Network Centric Operations (NCO) Case Study

The British Approach to Low-Intensity Operations:

Part I

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Foreword

The purpose of this Case Study Report is to provide the results of analysis and conclusions from the case study on the British Approach to Low-Intensity Operations. The Final Report is organized into two parts followed by the appendices. Part I presents a high level overview of the overall British Approach, an analysis of each of the operations under study, and overall conclusions. Part I builds on the primary and secondary research, face-to-face interviews and the web-based surveys conducted throughout this case study. Part II presents the detailed research, by operation, conducted by King's College London and informed by face-to-face interviews conducted by both King's College and PA Consulting. The appendices include the Research Design Plan, as well as detailed responses from the Internet Web Based Survey and interview transcripts.

This report is the result of work performed by PA Consulting Group's operating companies in the US and the UK under subcontract to Evidence Based Research, Inc. contract #W74V8H-04-D-0051 for the Office of Force Transformation and under contract to the UK Ministry of Defence contract #INFOCBM 010605 for Director Command and Battlespace Management (D CBM/J6)).

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Part I

Part I

CHAPTER 1.0 RESEARCH DESIGN PLAN OVERVIEW

Introduction

The purpose of this section is to provide a brief summary of the Research Design that served as an overall framework for conducting the LIO case study. As such, this section recaps essential elements of the Research Design Plan. The complete Research Design Plan is included in Appendix B.

Background

This case study was initiated as a collaborative effort between the Office of Force Transformation (OFT) and the UK Ministry of Defence Director Command and Battlespace Management (D CBM/J6), and Joint Doctrine and Concepts Centre (JDCC). The OFT has determined that Network Centric Operations (NCO) is the core concept that guides the transformation of the U.S. military. It is a new theory of war based on Information Age principles and phenomena, and can be summarized by NCO tenets.[1] These state that a robustly networked force improves information sharing and collaboration, which enhances the quality of information and shared situational awareness. This enables further collaboration and self-synchronization and improves sustainability and speed of command, which ultimately result in dramatically increased mission effectiveness. Similarly, the UK MOD has stated that "the achievement of military effect will, in the future, be significantly enhanced through the networking of existing and future military capabilities, under the banner of Network Enabled Capability (NEC)", the UK term for Information Age transformation.[2]

The objective of this study is to enhance the current understanding of the evolution of NCO and NEC as it relates to a variety of Low Intensity Operations (LIO). While debates exist around precise definitions, LIO in this case includes counter-terrorism, counter-insurgency, peacekeeping, and peace enforcement.[3] The study will gain insights on UK LIO and seek to offer these insights to help develop United States (US) and United Kingdom (UK) military thinking. Ultimately, these insights may improve mission effectiveness in similar operations in the future. It is understood that some of these operations pre-date the formalized theory of information warfare, but many of the principles, and certainly the mindset have always existed and so the use of such terms remains appropriate.

The primary aim of this study is to analyze British experiences in LIO involving counter-terrorism (CT) and counter-insurgency operations (COIN), through the prism of current NCO/NEC doctrine and practice. The study will capture progress along the UK defence lines of development (DLoD) and examine the operational concepts and tactics, techniques, and procedures (TTPs) that allowed British forces to develop and exploit an information advantage in a complex social domain (joint military, interagency, military/civil police, etc).

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[1] Department of Defense. *Network Centric Warfare Report to Congress*. July 2001.

[2] See the UK MOD NEC Handbook. Network Enabled Capability is defined as "the ability to gather knowledge; to share it in a common and comprehensible form with our partners; to assess and refine it to turn into knowledge; to pass it to the people who need it in an edited, focused form; and to do it in a timescale necessary to enable relevant decisions to be made in the most economic and efficient manner." Deputy Chief of the Defence Staff (Equipment Capability) (DCDS (EC)) 8 Nov 2001.

[3] See, for example, discussion paper by Dr. Daniel Marston, titled "Force Structure for High- and Low-Intensity Warfare: The Anglo-American Experience and Lessons for the Future" by Dr. Daniel Marston, Royal Military Academy Sandhurst; paper associated with NIC 2020 project, 2004.

Part I

Study Challenge

The DoD OFT SOW states that "increasingly, military forces are being called upon to conduct LIO—either as an adjunct to major combat operations, or in other operations as a primary activity in war-torn and divided societies. Prior to Operation IRAQI FREEDOM (OIF), the nation with perhaps the most significant experience in LIO was the UK." That being said, an additional factor that motivates this case study is that with all the experience and lessons learned that the UK has in LIO, they "have not been explicitly captured in a form that would make them useful to the US or other UK allies in developing ongoing doctrine and lines of development."

Case Study Objectives

This study seeks to systematically review and analyze the UK approach to LIO for the purpose of sharing the insights gained from the UK experiences with the US and other allies. Additionally, this research will build on the emerging understanding of the key role of information sharing and collaboration gained from recent advances in NCO/NEC theories, and to evaluate to what extent they were critical factors for UK LIO success. To our knowledge, LIO has never been assessed through this lens. Additionally, we will evaluate the appropriateness of analyzing the British LIO experience through the NEC/NCO perspective, looking for areas where the theory needs refinement and for evidence that may contradict or challenge the existing theory.

In order to gain a better understanding of the UK approach to LIO, and the potential supporting role of Information Age technologies and practices in these operations, the case study team identified the following objectives:

OBJ 1:	Develop an understanding of the UK approach to LIO.
OBJ 2:	Determine whether and how lessons from such operations were identified, disseminated, and implemented within the UK Armed Forces across time (DLoD and learning organization).
OBJ 3:	Develop an understanding of the past and future role of information age concepts and capabilities (such as Network Centric Operations (NCO)/ Network Enabled Capability (NEC)) in contributing to the success of these operations.
OBJ 4:	Determine whether and how the UK forces were able to develop and maintain an information advantage given the constraints of low intensity operations.

Study Scope

The focus of this study will be on low intensity operations conducted by UK Forces in the operations listed below:

- Malaya (1948 through1960)
- Northern Ireland –three time periods – 1969 through 1972, 1972 through 1976, and 1976 through 1995
- Bosnia –1992 through 1996
- Sierra Leone –1999 through 2000
- Iraq – May 2003 through 2004

Theory and Research Questions

Theory

The NEC Benefits Study model, or "NEC Measurement Framework" (see Appendix A), and the UK DLoD[4] were used to inform the case study. This Framework, which builds on the NCO Conceptual Framework, is a variation of the NCO value chain. This model has been used to shape the LIO study to ensure that it is of utility to the ongoing NEC Benefits work. A simplified version of this Framework is represented by the NEC Benefits Chain, Figure One, which has evolved over the duration of this study:

