 12, No 98, May 1957, p. 19.

1 X 3/4 TON VEH, 1 HAW 1MG

1 X 3/4 TON,2 Mors

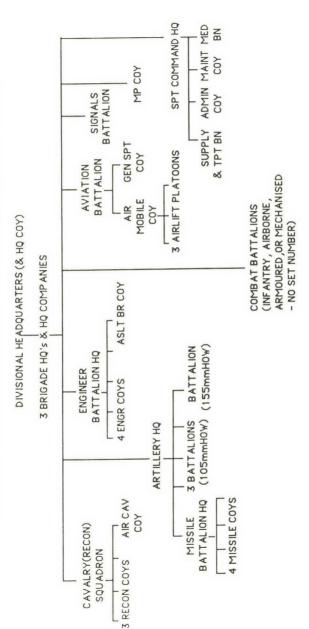
PENTROPIC BATTALION ORGANISATION (1960 - 1965)

BATTALION HE ADQUARTERS



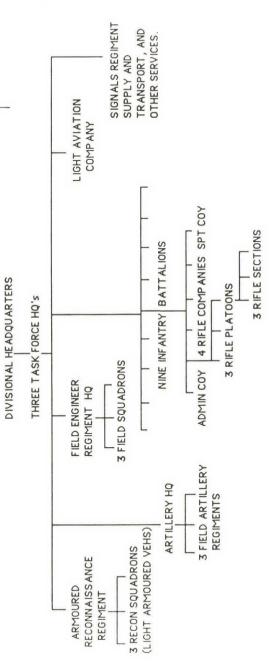
Australian Army Journal, No 129, February 1960, p. 11.

UNITED STATES INFANTRY DIVISION (ROAD 1963)



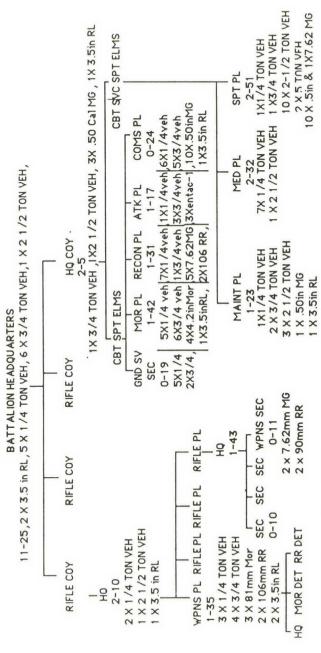
SOURCES: (C) CRS A6059. 41/441/152, Appendix 2 to Annex A to AHQ A240/1/712 of 20 June 1961; Kleinman & Horowitz, op.cit., p.94

TROPICAL INFANTRY DIVISION (AUSTRALIA - 1965)



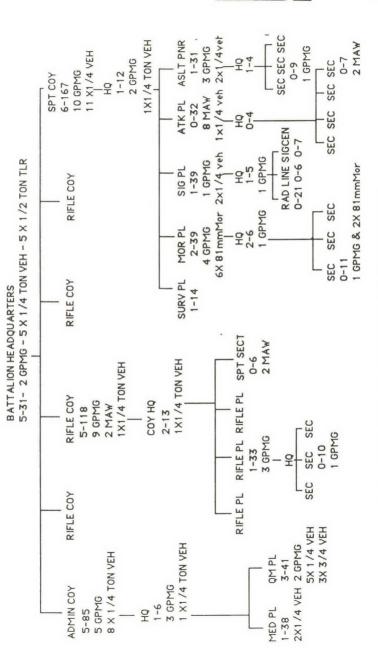
"Reorganising the Army," in The Bulletin, 9 January 1965, p.11.

UNITED STATES INFANTRY BATTALION ORGANISATION - 1963



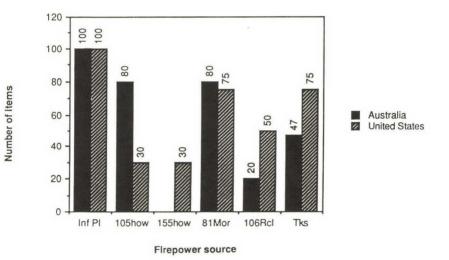
SOURCES: Shelton, op.cit., pp.23-24.

1965 AUSTRALIAN ARMY BATTALION ORGANISATION -

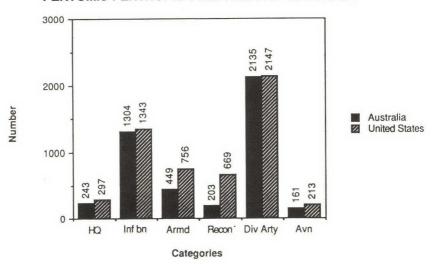


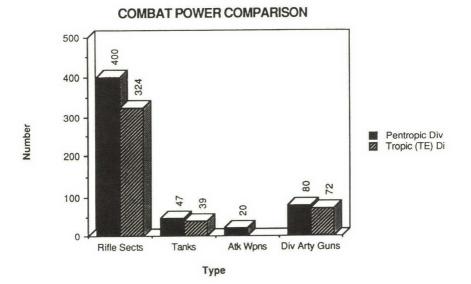
"Defence Review," in Australian Army Journal, No191, April 1965, p.27.

