

Design for Military Operations

The British Military Doctrine



Army Code 71451

ACKNOWLEDGEMENTS

Cover: Detail from a painting by Michael Turner depicting C Company's attack on Objective LEAD in the Gulf War. Reproduced by permission of 1st Battalion The Staffordshire Regiment (Prince of Wales's).

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Design for Military Operations - The British Military Doctrine

Prepared under the direction of the Chief of the General Staff

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CONTENTS

Foreword

ONE	Introduction	1-1
TWO	The Purpose and Roles of the Armed Forces	2-1
THREE	Modern Warfare	3-1
FOUR	Military Effectiveness	4-1
ANNEX	A The Principles of War	
	B Mechanics of Command	
	C Forms of Manoeuvre	



FOREWORD

When *The British Military Doctrine* (BMD) was first issued in 1989 it was breaking new ground - we had not before sought to articulate doctrine at a level above the tactical. Seven years on, I am heartened to see that professional interest amongst present day officers and NCOs has never been higher. And given that conflict is becoming increasingly complex it is as well that the Army has made headway in appreciating how to tackle the very varied situations it often now confronts. Whilst progress in the doctrinal field has probably been most marked at the tactical level, the existence of a high level doctrine has influenced the way in which the Army thinks. The explanation of fighting power, which is very much the essence of BMD, now lies at the root of much of what we do. It forms the basis of all our tactical doctrine. It is the framework for the way in which we are about to measure our military capability. And it is now used to explain the Army's reason for being as it is and needing to act as it does.

But despite BMD's essentially enduring nature, it was always acknowledged that it would be necessary to re-issue it at appropriate moments in the army's development. Now is such a moment, though the change required is not great. The analysis of military effectiveness in Chapter 4, which is the principal part of BMD, has only required minor updating, mainly to include a wider understanding of the manoeuvrist approach. It is worth reminding ourselves why this is so, for at a time when many of the wide ranging tasks that come the Army's way do not directly concern war fighting, some may express surprise that we are not re-defining military effectiveness markedly. The answer is that Armies exist to fight and their structure, organization, equipment and thought processes must reflect this fundamental fact. The essential nature of fighting power has not, therefore, altered.

Finally, let me lay some emphasis on the function of BMD which remains to *establish the framework of understanding of the approach to warfare in order to provide the foundation for its practical application*. The important word is 'understanding'. Little these days is predictable. Our people do so well in many parts of the world because our officers and NCOs have an understanding of warfare that is broadly based and they are not reliant, except where necessary, on rigid adherence to prescriptive rules. It is for this reason that BMD is, as before, issued to all officers in the Army of the rank of Captain and above and it is essential that we all become thoroughly conversant with it.

Chief of the General Staff

CHAPTER ONE

INTRODUCTION

CONTENTS

What is Doctrine?	1
The Functions and Levels of Doctrine	1
The Importance of Doctrine	3
Development	4
The Applicability of Military Doctrine	5
Cross Reference	5

“War is delightful to the inexperienced.”

Inscription on the tomb of Henry III in
Westminster Abbey

What is Doctrine?

Put most simply, doctrine is what is taught. In the North Atlantic Treaty Organization (NATO) it is described as ‘fundamental principles by which the military forces guide their actions in support of objectives. It is authoritative but requires judgement in application.’ There are various levels at which it can be written. The British Army defines military doctrine as follows:

“Military doctrine is a formal expression of military knowledge and thought, that the Army accepts as being relevant at a given time, which covers the nature of current and future conflicts, the preparation of the Army for such conflicts and the methods of engaging in them to achieve success.”

The Functions and Levels of Doctrine

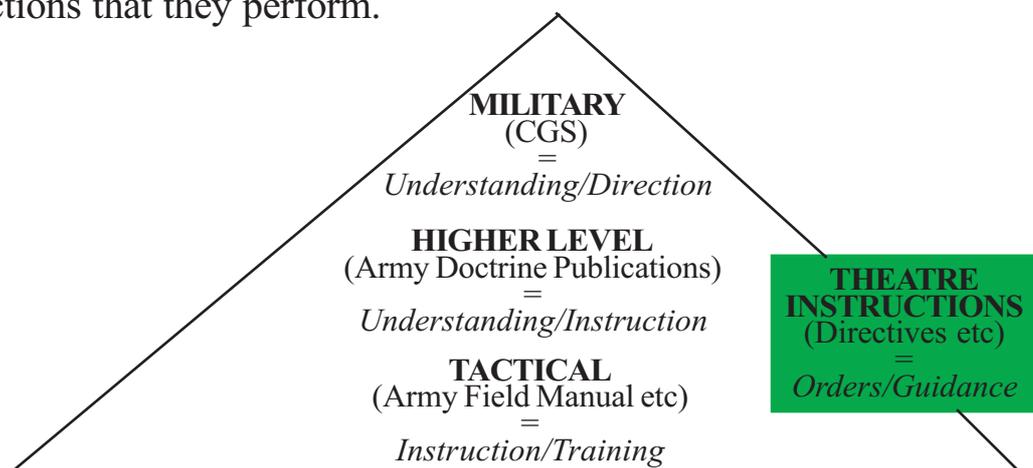
In some cases doctrine will be written to put across straightforward instruction; in others it will aim to impart understanding; elsewhere it may do both. In the British Army there are three levels at which it is written:

- *Military Doctrine.* A Military Doctrine is the highest level of Army doctrine and is issued by the Chief of the General Staff (CGS). It is termed military in the sense conveyed by the dictionary definition: ‘of, done by, befitting, soldiers, the army, or all armed forces’. It is concerned with conveying understanding not instruction. It is based directly upon Government policy manifest primarily in White Papers (which represent strategic doctrine), but is quite specifically designed

for the user - the Army. Yet, since it is unclassified, it will have a readership outside the Army. **Its function is to establish the framework of understanding of the approach to warfare in order to provide the foundation for its practical application.** Doctrine at this level must address the questions: why we have an Army ([Chapter 2](#)), what is the nature of the war the Army may be called upon to fight ([Chapter 3](#)) and how does it succeed in such a war ([Chapter 4](#)).

- *Higher Level Doctrine.* Higher level doctrine is concerned with the principles that govern the conduct of operations at all levels and with the operational level of conflict (see [Chapter 4](#)). It seeks to impart both understanding and instruction, although the emphasis is on understanding. It will be based upon the Military Doctrine. The Army Doctrine Publications (ADP) series is the core of such doctrine.
- *Tactical Doctrine.* Tactical doctrine provides the main body of doctrinal instruction within the Army. It is essential to ensure that all commanders, whatever their specialization, have a common foundation on which to base their plans. Most commonly it appears in pamphlets, sponsored by the Ministry of Defence (MOD) and establishments within the Training Organization and is usually classified RESTRICTED. The Army Field Manual (AFM) series, together with the range of subsidiary documents (such as the Tactical Aide Memoir), is the core of such doctrine.

The diagram below (Fig 1) shows these levels of doctrine related to the functions that they perform.



- *Theatre/Operation Instructions.* Theatre and Operation Instructions provide a vital supplement to doctrine. They will be sponsored by the relevant commander. They will seek to impart both understanding and instruction concerning probable or existing operations and will define the levels of command (see [Chapter 4](#)) within the theatre. Theatre and Operation Instructions will be closely based on Military, Higher Level and Tactical Doctrine, interpreting these in the light of the particular circumstances of the theatre concerned. Unlike the other strands of doctrine, some or all of these Instructions are likely to be highly classified.

The Importance of Doctrine

There is an argument that attempting to codify doctrine leads to rigidity of thought and even dogma. Whether or not this is the case is a question of approach. The Army, like many comparable organizations, has a requirement to be able to resolve complex activity. Yet warfare is an activity for which few hard and fast rules can exist. At low levels activities can be reduced to a number of drills. But an Army that is to succeed in war must have the ability to adapt rapidly to changing circumstances to endure chaotic conditions; for this mere drills will not suffice. If it is to represent an effective deterrent in peacetime, an Army must be seen to be physically capable of fighting and mentally and morally prepared to do so. Such an Army must be clear how the complex situations, difficulties and hardships that will inevitably arise in war are to be tackled. Conduct of war is a matter of applying both science and art. As Captain Liddell Hart explained:

“War is a science which depends upon art for its application.”

The Army’s doctrine must attend to both aspects, but its Military Doctrine must primarily seek to influence the way in which its officers and non-commissioned officers think. Hence the function of a Military Doctrine is to ‘establish the framework of understanding of the approach to warfare’ - not

a set of rules but to provide direction as an aid to understanding. The importance to an Army of being able to think was put by Major General Fuller as follows:

“ . . . `what to think` of itself is not sufficient; it may be said to supply the raw material - historical facts etc - in which `how to think` operates. `What to think` supplies us with the bricks and mortar, `how to think` with craftsmanship.”

It is that craftsmanship which formal doctrine must develop in peacetime by engendering, above all, a sense of purpose in what is done.

Development

Whilst doctrine should be regarded as neither infallible nor dogmatic, it nevertheless has authority and is to be followed. Its nature is enduring yet dynamic in order to drive development of both the science and art of war in the Army at the fastest practicable rate. It provides the focus for debate within and outside the Army and constructive criticism and assessment of it is to be encouraged. What will cause it to endure will be the fact that it is based on the hard won and often bitter experience gained in war. What will cause it to alter are:

- *Defence Commitments and Resources.*
- *Technology.*
- *The Threat.*
- *Research, Development and Experiment.*
- *Experience on Active Service and Trial on Exercise.*

Responsibility for the development and dissemination of doctrine rests with the General Staff, specifically the Director General Development and

Doctrine (DGD&D).

The Military Doctrine will be reviewed every five years and if necessary re-issued. It will in any event be re-issued every ten years.

The Applicability of Military Doctrine

Chapter 3 discusses the spectrum of conflict and the range of operations in which the Army may be involved. Military Doctrine is appropriate to operations throughout the spectrum. It is as relevant to the conduct of general war and regional conflict as to counter insurgency or peace support operations.

It is possible that future conflict will witness the use of weapons of mass destruction (that is to say nuclear, chemical and biological weapons). There is, however, no empirical evidence for the nature of the doctrine that would be appropriate if such weapons were ever to be used. This publication is therefore written within the context of conventional operations.

Cross Reference

Definitions used are, where possible, taken from the NATO Glossary AAP-6(Q), and the NATO Land Force Tactical Doctrine ATP-35(B). Expanded discussion of doctrinal statements in this booklet is to be found in the ADPs and the volumes of the AFM. Cross reference to these volumes is made in the form: 'See AFM Vol I Part 1,...'

CHAPTER TWO

THE PURPOSE AND ROLES OF THE ARMED FORCES

CONTENTS

British Defence Policy	1
Aim	1
NATO, OCSE, and Other European Alliances	1
The United Nations	1
Commonwealth and Colonial Responsibilities	2
Britain's Defence Roles	2
Defence Roles	2
Deterrence	2
Mission Types	3
Military Tasks	3
Categories of Forces	4
Forces Declared to NATO	4
Military Aid to the Civil Authorities	5
Control of the Armed Forces	5
Constitutional Position	5
The Higher Management of Defence	6
Dissemination and Scrutiny of Policy	7

Crisis Management	7
The Allocation of Resources	9
The Funding of Defence	9
Managing Resources Within Defence	9
Budgets	9
Financial Planning	9
Influences	10

British Defence Policy

Aim. The goal of British security policy is to maintain the freedom and territorial integrity of the United Kingdom and its Dependent Territories, and the ability to pursue its legitimate interests at home and abroad. Security defined in this way encompasses sustaining the rule of law and internal order within the United Kingdom and its Dependent Territories; reducing the possibility of, or if necessary deterring or defending against, external aggression against the United Kingdom, its Dependent Territories or its vital national interests; and creating and preserving the conditions of peace and stability within which the United Kingdom can pursue its national interests. Defence policy is designed to support this wider security policy. It guides the contribution the Armed forces make to the achievement of the country's defence and security goals and shapes their structure and capabilities. It is exercised to a large extent through international security structures and institutions designed to promote peace and international stability.

NATO, OSCE, and Other European Alliances. NATO which has been the cornerstone of western European Defence strategy for over 40 years, is set to expand and adapt to meet changing security conditions. In conjunction with the Organisation on Security and Co-operation in Europe (OSCE), the European Union, and the Western European Union (WEU), initiatives are being developed to enhance stability and security throughout central and eastern Europe and to promote wider international peace and security. Britain's commitment to collective security is central to her defence policy, and the most tangible expression of this in Europe is her position as the lead and framework nation in the ACE Rapid Reaction Corps (ARRC).

The United Nations (UN). The United Nations Charter gives it prime responsibility for the maintenance of international peace and security. In the aftermath of superpower confrontation, the UN has played a larger part in conflict resolution than was ever the case during the Cold War and is likely to face continuing pressure to mount peacekeeping and humanitarian

operations. As a permanent member of the Security Council, Britain attaches great importance to strengthening the authority and influence of the UN in pursuit of its Charter.

Commonwealth and Colonial Responsibilities. Britain has certain residual defence responsibilities that stem from her colonial past, and prominent position within the Commonwealth. The extent of commitment varies from country to country, and may range from military advice and consultation through to guaranteed assistance against internal and external threats.

Britain's Defence Roles

Defence Roles. Britain's defence policy is defined in terms of three overlapping roles:

- *Defence Role One.* To ensure the protection and security of the United Kingdom and her dependent territories even when there is no external threat.
- *Defence Role Two.* To ensure against major external threat to the United Kingdom and her allies.
- *Defence Role Three.* To contribute to promoting the United Kingdom's wider security interests through the maintenance of international peace and stability.

Deterrence. Underpinning these Defence Roles is the desire in the first place to deter. The term *deterrence* is associated with the NATO/WP confrontation but is no less relevant to the post Cold War era. The aim of deterrence is to preserve peace by facing a potential aggressor with a clear risk that the costs of aggression would outweigh any conceivable gain; and that the use of force is hence no longer a rational option. Successful deterrence depends on the possession of adequate forces, but the threat of their use must be credible by being appropriate in the circumstances and by conveying clearly that the will exists to execute and sustain them.

Deterrence requires a flow of information to be effective; intentions must be clearly enunciated and communicated. Deterrence is both a physical process and a matter of perception.

Mission Types. As an analytical tool, seven types of operation have been identified which might involve the use of the United Kingdom's military forces. These mission types are:

- Military Aid to the Civil Power in the United Kingdom.
- A challenge to the internal or external security of a Dependent Territory.
- General War - a large scale attack against NATO.
- A limited regional conflict involving a NATO ally who calls for assistance under Article V of the Washington Treaty.
- A British contribution to the missions of NATO and the WEU.
- A serious conflict (but not an attack on NATO or one of its members) which, if unchecked, could adversely affect European security, or which could pose a serious threat to British interests elsewhere, or to international security.
- Other military assistance and limited operations, characteristically of lower intensity and longer duration, to support international order and humanitarian principles, often under United Nations auspices.

Military Tasks. The demands which these Roles and Missions place on the Armed Forces are in turn broken down into 50 Military Tasks. These define the military activities which the armed forces are required to undertake to give effect to the Government's security and defence policies. Between them, the Tasks cover the entire spectrum of activities undertaken by the armed forces. Forces and capabilities are identified to carry out each Task and the analysis thus provides an explicit link between policy goals and the forces required to achieve them.

Categories of Forces. Forces are categorized as follows:

- Forces for General War generated by the mobilisation of reserves to reinforce current units, completion of the necessary training, and generation of stockpiles and equipping of units to war levels, possibly together with the raising, training and equipping of wholly new units.
- Permanently Committed Forces, including strategic nuclear forces and our garrisons.
- National Contingency Forces available for all seven mission types. They provide:
 - An immediate response to regional tensions that may escalate into conflict, whether on NATO's periphery or further afield.
 - A core capability for credible response should the United Kingdom's national interests be challenged.
 - A foundation on which to build in the event of a major external threat to our security.
 - And the pool from which to draw for operations in support of international security and stability.

Forces Declared to NATO. All three categories above contribute to forces declared to NATO which will consist of:

- Immediate Reaction Forces such as the Allied Command Europe Mobile Force (Land) (AMF(L)).
- Rapid Reaction Forces, of which the UK Land component comprises our contribution to HQ ARRC, one armoured and one mechanised division, and an airmobile brigade.
- Main and Augmentation forces held at the lowest state of readiness.
- Special Forces.

Military Aid to the Civil Authorities (MACA). Military Aid to Civil Authorities can take three forms:

- *Military Aid to the Civil Community (MACC).* MACC is the provision of Service personnel and equipment, both in emergencies (e.g natural disasters) and in routine situations, to assist the community at large.
- *Military Aid to Civil Ministries (MACM).* MACM is the use of military forces for non-military Government tasks, including assistance to maintain the essentials of life in the community or to undertake urgent work of national importance
- *Military Aid to the Civil Power (MACP).* MACP is provided in the United Kingdom and Dependent Territories for the direct maintenance or restoration of law and order in situations beyond the capacity of the civil power to resolve in any other way. The military role is to respond to a request for assistance, resolve the immediate problem and then return control to the civil power.

Control of the Armed Forces

Constitutional Position. The command of the Services formally rests with the Crown. In practice the authority of the Crown is represented by the Government of the day and responsibility for the Armed Forces is delegated to the Secretary of State for Defence, supported by the Defence Council which is the legal authority for the Services. Command over all officers and soldiers and the detailed administration of the Army is delegated by the Sovereign, through Letters Patent, to the Defence Council. The Service Chiefs of Staff are the professional heads of their Services and members of the Chiefs of Staff Committee. They are fully responsible for the fighting effectiveness, management, overall efficiency and morale of their Services. They normally report and tender advice through the Chief of the Defence Staff (CDS) to the Secretary of State while retaining their right of direct access to him and to the Prime Minister. CGS directs the work of the Army

in accordance with policy directives and budgets for the main areas of expenditure determined in conjunction with the Central Defence Staffs in the Ministry of Defence. Detailed management of the Army is the responsibility of the Executive Committee of the Army Board, chaired by CGS.

The Higher Management of Defence. The main principles of policy are decided by the Government. Major questions of defence policy are dealt with by the Standing Committee of the Cabinet concerned with defence and oversee policy matters, which is chaired by the Prime Minister and includes senior ministers with responsibilities relating to defence. Within these broad guidelines defence policy issues are resolved by the Secretary of State, his ministers and his two principal advisers: CDS and the Permanent Under Secretary (PUS) (Head of Department and Principal Accounting Officer).