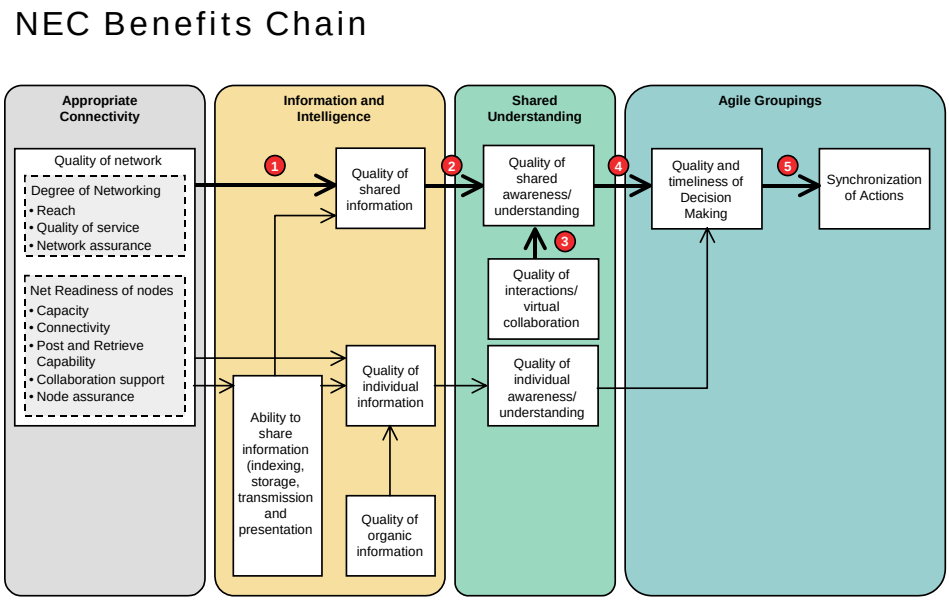


Figure 1: NEC Benefits Chain

- **Appropriate Connectivity** – covers quality of network (degree of networking, reach, quality of service, and network assurance), as well as the net readiness of nodes—their capacity, connectivity and assurance.
- **Info and Intelligence** – covers quality of shared info, plus the ability to share information, and the quality of individual and organic information. Includes an assessment of real time monitoring, enhanced ability to fuse and analyse info, and rapid dissemination of information.
- **Shared Situational Awareness** – includes the quality of shared awareness, the quality of interactions, and the quality of individual understanding; including improvements in combat ID.
- **Agile Groupings** – includes the quality and timeliness of decision-making, and the synchronisation of actions. Also includes observations on adaptive C2 and collaborative planning.

[4] Defence Lines of Development are currently defined by the acronym TEPID-OIL, which stands for Training, Equipment, Personnel, Information, Doctrine and Concepts, Organization, Infrastructure, and Logistics.

As such the model is entirely in keeping with the Measurements Framework and validates the research design approach. Grouping our findings on the network side under the NEC Benefits Chain headings provides consistency to the review of information age dynamics over time and operation.

Research Questions

The Research Design Plan (RDP) outlined research questions for this study that are explicitly derived from (1) the study objectives stated above and (2) the theory that this study seeks to explore and evaluate. These objectives lead directly to the primary research questions that informed this study:

RQ 1:	Did the UK develop a unique approach to dealing with LIO, and if yes, what were the major characteristics of that approach?
RQ 2:	In what ways did the UK military obtain, disseminate and implement lessons learned from LIO?
RQ 3:	What DLoD investments facilitated the development of the UK approach to LIO?
RQ 4:	To what extent did information age concepts and capabilities contribute to the UK's ability to successfully execute LIO?
RQ 5:	Were the UK forces able to develop and maintain an information advantage during LIO?

Study Hypotheses

In line with the Research Questions, several hypotheses were identified in the Research Design. Detailed explanations of how these were derived can be found in the RDP. It is important to note that these hypotheses were used to prompt lines of exploration and discussion in support of the objectives and research questions, and are answered through the commentary of the paper rather than as a separate activity.

- HYP 1.0 To the extent that the UK Armed Forces utilize formal and informal channels for the exchange of information and knowledge across its force elements (across operations and time), then it is more likely to learn from past experiences.
- HYP 1.1 To the extent that the UK Armed Forces gather lessons learned from previous LIOs and disseminates this information to Army personnel participating in current and pending LIOs, then it is more likely to learn from past experiences.
- HYP 1.2 To the extent that the UK Armed Forces promote training and force rotation policies that encourage information sharing across operations and time, then it is more likely to learn from past experiences.
- HYP 1.3 The longer the time delay in sharing information and lessons learned regarding LIO, the less likely is the UK Armed Forces to learn from past LIO experiences.
- HYP 2.0 To the extent that investments are coordinated across technologies, organizations, people, and processes (rather than focusing exclusively on a material solution), the UK is better able to develop a successful LIO approach.
- HYP 3.0 To the extent that the UK Armed Forces create and maintain social networks that cut across organizations, then it is more likely to effectively share information, gain and share an awareness and understanding of what is happening in the operation, and is better able to coordinate its actions to achieve desired effects.

- HYP 3.1 To the extent that the UK Armed Forces utilize social networks linking important friendly and neutral forces, it is more likely to have better situational awareness of its own forces and is better able to coordinate its actions to achieve desired effects.
- HYP 3.2 To the extent that the UK Army creates and maintains social networks linking important information sources (friendly and opposition) it is more likely to be able to it is more likely to have situational awareness and understanding of the opposition and therefore is more likely to gain an information advantage and is better able to coordinate its actions to achieve desired effects.

Data Collection

The data sources for this study include primary and secondary documents, and evidence gathered from face-to-face interviews, as well as a web-based survey of participants in the operations of interest. Research and findings in this case study have been derived from publicly available literature, journals, newspaper articles, primary sources (including government documents), and video libraries provided through the Imperial War Museum.

The research has been further informed with face-to-face interviews with senior officials—military and civilian—directly involved in the operations within the purview of this study. The aim to involve so many current and senior individuals was partly in search of understanding and insight, but also to gain credibility and support for such research, as well as using the existence and execution of the study as a vehicle for socialising the idea of more lateral use of social and physical networks in Low Intensity Operations. It should be noted that the study has elicited a great deal of interest from senior British figures. Additionally, the team has focused on interviews with the practitioners whose job it is to create, maintain, and update such social and physical networks as are possible to achieve in the constrained and difficult circumstances of LIO. The findings and evidence from these interviews helped the team understand how such networks are providing an advantage to those executing LIOs, and how the current generation of operational commanders, coordinators and communicators are using networks to do new things, and how the networks enable the willing to operate in new and innovative ways.

The web-based survey was sent to almost two hundred commanders, Ministers, Government Officials and front line operators from the Armed Forces. The responses include commentary from four-star generals, Secretaries of State, and private soldiers alike. All three Services, and all relevant departments of the UK Government have been represented, and have provided their unalloyed comments on where the UK approach has worked, where it has failed, and the role that networks of all descriptions have played.

Part I Report Organization

Part I of the report is organized into the following sections:

- A summary of the British Approach including the historical context, cultural context, principles of COIN in LIO, the British Psyche, the British approach to warfare in general, and the British experience of LIO.
- An analysis of each of the five operations that comprise this case study. The analysis is organized by UK Defence Lines of Development (TEPID OIL) and the NEC Benefits Model including Appropriate Connectivity, Information and Intelligence, Shared Understanding, and Agile Groupings.
- Cross-operational network observations based on the NEC Benefits Chain.
- Overall conclusions, including observations from the operations on developing and maintaining an information advantage.

Part I

CHAPTER 2.0 SUMMARY OF THE BRITISH APPROACH

British Forces manage Low Intensity Operations with explicit attention to the sensitivities of operating in a different, and foreign, cultural environment. This approach stems from a powerful historical context that provides some enduring elements in the British attitude to such operations. British Commanders present no claim to an unblemished record in this area, and openly describe a mixture of success and failure in the history of British operations since 1945—relative failures in Palestine, Aden, and Kenya can be set against the undoubted successes in Malaya, Cyprus, Rhodesia/Zimbabwe, Bosnia, or Sierra Leone. Throughout all operations, however, there have been some consistent threads that have derived from a number of historical and cultural factors and provided a series of what may be regarded as 'operating principles' that have evolved into a distinctive approach to LIO. The approach is distinct from the US approach, and is distinct from the approach of other European Armed Forces.