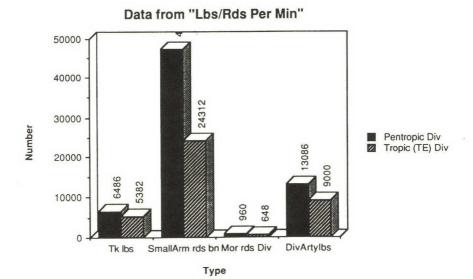
COMPARATIVE POWER: PENTOMIC-PENTROPIC

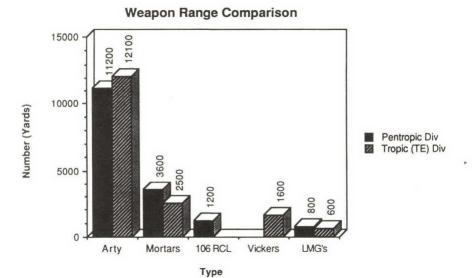


PENTOMIC-PENTROPIC COMPARISON: PERSONNEL









130 Appendix M

SENIOR APPOINTMENTS

MINISTERS FOR DEFENCE Hon Sir Philip McBride, KCMG, MP 24/10/1950 - 10/12/1958 Hon A.G. Townley, MP 10/12/1958-18/12/1963 Hon P.M.C. Hasluck, MP 18/12/1963 - 24/ 4/1964 Senator the Hon Sir Shane Paltridge, KBE 24/ 4/1964 - 19/ 1/1966
MINISTERS FOR THE ARMY Hon J.O. Cramer, MP Hon J.A. Forbes, MC, MP 28/ 2/1956 - 18/12/1963 18/12/1963 - 26/ 1/1966
SECRETARY DEPARTMENT OF DEFENCE Sir Edwin Hicks, CBE 29/10/1956 - 5/ 1/1968
SECRETARY DEPARTMENT OF THE ARMY A.D. McKnight, CBE 30/ 1/1955 - 29/ 4/1958 B. White, CBE 30/ 4/1958 - 5/ 2/1973
CHAIRMAN CHIEFS OF STAFF COMMITTEE Lieutenant General Sir Henry Wells KBE, CB, DSO 23/ 3/1958 - 22/ 3/1959
Vice Admiral Sir Roy Dowling KBE, CB, DSO 23/ 3/1959 - 27/ 5/1961
Air Chief Marshal Sir Frederick Sherger, KBE, CB, DSO, AFC 28/ 5/1961 - 18/ 5/1966
CHIEFS OF THE GENERAL STAFF Lieutenant General Sir Henry Wells, KBE, CB, DSO 16/12/1954 - 22/ 3/1958
Lieutenant General Sir Ragnar Garrett, KBE, CB 23/ 3/1958 - 30/ 6/1960
Lieutenant General Sir Reginald Pollard, KBE, CB, DSO 1/ 7/1960 - 20/ 1/1963
Lieutenant General Sir John Wilton, KBE, CB, DSO 21/ 1/1963 - 18/ 5/1966
UNITED STATES ARMY CHIEF OF STAFF

General Matthew B. Ridgway 1953 - 1955 General Maxwell D. Taylor 1955 - 1959

1959 - 1960

General Lyman L. Lemnitzer

BIBLIOGRAPHY

Archival Records

- AWM 121, Records of the Directorate of Military Operations and Plans. Branch series (Classified).
- AWM 102, Army Headquarters Series. State of Readiness of the Army (Clasified).
- CRS A6059, Army Headquarters Correspondence Files, Multiple Number Series (Classified).
- CRS A2653, Minutes of the Military Board (Classified).

Published Works

- A.J. Bacevich, <u>The Pentomic Era: The U.S. Army Between Korea and Vietnam</u>, National Defense University Press, Washington, D.C., 1986.
- G. St J Barclay, <u>Friends in High Places: Australian American</u>
 <u>Diplomatic Relations since 1945</u>, OUP Melbourne, 1985.
- C. Barnett, <u>Britain and Her Army 1509-1970: A Military.</u>
 <u>Political and Social Survey</u>, Allen Lane, The Penguin Press, 1970.
- C. Barnett, et al, Old Battles and New Defences, Brasseys, London, 1986.
- M. Blumenson, Patton: The Man Behind the Legend 1885-1945, Morrow, New York, 1985.
- B. Bond, <u>Liddell Hart: A Study of his Military Thought</u>, Cassell, London, 1977.
- B. Bond & I. Roy (eds), War & Society: A Yearbook of Military History, Croom Helm, London, 1975.
- B. Chakravorty, <u>Australia's Military Alliances: A Study in Foreign and Defence Policies</u>, Sterling, New Delhi, 1977.

- I.D. Chapman, <u>Iven G. MacKay: Citizen & Soldier</u>, Melway, Melbourne, 1975.
- C. Cook & J. Stevenson, The Longman Handbook of Modern British History 1714-1980, Longman, London, 1983.

Massachusetts, 1985.

- J.A. English, A Perspective on Infantry, New York, 1981.
- R. Forward & B. Reece (eds), <u>Conscription in Australia</u>, Uni of Qld Press, 1968.
- Major General J.F.C. Fuller, <u>The Conduct of War 1789-1961</u>, Eyre & Spottiswoode, London, 1962.
- T. Gander, Encyclopaedia of the Modern British Army, Stephens, Cambridge, 1980.
- Lieutenant General J.M. Gavin, <u>War and Peace in the Space Age</u>, Hutchinson, London, 1959.
- H.G. Gelber, <u>The Australian-American Alliance: Costs and Benefits</u>, Penguin, 1968.
- H.G. Gelber (ed), <u>Problems of Australian Defence</u>, OUP, Melbourne, 1970.
- K.R. Greenfield, et al, <u>United States Army in World War II-The Army Ground Forces: The Organization of Ground Combat Troops</u>, Historical Division, Department of the Army, Washington, D.C., 1947.
- G. Greenwood & N. Harper (eds), <u>Australia in World Affairs</u> 1961-1965, Cheshire, Melbourne, 1968.
- M.H. Halperin, <u>Limited War in the Nuclear Age</u>, Wiley, New York, 1963.
- N. Harper (ed), <u>Pacific Orbit: Australian-American Relations</u> <u>Since 1942</u>, Cheshire, Melbourne, 1968.
- D. Hawkins, <u>The Defence of Malaysia and Singapore: From AMDA to ANZUK</u>, R.U.S.I., London, 1972.
- O. Heilbrun, <u>Conventional Warfare in the Nuclear Age</u>, Allen & Unwin, London, 1965,