Under the control and direction of the Secretary of State, the MOD ensures effective co-ordination of all policy and administrative matters affecting the fighting Services. This includes:

- *Formulation and Execution of Defence Policy.* This involves determining long-term strategy and doctrine, force planning, assigning priorities and allocating resources.
- *Conduct of Operations.*
- *Manpower Planning.*
- *Equipment Requirements and Procurement.*
- *Detailed Financial Control.*

The Central Staffs of the MOD are responsible for advising ministers on, and co-ordinating, defence-wide policy, determining priorities and allocating resources. They are also concerned with common arrangements and planning for operations, intelligence, logistics and pay and personnel matters. The single-Service staffs are responsible for the management of their Services and execution of delegated operations. The Procurement

Executive is responsible for the development, production and purchase of all warlike equipment and stores.

Dissemination and Scrutiny of Policy. Defence policy is presented to Parliament in the form of a Statement on Defence Estimates (SDE or the Defence White Paper) each spring. This may be supplemented by other Command documents reviewing policy or commitments. The individual Services and the SDE are debated annually in Parliament. Parliament may also enquire into defence issues in the following ways:

- *Parliamentary Questions and Parliamentary Enquiries.* MPs may ask Parliamentary Questions on any aspect of defence or may write to a defence minister.
- *The Public Accounts Committee (PAC) and the National Audit Office (NAO).* The NAO, headed by the Comptroller and Auditor General (C&AG) and independent of ministerial control, audits departmental accounts to see that public funds have been managed efficiently and for the objects specified by Parliament. The C&AG's reports are submitted to the Public Accounts Committee.
- *Select Committees.* In addition to the Public Accounts Committee, the House of Commons Defence Committee (HCDC) is the committee principally concerned with defence issues.

Crisis Management

The then Prime Minister summarized in 1986 the division of responsibility in high level crisis management:

“You cannot run the details of an operation by politicians around the Cabinet table. You can set straight criteria, strict parameters, strict rules of engagement. Then, the precise way in which those are carried out is up to the Military.”

Crisis management is exercised at the highest level by ministers, either individually or in committee. Most crises will be handled by the Overseas Policy and Defence Committee of the Cabinet (OPDC), but if necessary a special cabinet committee may be set up to co-ordinate the work of all the government departments involved. Within the guidelines determined by ministers, the MOD is responsible for the higher direction of operations. This is done through the Defence Crisis Management Organisation (DCMO).

For NATO operations the DCMO, in conjunction with the Cabinet Office, liaises with the NATO Military Committee. For forces in Allied Command Europe (ACE) command is exercised by Supreme Allied Commander Europe (SACEUR) through Major Subordinate Commands (MSC - for example AFCENT) and Principle Subordinate Commands (PSC - for example LANDCENT) to national formations.

For non-NATO operations the DCMO issues directives to the Chief of Joint Operations (CJO) at the Permanent Joint Headquarters (PJHQ). A two-star Joint Force Commander (JFC) to command formations engaged in battle will be nominated from:

- *The Joint Force Command Group (JFCG):*
 - *Commander UK Task Group.*
 - *Commandant General Royal Marines.*
 - *Headquarters 3 (United Kingdom) Division.*
 - *Headquarters No 1 Group RAF.*
 - *An existing force or garrison headquarters if appropriate.*

For both NATO and non-NATO operations forces are provided by one or more of the single-Service Headquarters:

- *Fleet (FLEET at Portsmouth).*

- *Land Command (LAND, at Wilton).*
- *Strike Command (STC, at High Wycombe).*

The Allocation of Resources

The Funding of Defence. Each year, ministers consider collectively the allocation to spending departments of the resources available to the Government, as part of the annual Public Expenditure Survey (PES). The results are announced in late November/early December in the Chancellor's Budget speech, and published in the "Financial Statement and Budget Report". This sets out the Government's plans for public expenditure for the financial year starting the following April (the Estimates year) and for the following two years, along with plans for taxation.

Managing Resources within Defence. In 1991, the New Management Strategy (NMS) was introduced. The principles of the NMS are:

- Objectives and responsibility must be clear, and authority must match responsibility.
- Management must be accountable.
- Authority must be delegated to the greatest possible extent.

Budgets. Top Level Budgets (TLB) are now held by senior commanders and managers throughout the department in order to meet the costs of their organisations, and a hierarchy of Higher Level (HLB) and Basic Level Budgets (BLB) ensures that budgets are delegated as far down the chain of command as possible. Commanders of stores depots, repair workshops and front line units have their own budgets and must ensure value for money in day to day business.

Financial Planning. The overall vehicle for defence expenditure planning is the Long Term Costing (LTC), which provides a framework for the

coming 10 years. Defence policy, commitments and capabilities are decided by ministers. They are set out in the Departmental Plan, and reflected in the form of increasingly detailed objectives through the Army Plan, the TLB plans and lower level plans to the units that must fulfil them. Budget holders at all levels use their Management Plans as a framework for constructing the LTCs. LTCs are submitted up the budgetary hierarchy and scrutinised at each level for tautness, realism and compliance with agreed plans and assumptions. Proposed changes to the programme are set out in Alternative Assumptions. The central staffs compile the overall Defence Programme, embracing both the TLB costings and the equipment programme, and adjust it to fit within the resource levels agreed in the Public Expenditure Survey. The finalised programme is submitted to the Financial Planning and Management Group (FPMG) around Christmas each year and, following the Secretary of State's agreement, TLB holders receive their budgets for the coming year. Plans are adjusted to take account of changes to the programme, and the finalised LTC forms the starting point for the next LTC.

Influences. The process of constructing the Defence Programme has to take many factors into account. Among these are:

- *The Tri-Service Nature of Defence.* The needs and priorities of all three Services have to be met from a single finite budget. Thus the Army's financial plans and requirements (as well as doctrine and concepts) can never be taken in isolation.
- *The Varied Roles of the Army.* The roles of the various Arms and Services in the Army are very diverse and they require a wide range of equipment and training. In addition, the design of equipment must take into account the varying requirements of the Army's many commitments and often the needs of other Services. For example, strategic mobility imposes design limitations on Army equipment which must be air or sea transportable.
- *The Need for Balance.* It follows that there is a need for balance, for example in the following areas:

- *Breadth and Depth.* There is a balance to be struck between the **size** of the front line, and support for it. At the basic level the balance can be characterized as that between manpower and equipment, but it also involves the question of the range of capabilities offered by the front line.
- *General War and Contingency Force Operations.* The Army needs both to ensure that it has the basis to regenerate to a full General War ORBAT over a period of time, and to engage in Contingency Force operations at much shorter notice. This involves judgements about the balance between, for example, in-service equipments and war stocks.
- *Training Ammunition and Simulation.* At a less strategic level, balance needs to be achieved between investment in live firing (training ammunition) and in simulation to meet training requirements.
- *Cost Effectiveness.* The drive for value for money is an essential element in defence planning. Strenuous efforts are made in equipment development and procurement to achieve the most cost-effective solutions to defence problems. Solutions are judged by the standard of what is militarily effective for the achievement of commitments. Measures may include the reassignment of roles between Services or, more often, between Arms in the Army, purchase of suitable equipment 'off-the-shelf' or collaborative equipment development. The MOD also ensures that the possibilities for competition are maximized to give the best value for money in procurement and all activities in which military personnel are not essential. Inefficient use of resources results in less money being available for other essential projects.

CHAPTER THREE

MODERN WARFARE

CONTENTS

Introduction	1
The Nature of the Conflict	1
General War	2
Regional Conflict	2
The Concept of Limitation	2
The Concept of Intensity	4
Other Uses of Armed Forces	4
Military Activities in Peace	5
The Characteristics of the Modern Battlefield	6

Introduction

Predicting the nature of modern warfare is a notoriously unreliable process. Armies must, however, plan and train for future conflict on the basis of some indication of the likely nature of war. A middle course must be steered between experience (armies are often accused of training for the war they fought last) and projections of futuristic weapons (whose technology may be unproven and whose cost may be prohibitive). The first safe assumption is that war will occur where it is little expected and that warfare will assume at least a partly unforeseen form. The assumptions on modern warfare which follow are based on deductions from existing and projected intentions and capabilities tempered by experience from recent conflicts. The effect of the factors on each other will shape warfare at any particular time. This process, unique to any conflict, is, however, dynamic. In peacetime, therefore, the Services must have a sound idea of what may occur and how it might be countered. To be effective in war they must be able to react positively to the unexpected, adjusting their methods of operation rapidly to the circumstances actually prevailing. To understand modern warfare it is first necessary to consider the nature of conflict.

The Nature of Conflict

Conflict is a situation in which violence is either manifest or threatened. It is a struggle or a clash between opposing forces or contending wishes. It does not always explicitly demand violence although the risk or threat of violence is implied: even when violence has broken out, diplomacy, or other non-violent activity may continue. The parties to a conflict who have set out to impose their will on enemies will be at war. Other involved parties, whilst not at war, may nevertheless engage in military activity to resolve or terminate conflict. In either case a military response to conflict will require armed forces to be deployed commensurate with the level of violence.

It is therefore useful to consider conflict as a spectrum, for this then provides a general guide to the way in which armed forces may be used in response to the varying levels of violence. The spectrum extends from full scale warfighting at one end to the use of armed force in extremely constrained circumstances at the other, and only lends itself to a degree of definition. The following paragraphs consider the term 'General War' and 'Regional Conflict' and consider the concepts of limitation and intensity as well as other uses of armed forces.

General War. The term 'General War' is commonly used to define a major, unrestricted conflict in which national survival is at stake. Its unrestricted nature has led in the past to the terms 'General' and 'Total War' being regarded as synonymous. General war implies a total national effort in which all elements of society will be involved, including of course the armed forces. Whilst it is difficult to foresee any prospect of this condition arising in current circumstances, the Government's responsibility for national survival is inescapable; the Army must be capable of responding, after due warning, to the demands that General War will make upon it.

Regional Conflict. As its name implies, regional conflict occurs in a specific geographic area. The political and economic effects of such a conflict may reverberate much further afield but the fighting is contained within a particular region. This may be the only limitation that applies, since there is no implication that the size of forces deployed, the types of weapons employed, or the duration and intensity of the fighting will in any way be limited. Indeed regional conflict is likely to equal the intensity of general war for those directly involved. It follows that the deployment of a lower level of sophistication in weapons systems than in General War is likely to be a false economy. A British joint force committed to action will be carefully structured according to the threat and the force's mission.

The Concept of Limitation. In the Cold War the term 'Limited War' was used principally to distinguish conflict in which it was thought there would be no recourse to nuclear weapons. But as the discussion of regional conflict reveals, forces engaged in conflict will invariably be subject to limitation

and constraint and therefore it would no longer be useful to single out 'Limited War' as a specific type in the spectrum. The concept of limitation does, however, remain valid.

- *Limits.* The limits fall into four general categories:
 - *Objective.* In General War the means required to achieve objectives are selected. Implicit in other types of conflict is the fact that the objectives sought must be appropriate to the means available or acceptable in terms of public and international opinion.
 - *Means.* Although the only widely agreed limitation on means is that nuclear weapons should not be used, constraints may be imposed on weapons, eg chemical, or their employment, for instance against civilian targets, as well as on the scale of forces employed.
 - *Area.* Geographical limits may be accepted so that a conflict does not involve neutral parties or draw in other participants. Such limits may be designated as exclusion of war zones to avoid casualties to those not involved.
 - *Time.* Those undertaking a war usually believe that the issue can be settled quickly: reality is often different. Rapid achievement of objectives so that escalation will not occur remains the prime consideration: states may wish to prevent a *fait accompli* before there is political involvement by the Superpowers or the United Nations. Time limitations are not always present, although they are often imposed on belligerents from outside.
- *Political Aspect.* The size of forces committed by the UK and the constraints imposed upon them will be decided by the Cabinet Committee concerned according to the objectives and the level of threat. Consultation with allies will usually be necessary. The principles of reasonable force and minimum cost will apply and there may be specific legal requirements to be taken into account - limits of this sort will usually be incorporated in the Rules of Engagement for the theatre. There will be a need to reach a speedy conclusion to a conflict: the pressure of time will be conditioned by international support for the

UK's aims. Constraints may therefore be imposed or lifted for reasons only indirectly related to the fighting.

The Concept of Intensity. Intensity in warfare terms refers to the *degree* and *frequency* of violence encountered. Frequency speaks for itself and bears on tempo: degree concerns the destructive power of the means used (usually a weapon system). So intensity can be 'high' when violence occurs often (frequency) or when the encounters are particularly violent (degree). Given this interpretation, it adds nothing to the understanding of conflict to *classify* it in terms of intensity. For a conflict that is low in intensity at its outset can become high when the frequency and degree of encounters increase. On the other hand, the spectrum of conflict can usefully be *understood* in terms of the 'low' to 'high' - low being where the likelihood of violence (both frequency and degree) is assessed as being low, high being where it is thought very likely to occur. There is logically some, but only some, connection between the spectrum of intensity and the forces required. The 'low' end will seldom call for the full range of weapon systems to be deployed; the 'high' end is much more likely to require the widest armoured capability. But it does not follow from this that the low end will exclude sophisticated systems (such as STA, aviation etc) or those which minimize casualties.

Other Uses of Armed Forces.

- *Operations to Resolve or Terminate Conflict.* Where armed forces are used to resolve or terminate conflict, operations may often be conducted in support of a United Nations Mandate or directives from other international organizations, such as the WEU. The forces committed will invariably be joint and are likely to be part of an allied or coalition multi-national force. The standard of military effectiveness (described in [Chapter 4](#)) will be that which must always apply as the level of intensity may change, regardless of the mission. In principle, a force should be equipped to achieve its objectives in the shortest possible time and may often include war fighting elements. The composition, deployment, equipment (and, consequently, mission) of a force will be constrained by the transport lift available. This will also

affect what can be sustained logistically: a secure forward base from which air cover can be provided and an operation supplied is as indispensable for a limited conflict conducted at any great distance from the home base as it is for more warlike operations.

- *Counter Insurgency Operations (COIN)*. COIN operations are carried out to complement those political, economic, psychological and civic actions necessary to defeat an armed insurgency. Insurgency embraces forms of violence, often loosely controlled, with national or international political aims. These frequently include the overthrow of the established government. Each situation is unique but the range of activities could include:
 - *Subversion*. Illegal measures, short of the use of force, employed to overthrow a government or to persuade or force people to do things they do not want to do.
 - *Terrorism*. The use of violence to intimidate a population for political ends.
 - *Armed Insurrection*. Illegal measures, including the use of force, aimed at the overthrow of government. In this context **revolutionary war** differs in that its aim would not only be the overthrow of the state but also the reversal of the social and cultural systems pertaining at the time.

Military Activities in Peace

Military activities discharged during peace are likely to be based on the need to deter, but will include:

- *Military Aid to the Civil Authority (MACA)*. MACA is described in [Chapter 2](#) in the discussion of Britain's Defence Roles.
- *Military advice to HM Government*.
- *Training for war and other operations*.

- *Activities that support the UK's wider national interest.* Manning overseas garrisons, providing attachés, intelligence gathering and other activities that support the UK's wider national interest.
- *Training teams, Military Assistance Overseas (MAO) and secondments.*
- *Arms control.*
- *Non-Combatant Evacuation Operations (NEO).*
- *Monitoring and Observation.*
- *Public duties (ceremonial).*
- *Military security.*

The Characteristics of the Modern Battlefield

Some aspects of warfighting are enduring. Fear, chaos, friction, uncertainty, boredom, the human contest in which soldier faces soldier in mortal opposition; these will characterize the battlefield until warfare ceases as a method of pursuing political ends. As Clausewitz reminds us: *"If war is an act of force, the emotions cannot fail to be involved"*. Furthermore, the strategies, operational gambits and tactics that will be used invariably have historical precedent. But technological advance and new sociological and geo-political circumstances will inevitably change the detail of how war is fought. Modern warfighting has the following features that are particular to the late 20th Century:

- *Continuous Battle.* Night and bad weather no longer slow the tempo of operations. Battle will continue until one side or the other is exhausted.
- *The Pace of Battle.* The increasing speed of ground and air vehicles has increased the rate at which events will occur. The pace of battle

will appear to be greater because of the complex interaction between the volume of information that will be available and the inevitable circumstance in which a breakdown of communications, deception and surprise will take effect.

- *The Information Battle.* Information technology seeks to provide commanders at all levels with the precise information that they require precisely when they need it. It seeks to give them total visibility of the battlefield and, thus, an unbeatable advantage over the enemy. Whilst this ideal is unlikely to be achieved in full, significant progress towards it has already been made. The quantity and quality of information, and the intelligence which flows from it, that will be available gives modern warfare a new character.
- *The Extent of Battle.* The high cost of manning and equipping modern armies will ensure that war will be fought by forces almost certainly smaller in size than at any time in the 20th Century. This gives rise to the idea of ‘the less dense battlefield’ in which there will be more room to manoeuvre, at the operational level at least, and where the dividing lines between forces will be much less well defined.
- *The Range and Precision of Battle.* Improvements in weapon capabilities and the means to acquire their targets will allow battle to be fought at longer range and with greater precision than before.
- *The Multi-Dimensional Battle.* War will be fought in the deep, close and rear battles (see ADP - 1 Operations). It will be fought in and from the air and in the electro-magnetic spectrum. It will be fought simultaneously and at all levels of intensity, in all dimensions
- *The Effects on the Soldier.* Although it is impossible to quantify, it is likely that modern battlefields will be even more demanding than those of the past. The tempo, the intensity created by modern weapon systems and the scope for unfamiliar threats are likely to increase the ‘friction’ of war (described in more detail in [Chapter 4](#)) and so put new and greater demands on soldiers.

CHAPTER FOUR

MILITARY EFFECTIVENESS

CONTENTS

FIGHTING POWER	1
Military Effectiveness	1
What Constitutes Fighting?	2
The Concept of Fighting Power	3
Conceptual Component	3
Moral Component	5
Physical Component	6
MILITARY DOCTRINE - THE CONDUCT OF CAMPAIGNS AND OPERATIONS	7
Command	7
The Levels of Conflict	7
Levels of Conflict and Levels of Command	10
The Operational Level and Operational Art	11
The Command Philosophy	13

The Basis for Success in Fighting a War	14
The Environment	14
Requirements	16
The Exercise of Command	17
The Manoeuvrist Approach	21
A Joint/Combined Approach	27
Unity of Effort	33
Mobility	35
Surprise	35
Ground	36
Sustainability	37
Organizations and Systems Development	38
Development	39
Analysis	39
Guiding Principle	40
Requirements	40
Training Essentials	44
Matching Doctrine	44
Coping With Stress and Uncertainty	46
Learning from Experience	47

FIGHTING POWER

Military Effectiveness

Military effectiveness is the standard by which the Army is judged in peace and war, from platoon to the highest levels. In this chapter military effectiveness is explained using the concept of Fighting Power. This is not measured against an absolute standard but in relation to other armies. The components of Fighting Power provide the intellectual and practical justification for the structure of the Army. Fighting Power conveys an understanding of what constitutes the ability to fight and to succeed.