Historical Factors

The most significant historical factor appears to be the UK's imperial and post-colonial past in which the Armed Forces played such a large part. This history has shaped and influenced British military traditions, which are regarded as highly important by almost all in the military establishment. This past has created a context of virtually continuous military operations overseas throughout the 20th century, particularly in the post-1945 period. The proportion of Armed Forces personnel engaged in operations at any one time has been as high as 35% in the last decade, and even now stands at around 20%, a position that the MoD describes as 'normal'. This consistently exceeds the commitment levels of all the UK's major military partners.

These high levels of operational commitment—all (less Northern Ireland) abroad—have gone hand-in-hand with an extensive system of foreign basing (which has been steadily reducing since 1945, but was still relatively extensive until the 1980s). Even in the early 1990s, UK forces were serving in more than 30 locations. Such factors created Armed Forces that operated on the principle of frequent overseas postings, and were often required to demonstrate flexibility, as elements were task organised into small expeditionary groups. It also created jointness, at least at the lowest levels, and to the benefit mainly of the Army, where personnel from the Royal Air Force and Royal Navy have filled operational posts in the ground forces.

The post-colonial tradition also created the habit of working with—in many cases, officering—post-imperial armed forces within the context of the British Army. Such forces included the Indian Army, the Ghurkhas, the King's African Rifles, the Rhodesian African Rifles, etc. The effective integration of such forces into the general structure of military commitments over the imperial and post-colonial period provided a wide cultural context and direct experience, from which officers have drawn in the post-imperial history of the Armed Forces and particularly in the Army. This aspect of the enduring cultural context has found modern expression in the use, for example, of British Military Assistance Teams or the work of the Security Sector Defence Advisory Teams[5] in different parts of the world. The frequent use of the Forces in emergency relief operations, a wide variety of military assistance, and various other aspects of 'defence diplomacy' have complemented these activities, and contributed to a continuing international, multi-cultural global engagement that has added to the corporate experience and understanding of serving abroad.

[5] To be covered in detail later in the report.

Cultural Factors

The cultural context in which a 'British approach' to low intensity operations has developed is intimately linked to the historical context, but more diverse in its major drivers. At least three aspects emerge consistently.

The constitutional position of the Armed Forces in British society.

There is a continuous tradition of a very strong relationship between the Armed Forces' and government, and between the Armed Forces and society. This relationship has not been tested by civil war, revolution, or major national defeat. This has created a powerful and self-confident military tradition that both separates the Armed Forces from the political process, and yet also guarantees democratic accountability of the Armed Forces to the parliamentary process. The military has evolved as the United Kingdom has evolved. It is at once both an independent element of the state, deriving its legitimacy directly from the Crown and yet, like the Crown, is responsible to Parliament.

The tradition of all Volunteer Forces (the only departures from which have been during World Wars and their aftermath) has reinforced this independence with a culture of professionalism within the Armed Forces. Such professionalism has generally insulated the forces from political and public disapproval. Losses and defeats during World Wars are part of a national struggle for survival; losses and setbacks in expeditionary operations at other times have generally been regarded as acceptable within an all-volunteer professional force. Social links to the political establishment were also traditionally strong. Very few politicians or officials, until the current generation, had not served in the Armed Forces or were not linked to the Armed Forces by family. Such personal interaction, however, did not compromise the political neutrality of the Armed Forces: rather, it nurtured their self-confidence as part of a British establishment that assumed both privilege and responsibility.

The popularity of the Armed Forces among the public.

The Armed Forces consistently emerges from all public opinion surveys in the UK as the most trusted among a number of professions or walks of life. Levels of public trust for the Armed Forces are normally in excess of 85% (compared with less than 10% for politicians or journalists). This is believed to be due to a number of factors. The current regimental system devised in the 1880s has proved popular and durable with the public, creating small, social, accessible, and family based Army units, with traditional linkages to a particular region. This has increased the levels of public support for the work of local regiments (and also for locally-based squadrons and ships) and integrated national recruitment with a local awareness of the Armed Forces.

Links between the Armed Forces and the public are also strengthened by memories and personal connections from the period of national mobilisation in the World Wars and also by the role of the Volunteer Reserves—particularly the Territorial Army. Though conscription has not been popular in the UK and never linked strongly to notions of civic responsibility, still less to ethnic or cultural cohesion, the effects of the Second World War and immediate post-war conscription were nevertheless felt in society's relationship to the Armed Forces through to the 1980s. It should be noted that this is probably a declining factor. The last conscript left the Armed Forces in 1961, so the present older generation has almost lost this particular linkage.

Public toleration of the implications of military operations.

Public and political support for the Armed Forces has always been strong, regardless of the controversial nature of operations and almost regardless of losses. All expeditionary operations have been to some extent controversial and as long as the Forces are not perceived as being poorly led, then losses are normally regarded as an unfortunate part of military operations. The public reacts not to troop losses as such, but to a perception of pointless losses. This cultural underpinning of UK military activity has been strong and consistent, at least through to the end of the Cold War, and there is no convincing evidence that it has changed direction since, though its base level may be more vulnerable in the current era. There is no denying that the ongoing operation in Iraq is deeply unpopular.

There is a long-standing self-image in the UK of the British playing an important policing role in the world and undertaking global commitments. There is traditionally no constituency for isolationism in Britain, and a pleasure and acceptance at the concept of Britain as a global player. This comfortable self-image is only challenged when the overt costs of playing a world role are perceived to be high. If those human and financial costs are hidden, or intrinsically low, there is no perceptible public challenge as to why Britain should *not* assume global responsibilities. Political debates are much more about what *sort* of global responsibility Britain should assume.

The acceptance that the British Army should normally be small, as an all-volunteer force, leads to an understanding that its comparative advantage lies in the training and human ingenuity of its personnel, rather than its equipment and size. Neither the British public, nor the Forces themselves, expect the Armed Forces to be lavishly equipped. Both assume instead that their equipment and organisation will be adequate, and that they will achieve their objectives with ingenuity and improvisation.

There is little evidence that the current Iraq operation has undermined perceptions of public support for the role of the Armed Forces. The operation itself becomes increasingly controversial, but the role of British Forces is still respected. They are still, in the public's mind, 'the best' in the Coalition. Abuse scandals have been few and have not undermined public confidence in the essential competence of the forces, even though such scandals have made the whole operation more controversial in a political sense. The consistency of public support for the professionalism of the military may become more conditional, however, if a drip feed of such abuse stories were to continue.

The Approach to Warfare in General

UK forces have always favoured offensive operations even, sometimes especially, in defensive postures. This is based on a manoeuvrist approach to warfare that seeks to make the most of good training, initiative, and an offensive spirit. This approach seeks to exploit surprise and all the natural advantages as may exist of information and initiative in order to achieve and maintain tempo, it intrinsically assumes an ability to use forces in a network-enabled way to make the most of limited assets to succeed on operations. In the case of British Forces, this networking has very often been of a low technological level, with an emphasis on social networks as a critical and enduring element.