- Major General R.N.L. Hopkins, <u>Australian Armour: A History of the Royal Australian Armoured Corps 1927-1972</u>, AWM & AGPS, Canberra, 1978.
 - Battalion, The Royal Australian Regiment, 1969.
- M. Howard (ed), <u>The Theory and Practice of War</u>, Cassell, London, 1965.
- M. Howard, <u>War in European History</u>, OUP, London, 1976.

 ______, <u>Studies in War and Peace</u>, Temple Smith, London, 1970
- F.K. Kleinman & R.S. Horowitz, <u>The Modern United States Army</u>, Van Nostrand, Princeton, New Jersey, 1967.
- M. Kitchen, A Military History of Germany, From the eighteenth century to the present day, Indiana University Press, Bloomington, 1975.
- F. Legg, <u>The Gordon Bennett Story</u>, Angus & Robertson, Sydney, 1965.
- B.H. Liddell Hart (ed), <u>The Soviet Army</u>, Weidenfeld & Nicolson, London, 1956.
- One, Cassell, London, Second edition, 1967.
- , <u>Deterrent or Defence: A Fresh Look at the West's Military Position</u>, Stevens, London, 1960.
- ______, <u>Defence of the West</u>, Morrow, New York, 1950.
- J. Lider, <u>British Military Thought After World War II</u>, Gower Press, 1985.
- J. Luvaas , <u>The Military Legacy of the Civil War</u>, University of Chicago Press, 1959.
- ______, The Education of an Army, British Military Thought, 1815-1940, Cassell, London, 1965.
- J.K.Mahon & R. Danysh, <u>Army Lineage Series-Infantry Part I:</u> Regular Army, U.S. Army, Washington, D.C., 1972.
- T.B. Millar (ed), <u>Britain's Withdrawal From Asia: Its Implications For Australia</u>, ANU, Canberra, 1967.
- _____, Australia's Defence, MUP, 1965.

- Lieutenant General Sir John Monash, <u>The Australian Victories</u> in France in 1918, Hutchinson, London, 1920.
- Field Marshal Viscount Montgomery of Alamein, <u>A History of Warfare</u>, Book Club Associates, London, 1982.
- C. Moritz (ed), Current Biography, Wilson, New York, 1961.
- V. Ney, Evolution of the United States Army Field Manual: Valley Forge to Vietnam, Combat Operations Research Group (CORG), Army Combat Development Command, Fort Belvoir, Virginia, 1966.
- R.J. O'Neill, <u>Australia in the Korean War 1950-1953. Volume</u>
 <u>I: Strategy and Diplomacy</u>, AWM & AGPS, Canberra, 1981.
- P. Paret (ed), Makers of Modern Strategy: From Machiavelli to the Nuclear Age, Princeton, New Jersey, 1986.
- V. Pizer, The United States Army, Praeger, New York, 1967.
- R. Preston & S.F. Wise, Men In Arms, Fourth edition, Holt, Rinehart & Winston, New York, 1979.
- T.R. Reese, <u>Australia</u>. New Zealand, and the United States: A <u>Survey of International Relations 1941-1968</u>, OUP, London, 1969.
- T. Ropp, War In The Modern World, Collier, New York, 1962.
- J.P. Rose, <u>The Evolution of U.S. Army Nuclear Doctrine</u>, 1945-1980, Westview, Boulder, Colorado, 1980.
- G.E. Rothenberg, <u>The Art of Warfare in the Age of Napoleon</u>, Indiana University Press, Bloomington, 1980.
- J. Sandars, 8th Army in the Desert, Stephens, 1976.
- M. Sexton, War For The Asking, Penguin, Melbourne, 1981.
- E.M. Spiers, <u>The Army and Society 1815-1914</u>, Longman, New York, 1980.
- General M.D. Taylor, The Uncertain Trumpet, New York, 1959.
- A. Vagts, <u>A History of Militarism. Civilian and Military</u>, Hollis & Carter, London, 1959.
- Sir Alan Watt, Working Paper No 4 Australian Defence Policy 1951-1963: Major International Aspects, ANU, Canberra, 1964.
- R.F. Weigley, <u>History of the United States Army</u>, Enlarged edition, Indiana University Press, Bloomington, 1983.

, The American Way of War. A History of United States Military Strategy and Policy, MacMillan, New York, 1973.