Whilst this approach provides a basis for some objective assessment of military effectiveness, this assessment cannot be made solely in terms of economics, or mathematical formulae. Clausewitz made the point this way:

“War admittedly has its own grammar but not its own logic.”

The business of war and the necessary preparation for it will remain that combination of science and art that was noted in [Chapter 1](#). Nevertheless, it will be necessary to come to a judgement about the Army’s effectiveness and to show how that judgement was made. For some aspects this is straightforward: equipment performance and sustainability can usually be quantified readily and objectively. Other aspects of fighting power such as morale, doctrine and leadership do not easily lend themselves to objective measurement, but they do manifest themselves in collective performance which may be defined as:

“An element of Military Capability: the ability of units or formations to function as cohesive entities and so perform collective tasks to specified standards.”

Assessment of collective performance is the responsibility of the chain of command, using military judgement supported where appropriate by other analytical techniques.

What Constitutes Fighting?

Before explaining what constitutes an Army's ability to fight it is worth being clear - in so far as this is possible on paper - about what constitutes fighting. Professor Sir Michael Howard, in his book on Clausewitz, gives us this feel for it:

“In short, ‘Action in war is like movement in a resistant element. Just as the simplest and most natural of movements, walking, cannot easily be performed in water, so in war, it is difficult for normal efforts to achieve even moderate results.’

“It was this friction, said Clausewitz, that ‘distinguishes real war from war on paper’, and an understanding of its importance had to be the starting point for any theorist. A commander in the field could seldom be sure exactly where the enemy was or in what strength, much less what he was likely to do. Sometimes he did not know the location and condition even of his own troops. He, and even more the men under his command, was likely to be tired, hungry, and apprehensive if not actually physically frightened.”

Clausewitz tells us to have a healthy regard for the friction of war, but it is also necessary to understand how dreadful war actually is. The ruthless violence, the squalor, the noise, the smell, the fear, the confusion and uncertainty, the physical misery and often the intense boredom stand out in many accounts. It is clear that even mere existence can be an ordeal.

Fighting embraces more than just contact with the enemy. It involves surviving in an alien environment. Whilst resisting the stress that an opponent is attempting to impose on us, we must impose on him so great a degree of physical and moral stress that he is compelled to abandon his objective. So war is a clash of wills. An opponent's will must be subdued

and his courage killed. To succeed, an Army needs to be able to create order out of the chaos of war. For this reason clear doctrine and all that stems from it is an important ingredient in that success. And although many point to the role that luck has to play in defining the outcome of conflict, luck tends to favour those who have prepared both mentally and physically for what they have to do.

The Concept of Fighting Power

The term ‘Fighting Power’ defines an Army’s ability to fight. The hierarchy of Fighting Power is shown in the diagram below (Fig 3) and explained after it.

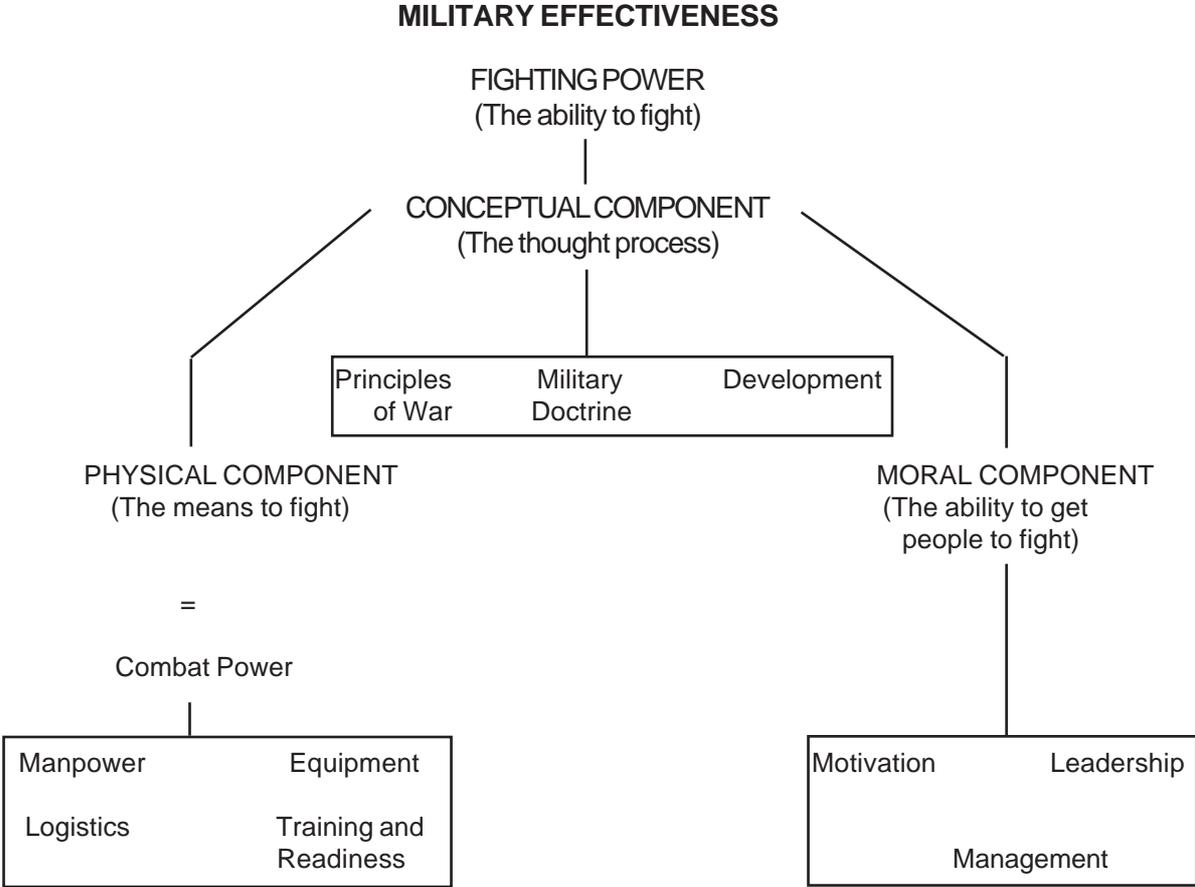


Fig3

There are three inter-related components: conceptual, moral and physical:

- *The Conceptual Component.* This heading can be described as the thought process behind the ability to fight. It is a necessary component, for as Clausewitz puts it:

“Theory exists so that one does not have to start afresh every time sorting out the raw material and ploughing through it, but will find it ready to hand and in good order. It is meant to educate the mind of the future commander, or, more accurately, to guide him in his self-education; not accompany him to the battlefield.”

The conceptual component is made up of:

- *Principles of War.* Principles of War are broad precepts which influence the conduct of war. The ten selected by the British Army (and its sister Services) are explained in Annex A. They have relevance at the high levels of war where they assert criteria against which courses of action can be tested. At lower levels they provide a guide for the planning and conduct of activity on the battlefield. The Principles of War are based on past experience where their application with judgement has led to victory. They are not rules yet blatant disregard for them involves risk and could result in failure.
- *Military Doctrine.* The function of Military Doctrine has been discussed in [Chapter 1](#). In establishing the framework of understanding of the approach to war it complements the Principles of War. This entire booklet represents the Military Doctrine, but the appearance of the term here is necessary to show its part in contributing to Fighting Power. The subjects that it addresses specifically in relation to Fighting Power are covered separately in the next three sections and shown diagrammatically ([Fig 4](#)):
- *Development.* Development requires an innovative approach to all aspects of Fighting Power. Doctrine will evolve in the manner described in [Chapter 1](#). Development will be clearly seen in the work of Research Establishments and in the application of operational analysis techniques. The views of commanders at all levels will also have major influence in the development of the ability to fight. Development of organizations and systems is more specifically covered in Section 3 of this Chapter.

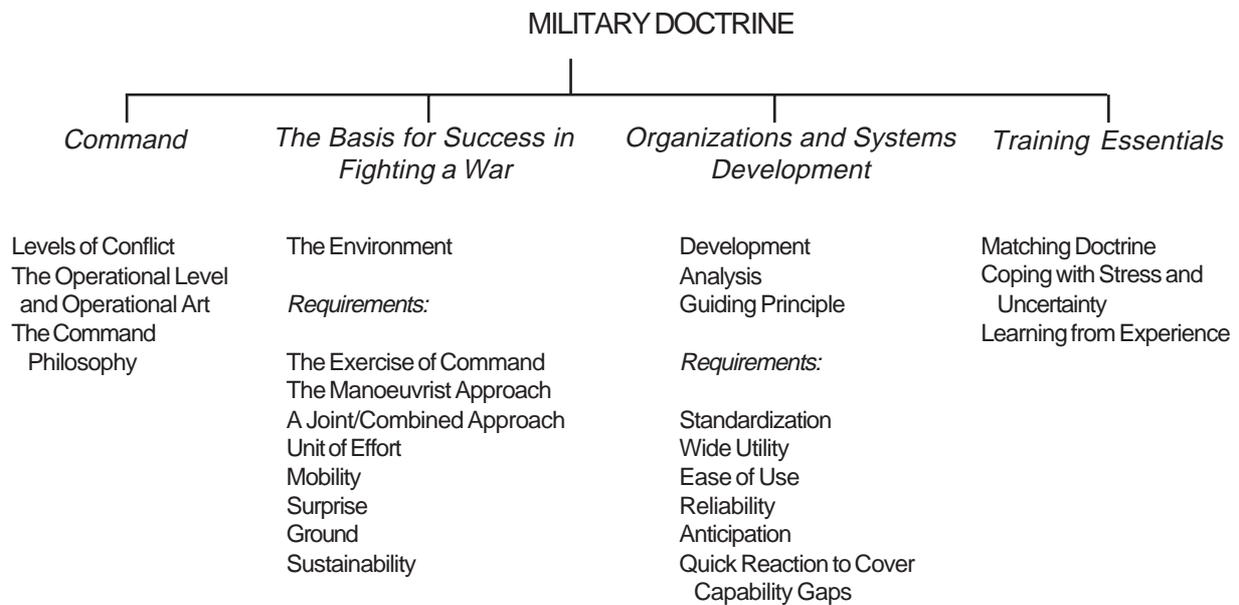


Fig4

- *The Moral Component.* The moral component concerns the ability to get people to fight. Many theorists and all practitioners of war have pointed to the significance of the moral aspect in fighting. For Clausewitz it was so important because

“With uncertainty in one scale, courage and self-confidence must be thrown into the other to correct the balance.”

The moral factor is difficult to define. It is often summed up in the term morale which Napoleon quantified in his saying that: ‘Morale is to the material (physical) as three is to one’. Maintenance of morale is a Principle of War and as such embraces both the moral and physical aspects of Fighting Power. High morale will stem from sound training, confidence in equipment and good administration as well as confidence in commanders, discipline, self-respect and clear knowledge of what is going on and what is required. Yet the ability to get people to fight is not just a question of morale. It will also involve:

- *Motivation.* Getting people to do things is a function of leadership but is made difficult in the absence of motivation. Soldiers who are well motivated and well led work as a team. From teamwork

comes comradeship and there are few closer bonds in human relationships than comradeship-in-arms. It leads to that pride in belonging best described by the term *esprit de corps*. Motivation will follow from high morale but will also depend upon a continuing sense of purpose. It is the job of the commander to instil purpose. But in the first instance the national will, reflected in public opinion, will give the soldier that purpose. Soldiers will generally be less easily led in pursuit of causes that they do not understand.

- *Leadership.* Military leadership is the projection of personality and character to get soldiers to do what is required of them. Skill in the techniques of leadership is the foremost quality in the art of command and contributes very largely to success at all levels of war. There is no prescription for leadership; different individuals will motivate soldiers in different ways - by example, by persuasion, by compulsion, by force of personality, by charm or by any combination of techniques. What is clear is that no military leader will succeed if he does not know the organization, however large or small, that he is privileged to command.
- *Management.* Management involves making the best use of resources. It is a facet of command and certainly no substitute for leadership. Good management can have considerable bearing upon morale and on military effectiveness. Management skills are essential in the efficient structure and running of organizations and systems starting at MOD level and extending to the field.
- *The Physical Component.* The physical component is the means to fight. It is the equivalent of the term '**combat power**', defined in NATO as: 'the total means of destructive and/or disruptive force which a military unit/formation can apply against the opponent at a given time'. The total means include the organization of the main elements of combat power, which are:
 - *Manpower.*
 - *Equipment.*

- *Logistics.*
- *Training and Readiness.*

The full hierarchy of Military Effectiveness is shown on the fold out section of the back cover. It may be helpful to have it folded out when reading the remaining Sections of this Chapter - which follow the hierarchy.

MILITARY DOCTRINE - THE CONDUCT OF CAMPAIGNS AND OPERATIONS

Command

Command is the authority vested in an individual for the direction, coordination and control of military forces. It is concerned primarily with leadership, responsibility and decision making. The activity of control complements command and embraces management and the technicalities of execution, and as such is largely the province of the staff and communications technology. The qualities that are important for the commander to possess are described in ADP - 2 Command pages 2-15 to 2-27.

- *Levels of Conflict.* The way in which command is exercised is related directly to the levels at which war is controlled, and the commander's responsibility varies accordingly. The levels may be defined both nationally and in Alliance terms ('British Grand Strategy' and 'NATO Military Strategy' for example). The levels of conflict are:
 - *Grand Strategic.* **Grand Strategy is the application of national resources to achieve policy objectives.** The purpose of

grand strategy is to direct and provide coherence to overall national, alliance or coalition policy, including all military and non-military aspects. Grand strategy is therefore the exclusive province of governments, whether acting independently or in concert with other governments through a multinational organisation such as the United Nations, an alliance established by treaty such as the North Atlantic Treaty Organisation or an ad hoc coalition such as that formed to prosecute the 1990-1991 Gulf War. From this definition three broad responsibilities flow:

- ❑ To lay down the policy objectives for the activities to be instituted.
- ❑ To stipulate the limitations to be imposed on those activities, including the circumstances in which military activity should cease.
- ❑ To make available the requisite resources, including, when necessary, direction of the national industrial base.

○ *Military Strategic.* **Military Strategy is the application of military resources to achieve the military aspects of grand strategic objectives.** A national, multinational or alliance strategic authority will consider the realistic contribution that military force can make to the achievement of the grand strategic objectives and set such activity in hand. Specifically, the military strategic authority will:

- ❑ Decide what campaign or campaigns need to be fought to achieve the strategic goals and in the light of political, legal and economic circumstances, decide those in which British Forces should participate.
- ❑ Identify the military strategic goals and define the campaign objectives which will constitute success - in other words - to identify the end-state. This is defined as 'That state

of affairs which needs to be achieved at the end of the campaign either to terminate or resolve the conflict on favourable terms’.

- Recognize any political, financial or legal limitations on the use of the force, with particular regard to alliance or coalition partners.

- Allocate forces and resources to each campaign theatre and appoint theatre commanders who will exercise operational level command.

- Agree operational objectives with theatre commanders and where necessary adjust resources.

- Establish the outline command arrangements.

- *Operational.* Joint campaigns and major operations are constructed and directed at the Operational Level in fulfilment of a strategic directive. It is the level that provides the gearing between military strategic objectives and all tactical activity in the theatre of operations. It is at the operational level that military resources are directed to achieve the campaign objectives - the end-state - defined by the military strategic authority, within any limitations imposed. An operational level commander will design a campaign within his delegated theatre of operations; he will plan and direct the major operations within the campaign. He will be responsible for:

- Deciding what tactical objectives are necessary to achieve the campaign objective. These decisions will be taken with due regard to political and coalition considerations.

- Deciding in what sequence these tactical objectives should be achieved.

- Allocating forces and resources as necessary for subordinate commanders to be able to achieve their tactical missions.

- ❑ Setting priorities for the provision of combat service support to sustain the tactical battles.
- ❑ Directing the activities of those formations, ships, aircraft and other units or assets not delegated to subordinate commanders, especially those earmarked as operational level reserves.

Because of its pivotal importance in the successful conduct of any campaign, whether Warfighting or in Operations Other Than War, this level of conflict is considered in more detail below.

- *Tactical.* Battles and engagements within a sequence of major operations are planned and executed at the Tactical Level in order to achieve the operational objectives of a campaign. At the tactical level battles and engagements are fought to achieve tactical missions, within the overall campaign design. It is at the tactical level that troops are deployed directly for combat.

The descriptions above may give the impression that each is a separate and clearly defined entity. In practice there is likely to be overlap. This is particularly the case in Operations Other Than War and Peace Support Operations. The distinction between the military strategic and operational levels of war will rarely be tidy. In seeking to differentiate between these two levels the key delineation is, that whereas the operational level commander **orders** the activities of his assigned formations and units in pursuit of his own plan of campaign, the military strategic authority is confined to **allocating** objectives and resources and setting necessary limitations.

- *Levels of Conflict and Levels of Command.*

- It is important to recognize that levels of conflict and command are not permanently linked. The corps level of command is often correctly associated with the operational level of conflict. But the corps may also operate at the tactical level, while, as in the Falklands, the equivalent of a division may operate at the operational level. It

depends on the circumstances and the levels of force deployed.