The role of Non Commissioned Officers (NCO) in the command chain of the UK Forces is critical, and of a different nature to many other Forces. Initiative and high levels of command responsibility are built into their training and their understanding of the central, respected and vital role they will play in barracks and on operations. This allows for an active pursuit of the 'mission command' concept with a focus on objectives and 'main effort', allowing discretion at lower levels as to how the tasks are to be achieved. There is a strong sense among respondents and interviewees that UK Forces genuinely exercise mission command, while many other Armed Forces simply talk about it.

Warfare and LIO in Britain's Experience

Britain's historical experience has led it to engage in many commitments that are de facto LIO. Over the last 125 years (with the partial exception of 1949-91) the Army has been geared for LIO and has had to ramp up for major war, not the other way round. The development of a LIO capability is therefore part of a continuum of operations that UK forces, particularly the Army, habitually expect to undertake.

The COIN doctrine that was developed as a response to the particular circumstances of Malaya was more a codification of what had been seen to work within the general LIO context; and was not something particularly new to the ethos of the Armed Forces. Later in this paper the COIN tenets are examined for their continued relevance in today's threat environment.

However, if the LIO ethos was intrinsic to life in the Armed Forces, this does not mean that its application was automatically ensured. COIN doctrines and techniques were forgotten as easily as they were gained from experience. The compensation was that doctrine and techniques were re-learned fairly quickly when occasion demanded, thanks to an enduring understanding of LIO in the collective experience.

Learning from the UK experience of LIO

Before the Malaya operation where COIN tactics were explicitly articulated for the first time, the experiences of the British Army were mixed. Imperial policing in East Asia, and in East and West Africa, saw both the strategy and tactics of COIN deliver reasonable levels of success. In India and Palestine, however, the political strategy of withdrawal may have been regarded as correct, but the military tactics were out-of-synch with the immediacy of those withdrawals and not well suited to the situation on the ground. In Palestine, in particular, the inability of the Armed Forces to apply normal COIN principles created a situation in which the British could only lose both tactically and strategically.

Later, operations in Aden and in the early stages of Northern Ireland were also unsuccessful; in the first case the operation ignored most of the important COIN principles and was not linked to a viable, wider political strategy. The latter case was unsuccessful because the Armed Forces did not appreciate the nature of the operation it was undertaking at the time of deployment.

However, the operations that did succeed created a reservoir of personal (if not institutional) learning that has been passed from Malaya through to Cyprus, Rhodesia, Northern Ireland, Bosnia, Kosovo, Sierra Leone, and Iraq.

Principles of COIN as they apply to LIO

COIN expertise draws from Imperial policing during which small numbers of troops kept order in large countries (40,000 British troops controlled an India of 30 million people in the 19th century) by being an intrinsic part of the political process, using local networks and resources, and gearing their operations to be in tune with the political undercurrents of the country.

British COIN activity has succeeded as part of a viable political process where it has been able to bring superior force and numbers to bear in local situations to overcome insurgent initiatives. In creating this local superiority it has relied on intelligence, networked agility in its forces, and NCO-level initiatives on the ground. COIN also takes time—Imperial policing was normally an open-ended affair designed for the long-term. When British COIN operations were taking place on a tight withdrawal timetable, as in Palestine or India, they were far less successful.

British COIN forces also learned to work hand-in-hand with local armed forces and/or police, whether as elements of evolving UK forces or as newly created forces of an indigenous government. Where British forces were not so well connected or operating entirely on their own, they were notably less successful.

Culture, history, and the imperial tradition have created awareness in all ranks of the Armed Forces, particularly the Army, that the role of troops in LIO is intrinsically political. Service Personnel know that by their very presence they will be seen by many as some part of the problem as well as the solution; and they understand that whatever they do as part of their tactical contribution, it will have wider political implications.

Enduring Tenets

The tradition of Imperial policing and the need to adjust to force constraints, multi-skilling, and small force packages for expeditionary operations, has created an awareness of the importance of connectivity and agility in LIO military operations of all kinds. Nevertheless this tradition had to be codified in light of experience—chiefly by Sir Robert Thompson in the Malaya operation. Many of Thompson's principles have been reinterpreted by subsequent analysis and in the light of other operations, but certain enduring aspects remain evident.

Those aspects can be summarised as:

- A political campaign that opposes all aspects of the adversary's operations; military, political, media, information, etc., with the intention of isolating the adversary from their potential and actual bases of support. For this purpose political and police primacy is essential, in a relationship where armed forces back up the police, and not vice versa. This must go hand-in-hand with a tough administration whose principles and limits of tolerance are well understood.
- A military force that is operating legitimately and without recourse to 'dirty tricks', even if insurgent forces use them. Wherever military operations have been conducted, civic operations must immediately take place to support political and social stability in areas cleared of insurgents. Secure and prosperous base areas are therefore created which eventually link-up and leave those territories controlled by insurgents isolated and impoverished.
- An understanding that military victory is achieved not by high intensity operations, but by precise and focused operations where tactics force insurgents into the open, and where the tactical, operational and strategic focus is constant – and is based on delivering security to the people, not insurgent headcount. This aspect of the campaign—tactical success on the ground—is achieved by intelligence-led operations that must be facilitated by the political campaign, as outlined above.

These enduring principles were learned during the period of Imperial policing and then codified during the Malaya emergency. Since then, they have undergone much iteration as the context of insurgent and terrorist operations have altered. Insurgents now have the power of modern communications, for example, and make much more extensive use of the media to manipulate public perception as a central part of their campaign. Consequently, the need to conduct a military campaign within a clear and legitimate political framework may be regarded as an enduring element in the British approach to LIO. This, it is generally accepted, requires the communications and inherent agility to rapidly adjust the tempo of operations.

This agility allows forces to go from high tempo combat to policing and, if necessary, back to combat status very quickly. At the policing level there is a conscious decision to equip British troops with lower levels of protection or obvious weaponry in order maintain a low profile and support the feel of normality.

Force protection in these circumstances relies, to a large extent, on intelligence, shared situational awareness, and an established ability to ramp-up to combat status very quickly.

The British, therefore, try to demonstrate early on the ‘iron fist’ inside the ‘velvet glove’ in a mixture of rewards and punishments to local leaders of society. However, the way this dynamic is controlled may need to change in response to the developing paradigm of modern insurgency or terrorism, particularly the re-playable nature of the media and the use of images by insurgents to shape perceptions amongst local and global audiences. The use of the iron fist must still be seen as proportionate and legal. Tactical battles have to be won on the ground, and the military *must* be seen to prevail when challenged, but even then they must do so in ways that are not intrinsically escalatory.

CHAPTER 3.0 MALAYA

Historical Sketch

The Malayan Emergency was declared in 1948 in response to a series of attacks on labourers and planters carried out by the communist-inspired Malay Races Liberation Army (MRLA). Following some early setbacks, the British gradually managed to marginalise the MRLA both physically and politically. This politico-military success enabled the declaration of Malayan independence in 1957 and the termination of the Emergency in 1960.

The MRLA's stated aim was the establishment of a Soviet Republic of Malaya. The struggle became deeply affected by the country's ethnic division: the ethnic-Chinese, who were disenfranchised and barred from acquiring Malayan nationality, rallied to the MRLA as a means towards greater political representation. As a result, the group was highly unpopular with the ethnic-Malays, who perceived it as threatening their special status and as further empowering the financially dominant Chinese minority.