Journal Articles - etc

- F. Alexander, "Problems of Australian Foreign Policy, July-December 1964," in <u>The Australian Journal of Politics and History</u>, Vol 11, No 1, April 1965.
- J.E.B., "The Critical Area of Compatibility," in <u>The Australian</u> Army Journal, No 148, September 1961.
- R. Babbage, "Australian Defence Planning, Force structure and Equipment: The American Effect," in <u>Australian Outlook</u>, Vol 38, 1984, pp. 163-168.
- Major J.W. Bell, "The Case for Armour in Nuclear War," in The Army Quarterly and Defence Journal, Vol 76, April 1958 & July 1958.
- Lieutenant J.C. Binkley, "History of U.S. Army Force Structuring," in Military Review, Vol 57, No 2, February 1977.
- R.G. Boyd, "Problems of Australian Foreign Policy, July-December 1959," in <u>The Australian Journal of Politics and History</u>, Vol 6, No 1, May 1960.
- Lieutenant Colonel W.L. Boyston, "Armor in the Atomic Battlefield,"in <u>Armor</u>, Vol 66, No 3, May-June 1957.
- Brigadier M.F. Brogan, "Comparative Fire Power," in Australian Army Journal, No 147, August 1961.
- Major E.W. Chamberlain, "The Hidden Versatility of our New Divisions," in <u>Army</u>, April 1964.
- Major J.H. Cushman, "Pentomic Infantry Division in Combat," in Military Review, January 1958.
- Lieutenant General C.D. Eddleman, "The Pentomic Reorganization-A Status Report," in <u>Army Information Digest</u>, September 1958.
- Colonel G.W.H. Fellows, "The Nuclear legions," in <u>The Army</u> <u>Quarterly and Defence Journal</u>, Vol 78, July 1959.

- Major R.I. Harrison, "The CMF Rifle Company Triumph or Tragedy?, "in <u>Australian Army Journal</u>, No 185, October 1964.
- A.J. Hill, "Could Napoleon's Army Win Today?," in <u>The Journal of the Royal United Services Institute.</u> Vol 122, No 1, March 1977.
- Colonel C.H. Hollis, "This is a ROAD Brigade," in Army, April 1963.
- Major D.M. Horner, "Staff Corps Versus Militia: The Australian Experience in World War II," in <u>Defence Force Journal</u>, No 26, January/ February, 1981.
- C.A. Hughes, "Political Review," in <u>The Australian Quarterly</u>, Vol 37, No 1, March 1965.
- Major A.F.J.G. Jackson, "Fighting Formations of the Future," in <u>Journal of the Royal United Service Institute</u>, Vol 100, February November 1955.
- Lieutenant Colonel C.P. Keiser, "ROAD Reorganization of the Army Division (USA)," in <u>Military Review</u>, Vol 42, No 1, January 1962.
 P. King, "Problems of Australian Foreign Policy, January-June
- P. King, "Problems of Australian Foreign Policy, January-June 1964," in <u>The Australian Journal of Politics and History</u>, Vol 10, No 3, December 1964.
- F. Kitson, "The New British Armoured Division," in <u>Journal of</u> the Royal United Service Institute, Vol 122, No 1, March 1977.
- Lieutenant Colonel F.K. Kleinman, "ROAD sign for Big Sixes," in <u>Army</u>, July 1962.
- Captain B.H. Lidell Hart, "How to Quicken Manoeuvre and Gain Flexibility in Land Warfare," in <u>The Army Quarterly and Defence Journal</u>, Vol 60, April & July, 1950.
- Major General J.D. Lunt, "An Army In Transition," in <u>The Army</u> Quarterly and <u>Defence Journal</u>, Vol 104, No 3, 1974.
- M.G. Marken, Sr, "The Atomic Age Divisions," in <u>Army Information Digest</u>, Vol 20, No 9, September 1965.
- C.M. Mattimoe, "Atomic war Tactics," in <u>Military Review</u>, Vol 36, No 2, February 1957.

- Lieutenant Colonel C.J. Millar & Colonel A.E.G. Strong, "ARA-CMF Integration," in <u>Australian Army Journal</u>, No 168, May 1963.
- Field Marshal B.L.Montgomery, "The Panorama of Warfare in a Nuclear Age," in <u>Military Review</u>, Vol 36, No 12, March 1957.
- , "Organization for War in Modern Times," in <u>The Journal of the Royal United Service Institution</u>, Vol 100, No 600, November 1955.
- R.G. Neale, "Problems of Australian Foreign Policy January-June 1963," in <u>The Australian Journal of Politics and</u> <u>History</u>, Vol 9, No 2, November 1963.
- Colonel F.W. Norris, "Divisional Command in 1960-70," in Military Review, March 1957.
- R.M. Ogorkiewicz, "Armoured Infantry Carriers," in <u>The Army</u> Quarterly and Defence Journal, Vol 80, April-July 1960.
- Major J. Paget, "The British Regimental System," in <u>The Army</u> Combat Forces Journal, Vol 4, No 11, June 1954.
- Colonels C.M.I. Pearson & W.J. Morrow, "The Pentropic Division Another Point of View," in <u>Australian Army Journal</u>, No 187, December 1964.
- Major General H.B. Powell, "The Infantryman in the Atomic Age," in <u>Australian Army Journal</u>, No 112, September 1958.
- Lieutenant Colonel M.A. Pullman, "Administration in the Pentomic Infantry Division," in Military Review, January 1958.
- J.W. Rainey, "Ambivalent Warfare: The Tactical Doctrine of the AEF in World war I," in <u>Parameters. Journal of the U.S. Army War College</u>, Vol 13, No 3, September 1983.
- Major W.N.R. Scotter, "Streamlining the Infantry Division," in The Journal of the Royal United Service Institution, Vol 98, February-November 1953.
- Colonel J.M. Shepherd, "Type Divisions For Atomic Warfare," in Military Review, Vol 36, No 8, November 1956.