- More than one level of command may operate at each level while each level of command may operate in more than one level of conflict. The essential matter is that the *functions* as defined above are carried out by a commander who knows that it is his duty to carry them out.
- *The Operational Level and Operational Art.* The vital link between the setting of military strategic objectives and the tactical employment of forces on the battlefield is the exercise of command at the operational level. The skilful execution of the operational level of command is described as ‘**Operational Art**’. That art embraces both decisions taken at the operational level and the outcome of those decisions, often tactical activity but bearing on the strategic level. For action at the operational level must be planned with a view to seeking a decisive result. The scope of operational art - generalship - can be shown diagrammatically thus:

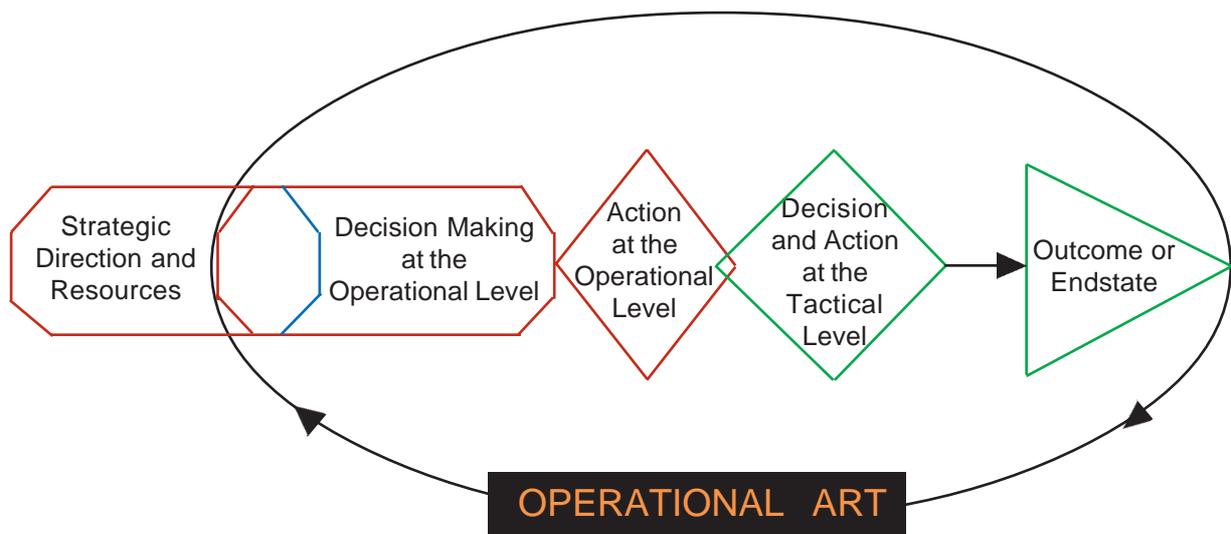


Fig 5

The diagram shows both the continuous nature of the art and the fact that whilst it was possible in the previous section to identify levels of conflict, in the exercise of *command* firm lines between the levels

cannot be drawn. No amount of operational brilliance will make up for lack of strategic or tactical competence. Nor is it possible to be precise about the nature of the art, though characteristics which illustrate its importance can be stated:

○ *Freedom of Action.* As the definition implies, activity at the operational level must contribute directly to the military strategic aim. Such aims will invariably be broadly set and to achieve them the operational commander must be given wide ranging freedom of action to originate and execute plans which will allow him to gain and retain the initiative. He must also be given appropriate resources under his own hand to influence the situation decisively.

○ *Joint and Combined Nature.* At the operational level activity on land, at sea and in the air must be conceived, planned and conducted as a single entity, usually involving all three Services and is therefore 'joint'. Within an Alliance such as NATO, activity will invariably involve forces of more than one nation operating together and is therefore 'combined'. Consequently the operational commander will always seek to concentrate his effort within the freedom of action that he has been given by the direction of joint and combined resources. So, whereas at the tactical level battles can be fought by land forces within an environment created by independent maritime or air action, at the operational level the campaign must be one in all respects, embodied in a joint directive. The operational commander should therefore command all joint forces in the theatre.

○ *Concentration of Force.* This Principle of War, together with its corollary economy of effort, is of particular importance at the operational level. Identification of the point against which to concentrate effort so that it will have the greatest effect upon an enemy's force, whilst sustaining minimum loss, is a major component of operational art. That point must be that element of the enemy's overall capability whose elimination will lead to the enemy's inevitable defeat or render the attainment of his objectives impossible. It is known as the *Centre of Gravity*: it could consist of any characteristic, capability or locality from which the enemy derives his freedom of

action, physical strength or will to fight. The keys to unlocking the centre of gravity are called *Decisive Points* - those events, the successful outcome of which is a precondition to the elimination of the enemy's centre of gravity. The event may not necessarily be a battle and may not therefore have geographical significance; the key consideration is the effect on the enemy. The identification of decisive points is a fundamental part of the campaign planning process.

- *Scale.* The scale of the operational level is fundamentally different from the tactical in terms of area and time and - often - size of forces. This has implications for the decision making process: in particular the gathering and evaluation of intelligence and the need for decisions long in advance of formations crossing their lines of departure in order to allow time for deployment.
- *Total Effect.* Without the operational level military strategy cannot be implemented in the most effective way. There is every chance that limited resources, finite moral and physical effort and soldiers' lives may be squandered in tactical battles that are either fought in the wrong place at the wrong time or are entirely unnecessary. The operational commander should ensure that he executes campaigns rather than a series of disconnected battles. His function is not just one of co-ordination. Operational art requires deep thought on how to apply the principles of concentration of force and economy of effort and so where to deploy the joint, and usually combined, resources to achieve a decisive result on a scale that justifies the freedom of action given. To succeed in this way the commander must ensure that the power of the whole - the campaign - is greater than the sum of its parts - the battles. This is often described as the synergistic effect
- *The Command Philosophy.* A command philosophy provides the basis for the exercise of command. The three tenets of the British Army Command Philosophy are:
 - The importance of making a timely decision.

○ The importance of understanding the intention of the commander both generally and specifically.

Clear responsibility to fulfil that intention *based on*:

Clear understanding of common doctrine.

Mutual trust between commanders.

Obedience to orders.

Initiative to act within any freedom of action given, or purposefully in the absence of further orders.

The Basis for Success in Fighting a War

This pivotal section of the booklet sets out the basis of the British Army's approach to warfighting and operations other than war, throughout the spectrum of conflict.

The Environment. Military activity does not take place in a vacuum. No Army today is going to succeed in fighting unless it appreciates the environment - natural and enemy-induced - in which it exists. Only commanders who understand the conditions they will encounter will not be over-awed by them and will be able to turn them to their advantage. The dominant elements of the environment are shown below.

- *The Political Situation.* The Clausewitzian dictum that “war is not merely an act of policy but a true political instrument, a continuation of political intercourse, carried on with other means” holds as good today as it did in the 19th Century. A British military force will always operate in a political context. That context is defined in terms of a directive to the relevant commander and most particularly in the Rules of Engagement (ROE) set for the operation.

- *The Mind.* The dimension of the mind is of paramount importance in any conflict. The Army that believes it is fighting in a just cause under leadership that inspires its confidence, is capable of achieving the seemingly impossible; whereas one which lacks conviction and motivation, however well equipped and provisioned, will quickly crumble. Measures which enhance our own morale and undermine that of the enemy form an essential component of any campaign. These psychological operations (psyops) require careful research and execution if they are to be credible and so effective.
- *The Population.* Operations will frequently take place in populated areas where account will have to be taken of those caught up in hostilities. The Law of Armed Conflict will be applied so there will be a need for the Services to comply with certain legal provisions as regards the local population, even in wartime. There will be an effect upon movement by road and rail and there may be a requirement to provide food and medical care for the local population. The population will be sources of information useful to both sides, and of local geographical information. In operations other than war success will ultimately depend upon their support. Consideration of the amount of collateral damage allowed in a war zone which is populated will have implications for manoeuvre and firepower. If denied information, protection and careful treatment, the uncontrolled movement of large numbers of civilians may greatly hinder operations. Civil-military liaison and instructions to the civil population will therefore assume considerable importance in war.
- *The Air Situation.* An air situation which is at least not unfavourable and which allows local air superiority to be won for short periods at the decisive time and place is essential if forces on the ground are to manoeuvre and the logistic system is to operate without prohibitive losses. New technology will ensure that night and poor weather has ceased to be a major limitation in the use of air power.

- *The Electro-Magnetic Spectrum.* Armed forces must be equipped and trained to fight as successfully in the environment of the electro-magnetic spectrum as in any other. This will involve the use of technical and procedural means, including deception, both to attack enemy systems and to neutralize the threat to our own.
- *The Nuclear, Biological and Chemical (NBC) Environment.* NBC conditions impose severe penalties upon all military activity, particularly command and control and logistics. The penalties, in relation to the chemical threat in particular can be reduced by good defensive equipment and procedures, and rigorous training in its use.
- *Climate and Weather.* Soldiers are physically and psychologically affected by climate and the weather. The performance of many weapons systems, notably sensors and communications, can be degraded in poor weather. Rain, snow and mud hamper mobility. At the tactical level observation and engagement ranges can be dramatically reduced. On the other hand, heavy cloud and poor visibility can reduce the opportunities for aircraft and satellite surveillance and some weather conditions can make the use of chemical agents unworthwhile. Whilst the effects of weather and climate must be taken into account they can be turned to advantage - for example to enhance the achievement of surprise - by motivation and good leadership.
- *Terrain.* The nature of the terrain over which the campaign or battle is to be fought will inevitably affect the way in which operations will be conducted by friend and foe. Successful commanders will extract the maximum advantage from the ground over which they are fighting. They will choose the ground that suits their own purpose and confounds the enemy's.

Requirements. Given this environment, there are a number of requirements for the successful fighting of a war. They stem from the Principles of War and apply both to offensive and defensive operations, throughout the spectrum of conflict. They are

The Exercise of Command, The Manoeuvrist Approach, A Joint/Combined Approach, Unity, Mobility, Surprise, Ground and Sustainability.

- *The Exercise of Command.* ‘Mission Command’ is the practical manifestation of the Command Philosophy and is the basis on which all direction and orders are given by commanders to their subordinates. ‘Mission Command’ derives its strength and value from the intention to tell subordinates what to achieve and *why*, rather than what to do and *how*. Most essentially, commanders do this by issuing *missions* rather than *tasks* (a mission is a task + a purpose [AAP - 6]).
 - *Decision Making Process.* The exercise of command is primarily concerned with the decision making process. Major factors in this process are time and information available. Both vary with the levels of command - in general the higher the level the more time but also the more information with which to contend. At any level quick reaction will be paramount and there will always be the need to reach a timely decision in relation to an opponent’s own decision-action process. Otherwise there is no possibility of gaining or retaining the initiative. Decisions will often have to be made by a commander on the basis of his own instinctive judgement. Such decisions cannot follow from a careful analysis of the situation, weighing all the advantages and disadvantages of various alternative courses. Nor may they follow as a logical consequence of earlier events, but will result from instinct that the moment has come for a particular course of action. Even when a very rapid decision is required some method in the decision making process is essential. The stages in that process are:
 - *Direction.* During the direction stage an initial analysis is made by the commander of what is required of him either by reference to his mission or in the circumstances in which he finds himself. The time by which the decision has to be made will also be determined. Intelligence (G2) staffs are tasked by the commander stating the intelligence requirements, so initiating or

continuing the intelligence cycle (See ADP - 2 Command para 0315). Operations (G3) and supporting advisers and staffs execute preliminary action (movement and resupply for example) and carry out staff checks. Priorities for work may well have to be set at this stage.

□ *Consultation.* In the second stage, if time allows, consultation occurs at three levels:

- ▶ *Upwards.* The commander will talk to his superior if he is in any doubt about what he is to do, and also to ensure that he is keeping him informed of his intentions.
- ▶ *Sideways.* He will speak to his advisers within his own headquarters, but this will only be necessary if they are not fully in his mind as a result of the Direction stage. He will also liaise with his neighbouring commanders in accordance with the principles and procedures for establishing liaison laid down in STANAG 2101. In war accurate reporting by capable liaison officers will be of great value.
- ▶ *Downwards.* Consultation downwards is the means by which he will obtain an impression of what is feasible as well as gaining ideas, though in the process he must beware that his resolve is not weakened. Whenever possible a commander should go forward for discussions on the ground, where he can get a feel for the situation and be in a position to make his own judgements. The use of trunk communications may be necessary when time is short, but it is very much a second best. At the end of whatever discussions are held the commander must leave his subordinates in no doubt as to his intentions. Consultation, Consideration and Decision making will frequently be telescoped into one continuous phase, with little time for consultation, which may have been restricted to asking a few questions over the trunk system.

○ *Consideration.* Before reaching his decision it will be necessary for the commander to consider the work of his staff from the Direction stage, and to apply his judgement to it influenced by any consultation that has been possible. Conferences should be avoided. The staff may present the commander with options but they do not make the decision.

□ *Decision.* The commander makes the decision.

□ *Execution.* Although the decision has been made the process is not complete until the commander has assured himself that dissemination in the manner that he requires has been carried out (see Annex B on the Mechanics of Command). He will also subsequently wish to see that his decision is executed correctly and adjusted in the light of events. In the words of General Patton:

“Promulgation of an order represents not over 10 per cent of your responsibility. The remaining 90 per cent consists in assuring through personal supervision on the ground by yourself and your staff, proper and vigorous execution”.

The full process can be shown diagrammatically (Fig 6):

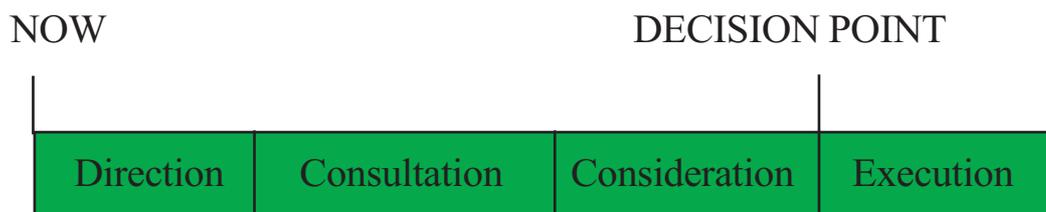


Fig 6

When time is short, as has been explained, the process will have to be condensed and activities undertaken concurrently rather than consecutively. The time by which a decision has to be taken may be self evident from the circumstances, but if not, it must be clearly established during the Direction stage. Thereafter, Consultation and

Consideration become inseparably blended, leading to a decision being taken on the spot (Fig 7).

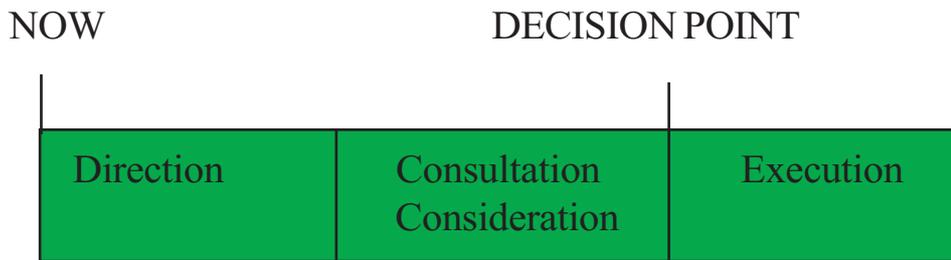


Fig 7

While encouraging full discussion during Consultation, the commander must never permit decision by committee. Fuller is perceptive on this point:

“The common deficits in command are ...calling conferences in order to pick the brains of subordinates and lack of originality which often leads to doing something which the enemy expects in place of what he does not look for.”

○ *Information Requirement.* No decision can be made in the absence of information but modern means of acquisition threaten to swamp commanders. The danger is particularly apparent at the operational level where the commander will receive information from a multiplicity of sources, both in theatre and strategic. It is therefore necessary to identify what information is essential to each level of command, which can only be achieved by initially restricting area coverage. Less urgent information can be disseminated selectively as a lower priority. Reaching a decision will always involve the commander exercising his own judgement on incomplete information. Risk cannot be avoided; to wait in hopeful anticipation of complete clarification will result in a paralysis of inactivity. The risk can be minimized if critical information requirements at a theatre’s various levels of command are identified in peacetime and regularly refined. The areas of intelligence interest and responsibility, described in AFM Formation Tactics para 0205, should also be laid down since depths and frontages may alter

according to the surveillance, target acquisition and weapons systems available at the different levels of command. It will also be important to establish a single focus for intelligence at each level, especially in operations other than war. On operations there will be a need to task complementary sources to confirm or refute apparent theories, primarily to guard against the possibility of being deceived. Procedures for this requirement and the necessary systems must exist in peace.

- *Delegation.* Delegation in the exercise of command will be both necessary and desirable and commanders must possess the judgement to know what to delegate and to whom. They must be clear that whilst they may delegate their authority, they are never absolved from overall responsibility. When a commander is absent from his headquarters, though he should make every endeavour to remain in touch with the situation and be ready to intervene when necessary, this may not always be possible. In these circumstances his deputy or principal Staff Officer must have the clear responsibility to act on his behalf.
- *Mechanics.* The way in which headquarters are organized and run is shown at Annex B.
- *The Manoeuvrist Approach.* The manoeuvrist approach is defined as **an approach to operations in which shattering the enemy's overall cohesion and will to fight is paramount. It calls for an attitude of mind in which doing the unexpected, using initiative and seeking originality is combined with a ruthless determination to succeed.** The principles and thought process that underpin the theory of manoeuvre warfare are equally applicable to Operations Other Than War. This is because the successful application of the manoeuvrist approach inspires a particular attitude of mind and a method of analysis that is relevant to any circumstances involving the use of military force to resolve conflict.
- *The Nature of Manoeuvre Warfare and Attrition Warfare.* Manoeuvre is the 'employment of forces on the battlefield through

movement in combination with fire, or fire potential, to achieve a position of advantage in respect to the enemy in order to accomplish the mission' (AAP-6). It is the chief means of applying the principles of concentration of force, economy of effort and surprise. Attrition is 'the reduction of the effectiveness of a force caused by loss of personnel and materiel' (AAP-6). But these definitions do little to explain the distinctions between manoeuvre warfare and attrition warfare. The latter implies that success will depend upon which side can last the longer in the process of gradual reduction of effectiveness. The theory of manoeuvre warfare on the other hand, seeks to inflict losses indirectly by envelopment, encirclement and disruption, while minimizing the need to engage in frontal attrition. It is the destruction of the enemy's will and cohesion as much as his materiel that is the key. But this is not to say that neither theory contains an element of the other: it is a case of where the emphasis lies and of how the commander thinks about the execution of the mission he has been given. Though skill in the manoeuvrist approach is the more difficult art to acquire and requires the greater investment in training and equipment, it provides for greater flexibility in combat, the opportunity to seize fleeting opportunities and the means to overcome greater force with less by inflicting on him a series of rapid, violent and unexpected actions which create a turbulent and deteriorating situation with which he cannot cope. It is therefore the characteristics of manoeuvre warfare and the requirements for it which must be primarily addressed in doctrine and reflected in the British Army's overall capability.