The British counterinsurgency campaign was initially ineffective; the focus was on criminal activity rather than the political factors fuelling the rebellion, and the military *modus operandi* was predicated on large-scale sweeps that made it virtually impossible to catch the communists by surprise. Despite having seized the initiative, the MRLA was unable to establish territorial control as intended. Hoping to attract greater support, the communist leadership issued a directive in October 1951, which ordered the MRLA to desist from indiscriminate attacks on civilians and to withdraw deep into the jungle to avoid the British security forces.

The directive coincided with a change of direction in the counterinsurgency campaign. As Director of Operations, LtGen. Harold Briggs helped implement a plan to divorce the MRLA from its ethnic-Chinese support base. The Chinese population was relocated to 'New Villages' where they were monitored but also offered land, employment, education, and a chance to engage in local politics. Consequently the MRLA gradually found it more difficult to interact with the Chinese population, who were its source of recruits, materiel, and food.

Briggs also established a network of federal, state, and district interagency committees to help coordinate the government machinery. This system allowed for decentralised and coherent decision-making and a constant flow of intelligence to the Army. Such information was needed to surprise or ambush the elusive guerrillas. To that end, the military also changed their approach to form smaller units that could operate in the jungle with greater agility.

As High Commission *and* Director of Operations, Lt-Gen. Sir Gerald Templer was able to consolidate the progress made under Briggs. Templer emphasised that the British forces were fighting for Malayan independence, and increased the Chinese and Malay participation in both politics and the war effort. These policies shifted the image of the counterinsurgency from one of colonial-era repression to a struggle for independence. The perception of legitimacy thus conferred was the ultimate force multiplier in Templer's hearts and minds campaign.

Henceforth, the Emergency was increasingly dominated by the effective use of intelligence and operational analysis. Underlying the military successes lay a sophisticated political strategy of ethnic reconciliation that culminated in the declaration of Malayan independence as a multi-ethnic state in 1957. At this point, the MRLA campaign lost its remaining momentum and raison d'être. On 31 July 1960, the Malayan government declared the Emergency over.

DLoDs and Organisational Learning

Training

Training was generally inadequate during early years of Emergency, resulting in frustration and ill-founded and predictable operations. Eventually training improved and began to incorporate recent lessons identified and the best practices of the successful units from theatre.

The British Army's institutional memory of jungle warfare (during WW2) had dissipated by 1948. Nonetheless, individuals within the Army who had experienced such combat facilitated the bottom-up 'relearning' process by passing on what they knew of such operations.

The first training centre (Far-Eastern Land Forces Training Centre) was established in 1948, but had little initial impact due to an inappropriate focus on large-scale 'jungle sweep' tactics. From 1951 training centres began reflecting an experience based adaptation to jungle warfare (long-term immersion, communications, small-unit ops etc).

Beginning in 1951, training schools began to dramatically increase their influence through adopting a 'train the trainer' approach whereby a cadre from each unit was trained in the necessary jungle skills, as well as the best techniques for passing on the information. This facilitated the most rapid dissemination of best practices.

A Jungle Warfare School was established at Kota Tinggi in Johore, specifically to train the advance parties of all units arriving in the theatre. Identifying a lack of written training materiel, the staff gathered experiences and procedures from every successful unit on how to operate and defeat the MRLA. This was then put together in a comprehensive instruction manual, and carried by every soldier and policeman in Malaya.

Initially inadequate police training resulted in abuses and excessive use of force. New police recruits from Palestine and Europe arrived and were "put into service with only a minimal training in professional police work, no knowledge of the Malay, Chinese, or Tamil languages or the customs of the country, and little appreciation of the standard of work and conduct expected of them".[6]Special Constabulary training was also initially inadequate. Intelligence training increased when Templer arrived in February 1952, and when the Intelligence (Special Branch) Training School, which provided specialist courses for the Special Branch (along with select personnel from the Army, police force and the civil service) was established. This training was essential in order to develop the necessary skills to acquire precise knowledge on the location and activities of the insurgents.

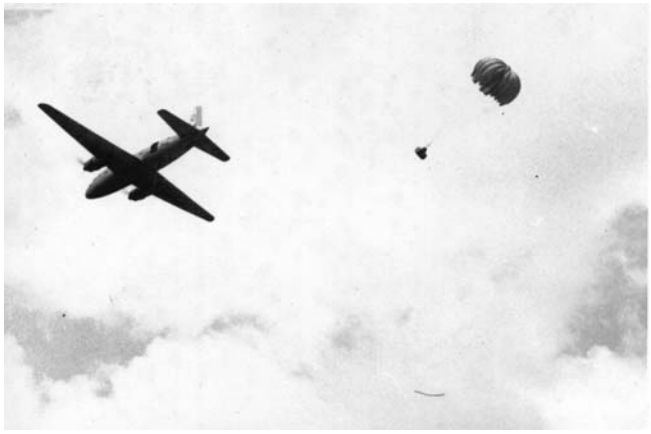
This Police training was initially conducted by mobile Army teams and was eventually replaced by a 500-strong team of British police sergeants, recently demobilised from the Palestinian Police.

[6] *ibid*., p. 72

Equipment

At the outset of the Emergency, police, military, and civil equipment was largely inadequate to face the threat at hand—all the factors were gradually improved as the Government began to recognise the seriousness, and the likely duration, of the threat. As soon as a longer-term approach began to evidence itself through the provision of appropriate equipment, operations on the ground became much more effective.

Increasing and enhancing RAF force levels of fixed wing aircraft after some poorly resourced early years. This provided an invaluable contribution in terms of reconnaissance, PSYOPS, and air supply (a critical support element to long range insertion patrols) and bombing (mostly ineffective, and discontinued later).



Malayan Airdrop
Source: http://www.nmbva.co.uk/Australian%20photos.htm

Increasing the quality and use of helicopters: Sikorksy S-51 and Dragonfly helicopters provided an organic support element by 1953. Only with the arrival (on loan from the US) of the Sikorsky S-55 did the UK maintain an operationally important level of troop-carrying helicopters, leading to mobility, much improved re-supply capability, and more reliable medical evacuation. The introduction of troop-carrying helicopters also enabled the Special Air Service (SAS) to play a vital role in the counter-insurgency campaign.

Radios and telephone networks were all steadily improved after the urgency of the situation had been recognised by the provision of better and more suitable equipment.

Surveillance assets were largely limited to air assets and jungle patrols. A surveillance network, of sorts, was established amongst the outlying stations in order to pass on insurgent activity and movement.

Personnel

Initially the Army was under the command of the Far Eastern Land Forces (FARELF) in Singapore, which was itself preoccupied by external regional threats rather than the troubles in Malaya. Similarly, the RAF had an exclusive chain-of-command, which prevented effective cooperation with the Army. Adding to these problems was the poor physical state of intra-Service communications between the various services.

The Armed Forces focused on optimising the combat to support ratio (administrative tail, National Service, and troop rotations), and trained for conventional warfare. Initially the soldiers placed great faith in large-scale sweeps of the jungle, even though "the major effect of these mass movements of troops was to telegraph their advance so that the guerrillas were alerted well before the troops arrived".[7] However, at this point there was little or no experience of how to conduct small-unit operations in the jungle, how to collect intelligence on guerrillas or how to conduct psychological operations.[8] Intelligence gathering was further complicated by the general lack of Chinese representation in either the police force or the military.