- Lieutenant Colonel N.E.V. Short, "The Organization of the Division in a Nuclear War," in <u>Journal of the Royal United service Institute</u>, Vol 101, February-November 1956.
- Major S.T. Smith, "Prelude to the Pentropic Division," in Australian Army Journal, No 133, June 1960.
- Colonel F.W. Speed, "Australian Army Administration in an Allied Theatre of War," in <u>Australian Army Journal</u>, No 113, October 1958.
- General M.D. Taylor, note in <u>Websters American Military</u> <u>Biographies</u>, Merriam, Massachusetts, 1978.
- Major P.S. Turner, "The Sooner the Better," <u>Journal of the Royal Artillery</u>, April 1956.
- General Sir Dudley Ward, "Divisional Organization," in Military Review, August 1957.
- Colonel A.L. Wermuth, "High on the ROAD," in <u>Army</u>, November 1963.
- J.B. Wilson, "Mobility Versus Firepower: The Post-World war I Infantry Division," in <u>Parameters</u>, Vol 13, No 3, September 1983.
- General W.G. Wyman, "The United States Army Its Doctrine and Influence on U.S. Military Strategy," in Military Review, Vol 37, No 12, March 1958.
- Major R.M. Young, "Artillery of the Pentomic Infantry Division," in Military Review, Vol 38, No 1, April 1958.
- Army Information Digest, "US Army Pentomic Division," in Australian Army Journal, No 127, December 1959.
- "The Pentropic Division," in <u>Australian Army Journal</u>, No 129, February 1960.
- "The Pentropic Division: Armour in the Combat Support Group," in Australian Army Journal, No 133, June 1960.
- "Equipment for the Pentropic Division," in <u>Australian Army</u> <u>Journal</u>, No 134, July 1960.
- Directorate of Military Training, "Command and Grouping for Battle in the Pentropic division," in <u>Australian Army Journal</u>, No 135, August 1960.

- Directorate of Military Training, "Defence Review," in Australian Army Journal, No 191, April 1965.
- "The United States Army Division," in <u>Australian Army Journal</u>, No 154, March 1962.
- "Modifications in Pentomic Infantry, Armored Units," in <u>Army</u> Information Digest, Vol 14, No 3, March 1959.
- "New Divisional Organization," in <u>Army Information Digest</u>, Vol 12. No 5. May 1957.
- "Smaller 'Pentomic' Divisions on the Way," in <u>Army Navy Air</u> Force Journal, Vol 94, No 18, December 1956.
- "Army Reaffirms Pentomic Concept," in <u>Army Navy Air Force</u> <u>Journal</u>, Vol 196, 27 December 1958.
- "Inside Story On Army-Marine Manpower Decisions," in <u>Army Navy Air Force Journal</u>, Vol 98, 3 June 1961.
- "Pentomic Army Changes Ahead," in <u>Army Navy Air Force</u> <u>Journal</u>, Vol 98, 11 March 1961.
- "Major Reorganization of Army," in <u>Military Review</u>, June 1960.
- "Pentropic Divisions," in Military Review, May 1960.

Government Publications

Commonwealth Parliamentary Debates (Hansard) Vol H of R,(8 - 13 Eliz II), 25, 26, 27, 28, 29, 44, & 48.
Department of Defence, Defence Report 1963, Canberra.
<u>Defence Report 1964</u> , Canberra.
, <u>Defence Report 1965</u> , Canberra.
, "Key Elements in the Triennial Reviews
of the Strategic Guidance Since 1945," April 1986.
Army Public Relations, Brief History of the Australian Army.
Military Board, The Pentropic Division in Battle
(Provisional), Part 2, Administration, Military Board, Army Headquarters, Canberra, 1961.

T.B. Millar, <u>Committee of Enquiry into the Citizen Military</u> Forces, Defence Printing, Victoria, 1974.

Department of defence, <u>Joint Service Staff Duties Glossary Part</u> 1 (JSP) AS 101 (Edition 3, February 1984), Australian Joint Service Publication, Canberra.

Unpublished Works

Captain J.M. House, "Towards Combined Arms Warfare: A Survey of Tactics, Doctrine, and Organization in the 20th Century," Master of Military Art and Science thesis, Fort Leavenworth, Kansas, 1984.

Captain W.L. Mayew, "The Regimental System in the United States Army: Its Evolution and Future," Master of Military Art and Science thesis, Fort Leavenworth, Kansas, 1972.

J.E. Murphy, "History of the Post War Army," Manuscript prepared for the Military Board (agendum No 34/1953).

Major H.R. Shelton, "The United States Infantry Division and the Australian Pentropic Division--Similarities and Differences," Master of Military Art and Science thesis, Fort Leavenworth, Kansas, 1964.

Newspapers

The Bulletin
The Sydney Morning Herald

Interviews

Major General D. Vincent in Canbera, 5 August 1987.
Major General P. Falkland in Canberra, 16 April 1987.
Brigadier W.J. Morrow in Canberra, 31 March 1987.
Major General C.M.I. Pearson in Sydney, 28 March 1987.
Major General Sir Ivan Dougherty in Sydney, 29 March 1987.
Major General A.L. Morrison in Canberra, 28 April 1987.

Correspondence

Letter from Lieutenant General Sir Thomas Daly, 18 March 1987. Letter from General Sir Arthur MacDonald, 7 April 1987. Letter from Major General P.A. Cullen, 14 April 1987.

STRATEGIC AND DEFENCE STUDIES CENTRE

The aim of the Strategic and Defence Studies Centre, which was set up in the Research School of Pacific Studies in The Australian National University, is to advance the study of strategic problems, particularly those relating to the general region of the Indian and Pacific Oceans and South-east Asia. Participation in the Centre's activities is not limited to members of the University, but includes other interested professional and Parliamentary groups. Research includes not only military, but political, economic, scientific and technological aspects. Strategy, for the purpose of the Centre, is defined in the broadest sense of embracing not only the control and application of military force, but also the peaceful settlement of disputes which could cause violence.

This is the only academic body in Australia which specialises in these studies. Centre members give frequent lectures and seminars for other departments within the ANU and other universities. Regular seminars and conferences on topics of current importance to the Centre's research are held, and the major defence training institutions, the Joint Services Staff College and the Navy, Army and RAAF Staff Colleges, are heavily dependent upon SDSC assistance with the strategic studies sections of their courses.