○ *Characteristics of Manoeuvre Warfare.* Manoeuvre warfare has the following characteristics:

- It is joint and combines the resources of all arms and services. The air dimension, both fixed wing and rotary, is of crucial importance.

- Generally it aims to apply strength, in the form of firepower, against weakness, in contrast to attrition where strength tends to be applied against strength.

- ❑ The emphasis is on the defeat and disruption of the enemy rather than attempting to hold or take ground for its own sake.

- ❑ It depends for its success on the precise application of force against identified points of weakness.

- ❑ It aims to defeat the enemy by destroying his will and desire to continue by seizing the initiative and applying constant and unacceptable pressure at the times and places that the enemy least expects.

- ❑ It will invariably include elements of movement, application of firepower and positional defence. There will almost always be a requirement to fix the enemy, to deny him access to routes and objectives, and to secure vital ground and key points. The manoeuvrist should not be afraid to take up a defensive posture provided always that he never sees it as an end in itself, but for example as a preliminary to resuming the offensive or to regain balance.

- ❑ Significant features of manoeuvre are momentum and tempo which in combination lead to shock action and surprise.

- *Manoeuvrist Concepts.*

- ❑ *The Decision Cycle.* In order to exercise command effectively, a commander must make timely decisions and take the appropriate action. This is a fundamental principle of manoeuvre warfare. If a commander can consistently decide and act quicker than his opponent, he gains a significant advantage. The process of assessing the situation, making a decision and acting is known as the **decision cycle**. For more detail on this subject see ADP - 2 Command pages 3-6 to 3-9.

- ❑ *Momentum.* In military terms, momentum is **a measure of the effect that a formation or unit that is moving can have**. It is the product of that moving force's size and speed (mass x velocity).

Momentum can have effect upon an opponent following the principles of leverage, or turning effect, but leverage is not possible unless the enemy is held at one point before being struck a blow at another. It follows that the commander must first decide where to hold his opponent and then how to obtain the necessary momentum. To achieve effect he can vary the ratio of mass and velocity. He may opt for a small force going deep and creating the shock effect by its speed, classically the way in which an airmobile force is used, or for a larger force relying on its mass more than its speed. Momentum will not be achieved and maintained without:

A flexible and responsive logistic system that puts the spur to operations.

Uncommitted follow on forces (reserves) capable of rapidly reinforcing success and exploiting opportunities.

Formations and units that are prepared to take calculated risks in pursuit of the commander's intention.

□ *Tempo*. Tempo, or the rate of activity (between battles at the operational level and within battles at the tactical level), in military terms is **a measure of the extent to which the potential speed of a formation or unit is exploited relative to the enemy**. It is not an absolute and should not be confused with mere speed. It is largely a matter of responsiveness and agility. These depend upon the decision making process and the time taken to execute the decision and complete movement, the total process often being referred to as the decision cycle. Since manoeuvre relies upon the precise application of force, not least in terms of time, it is vital that one's own decision-action cycle is quicker than (or 'within') that of the enemy. So the higher the tempo, the greater the likelihood of outmanoeuvring an opponent. This holds good both in mounting and conducting operations. The analogy of kinetic energy ($\frac{1}{2} \text{ mass} \times \text{velocity}^2$) is relevant here. This reminds us that, provided the force (mass) has sufficient combat power, more

benefit may be gained by quick, forceful action by small forces than by maximising strength at the expense of the time taken for that force to take action. High tempo is unlikely to be possible without:

- ▶ An information system at the operational level of command which provides intelligence that is timely and accurate enough for the commander to assess enemy weaknesses.
- ▶ Command being decentralized through the use of directives which give a considerable degree of freedom of action to subordinate commanders.
- ▶ Formations possessing a high degree of mobility and a flexible logistic system.
- ▶ Movement skills being of the highest order.
- ▶ Response at low level being rapid as a result of being based upon clearly understood and regularly practised procedures and drills.

○ *Forms of Manoeuvre.* Manoeuvre is not confined to ground based forces. It has an air dimension in which helicopters play an increasing part. Remembering that manoeuvre is not just *movement* but movement with *fire*, there are certain classic forms of manoeuvre that remain as relevant as they ever were. These are described in Annex C.

○ *The Manoeuvrist Approach and the Commander.* Manoeuvre warfare requires commanders who have the mental capacity to:

- Operate successfully within confusion and disorder. Little will be predictable. Decisions will often need to be made on the basis of incomplete information. Much will then depend upon the nerve and instinctive feel of the commander.

- ❑ Think quickly and act in an original way, if the enemy are to be surprised and disrupted, before eventually being destroyed. Adopting an indirect approach and achieving rapidity of manoeuvre will nearly always be essential prerequisites for success.
 - ❑ Study the mind and doctrine of an opponent.
 - ❑ Understand the operational level of conflict and the associated operational art. This is essential if the Army is to be capable of using manoeuvre to effect against a powerful enemy also employing manoeuvrist techniques.
- *Manoeuvre Warfare and Firepower.*
- ❑ The ability to deliver concentrated fire is essential if an Army is to exert physical force. Such firepower, whether it be delivered directly, indirectly, from the ground, sea or by air, is brought to bear through manoeuvre. Having been concentrated, firepower can then:
 - ▶ Demoralize an enemy, and destroy his will and ability to fight.
 - ▶ Facilitate our own ability to manoeuvre by hampering the enemy and neutralizing his forces.
 - ▶ Disrupt an enemy's command and control arrangements, his means of firepower and his ability to sustain operations.
- The full effect and flexibility of firepower will not be realized unless:
- ▶ It is synchronized with other battlefield activities in terms of time, space and purpose to achieve the maximum unity of effort.

- ▶ It is fully co-ordinated at all levels. Control will invariably be exercised at a low level but command will often be vested in a high level commander to achieve the necessary flexibility and concentration in its application.
 - ▶ Target acquisition means are dedicated.
 - ▶ The necessary communications are provided to exercise command and control effectively.
 - ▶ Its own mobility, protection and re-supply matches that of the forces it is supporting.
- *A Joint/Combined Approach.* The joint battle is indivisible. The various tasks which the other two Services will have to undertake and the principles which will be applied in their fulfilment must be understood by all ground force commanders.
 - *Air Operations.*
 - *The Critical Importance of Air Power.* Air power has a vital role to play in modern warfare and will have a decisive influence on the outcome of any conflict. It permits the projection of concentrated force at short notice over long distances. The three inherent qualities of speed, reach and responsiveness, including the ability to switch rapidly from defensive to offensive action, form a flexible combination that gives the joint commander the opportunity to use air power to:
 - ▶ Achieve and maintain sufficient control of the air to allow friendly air and land operations to be conducted without interference from enemy air operations.
 - ▶ Restrict enemy movement as much as possible.
 - ▶ Provide concentrated fire support for both offensive and defensive operations.

- ▶ Pose a threat to the enemy over a wide area well beyond the range of ground weapons and so force him to divert vital resources to defensive operations that might otherwise be devoted to offensive action.
- ▶ Assist in the process of strategic and tactical mobility by redeploying, reinforcing or resupplying forces quickly.

□ *How Air Power is Used.* Air Power Doctrine is published in AP 3000 which outlines all Air Operations. The employment of air power in co-ordination with ground forces will include elements of the Counter-Air Campaign, the Anti-Surface Force Campaign and Combat Air Support Operations.

- ▶ *Counter-Air Campaign.* The counter-air campaign is ‘directed against the enemy’s air offensive capability to achieve and maintain the desired degree of air superiority’ (AAP-6). It will involve attacking enemy airfields, air defence and command and control systems (Offensive Counter Air operations) and the use of friendly air defence fighters and missiles to destroy enemy forces in the air (Defensive Counter Air operations).
- ▶ *Anti-Surface Force Campaign.* There are two elements of relevance to land operations:
 - ◆ *Air Interdiction.* Air interdiction is conducted ‘to destroy, neutralize or delay the enemy’s military potential before it can be brought to bear effectively against friendly forces’ (AAP-6). Air interdiction is planned jointly but as the targets are generally beyond the range of land-delivered weapons it does not usually require detailed integration with the fire and movement of friendly forces.

◆ *Offensive Air Support.*

- *Close Air Support.* Close air support is applied 'against hostile targets which are in close proximity to friendly forces and which require detailed integration of each air mission with the fire and movement of those friendly forces' (AAP-6). Ground force commanders must be clear that there will be few occasions in warfighting when close air support will be the most effective way of using air power.

- *Battlefield Air Interdiction.* Battlefield air interdiction is the shorter range element of air interdiction. It is directed against enemy targets which are beyond the immediate proximity of friendly forces but in a position directly to affect them - for example columns of armour or artillery. Its use is planned jointly but requires less co-ordination in execution than close air support.

◆ *Combat Support Air Operations.* The following Combat Support Air Operations are relevant to Land operations:

- *Tactical Air Reconnaissance.* Tactical air reconnaissance collects information on the enemy, weather and geographical features required for the planning and conduct of land operations. It is part of wider aerospace, surveillance and reconnaissance operations, which include collection from a wide variety of sensors, including photographic, radar, optronic and electronic systems mounted in space, air and ground platforms.

- *Air Transport Operations.* Air transport support will include strategic (inter-theatre) and tactical (intra-theatre) operations conducted by fixed wing aircraft and helicopters. The support will encompass 5 major roles: Scheduled services, airborne operations, special air operations, air logistic support operations and aeromedical evacuation.

- *Airborne Operations.* Airborne operations include the delivery of troops by air-landing, parachute or helicopter. Such operations may involve both troop-carrying and attack helicopters and fixed wing aircraft. They will require the close co-ordination of aircraft with ground forces either for rapid movement across the battlefield or for manoeuvre in the land battle. The characteristics of, and the requirements for, manoeuvre apply as much to air-delivered as to ground force operations.

- *Electronic Warfare.* Electronic warfare operations involve the military use of electronics to determine, exploit, reduce or prevent the hostile use of the electromagnetic spectrum and actions taken to ensure its effective use by friendly forces.

◆ *Principles of Joint Land and Air Operations.*

- Land and air commanders must work together at all levels, with planning staffs being co-located.

- The responsiveness of air power demands centralized command at a high level to ensure its effective and timely use. The reach of aircraft largely determines the level of control, though this is not the only determining factor. Control may also be delegated to a relatively low level formation for a

specific operation or period of time. Under these circumstances, the air adviser's cell or the headquarters will have an important role in advising on the tactical employment of aircraft, and ensuring their subsequent co-ordination.

- Effective airspace control arrangements must be established over the combat zone to minimize the risk of destroying our own aircraft, without degrading the effectiveness of our own air defences. Responsibility for airspace control should normally be vested in the air commander.

- Delivery by air can offer ground forces some of the advantages of air power, and so surprise and high tempo can be achieved. Such forces must, however, have a reasonable balance of ground and air-mounted weapons and sufficient equipment for the fulfilment of their mission once surprise has been gained. Speed of execution is dependent upon joint planning, starting with the ground plan. Responsiveness and flexibility are directly related to the level of training of the staffs, troops and aircrew involved. Planning for operations by air-delivered forces should aim to counter or avoid enemy air defence systems. Air-delivered forces may have problems sustaining operations and logistic arrangements are necessarily complex.

○ *Maritime Operations.* Maritime power in the broadest sense is military, political and economic power exerted through an ability to use the sea. Military maritime power has also had a longstanding ability to influence events on land through amphibious and ship launched land attack operations. This power projection capability has greatly expanded with the advent of modern amphibious techniques and the

advent of sea based aircraft and land fighting from the sea components. The utility of maritime forces is most evident when they form part of a joint force in the execution of a strategy designed to achieve objectives ashore by using access from the sea. Land forces may only be able to obtain access if they are landed by naval forces in amphibious operations. Even when this is not the case, ground forces may be prevented from achieving their objectives unless maritime forces can safeguard their lines of support. Maritime Doctrine is published in BR 1806, which outlines all Maritime Operations. These are joint by definition as they involve forces operating both afloat and ashore - and nowadays in the air. Through providing an amphibious capability they regularly practise what could be considered the ultimate joint operation. Naval forces can provide afloat headquarters for joint forces, offering advantages in flexibility and access.

○ *Amphibious Operations.* Captain Marryat described inter-Service co-operation at Cartagena in 1741 as follows:

“The Army thought that the Navy might have beaten down stone ramparts ten feet thick; and the Navy wondered why the Army had not walked up the same ramparts which were thirty feet perpendicular.”

Experience in the Falkland Islands in 1982, although more successful than Cartagena, was a timely reminder of the complexity of amphibious operations, now invariably tri-Service. An understanding of the following principles is essential if earlier experience, confirmed by that of the South Atlantic, is to be put to good effect.

□ *Command, Control and Communications.* A joint force undertaking an amphibious operation requires clear operational level objectives. These will include:

- ▶ Achievement of surprise which is particularly important in amphibious operations.

- ▶ At least local superiority at sea and in the air for the duration of the landings.
- ▶ Clearance of the bridgehead to protect the landing area from indirect fire.
- ▶ Early establishment of port facilities.

A trained and experienced joint planning staff for the operational level headquarters and preferably for the landing force will be required. Joint plans inevitably involve a degree of compromise, but once firm in outline changes should be avoided. Dedicated shipborne headquarters facilities including communications to naval, air and landing forces, and to supporting merchant ships taken up from trade (STUFT) are necessary. Inter-Service communications, often through land force and naval liaison parties are vital. Information concerning both enemy dispositions and the nature of the landing area (the beach above and below water, and its exits) will have to be collected. The joint plan should also specify the states of command of an embarked force and when they are to change for those landed.

□ *Support.* Support for joint operations will be limited both by weather and sea conditions and the quantities of supplies that can be shipped and unloaded across beaches. Fire support may also be limited by natural conditions and the capabilities of carrier borne aircraft. The problems of airspace management over a beach area are considerable, and detailed co-ordination of air defence weapons, air support and helicopters is necessary.

□ *Doctrine and Training.* Common tri-Service doctrine and procedures are vital for successful amphibious operations. They must be up to date and rehearsed regularly by those with amphibious roles. Inexperienced troops will need considerable training before they can be effective in amphibious operations.

- *Combined Operations.* The UK's security policy and the size and capabilities of its armed forces mean that operations involving only national forces will be rare. Commanders of combined formations should be aware of the political constraints which may be imposed upon Allied contingents, their differing national characteristics, doctrines and equipment.
- *Unity of Effort.* Unity of effort is required to produce a total effect on the battlefield at all levels through:
 - *Complementary Use of Systems.* Only a *balance* of weapons systems will enable the wide range of threats to be defeated. At the tactical level this is achieved by all Arms grouping, and understanding how different weapons can be fought to best effect.
 - *Main Effort.* To achieve concentration of combat power and logistic support on the main effort (defined as: "a concentration of forces or means, in a particular area, where a commander seeks to bring about a decision" [See ADP - 2 Command page 8-C-1]), formations and support will have to be switched from points of lesser importance. Considerable ingenuity may be required by formations left in areas of lesser emphasis to conceal or overcome their lack of resources.
 - *Co-ordination.* Attacks throughout enemy forward and rear areas must be co-ordinated so that a cumulative effect can be created in the decisive place. In conventional operations the need to concentrate pressure on the enemy in some depth was summarized by General Guderian as:

"Boot `em, don't spatter' em."

This co-ordination of battlefield activity in time and space for maximum effect at the decisive point is also known as **synchronization**. The synergistic effect of taking action simultaneously in several different places is far greater than the sum of the individual actions. In operations other than war it may be reflected in the single overall plan. Although the need for minimum force will be

present, unity of effort will apply by directing the maximum appropriate pressure on to all the various elements of the belligerent's structure.

- *Mobility.* Mobility is the capability of forces to move from one place to another *whilst retaining the ability to fulfil their mission. Speed of movement is what is significant in war.* It is important that:
 - Within a *formation* the components that are essential for the fulfilment of that formation's *primary* mission (typically armour, infantry, artillery, air defence, engineers, aviation and headquarters) have comparable mobility.
 - Logistic mobility and organization is such that it can support the tempo of operations envisaged, not least in terms of range and speed.
 - Procedures for the planning and execution of movement are highly refined and automated where practicable to produce the most rapid response possible.
 - A positive attitude is taken to the requirement to move by using ground to best advantage. Commanders must be prepared to go where the enemy cannot go, or even where he thinks one cannot go. To achieve momentum it may be necessary to employ smaller forces which are able to move faster than more powerful and better protected ones.
- *Surprise.* Surprise is a Principle of War. Its inclusion here is recognition of the fact that it is a vital ingredient of success in modern warfare. It is a significant way of seizing the initiative at all levels of war, though it tends to be neglected in peace. Historical examples, some very recent, show that even the simplest surprise can confer disproportionate advantage. It is necessary that commanders at all levels attempt surprise wherever practicable, and that all soldiers are aware that in war attempts will be made to surprise them. There is no prescription for the achievement of surprise but it is the case that:

○ *Surprise is not an end in itself.* It cannot be effective on its own as it is a condition of success not success itself. For Clausewitz there were two universal desires in war: first to achieve superiority at the decisive point, and second to take the enemy by surprise, since ‘without (surprise) superiority at the decisive point is hardly conceivable’. Although surprise may occur by accident, planning is the key to success. The benefits of surprise may be short-lived so planning should seek to exploit its effects rapidly.

○ *Surprise should primarily be directed at the mind of the enemy commander rather than at his forces.* The aim should be to paralyse the commander’s will. It follows that study and assessment in peacetime of an opponent’s theoretical vulnerabilities is profitable.

○ *Surprise need not be total.* Surprise results from striking an enemy at a time or place or in a manner for which he is unprepared. It is not essential that the enemy is taken unawares, but only that he becomes aware too late to react effectively.

○ *Major factors in achieving surprise are intelligence, security, originality, speed and deception.* Deception, in particular, covers ‘measures designed to mislead the enemy by manipulation, distortion or falsification of evidence to induce him to react in a manner prejudicial to his interests’ (AAP-6). The subject is covered in detail in ADP - 1 Operations paras 0448 - 0451.

● *Ground.*

○ *Value of Ground.* Despite advances in technology ground still confers advantages and imposes limitations on those engaged in manoeuvre, target acquisition and movement. It continues to give ‘cover from view’ and cover from fire’ from even the most sophisticated weapons systems, and mobility depends upon its nature. Detailed knowledge of an area is of particular value:

□ *In the Estimate Process.* In an estimate it is necessary to assess, and in battle to reassess, ground for the value it confers on the immediate commander and on the higher level of command. This is so that the efforts devoted to taking or holding ground remain in proportion to its value. For example, a successful tactical defence, if conducted for too long, may result in defeat by an operational envelopment or encirclement of the defenders.