[7] Stubbs (1989), p. 71
[8] Nagl (2002), p. 93

A major difficulty in sustaining troop levels related to the rotational scheme in place to ensure that no serviceman should spend more than three consecutive years overseas. This scheme resulted in many battalions remaining at two-thirds of their full strength, with the most experienced troops missing due to rotation.[9] Though many soldiers refused to return home, several battalions suffered from a shortage of men, particularly those that had spent sufficient time in theatre to learn the complexities of the operational environment and the mission. This deficiency in experience had wide-ranging ramifications.

There were difficulties in managing the terms and conditions of conscription at this time. After the initial training a National Serviceman's effective time was limited to 18 months, which, when accounting for transport and specialist training, translated into a mere 12 months—a very short time to familiarise oneself with the operation. When the National Service commitment was extended to two years in 1949, matters improved considerably and the way was opened for National Servicemen to play a vital role in the campaign.

On the positive side, these National Servicemen—doctors, surveyors, and other types of specialists in civilian life—also brought with them a raft of skills that were rare in the active service.

The police force was beset by pervasive poor health and low morale, split as it was between those who had left Southeast Asia during World War II and those who had endured those difficult years in theatre. During these early years, the demoralised police frequently surrendered rather than resist.[10] The issue of morale would require a long-term solution, but in the meantime, it was important to boost the size of the police force. Constabulary Services were quickly stood-up and in the first three months of the insurgency some 24,000 Malays were enrolled into a special Constabulary and used for static guard duties, freeing troops for mobile patrols as the constables were trained.

Scout Car - 1949
Source: http://www.nmbva.co.uk/Australian%20photos.htm

There was a negative side to the growth of the Police – as it began to lose shape and focus. By 1952, the police had become too big and unwieldy, and lacked any sense of direction. Police had no clear idea whether they ought to be a paramilitary gendarmerie, or a traditional colonial Police force (or both), 'it was poorly led and trained and in consequence suffered… from low self-esteem and morale'.[11] In 1952, measures were implemented to split the police force into one paramilitary branch and one traditional police branch, the former to augment military units in operations in villages and on the fringe of the jungle, the latter to conduct regular police tasks. Police Training Colleges were then established for training the different elements of the police force.

In 1948 the chain of command between police and military was less than clear. This later improved with the introduction of inter-agency committees and the merging of High Commissioner and Director of Operations in Templar.

[9] This section drawn on Mackay (1997), pp. 93-94
[10] Mackay (1997), p. 39
[11] Mackay (1991), p. 131

Information

Despite long-standing relations and ties with Malaya, there was an initial misunderstanding at the strategic level of the nature of the problem at hand. British authorities assumed that the brewing instability was the result of mere banditry and crime and that it would therefore be short-lived. This overlooked the deep-rooted political nature of the insurgency and delayed the response of the government.

Lacking a politically informed analysis of the situation, the UK government spent the early years of the insurgency underestimating the insurgents, 'failing to recognise that the communists could be politically motivated, and ignoring the fact that the MCP had widespread support within certain sections of the population'.[12] This approach gave the intelligence services a very narrow remit, concerning itself with crime rather than political subversion. Little was done to assess the political, social, and economic conditions upon which these groups fed. As a consequence, the information passed on to the Government was too often ambiguous and misleading.

There were some faulty initial assumptions at the onset of the Emergency. It was assumed that the Malay Police would understand the language, culture, and mindset of the ethnic-Chinese insurgents. There was also an implicit assumption that the crisis would unfold in a predictable manner. Neither of these assumptions was correct. The UK government also failed to understand the predicament of the civilian Chinese population of Malaya, who were caught between the intimidation of the MRLA and the initially punitive policies of the British counterinsurgency campaign.

The early policy of 'coercion and enforcement' was deliberate, intended as a means of inciting fear in the Chinese and deterring them from joining the insurgents. Ultimately, however, such an approach alienated the Chinese population and because it meant that they were not protected, they therefore tended to cooperate with the guerrillas who at least offered a modicum of security. It was the antithesis of the 'hearts and minds' approach that eventually endured.

Intelligence gathering and handling improved throughout the Emergency, with structures and interagency coordination streamlined and systematised. The intelligence available to the British forces improved in line with improvements in the police force, the security situation in the 'New Villages', and improvements in the organisational structure. The restructuring of the Special Branch under Templar was key to enabling an efficient information network, with the Special Branch acting as the lead agency.

By the mid-1950s, Special Branch was familiar with the MRLA order of battle, its leaders, their location and their movements. Communication channels had by this time been put in place to ensure the timely information flows across the different services. This was the culmination of an evolving approach.

Intrinsic to this structure were Military Advisors at the Special Branch that could relay the intelligence to the military in the manner most appropriate and useful. Good intelligence resulted in a greater awareness of the political context of the counter-insurgency that in turn led to measures geared toward co-opting the civilian populace through a hearts and minds campaign. In turn, this yielded greater intelligence.

Briggs set up the Federal War Council and several state and district war executive committees (SWECs and DWECs) to enhance interagency information sharing. The committees were organised into a horizontal and vertical network across the country. They generated shared awareness, enabled decentralised decision-making, and allowed for a quick dissemination of lessons learned.

[12] Stubbs (1989), pp. 68-69

Amnesties, PSYOPS, propaganda, and rewards were used to encourage enemy personnel to surrender. These SEP (surrendered enemy personnel) were used to gain intelligence on rebel whereabouts and activities. The means of attracting and 'using' defectors became more imaginative and effective with time. In the end, SEP were used during interrogations, in operational analysis and in actual combat.
During the later stages of the campaign, rebel suppliers would be turned and used as agents. This required long-term police investigations and effective cooperation and communications between Special Branch, the police, and the Army.

Doctrine and Concepts

The early years of the Malaya conflict saw very little development of either doctrine or concepts at anything more than a local level. The hard fought lessons of WWII had apparently been lost to the corporate memory, and a change in the shape and style of the Empire further distracted minds in the UK. The national service ongoing at the time was also a factor, as was the worsening political dynamic in Europe.

Despite combat experience, there was no real doctrine for jungle warfare in 1948, and a campaign-specific field manual (*Anti-Terrorist Operations in Malaya)* was not developed until 1952.

The British Army lost much of its jungle expertise by the time of the Malayan Emergency. The two main factors contributing to the loss were the post-war demobilisation of the units involved in jungle warfare and the declaration of Indian independence in 1947, which resulted in the loss of large parts of the Gurkha regiments. As a result, the doctrine for counter-insurgency and jungle warfare at the onset of the Malayan Emergency was inappropriate for the task at hand. The British Army was expecting to fight a nuclear, or at least conventional, war in Europe and all the thinking at the Staff Colleges and training schools was focused on such a conventional exchange.

As the Emergency developed, the British military gradually recovered its jungle-fighting skills. By force of circumstance, the military adapted, breaking into smaller units that were more mobile and capable of autonomous decision-making. This adaptation was at first informal and was only later institutionalised by Briggs and then Templar.

No formal doctrine was published afterwards as a result of Malaya experience. Published commentary on the strengths and weaknesses of the operations was limited to history books and regimental records. However, the Thompson principles were evolved, articulated, and passed on. They remain in existence today.

Organisations

The many different organisations active during the Malaya Emergency were at times as much part of the problem as the solution. Despite the almost model coherence achieved in later years, analysis shows that the Government took time to understand how to most effectively fuse the energy and output of the disparate bodies.