Since its inception in 1966, the Centre has supported a number of Visiting and Research Fellows, who have undertaken a wide variety of investigations. Recently the emphasis of the Centre's work has been on problems posed for the peace and stability of Australia's neighbourhood; the defence of Australia; arms proliferation and arms control; decision making processes of the higher levels of the Australian Defence Department; management studies and the role of the Minister in Australia's defence policy making; and the strategic implications of developments in South-east Asia, the Indian Ocean and the South West Pacific Area.

The Centre contributes to the work of the Department of International Relations through its graduate studies programme; and the Department reciprocates by assisting the Centre in its research. A comprehensive collection of reference materials on strategic issues, particularly from the press, learned journals and government publications, is maintained by the Centre.

The Centre also conducts seminars and conferences which have led to several volumes of published proceedings.

STRATEGIC AND DEFENCE STUDIES CENTRE PUBLICATIONS as at 27 February 1989

All series distributed by:
Publications Officer
Strategic and Defence Studies Centre
Research School of Pacific Studies
The Australian National University
GPO Box 4 Canberra ACT 2601 Australia

CANBERRA PAPERS ON STRATEGY AND DEFENCE:

NO.	TITLE	\$AUS
CP31	Japanese Defence Policy Since 1976: Latest Trends	
	by K.V. Kesavan	7.00
CP32	Limited World War?	
	by Neville Brown	9.00
CP33	The Strategic Implications for Australia of the New Law of the Sea	
	by D.B. Nichols	9.00
CP34	Low Level Conflict Contingencies and Australian Defence Policy	
	by Tony Godfrey-Smith	10.00
CP35	The Terrorist Threat to Diplomacy:	
	An Australian Perspective	
	by Andrew Selth	10.50
CP36	Problems in Australian Defence Planning	
	by Ray Sunderland	10.00
CP37	Nuclear Pre-emption and Crisis	
	Stability 1985-1990	
	by Robert D. Glasser	10.00
CP38	The Regional Concentration of Defence Spending:	
	Issues, Implications and Policies Concerning Defence	
	Infrastructure Development in Australia	
	by Michael Ward	10.00
CP39	The Role of Japan in United States Strategic Policy	
	for Northeast Asia	
	by Russell Solomon	10.50
CP40	Australian Higher Command in the Vietnam War	
	by D.M. Horner	10.00

Publications 145

CP41	Command Structure of the Australian Defence Force	
	by F.W. Speed	10.00
CP42	The Afghanistan Conflict: Gorbachev's Options	
	by Amin Saikal	10.00
CP43	Australia's Secret Space Programs	
	by Desmond Ball	10.00
CP44	High Personnel Turnover: The ADF is not a	
	Limited Liability Company	
	by Cathy Downes	10.00
CP45	Should Australia Plan to Defend Christmas	
	and Cocos Islands?	
	by Ross Babbage	10.00
CP46	US Bases in the Philippines: Issues and Implications	
	by Desmond Ball (Editor)	10.00
CP47	Soviet Signals Intelligence (SIGINT)	
	by Desmond Ball	15.00
CP48	The Vietnam People's Army: Regularization of Command	1975-1988
	by D.M. FitzGerald	10.00
CP49	Australia and the Global Strategic Balance	
	by Desmond Ball	10.00
CP50	Organising an Army: the Australian Experience 1957-1965	
	by J.C. Blaxland	15.00
	Plus	oackaging and postage

WORKING PAPERS:

<u>Price</u>: All at the one price of \$A3.00 plus packaging and postage, except WP57. Some earlier numbers available on request.

2
t
ar:

WP55	Kenya's Role in the Somali-Ethiopian Conflict
	by Samuel Makinda
WP56	Australia, the US, and the Strategic Balance
	by H.G. Gelber
WP57	A New Aircraft Carrier for the Royal Australian Navy?
	by Gary Brown and Derek Woolner
	(\$5.00 plus packaging and postage.)
WP58	Issues in Strategic Nuclear Targeting: Target Selection and Rates of Fire
	by Desmond Ball
WP59	The Need for an Australian Aircraft Carrier Capability
	by Alan Robertson
WP60	The State of the Western Alliance
	by T.B. Millar
WP61	Controlling the Spread of Nuclear Weapons
	by T.B. Millar
WP62	Managing Nuclear Polarity
	by John J. Weltman
WP63	Aspects of Leadership in a Modern Army
	by J.O. Langtry
WP64	Indian Ocean: A Zone of Peace or Power Play?
	by Iqbal Singh
WP65	World Political and Strategic Trends over the Next 20 Years -
	Their Relevance to Australia
	by Paul Dibb
WP66	The Concept of Force Multipliers and the Development of
	the Australian Defence Force
	by J.O. Langtry and Desmond Ball
WP67	Indochina and Insurgency in the ASEAN States, 1975-1981
	by Tim Huxley
WP68	Problems and Prospects in Managing Servicemen's Careers: A Review
	by Warwick J. Graco
WP69	Performance-Based Training: An Explanation and Reappraisal
	by Warwick J. Graco
WP70	The Civil Infrastructure in the Defence of Australia: A Regional Approach
	by J.O. Langtry
WP71	Civil-Military Relations in Australia: The Case of Officer Education, 1965-1980
	by V.J. Kronenberg and Hugh Smith
WP72	China in Asian International Relations
	by Donald H. McMillen