□ *At the Tactical Level.* Appreciation of ground at the tactical level is indispensable for the following reasons:

- ▶ To make the best use of all available weapons systems.
- ▶ To ensure an appropriate tasking, grouping or concentration of forces for an area.
- ▶ To conceal troops and logistic assets from reconnaissance or surveillance and to detect areas of 'dead ground'.
- ▶ To assess 'going' so that mobility and counter mobility resources can be used to best effect.

○ *Terrain Analysis.* Detailed advice from terrain analysis staffs will be valuable in any map study. Areas and routes should seldom be considered impassable. Defending forces have often been surprised by determined troops traversing ground thought impassable, the German attacks through the Ardennes (1940 and 1944) and the 'yomp' to Port Stanley (1982) being examples.

- *Sustainability.* Sustainability is the ability of forces to sustain the necessary level and duration of fighting to achieve their objectives. The key word is 'duration'. Sustainability is more than just logistics (the science of planning and carrying out the movement and maintenance of forces). The term embraces the organization of manpower, equipment and logistics - three of the four elements of combat power - as all directly affect a force's physical potential to complete its mission.

A commander must make a judgement about his force's sustainability as above all things it will limit his freedom of action. In peacetime the judgement is difficult to make. It hinges on the likely duration of operations, tempered by the pattern of demand, and will be detailed in the sustainability statement. Sustainability therefore requires having sufficient men, equipment and stocks on hand and the ability to resupply and reinforce. This last requirement will depend upon the resilience of the logistic system, interoperability of equipment and commonality of ammunition, factors which are discussed in the next section.

It is clear that an army which in peace ignores sustainability is depriving itself of a significant proportion of its means to fight (combat power). A commander who ignores the question in training or in war deceives himself and those under his command.

Organizations and Systems Development

Since the aim in manoeuvre warfare is to avoid trials of strength and attack points of weakness, this approach must be reflected in the design of equipment and organizations. These requirements will need to be continually refined to reflect changes in a potential enemy's operating techniques and equipment capabilities. Once a potential enemy becomes an actual one, theoretical requirements will become real ones. An ability to adapt rapidly to unanticipated demands will then be essential.

The aim of this section is to provide a framework upon which the thinking of those who organize the Army and procure its systems can be based. It is concerned with the process of development. More specifically it describes the need for analysis and the Guiding Principle and requirements that influence the result. 'Systems' is used in its structural sense to mean a set of connected parts making up a complex whole: 'organization' provides form to that whole.

Development. Doctrine must bear upon the way in which the Army is organized and equipped. Inevitably the speed of change in modern technology means that organizations and systems (O&S) do not always follow directly from doctrine as theoretically they should. The inter-relationship between doctrine and O&S is therefore better viewed as cycles by which the development process takes place. (See Fig 8)

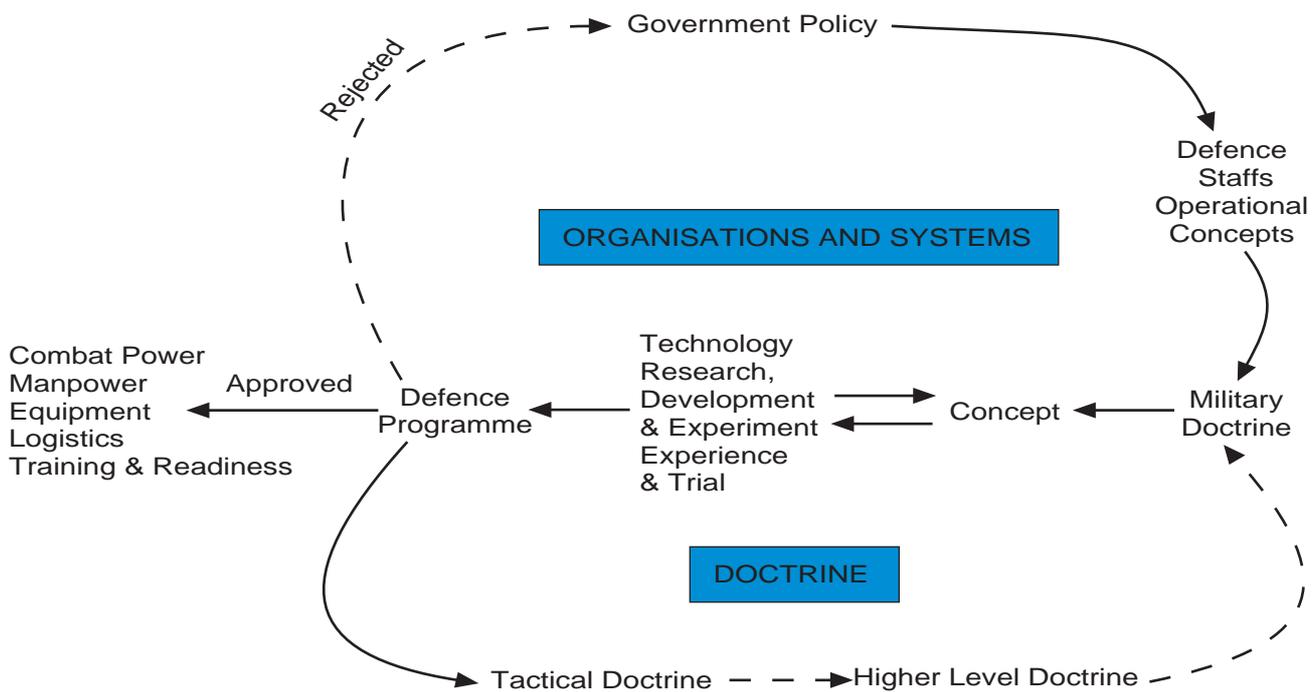


Fig 8

The Defence Programme (see [Chapter 2](#)) imposes the inescapable fact of resources, often summarized as ‘The Rule of the Four M’s’ - Manpower, Material, Minutes and Money. If approved by the Programme, a concept will be converted into combat power. If it is not, it must re-enter the cycle and be re-considered in relation to government policy. Doctrine itself develops in the manner described in [Chapter 1](#) which is shown in the lower cycle.

Analysis. The process of analysis, which should include risk assessment, should always feature in any O&S decision, whatever the level or range of activity, as it is the means by which conflicting factors or requirements are

placed in their proper order. It is a similar process to that applied in the field: mission analysis and the estimate. The merit of a systems approach, that is consideration of the effect of the complex whole rather than individual parts, to the Army's acquisition of equipment needs little emphasis. It is, however, necessary that both systems and organizations are considered in the approach from the start. Only in this way will the whole be given a definite structure early on and any re-organization take place by the time the system enters service.

The actual analysis may take the form of Operational Analysis (OA). It should determine the balance between cost and gain within a system or between systems and the system's relationship to the organization in which it will operate. Although the process will often seek to model the performance of a system, no analysis can hope to cover every facet of it. Even with the advent of more capable computers, analysis will always rely on assumptions to provide data for the process of mathematical examination which underpins OA techniques. The assumptions will often deal with intangibles and matters for subjective decision. Such assumptions are made by military and scientific advisers often formed into a Military Judgement Panel. Such a panel comes into play at the beginning of any analysis by setting values, as assumptions, and after the examination in interpreting the results. An essential element of this interpretation is testing the sensitivity of the results against the assumptions made. Military judgement is therefore an intrinsic part of analysis.

Guiding Principle. The guiding principle in any O&S decision is the need for total consistency with the Military Doctrine, especially:

- *The characteristics of modern warfare.*
- *The implications of the manoeuvrist approach to operations.*

Requirements. The principal requirements that bear upon the O&S development process are:

- *Standardization.* Within NATO, standardization is 'the process of developing concepts, doctrines, procedures and designs to achieve and

maintain the most effective levels of compatibility, interoperability, interchangeability and commonality in the fields of operations, administration and materiel' (AAP-6). Standardization is therefore the ideal upon which decisions should be based. It is worth noting that the definition embraces more than just equipment and that it applies equally in relation to the other Services. In practice the ideal will often not be met. The minimum levels for the British Army to seek with Allies and the other Services in the field of O&S are:

- *Compatibility*. 'The capability ... to function in the same system or environment without mutual interference' (AAP-6) applies to all systems and organizations.
- *Interoperability*. 'The ability ... to provide services to and accept services from other systems, units or forces ...' (AAP-6) applies to communication and information systems at the operational level of command and above.
- *Interchangeability*. The capability of 'being exchanged one for the other without alteration of the items themselves, or of adjoining items, except for adjustment, and without selection for fit and performance' (AAP-6) applies to combat supplies.
- *Commonality*. 'A state achieved when groups of individuals, organizations or nations use common doctrine, procedures or equipment' (AAP-6) requires common standards and measurements.
- *Wide Utility*. The diverse nature of the Defence Roles described in [Chapter 2](#) and the fact that they overlap means that O&S must have as wide utility as possible. Furthermore, the ability to switch from one task or target to another confers a number of advantages by:
 - Enhancing tactical freedom.
 - Simplifying planning.

- Increasing the ability to act in an unexpected manner, and so introducing an element of surprise.
- Reducing capital costs and manpower overheads avoided.

In meeting the demands for wide utility, it is important that:

- The minimum essential level of capability is retained. An anti-tank weapon for light forces must be able to defeat the required target. A guided weapon used in both ground and air defence roles must be able to defeat the appropriate targets in both environments.
- Numbers of systems are not reduced to the extent that the most demanding requirements are not met.
- O&S are not made unduly complex.
- *Ease of Use.* At the design and development stage it is necessary to make equipment simple and easy to use in order to help tired and taxed soldiers operate it effectively. If ease of use is accorded high priority benefit should also accrue in a reduced training burden. Ease of use may be achieved through:
 - Effort in design and technology, albeit complex, to ensure the best ergonomic solution.
 - A comprehensive and imaginative training package as part of the development of the whole system.
- *Reliability.* Reliability is an important factor for two reasons. First, it affects all the performance characteristics of a piece of equipment and drives the cost of equipment support and hence what can be afforded. Second, it influences the user's confidence in that equipment and therefore the degree to which it is used in training and war. Reliability is the 'ability of an item to perform a required function under stated

conditions for a specified period of time' (AAP-6). Three other factors are inter-related, and together the four are often known by the acronym 'RAM-D':

○ *Availability.* In simple terms availability is the proportion of time which a piece of equipment spends in a usable state. In terms of reliability it is the principal issue. The standard of availability set will require careful analysis of roles, conditions of use and cost. Once set, the following should ensue:

□ Examination of the harshness of the working environment to determine the level of durability needed.

□ A decision on how often it is likely that the equipment or a component will fail (reliability) and how long that state can be tolerated - a function of ease of repair (maintainability).

○ *Maintainability.* The key issue of maintainability is the capacity to keep material in, or restore it to, a serviceable condition. It depends, amongst other things, upon speed of fault finding and subsequent repair. Quick methods of doing this, such as built-in test equipment (BITE) and forward repair facilities, must be considered at the analysis stage.

○ *Durability.* Durability is a measure of the system's capacity to withstand the pressures and demands of the environment in which it is expected to be used.

- *Anticipation.* Anticipation in the field of O&S is concerned with the efficient management of change. In this context it means thinking ahead and preparedness to take action on any conclusions reached. The requirement is to react to opportunities rather than crises - to seize the initiative and act before the event rather than after it. To inculcate the ability to anticipate, resources will have to be devoted to it in peacetime despite the difficulty of justifying the expense in the short term. Anticipation requires a sense of awareness of:

- Potentially useful developments in technology and research, not only related to land systems but also in commercial fields and that done by the other Services.
- An opponent's capability.
- *Quick Reaction to Cover Capability Gaps.* Despite efforts to anticipate, unpredicted capability gaps are likely to occur. As on the battlefield, a reserve of capability must be earmarked to meet such challenges. Procedures must exist to ensure that once the unforeseen is detected a response can be made promptly and effectively. Awareness is the key, together with the preparedness to accept unwelcome news. There must also be a sound method of validation of such news if the false alarm rate is to be kept low. Speed of reaction will then depend upon teamwork, the quick passage of information, and willingness to devise and execute unconventional solutions.

Training Essentials

Matching Doctrine. The aims, objectives and principles of training are described in ADP-4 Training, and it is worth repeating General MacArthur's statement, which is included in that publication:

"In no other profession are the penalties for employing untrained personnel so appalling or so irrevocable as in the military."

Training must be related directly to the task of the formation or unit concerned and must also follow from the doctrine in this booklet. There is a requirement for training to be validated by field commanders, establishments within the training organization and by the use of operational analysis techniques.

Two specific themes in training stand out if the needs of the command philosophy, the exercise of command and the manoeuvrist approach are to be met:

- *Development of the Right Approach.* The successful exercise of command and a quick reaction to orders will depend amongst other things upon an attitude of mind which must be fostered from the start in officer and NCO training. In particular:
 - All commanders must have a good understanding of the level of command two above them. If they have this they will be able to interpret the overall plan and so understand the intention of the superior commander generally.
 - Regular study of command one level above is necessary if commanders are to be able to analyse their missions properly and so understand the intention of the superior commander specifically.
 - All officers must have a sound knowledge of the capabilities of armour, infantry and supporting Arms at battlegroup level.
 - Officers and NCOs must be encouraged to experiment and to test their powers of initiative on exercise.
- *Establishment of Mutual Trust.* Mutual trust and professional respect are necessary for good command relationships. The environment in which trust can flourish is one where:
 - Common doctrine is absorbed at all levels. The levels, starting with this booklet, are explained in [Chapter 1](#). Clearly, the bulk of absorption will be through tactical doctrine which must be regarded by the officers and non-commissioned officers of the Army as the minimum professional knowledge they should have.
 - A constructive attitude is taken to mistakes, from which much can be learned. There is no excuse for making mistakes which can be avoided - for example by prior reading of tactical doctrine or proper obedience to orders - but one aim of training is to teach. Learning from mistakes on training should breed confidence, eradicate unnecessary 'fear of failure' and engender in commanders the creative imagination necessary to make them good trainers of men.

Coping with Stress and Uncertainty. Training must be specifically designed to ensure that the Army is prepared for the fact that uncertainty will play a major part in any future war. Commanders must understand the effects that this fact will have upon morale, the planning and decision making process and the significance therefore of quick reaction to the unexpected. Hence the importance in peacetime of:

- *Creating Realism and Friction in Training.* Once low level drills are mastered, what happens on exercise must, from a player point of view, be totally unpredictable. It is essential that commanders are placed under stress and that their flexibility is tested. New factors must be introduced so that plans have to be changed. Commanders must also be faced with a non-compliant enemy and the friction of war - not least logistic - so that they have to fight the battle as well as deploy. This can only be fully achieved on a two sided exercise in the field. But simulation techniques must be adopted at all levels of command in the Army, sometimes to enable training to be better done, but invariably to allow it to be done more quickly, cheaply and efficiently.
- *Developing Criteria in Peacetime for the Selection of Commanders.* The qualities of the commander are documented in ADP-2 Command [Chapter 2](#). In peacetime many of them may not come to the fore. Selection must therefore focus on the quality of robustness, not least mental robustness, and in particular the:
 - Preparedness to exercise responsibility in the appointment.
 - Preparedness to make timely and relevant decisions.
 - Capability to withstand stress and persevere in uncertainty.
 - Ability to select and train subordinates.

Learning from Experience. In peacetime the Army's experience of warfighting (as opposed to operations other than war) may be very limited: to compensate for this, some vicarious experience may be gained from study of military history. In war, however, there is a requirement to learn rapidly from very recent battles so that newly-gained experience is put to good use. Learning from experience is, therefore, both a long and short term process.

- *Long Term.*
 - *Normal Military Experience.*
 - *Military History.* Professor Sir Michael Howard recommends three general rules for the professional study of military history. It should be studied:
 - In depth to get beneath the historian's necessarily imposed pattern of seeming orderliness and to try to understand what war is really like - to get an idea of the confused nature of fighting.
 - In breadth so that the development of war over a long period can be understood.
 - And in context to appreciate the political, social, and economic factors that exercise important influences on the military part of the equation.

Military history, however, will not provide universal remedies. It offers accounts of problems and options, particular solutions and the reasons for historical successes and failures. It should not be used selectively to prove a theory or support a particular course, or followed slavishly, for, as Napoleon concluded: "what is good in one case is bad in another".

- *Short Term.* The real test of military effectiveness is war. Assessments must be made in, or soon after, battles so that improvements to tactics, equipment and organization can be devised. This is particularly important at the outset of a conflict when the actual performance of men and equipment is seen. This short term experience needs to be disseminated very quickly and widely.

ANNEX A

THE PRINCIPLES OF WAR

The Principles of War, which form part of the conceptual component of fighting power, are listed below. With the exception of the master principle, which is placed first, undue emphasis should not be accorded to the order in which the others appear.

Selection and Maintenance of the Aim

In the conduct of war, and therefore in all military activity, it is essential to select and define the aims clearly. The ultimate aim may be absolute, the overthrow of a hostile government, or more limited, the recovery of occupied territory. Within his strategic directive, a commander may have several courses of action open, each of which would fulfil the aim. The selection of the best course will lead to the mission and outline plan being issued, the mission being a statement of the aim and its purpose. The aim passed on to subordinate commanders may be precise or expressed in unambiguous and attainable with the forces available. Once decided the aim must be circulated as widely as security allows so that all can direct their efforts to achieve the aim.

Maintenance of Morale

Because success in war depends as much on moral as physical factors, morale is probably the single most important element of war. High morale fosters the offensive spirit and the will to win. It will inspire an army from the highest to the lowest ranks. Although primarily a moral aspect it is sensitive to material conditions and a commander should look after the well-being of his men.

Offensive Action

Offensive action is the chief means open to a commander to influence the outcome of a campaign or a battle. It confers the initiative on the attacker, giving him the freedom of action necessary to secure a decision. A successful defence must be followed by offensive action if it is to achieve a decisive result. Offensive action embodies a state of mind which breeds the determination to gain and hold the initiative: it is essential for the creation of confidence and to establish an ascendancy over the enemy, and thus has an effect on morale.

Surprise

The potency of surprise as a psychological weapon at all levels should not be underestimated. It causes confusion and paralysis in the enemy's chain of command and destroys the cohesion and morale of his troops. In recognition of its vital part in achieving success surprise is covered in more detail as a Requirement for Success in [Chapter Four](#).