Even when the seriousness of the situation was being grasped, the Colonial Office sought to postpone any long-term decision-making until the formation of the Malayan Committee in the Cabinet in April 1950.[13] When finally formed, this committee represented the various military services, the MoD, and other governmental departments.

[13] Mackay (1997), p. 37

Shortly after the declaration of the Emergency, a series of joint committees was established, comprising police, military, and civilian representatives. Whilst these committees did facilitate communication and the sharing of views, the substandard state and preparedness of the various services greatly impeded coordinated action. Indeed, the committees were not rendered truly effective until 1950, when Briggs established a network of inter-agency councils stretching from the federal, to state, to district level. Each committee was composed of the chief military, police, and government representative of the region, with the senior civilian as chairman, and was 'empowered to direct the counterinsurgency effort in its area of jurisdiction by giving orders to police, military, and civil organizations within those boundaries'.

For the collection of intelligence, the police relied on the Special Branch, established in Malaya in 1919. Due to the restructuring of its force, the Special Branch was not prepared to do the intelligence work necessary to combat the insurgency. The service had been split (during the short-lived Malayan Union) into a Criminal Investigation Division and a political-intelligence arm. Realising that these two functions needed to be merged, the Malayan Special Branch was re-established and placed under the control of the Deputy Commissioner Police as one of two Criminal Investigation Division branches.

In July 1948, HQ Malaya District authorised the formation of 'Ferret Force'—an ad hoc unit composed and led by veterans of the Special Operations Executive. This force built on experiences from the WWII jungle campaigns, both in Burma and in Malaya. The Ferret Force group would develop local information from full immersion in the local culture and environment. It would typically be led by a British volunteer with local knowledge; would consist of four teams, a British officer and twelve volunteers from British or Gurkha regiments, a detachment of the Royal Signals, Dyak trackers, and a Chinese liaison officer. This approach became an accepted best practice and was taught to the rest of the Army in training schools from 1950.

Infrastructure

Knowledge of the national infrastructure in Malaya assisted the UK Government in understanding the non-military aspects of life in the country. The study has not concentrated on infrastructure observations, but it was clear that the prior British presence provided the British representatives in Malaya numerous advantages: there was a legacy of trust and familiarity, and the close association between the two countries generated an intimate knowledge of the networks, workings, and culture of Malaya.

Logistics

An effective logistic chain became essential in supporting the sort of long range, deep immersion patrols that were achieving such tactical success. Again the operation suffered in the early years through a lack of recognition of the seriousness of the situation, and consequent lack of investment.

Malayan Supply Drop
Source: http://www.nmbva.co.uk/Australian%20photos.htm

Singapore was considered to be a vital 'rear base', without which the logistic effort may well have been overmatched. Logistic support in the early years was considered to be slow and unreliable, and lacking any sense of urgency. Whilst this improved, like many other areas, the logistic effort in support of service personnel in Malaya was never considered to have been very impressive.

Logistics rendered critical by the need for long-term immersion in jungle, gradually improved. The operational emphasis on longer patrols meant that in order to allow the soldiers on patrol to move at a reasonable speed, the logistic effort had to keep up with the demand for frequent re-supply. This increased the importance of accurate, well-planned airdrops of supplies.

Network Strengths and Weaknesses

The evidence behind the use of networks during the Malayan Emergency reinforces two particular views. The first is that the whole shift in emphasis to a more agile intellectual and operational approach took some time. Second, the networks in question were mainly social, either formal or informal, and many of the benefits later achieved came through structural, training, and procedural changes rather then technological enhancements.

There is much evidence to support the view that the UK became far more successful at the strategic, operational, and tactical levels once it adopted a more comprehensive and coherent approach to the different facets of the insurgency. Though it was not described at the time as such, a central part of the newly developed coherence was the considered and effective use of networks to support activity and decision at all levels.

Whilst the Malaya operation took place a long time before Information Age concepts became common parlance, it is useful to look at the progress made in these areas in order to determine how the UK used networks to gain an advantage in the operation. Moreover, the operation is a good example of the linkages between appropriate connectivity and information and intelligence, and how the development of that intelligence improves shared understanding and leads to agility amongst force elements.

Appropriate Connectivity

Quality of networking, degree of networking

It was a commonly held view amongst commanders and deployed forces in the early years that there was no efficient or effective intelligence collecting machinery either operating within the country, or being applied from outside. The early years saw much obscurity and inaccurate reporting, part of a deliberate in-country policy to try to play down the security situation. It is evidence of the poor network that decision makers in London were not able to get a clearer view of the situation, and the subsequent paucity of accurate information led to a series of questionable decisions from London, reflecting the fact that few decision makers outside Malaya either understood the problem, or were interested enough in it to find out. One of the consequences of this for the Armed Forces was a shortage of effective communications equipment, such that in the early years, and up to 1951/1952, the physical network could be described as neither high quality nor robust.

There is no evidence in the early years that timely exchange of information between security forces led to any significant operational benefit, and connectivity throughout fell far short of providing any physical means for real-time monitoring or reach back. However, the network did improve, and a limited form of joint picture, or at least joint understanding, was developed between the Government, Police and Armed Forces.

The Physical Network was limited to a command and control (C2) function in Malaya, and was further limited to the Security Forces and a limited number of government offices. The Security Forces did establish a physical network of sorts, with a telephone link between each of the Security Force outposts, and between the outposts and the regional HQ. This may appear basic, and although the link was non-secure, it did allow for routine exchange of unclassified information and provided the means for warning

other units over distance. This simple step has not always been possible in operations since, and it improved the tactical effect by giving forces a network to report enemy movements, and therefore initiate pro-active operations.

Radios provided the only other element of the physical network, and were of varying utility once troops were in the jungle. The ability to communicate became an increasing priority as intelligence led operations began to replace the large scale 'sweeps' of the early years and the need to pass information on the move began to define not only how patrols operated, but also the training and equipment requirements. Connectivity between the Armed Forces also improved over time. The terrain was such that air to ground communications and coordination was essential, and the use of radios was central to these operations. Structural improvements and procedural changes, supported through training, began to provide the coherence required for effective Air-Land operations.

On the social network side, the strategic link between the UK Government and Security Forces in theatre, as well as between senior and junior commanders in theatre, was typical of the hierarchical and bureaucratic norms of the time. Ministers in London described the emergency as 'a military problem' and were not keen to adopt a cross-governmental approach. This lack of coherence at the strategic level led inevitably to inter-Departmental friction, and a lack of collaborative planning.

Such civil-military relations and communications were poor for a long time, and three years passed before any significant improvement was made. Only with the establishment of a network of interagency committees in 1951 did immediate decision-making become possible at low-levels and suitable emphasis develop on the importance of local knowledge and information. Led by the Combined Emergency Planning Staff (CEPS), which represented all relevant civil, military, and police departments and institutions, this initiative moved responsibility for information collection down to the district level rather than keeping it under centralised command. The structure was replicated throughout the country with the establishment of SWECs and DWECs.

There were also limitations in the formal network within the Armed Forces, where junior officers were learning valuable lessons on the ground, yet the lack of genuine interaction and communication between the ranks made the leadership slow to see the benefit of this bottom-up process. This was due in large part to the more formal approach of the day, and examples began to come through in the later years of best practices being shared in the system.

The degree of physical, horizontal and vertical connectivity that existed in Malaya can only be described as limited; partly as a result of technology at the time, and partly because the situation did not receive due attention and investment for some time. It was not clear from the research whether the insurgents deliberately targeted the physical or social network, but it is apparent that they had to adjust their modus operandi (MO) in order to try and evade the range of patrols, surveillance flights, and offensive operations targeted against them as a result of better networking amongst the security forces.