WP73	The Resolution of Conflict and the Study of Peace
WP74	by T.B. Millar The Australian Army of Today and Tomorrow
44174	by Major General K.J. Taylor
WP75	A Nuclear-free Zone for the Southwest Pacific: Prospects and Significance
VV1/3	by Greg Fry
WP76	War and Conflict Studies in Malaysia: The State of the Art
VVI / O	by Zakaria Haji Ahmad
WP77	Funding Australia's Defence
**177	by Derek Woolner
WP78	Australia's Changing Threat Perceptions
VVI / O	by Ray Sunderland
WP79	Human Resources and Australia's Defence
**175	by I.F. Andrew
WP80	Australia's Emerging Regional Defence Strategy
***************************************	by Ray Sunderland
WP81	The Soviet Union as a Pacific Military Power
*****	by Paul Dibb
WP82	Soviet Policy in the Red Sea Region
	by Samuel M. Makinda
WP83	The Political Economy of Global Decline: America in the 1980s
	by Andrew Mack
WP84	Australia and the Republic of Korea: Still Allies or Just Good Friends?
	by Andrew Selth
WP85	Command in Operations of the Australian Defence Force
	by F.W. Speed
WP86	Australian Defence Force Functional Commands
	by F.W. Speed
WP87	Mr Reagan's 'Star Wars': Towards a New Strategic Era?
	by Harry Gelber
WP88	The ASEAN States' Defence Policies, 1975-81:
	Military Responses to Indochina?
	by Tim Huxley
WP89	The Civil Defence of the USSR: This Everybody Must Know and
	Understand. A Handbook for the Population
	translated by Geoffrey Jukes
WP90	Soviet Strategy Towards Australia, New Zealand and Oceania
	by Paul Dibb
WP91	Terrorist Studies and the Threat to Diplomacy
	hy Amdray Calth

WP92	Australia and the Terrorist Threat to Diplomacy
	by Andrew Selth
WP93	Civilian Defence: A Useful Component of Australia's Defence Structure?
	by Peter J. Murphy
WP94	Australia's Defence Forces - Ready or Not?
	by Ray Sunderland
WP95	Selecting Long-Term Force Structure Objectives
	by Ray Sunderland
WP96	Aspects of Defence: Why Defence?
	by W.H. Talberg
WP97	Operational Command by the Chief of the Defence Force
	by F.W. Speed
WP98	Deterrence, Strategic Defence and Arms Control
	by Ron Huisken
WP99	Strategic Defenses: Concepts and Programs
	by Desmond Ball
WP100	Local Development of Defence Hardware in Australia
	by Stanley S. Schaetzel
WP101	Air Operations in Northern Australia
	by Air Marshal S.D. Evans, AC, DSO, AFC
WP102	International Terrorism and Australian Foreign Policy: A Survey
	by Andrew Selth
WP103	Internal Aspects of Security in Asia and the Pacific: an Australian Perspectiv
	by Andrew MacIntyre
WP104	Rethinking Deterrence and Arms Control
	by B.C. Brett
WP105	Low-level Military Incursions: Lessons of the Indonesia-Malaysia
	'Confrontation' Episode, 1963-66
	by J.A.C. Mackie
WP106	Japan's Role in United States Strategy in the Pacific
	by Paul Keal
WP107	Detection of Nuclear Weapons and the US Non-disclosure Policy
	by Gary Brown
WP108	Managing Australia's Contingency Spectrum for Defence Planning
	by Ross Babbage
WP109	Australia's Approach to the United States Strategic Defense Initiative (SDI)
	by Ross Babbage
WP110	Looking Beyond the Dibb Report
	by Ross Babbage

WP111	Mr Gorbachev's China Diplomacy
	by Gary Klintworth
WP112	The Comprehensive Test Ban Treaty: Verification Problems
	by Samina Yasmeen.
WP113	The Future of the Australian-New Zealand Defence Relationship
	by Ross Babbage
WP114	Kim Il Sung's North Korea: at the crossroads
	by Gary Klintworth
WP115	The Australian Defence Force in Industrial Action Situations:
	Joint Service Plan 'CABRIOLE'
	by Gary Brown
WP116	Conscientious Objection to Particular Wars: The Australian Approach
	by Hugh Smith
WP117	Vietnam's Withdrawal from Cambodia,
	by Gary Klintworth
WP118	Nuclear Arms Control After Reykjavík
	by Harry G. Gelber
WP119	A Programme for the Development of Senior Officers of
	the Australian Defence Force
	by Harry G. Gelber
WP120	The Northern Territory Economy: Growth and Structure 1965-1985
	by Ciaran O'Faircheallaigh
WP121	Aborigines and Torres Strait Islanders in the Second World War
	by Robert A. Hall
WP122	The ASEAN States' Internal Security Expenditure,
	by Tim Huxley
WP123	The Status of Australian Mobilization Planning in 1987
	by J.O. Langtry
WP124	China's India War: A Question of Confidence
	by Gary Klintworth
WP125	India and Pakistan: Why the Latest Exercise in Brinkmanship?
	by Samina Yasmeen
WP126	Small State Security in the South Pacific
	by David Hegarty
WP127	Libya and the South Pacific
	by David Hegarty
WP128	The Dilemmas of Papua New Guinea (PNG) Contingencies
	in Australian Defence Planning
	by Ross Babbage