Concentration of Force

Military success will normally result from the concentration of superior force at the decisive time and place. This does not preclude dispersion which may be valuable for the purposes of deception and avoiding discovery and attack. Rapid concentration and dispersion depend on good communications and an efficient traffic control system. They also depend on balance, the essence of the next two principles.

Economy of Effort

The corollary of concentration of force is economy of effort. It is impossible to be strong everywhere and if decisive strength is to be concentrated at the critical time and place there must be no wasteful expenditure of effort where it cannot significantly affect the issue. In order to gain a substantial advantage a commander will have to take a calculated risk in a less vital area. The application of the principle may be summed up as planning for a balanced deployment combined with a prudent allocation of resources strictly related to the aim.

Security

A degree of security by physical protection and information denial is essential to all military operations. Security should enable friendly forces to achieve their objectives despite the enemy's interference. Active measures include the defence of bases and entry points, a favourable air situation, flank protection and maintenance of adequate reserves. The principles of concentration of force, economy of effort and security are all closely inter-related.

Flexibility

"No plan of operations can look with any certainty beyond the first meeting with the major forces of the enemy. The commander is compelled ... to reach decisions on the basis of situations which cannot be predicted."

General Field Marshal von Moltke

Although the aim may not alter, a commander will be required to exercise judgement and flexibility in modifying his plans to meet changed circumstances, taking advantage of fleeting chances or shifting a point of emphasis. Flexibility depends upon the mental component of openness of mind on the one hand, and simple plans which can easily be modified on the other. A balanced reserve is a prerequisite for tactical or operational flexibility.

Co-operation

Co-operation is based on team spirit and training, and entails the co-ordination of the activities of all Arms, of the Services and of Allies, for the optimum combined effort. Goodwill, a common aim, a clear division of responsibilities and understanding of the capabilities and limitations of others are essential for co-operation.

Administration

Sound administration is a prerequisite for the success of any operation. Logistic considerations are often the deciding factor in assessing the feasibility of an operation. A clear appreciation of logistic constraints is as important to a commander as his ability to make a sound estimate of the operational situation. No tactical plan can succeed without administrative support commensurate with the aim of the operation: it follows that a commander must have a degree of control over the administrative plan proportionate to the degree of his responsibility for the operation. Scarce resources must be controlled at a high level: the administrative organization must be flexible enough to react to changes in the situation with the most economic use of the available resources.

ANNEX B

MECHANICS OF COMMAND

Organization of Headquarters

Headquarters at all levels must be responsive and able to survive. The criteria of small size and hardness will contribute towards survivability, as will frequent movement. In many cases geographical dispersion of command facilities will help to diffuse the headquarters' electronic signature.

Headquarters must be organized and staffed to be able to conduct *sustained* operations. The need to move frequently must not hinder responsiveness. At brigade level and above there is a need for an organizational division into present and future plans; only in this way can a smooth transition between battles or operations be achieved and the *continuous* nature of warfare be recognized.

The span of command is the number of subordinate organizations one commander can command and control directly. Technology, particularly modern communications and information handling techniques, make it possible to widen the span of command. But as command is essentially a

human function, pure technological considerations are not the only criteria in deciding the span. Three factors need also to be considered.

- *The Threat.* A headquarters with too great a span of command will necessarily be large physically and in terms of its signatures. It will therefore be vulnerable and its destruction may confer undue advantage on an enemy.
- *Command.* The need for the commander to think 'two down' and for subordinate commanders to think 'one up', and indeed understand what is going on two levels above them is important.
- *Logistic Control.* A headquarters must be able to exercise logistic control over all those in the span of command. Since logistics often determine what is operationally feasible, this factor will be a major limitation.

Experience has shown that a ratio of more than four or five subordinate organizations to one headquarters is unlikely to work.

Procedures

Command and control procedures must be simple, efficient and flexible to meet the criterion of responsiveness in headquarters.

- *Operations Security.* Operations security is part of the planning process and is a function of the staff, requiring close co-operation between G2 and G3 staffs. It will entail physical defensive and offensive measures, often related to deception.
- *Mission Analysis.* Mission analysis occurs during the Direction stage of the decision making process. It is the first and most important part of the appreciation process. The mission analysis procedure is designed to enable a subordinate commander to identify his tasks and the purpose behind them, so that he is then in a position to use his initiative where appropriate and act purposefully in the confusion of battle.

- *Dissemination of Orders.* Clarity of intension is of paramount importance in orders. Recourse to detailed orders should be the exception but will be necessary to cover situations such as initial deployment, some low level tactical situations, when there is a low degree of training amongst commanders and staffs and where for good operational or tactical reasons tight control is required. More often commanders' intentions are better relayed by directive outlining:
 - *The Concept of Operations.*
 - The Mission.
 - *The Tasks.* Tasks are listed as definite objectives one level down and do not usually specify the way in which the objective is to be achieved. Read in conjunction with the concept of operations and the mission they must convey the commander's intention precisely.
 - *Resources.* Troops and resources are allocated to achieve the necessary force ratios. Their suitability for the task must be considered. Particular care needs to be taken in the tasking of reserve units. Regrouping should be avoided wherever possible and therefore tasks should be structured to groups rather than vice versa. Groupings should almost invariably contain a mixture from all Arms. Lack of resources, particularly logistic, may well be a major constraint upon freedom of action.

The use of directives, short though they may, does not absolve the commander and staff from detailed work - quite the opposite. The cerebral aspect of command is arguably more tested in control by directive than by detailed order because:

- If freedom action is to occur, all the implications of the superior commander's missions must be exhaustively examined. Translation of intention into a simple directive requires more *thought* than listing things in great detail for a set-piece plan.

- To make the concept of operations of a directive work calls for very wide ranging supporting staff work. For instead of simply relating to a set plan it must cater for subordinates acting at speed within the freedom of action they have been given. This will involve a good deal of detailed movement and logistic calculation.

- *Planning Norms, Standard Procedures and Drills.* An aspect of the high level of training required for directive control is the use of planning norms, standard procedures and drills. In staff work they ensure, through the existence of standing operating procedures, that orders are kept short whilst the use of planning norms, for example standard loads, speeds up calculations.

ANNEX C

FORMS OF MANOEUVRE

Introduction

Some enduring forms of manoeuvre are described below. They are not firm rules or schemes: one form of manoeuvre may embrace or develop or be turned into another. Generally their aim is to defeat enemy intentions by the disposition of forces with only the minimum of essential tactical fighting. It is important to relate forms of manoeuvre to the overall objectives they are designed to seek. For example, the classic Napoleonic *manoeuvre sur les derrières* was usually intended to hold one part of the enemy forces to prevent its concentration and so allow the successive defeat of all the parts in detail. It cannot be divorced from the individual objectives Napoleon sought. However, many followers trying to codify his system ignored this and developed it slavishly into theories, often with disastrous results.

Three general headings have been chosen:

- *Deliberate Operations*. The aim of deliberate operations is to manoeuvre so that enemy forces can be engaged or to defeat an enemy

with the minimum of fighting by forcing him into a disadvantageous position. Offensive action in the form of a major attack to break into or through a defended area is included since it will invariably include manoeuvre at lower levels and provides the basis for other forms of operation.

- *Exploitation.* The exploitation of success gained in deliberate operations is not straightforward. It requires a different mental approach, new directives and fresh command, control and logistic arrangements. It therefore justifies categorization and study on its own.
- *Manoeuvre Terms.*

All provide means to achieve objectives: they may form part of an offensive or defensive strategy and embrace all phases of war. They are the forms in which operational art may be manifest and as such must be read in conjunction with the section on Manoeuvre.

Deliberate Operations

Envelopment

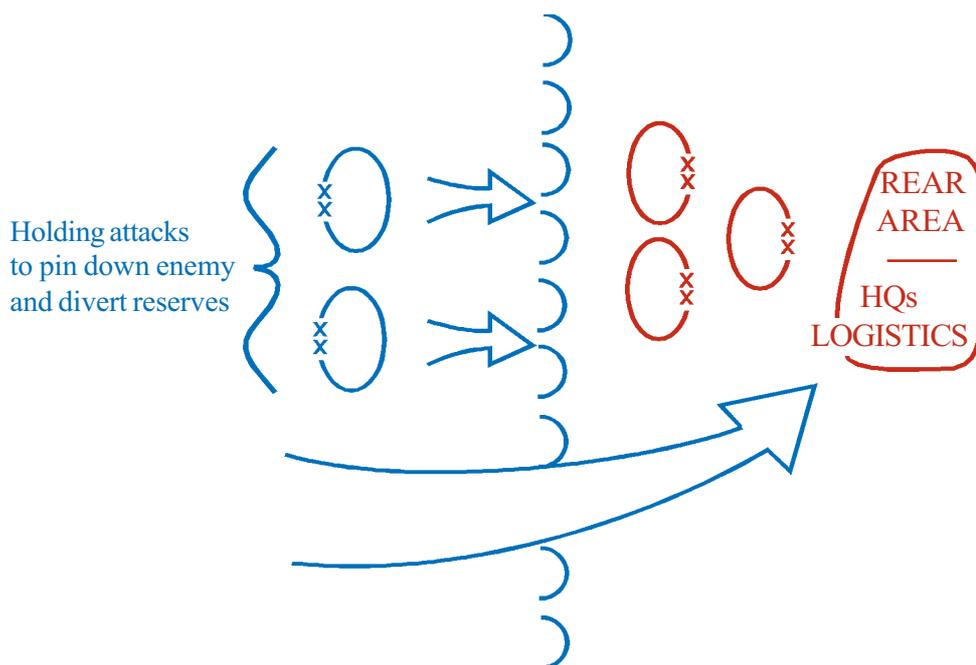


Fig. 8

'An offensive manoeuvre in which the main attacking force passes around or over the enemy's principal defensive position to secure objectives to the enemy's rear' (AAP-6). It is a basic form of manoeuvre designed to apply force against enemy weakness, and will normally require diversionary attacks against the enemy's main defensive front. Considerable speed of movement and identification of weak points is required if the enveloping force is to be able to reach its objectives in depth. The envelopment may cause the enemy to redeploy or to withdraw; it may cause disruption to his command and control or logistic systems or open the way to objectives which he was trying to defend. It may be undertaken with a view to outflanking, ousting or trapping enemy forces possibly against a geographical feature. Airmobile or airborne forces may be employed as part of an enveloping force: this is also known as a 'vertical envelopment'.

Turning Movement

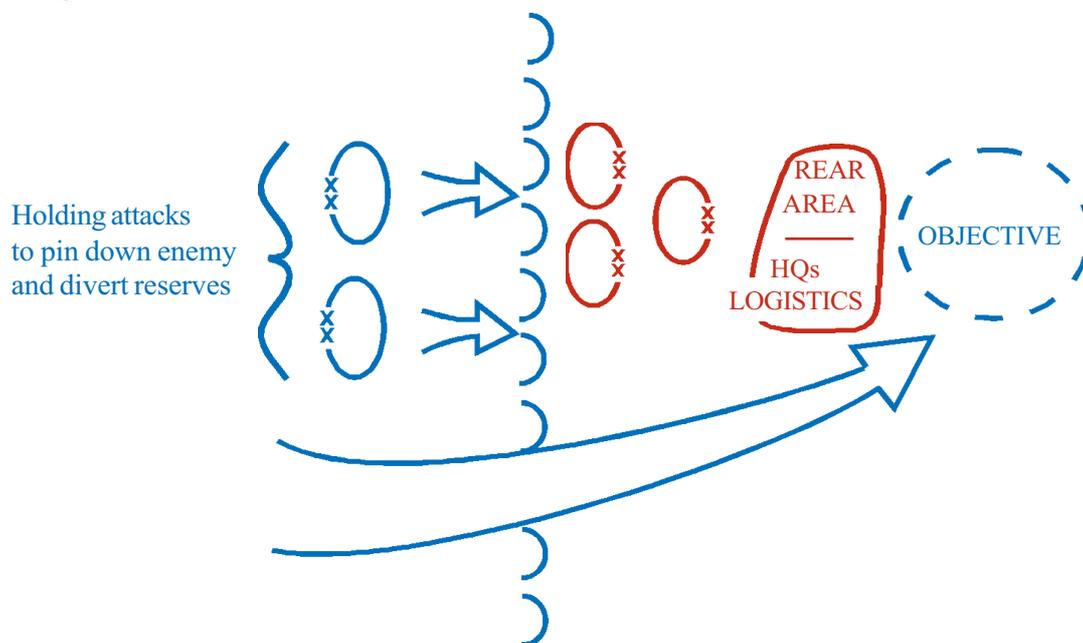


Fig 9.

'A variation of the envelopment in which the attacking force passes around or over the enemy's principal defensive positions to objectives deep in the enemy's rear to force the enemy to abandon his position or divert major forces to meet the threat' (AAP-6). The critical word here is **deep**: this may result in objectives being taken with little fighting except in the initial stages, or the enemy having to deploy reserves at some distance from their main body. As such it is a riskier operation.

Double Envelopment

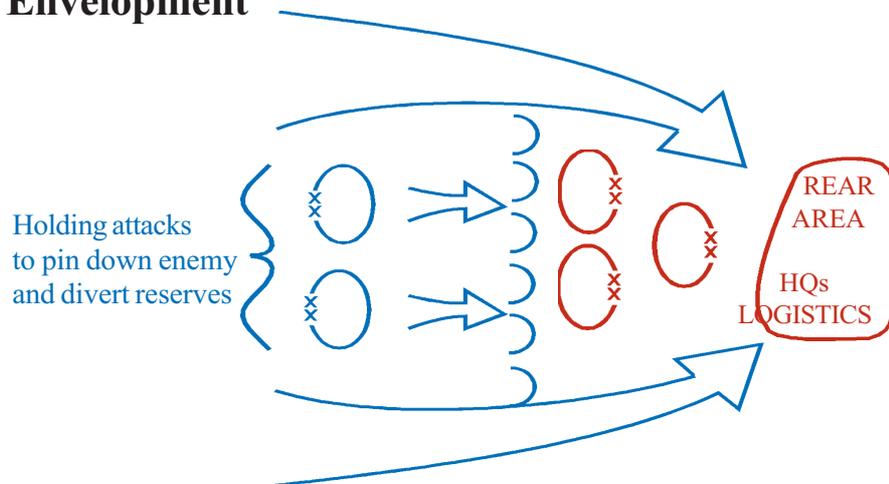


Fig. 10

An envelopment operation mounted with two axes may be designed to outflank an opponent from both sides with a view to forcing abandonment of his intentions, a general withdrawal or as a prelude to encirclement and destruction of the forces trapped. This is also loosely known as a pincer movement.

Encirclement

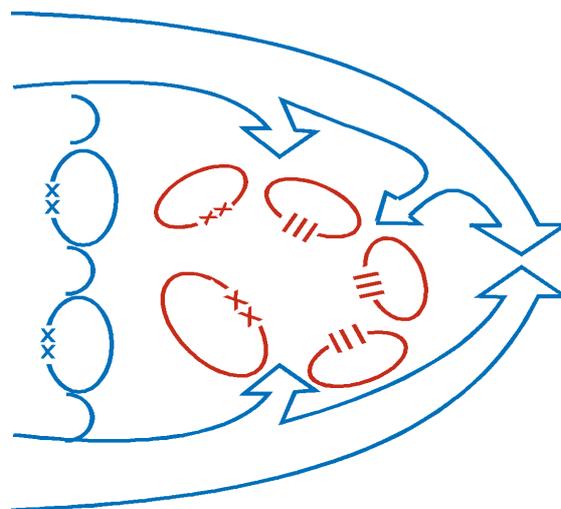
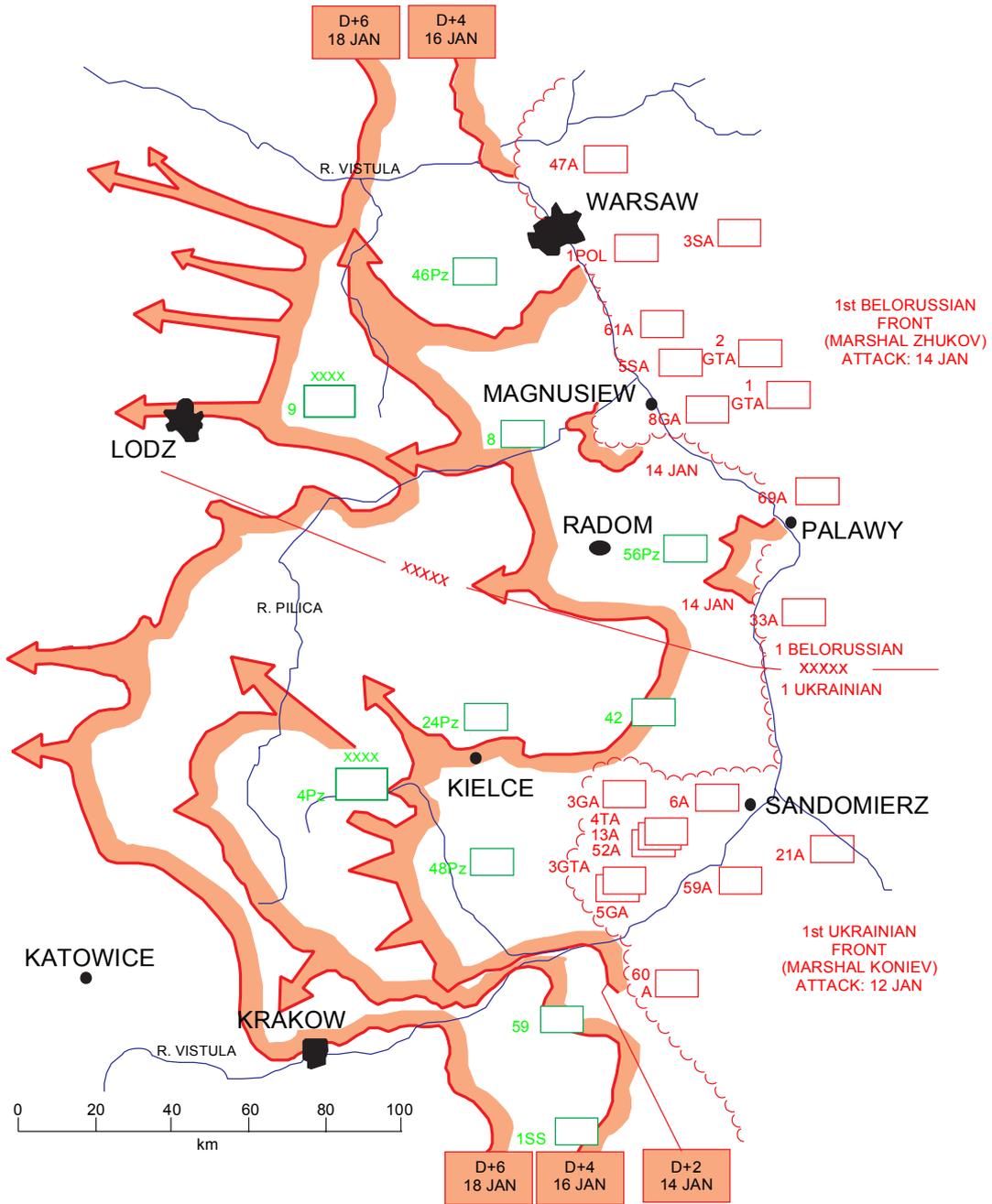


Fig. 11

If the 'pincers' are strong enough to meet having trapped a force, and to hold an encircled force from breaking out, large forces with all their equipment may be neutralized or destroyed. Larger encirclements are costly operations in terms of troops and the time taken to reduce the trapped forces. Encircled forces can only be resupplied by air, and unless an early decision to relieve them by breakout and break-in is made then their resources may be inadequate to force a breakout or fight their way back to rejoin the main body.