WP129	Christmas and the Cocos Islands: Defence Liabilities or Assets?
	by Ross Babbage
WP130	The Gulf War and 'Irangate': American Dilemmas
	by Amitav Acharya
WP131	The Defence Para-military Manpower Dilemma: Militia or Constabulary?
	by J.O. Langtry
WP132	'Garrisoning' the Northern Territory: The Army's Role
	by J.O. Langtry
WP133	The Case for a Joint Force Regional Command Headquarters in Darwin
	by J.O. Langtry
WP134	The Use of the Soviet Embassy in Canberra for Signals
	Intelligence (SIGINT) Collection
	by Desmond Ball
WP135	Army Manoeuvre and Exercise Areas in the Top End
	by Desmond Ball and J.O. Langtry
WP136	Legal Aspects of Defence Operations on Aboriginal Land in the
	Northern Territory
	by Graeme Neate
WP137	The ANZUS Alliance - The Case Against
	by Gary Brown
WP138	Controlling Theater Nuclear War
	by Desmond Ball
WP139	The Northern Territory in the Defence of Australia: Geostrategic Imperative
	by J.O. Langtry
WP140	The Ambient Environment of the Northern Territory:
	Implications for the Conduct of Military Operations
	by J.O. Langtry
WP141	Is the Non-aligned Movement Really Non-aligned?
	by Samina Yasmeen
WP142	The Australian Submarine Project: An Introduction to Some General Issues
	by A.D. Garrisson
WP143	The Northern Territory in the Defence of Australia: Naval Considerations
	by Commander Stephen Youll RANEM
WP144	The Northern Territory in the Defence of Australia: A Potential
	Adversary's Perceptions
	by J.O. Langtry
WP145	The INF Treaty and Soviet Arms Control
	by Samuel Makinda
WP146	Infrastructure Development in the North: Civil-Military Interaction
	by J.O. Langtry

WP147	South Pacific Security Issues: An Australian Perspective
	by David Hegarty
WP148	The Potential Role of Net Assessment in Australian Defence Planning
	by Brice Pacey
WP149	Political Reform and the 13th Congress of the Communist Party of China
	by Ian Wilson
WP150	Australia's Defence Revolution
	by Andrew Mack
WP151	The Intelligence Analyst's Notebook
	by R.H. Mathams
WP152	Assessing the 1987 Australian Defence White Paper in the Light of Domestic
	Political and Allied Influences on the Objective of Defence Self-reliance
	by Thomas-Durrell Young
WP153	The Strategic Defense Initiative (SDI): The North Pacific Dimension
	by Clive Williams
WP154	Australia's Maritime Activities and Vulnerabilities
	by W.A.G. Dovers
WP155	Coastal Surveillance and Protection:
	Current Problems and Options for the Future
	by Ross Babbage
WP156	Military Competence: An Individual Perspective
	by Warwick J. Graco
WP157	Defence Forces and Capabilities in the Northern Territory
	by Desmond Ball
WP158	The Future of United States Maritime Strategy in the Pacific
	by Ross Babbage
WP159	Inadvertent Nuclear War: The US Maritime Strategy
	and the 'Cult of the Offensive'
	by David Hodgkinson
WP160	Could the Military Govern the Philippines?
	by Viberto Selochan
WP161	Defence in Papua New Guinea: Introductory Issues
	by Tas Maketu
WP162	The Northern Territory in the Defence of Australia:
	Settlement History, Administration and Infrastructure
	by Deborah Wade-Marshall
WP163	The Diplomatic and Security Implications of ANZUS Naval
	Relations, 1951-1985
	by Thomas-Durrell Young

WP164	How Valid was the Criticism of Paul Dibb's 'Review of
	Australia's Defence Capabilities'?
	by Matthew Gubb
WP165	ASEAN: Security Issues of the 1990s
	by Leszek Buszynski
WP166	Brunei's Defence Policy and Military Expenditure
	by Tim Huxley
WP167	Manpower Considerations in Mobilizing the Australian Army for Operational Service
	by Warwick J. Graco
WP168	The Geographic Context for Defence of the Northern Territory
	by John Chappell
WP169	Social, Economic and Political Influences Upon the Australian
	Army of the 1990s
	by Cathy Downes
WP170	Activities of the Soviet Fishing Fleet: Implications for Australia
	by Robert Ayson
WP171	The Australian Military Response to the Fiji Coup: an Assessment
	by Matthew Gubb
WP172	Gorbachev and the Soviet Military
	by Malcolm Mackintosh
WP173	Gorbavhev's First Three Years
	by Malcolm Mackintosh
WP174	South Pacific Culture and Politics: Notes on Current Issues
	by Jim Sanday
WP175	Why Australia Should Not Ratify the New Law of War
	by Brigadier P.J. Greville (RL)
WP176	The Northern Territory and the Defence of Australia: Historical Overview
	by Peter Donovan

OTHER MONOGRAPHS:

NO.	TITLE	\$AUS
M1	Controlling Australia's Threat Environment: A methodology for	
	planning Australian defence force development,	
	by J.O. Langtry and Desmond J. Ball	6.50
M3	Arms for the Poor: President Carter's Policies on Arms Transfers	
	to the Third World,	
	by Graham Kearns	7.00

Publications 153

M4	Options for an Australian Defence Technology Strategy,				
	by S.N. Gower	7.00			
M5	Oil and Australia's Security: The Future Fuel Requirements	of the			
	Australian Defence Force				
	by I.M. Speedy	9.00			
M6	Australia's Overseas Trade - Strategic Considerations				
	by W.S.G. Bateman	10.00			
M7	Survival Water in Australia's Arid Lands				
	by B.L. Kavanagh	10.00			
	Plus pa	ackaging and postage			
MISCE	LLANEOUS PUBLICATIONS:				
NO.	TITLE	\$AUS			
MS1	Defence Resources of South East Asia and the				
	South West Pacific: A Compendium of Data				
	by Ron Huisken	8.00			
MS3	Testimony				
	by W.K. Hancock	7.00			
MS4	The A-NZ-US Triangle				
	by Alan Burnett	18.00			
	Plus pa	ackaging and postage			