Exploitation

Expanding Torrent



NOTES:

1. Symbols denote German Corps and Soviet/Polish Armies unless otherwise shown.
2. Pz : Panzer.
3. A : [Soviet] Army with prefixes : S - Shock, T - Tank, G - Guards.
4. POL : Polish

Fig. 12. Vistula - Oder Operation D to D+6, 12 - 18 January 1945

'When a dam is broken, the water cascades with irresistible force'

Sun Tzu.

The concept was examined by Captain Liddell Hart in his study of the March 1918 offensives: it was subsequently developed by Guderian in Germany and by Tuchachevsky and Triandfilov in the Soviet Union. This form of deep battle requires a very heavy concentration of force in the area of the breakthrough so that once a passage is cleared through the defended zone sufficient force can be passed through to fan out and exploit success in many directions. Once the attacker has broken through into operational depth he has the advantage of interior lines (see below): to concentrate successfully against an 'expanding torrent' operational reserves have to be committed early and move fast if they are to achieve more than stabilization on a new line of defence. This manoeuvre was perfected by the Red Army on many operations, notably at Kiev (October-November 1943), at Lass-Kishinev (August-September 1944) where a double envelopment led to a multiple encirclement and the destruction of four armies (two German, two Romanian) and Vistula-Oder (January-February 1945). In the Vistula-Oder operation, the largest offensive mounted by Soviet Armies on the Eastern Front, twenty armies were initially deployed with tactical superiority of between 6:1 and 40:1. By D+21, 2 February 1945, when the 1st Belorussian and 1st Ukrainian Fronts went over to the defensive along the line of the River Oder, they had advanced, in places, more than 350 miles. Thirty-five German divisions had been destroyed; a further 25 had suffered 50-70 per cent casualties. If conducted in sufficient strength, an operation of this type can rapidly overrun large tracts of territory with comparatively little fighting.

Narrow Thrust

In [Chapter Four](#) it was stated that momentum could be achieved by various combinations of size and speed, a commander having the option of selecting a small force able to penetrate deeply, thereby creating a shock effect by its sudden appearance. The point of main emphasis may result in a narrow thrust, itself possibly part of an envelopment, as in France in 1940. (Fig 13). The unexpected arrival of forces in rear areas to secure important objectives

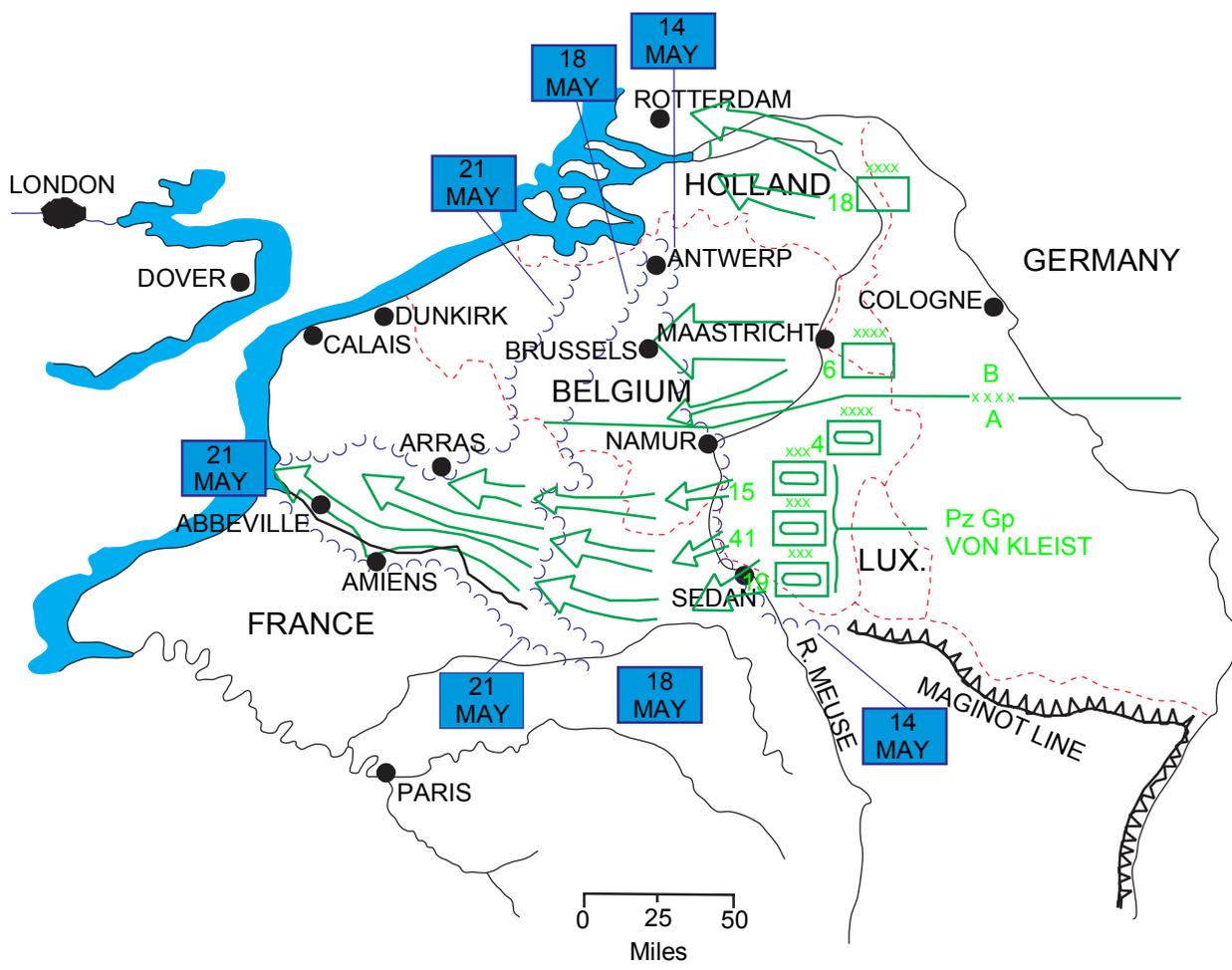
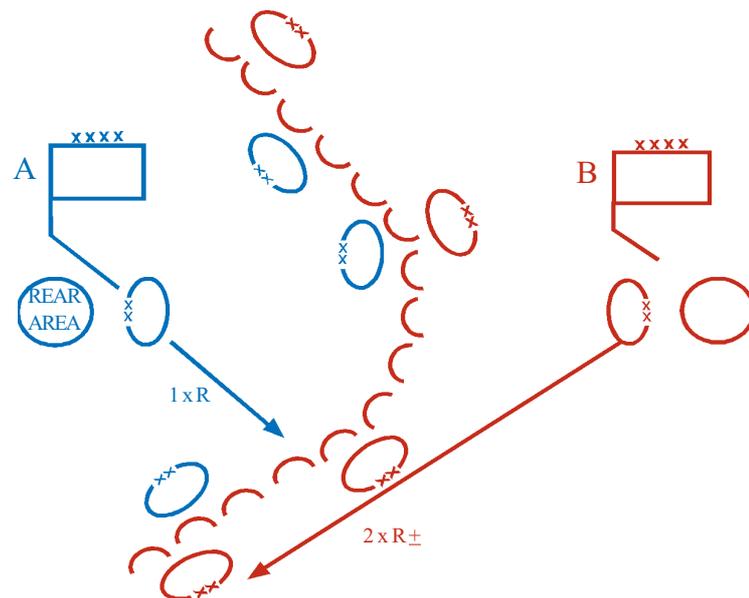


Fig.13. German Advance to the Channel, May 1940

will undoubtedly create a major shock effect. The narrow thrust may be difficult to sustain: an operational reserve and a favourable air situation could turn the tables and threaten its envelopment.

Manoeuvre Terms

Interior and Exterior Lines



Army A, operating on interior lines has far to move (one $x R$) to concentrate force at or supply any part of its front. Army B, operating on exterior lines has further (up to two $x R$) to move to concentrate or supply its forces. Army A should therefore be able to manoeuvre more quickly against Army B.

Fig. 14

The concept of lines of operation applies both to manoeuvre and logistics. If a formation is interposed between two enemy forces it is said to be operating on interior lines. This has the advantage that the formation is able to move against either opposing force, or switch its resources over a shorter distance than its adversary. Such a concept depends on the ground and the state of mobility of both sides: relative mobility may have a similar effect. For example, the successful switch of the German 8th Army from North of the Masurian Lakes to concentrate against the Russian 2nd Army near

Tannenberg (August 1914) was possible owing to the superior mobility of the German Armies.

Mobile Defence. The options for a defensive battle range from positional to mobile defence, the former involving a reconnaissance screen for warning of enemy intentions, a main defensive area in some depth and a reserve. If a force is insufficiently strong to hold its allotted frontage in depth then it may consider fighting a mobile defence. This could, at the extreme, consist of a warning and delaying (guard) force in front of a series of less well prepared positions from which defensive battles may be fought. Such a battle would involve reliance on a much larger reserve being deployed and redeployed to engage the enemy. The requirements for such an option to be feasible are:

- Good communications and mobility, and a favourable air situation.
- A higher standard of proficiency than in more positional forms of defence, especially among junior commanders, will be needed for this operation to work

Mobile defensive operations will tend to be based on a framework of positions from which actions of the ambush type can be mounted. Once troops are engaged in defensive positions it will be difficult to move them, particularly if the opponent is strong in armour, artillery and ground attack aircraft. As a result, mobile defence may result in delay to the enemy rather than destruction. The essence of such a defence is that mobility should allow troops to be used in several successive positions. Nevertheless, once in those positions they will have to be prepared and equipped to fight defensive engagements. Of necessity, however, troops engaged in mobile defence will tend to be less effective, partly because of the time spent in movement, and partly because more positions will have had to be prepared - to a lesser standard. To quote Colonel J N Alford:

"Mobility of defensive forces in such circumstances, while it may be essential, is not a substitute for numbers. It merely tends to offset an inherent disadvantage."

A sounder defence may be based on good positions, taking account of the capabilities of the Arms, to channel an opponent into areas in which he can be destroyed by the offensive manoeuvre of all Arms, particularly armour, and indirect fire. This will be preferable if destruction rather than delay is to be achieved. In this case the balance of reserves is more reasonable but the normal principle remains that once a reserve is committed, a new reserve must be created from elsewhere.

Culminating Point. Unless a decisive success is achieved, an offensive may reach a point when the remaining fighting power of the attacker is no longer sufficient for the operation to proceed. Losses to the attacker may result in an opponent being strong enough proportionately to be able to defeat subsequent attacks. Alternatively the attacker may not be able to sustain his operations for lack of supplies as well as shortage of manpower and equipment replacements. This has been described as the culminating point. After such a point has been reached the attacker may be forced to revert to the defensive in order to rebuild his fighting power. The implications are that:

- Sufficient capabilities must be allocated to a commander undertaking an offensive so that he can achieve a decisive success.
- Enemy culminating points must be predicted so that countermoves can be planned.

For example, Eisenhower, in late 1944, halted the advance into Holland and Germany to build up stockpiles. He feared that otherwise insufficient fuel would be available to sustain operations: in the event this proved to be the problem for the German counter-offensive in the Ardennes (December 1944).

Centre of Gravity. The concept of centre of gravity stems from the interpreters of the Napoleonic system. Clausewitz, for example, in explaining what constitutes defeat, suggested that the centre of gravity was 'the hub of all power and movement, on which everything depends ... the point at which all our energies should be directed'. Its application at the strategic level might be interpreted as the destruction of the principal army,

the seizure of the capital city or the disintegration of an alliance.

A related term is 'decisive point'. It was explained in [Chapter Four](#) that manoeuvre depends for success on the application of force against identified points of weakness - concentration of force at a decisive point. A decisive point is usually a physical objective to which fighting power is committed to achieve a decisive result.

The decisiveness of a point is determined with reference to the enemy's intentions and centre of gravity. The concepts of decisive point and centre of gravity are therefore related. At the operational level the centre of gravity is likely to refer to major forces. For example, an operational commander will *consider* action with reference to the centre of gravity identified at the strategic level, but will *order* action at the decisive point. The term centre of gravity is not used at the tactical level.

Chapter 1

INTRODUCTION

What is Doctrine, functions, levels and development of doctrine

Chapter 2

THE PURPOSE AND ROLES OF THE ARMED FORCES

British Defence Policy, main defence roles, control of the armed forces, crisis management and the allocation of resources.

Chapter 3

MODERN WARFARE

The Nature of Conflict, General War, Regional Conflict, Comments of
of
Limitation and Intensity, Other Uses of Armoured Forces, The
Modern
Battlefield, Military Activities in Peace.

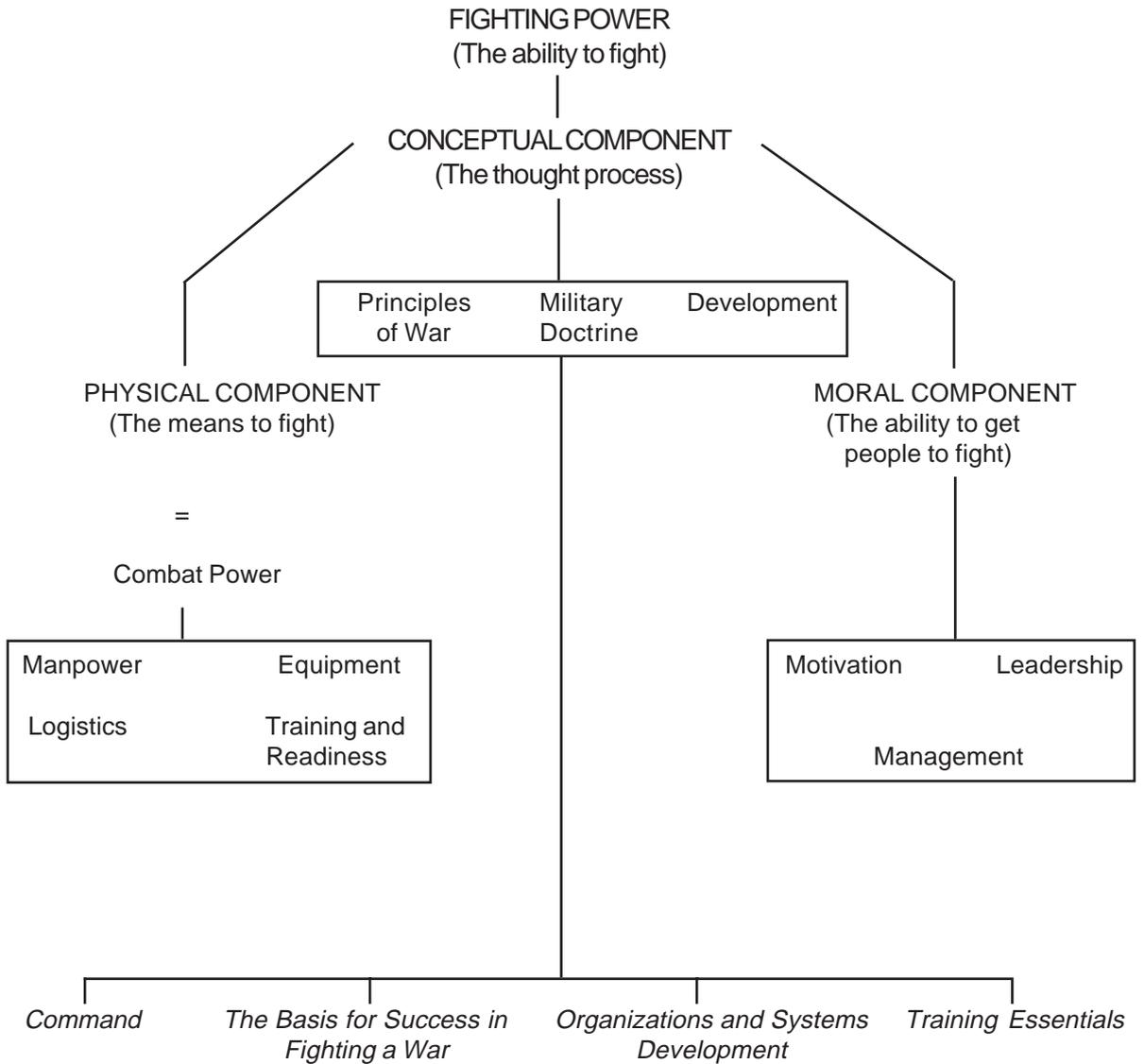
Chapter 4

MILITARY EFFECTIVENESS

Fighting Power: what constitutes fighting and the concept of Fighting Power.

Military Doctrine: command, the basis for success in fighting a war, organizations and systems development and training essentials.

MILITARY EFFECTIVENESS



Levels of Conflict
The Operational Level
and Operational Art
The Command
Philosophy

The Environment
Requirements:
The Exercise of Command
The Manoeuvrist Approach
A Joint/Combined Approach
Unit of Effort
Mobility
Surprise
Ground
Sustainability

Development
Analysis
Guiding Principle
Requirements:
Standardization
Wide Utility
Ease of Use
Reliability
Anticipation
Quick Reaction to Cover
Capability Gaps

Matching Doctrine
Coping with Stress and
Uncertainty
Learning from Experience

The function of the Military Doctrine is to establish the framework of understanding of the approach to warfare in order to provide the foundation for its practical application.