With regard to improvements in appropriate connectivity over time in Malaya, the evidence supports the view that there was an improvement in the security functions and structures, through enhanced definition of responsibility, coordination, and sharing of information that provided the most significant improvement to the network. It is not apparent that any change in technological approach or capacity had such a marked effect.

Information and Intelligence

Quality of organic/individual information, quality of shared information, and ability to share information

The common view borne out in records and interviews from the period was that the UK's greatest weakness at the start of the Emergency was the lack of early and accurate information on the enemy's strength, dispositions, and intent. Relationships between the Police and the Army were strained in the early years, and this clash—itself a product of poor communications and lack of receptiveness on the part of the senior staff—impacted on the amount of intelligence that was shared between the police and the Army. Inappropriate military approach, inadequate understanding of the enemy and of operations, and civil-military disconnect categorized the early years of the emergency.

Eventually, the Special Branch was made the lead agency for intelligence, and subordinated all other intelligence-gathering structures to this central institution, where intelligence was to be collected, analysed, and disseminated. The Army objections to such an arrangement were ameliorated by the presence of thirty Special Military Intelligence Officials in the Special Branch whose job it was to provide the military perspective and represent the military need on intelligence issues.

With regard to measuring the evidence, research shows that, prior to 1952, there was very little individual or shared information and intelligence that was correct, consistent, up-to-date, complete, accurate, relevant, and timely. This situation improved significantly with the restructuring of intelligence gathering and handling agencies, and was much improved by the support and intervention of key players in the social network. It is not apparent that any technological improvement during the period had any very significant effect on operations.

Conversely, the use of SEPs (Surrendered Enemy Personnel), agents, and other HUMINT activity became critical to intelligence gathering. No other reliable method or tool, and certainly not large sweeps of the jungle and aerial surveillance, were able to provide the key elements of enemy location, capability, or intent. The value of HUMINT has proved itself time and again in low intensity operations, particularly where the terrain or culture precludes more overt surveillance methods. So it was in Malaya where SEPs and agents would work to turn insurgents and build a network of information providers inside the enemy force. LtCol Walker, then the commander of the First Battalion, Sixth Gurkha Rifles, began deploying SEPs to evaluate each of his own companies, a practice that led to significant operational innovations designed to find the enemy and exploit its weaknesses.[14] In the following years, the use of SEPs became commonplace and more sophisticated. In 1952, Sir Arthur Edwin Young, the Commission of Police, created an interrogation centre staffed entirely by ex-rebels.

At a strategic level, the increasing emphasis on two of the principles of intelligence; centralised control and systematic review, began to inculcate an intelligence led approach that sought the defeat of the insurgents, not his destruction. With the ready alternative of support and diplomatic engagement, as well as national independence on the horizon, it was an approach that paid dividends after the attrition of the first few years.

The use of HUMINT that provided the highest quality of individual information, and the network of agents amongst the insurgents, along with more developed intelligence handling techniques and networks in theatre, eventually provided a high degree and quality of shared information. By interfering with the rebels' logistical flows, they were forced to make new contacts and establish new suppliers. At this point they were monitored closely by the security forces, which would later attempt to turn the fresh rebel

[14] Nagl (2002), p. 96-7

recruit. Once an agent had been turned, he would be used covertly to acquire precise information on the future activity and location of the rebels.

What was lacking for a long time was the ability to share information in a timely manner across the security forces. This was the case even when relations between the intelligence organisations had dramatically improved, and can be seen as evidence of a lack of technological, or at least physical communications, capacity. There were no databases that could be accessed outside the building they were held in, and a lack of data transmission devices meant that mobile communications were limited to insecure speech.

The need for information was recognised by senior commanders, who felt there should be more operational analysis, and formed an Operational Research Team for this purpose. From 1953 on, commanders were required to fill in a detailed form (Form ZZ) following every encounter. This catalogue of information was then available for analysts to identify and investigate trends in terrorist MO, or more general political or social information. In such ways, the initially informal process of bottom-up learning and adaptation was systematised through operational analysis, resulting in the gradual crystallisation and refinement of context-specific doctrine and training.

Anecdotal evidence supports the view that the handling, passage, and use of information and intelligence improved dramatically over time to turn the information advantage away from the once free-roaming insurgents to the security forces. The Security Forces became increasingly aware of insurgent movement and intent, partly through the isolation resulting from the creation of the New Villages, but also as a consequence of the MRLA force being heavily infiltrated.

Shared Understanding

Quality of individual awareness, quality of interactions, and quality of shared awareness.

At the strategic level London's understanding of the situation in Malaya was initially extremely low. The level of political-military understanding and liaison was low, and there was little early effort made to improve that condition. Much trust, an important factor in shared understanding, was lost in the early years through the overly confident reporting from Malaya on the state of the insurgency. This reporting reduced the level of shared understanding, lost the Foreign Office a great deal of credibility in the eyes of the military, and contributed to the poor civil-military relationship of the early years.

The general level of individual awareness amongst the ground forces on the front line was also low. In terms of the four fitness-for-use attributes: completeness, accuracy, relevance, and timeliness, most individual servicemen had a highly localised understanding. At the very lowest levels this might have been bearable given the inability of friendly forces to intervene or contribute unless very close to a unit in trouble, but it also extended to a lack of understanding of enemy activity or intent and so led to mal-coordination and duplication of effort. Conversely, the close social ties amongst the officer class led to a common outlook and a shared 'language' as a baseline, facilitating decision-making and reinforcing the overall direction of the counterinsurgency effort.

Regarding the quality of interactions, and judged against the principles of depth, breadth, intensity, and agility, there was a consistent improvement throughout the campaign. There was little evidence of the network being sufficiently advanced to enable collaborative planning, and no true sense of a shared information environment. Accordingly, the degree of shared understanding did not often support tactical exploitation. Moreover, there is consistent evidence that decision makers in the early years were often drawing different inferences from the same information.

In later years, an improvement in shared understanding led to common approaches and increased coherence and opinion as to likely enemy intent. At the tactical level this could be demonstrated by something as basic as the Army's ability to coordinate between various units to pre-empt an MRLA response to an attack. At the strategic level it led to common understanding of the key political, economic, and social drivers.

Agile Groupings

Quality and timeliness of decision making; synchronisation of actions

Such operational agility as was achieved by the British in Malaya came about principally as a result of learning from experience, rather than any step change in technological approach or capability. Improvements in the ground-air network, which allowed the RAF and Army to support each other more effectively on operations, were a significant step forward in the Joint approach and provided a degree of Joint manoeuvre. The air-ground network was critical in enabling communications, reconnaissance, air supply, intelligence, tactical mobility, and evacuation. In various ways, these benefits all resulted in longer and/or more fruitful immersions in the jungle. Aerial bombardment was also used to force rebels to move in a set direction, where other security force units would be ready to ambush them.

The most significant change in the tactical approach adopted in Malaya was the move away from large speculative sweeps of the jungle to intelligence-led small unit operations. Essentially, using intelligence and the supporting network, to replace mass with information. For instance, rather than raiding large sections of jungle in the hope of eliminating guerrillas, the soldiers began laying small ambushes at precise locations that had been identified with the help of informants.

Improvements in the areas cited above allowed the British to become much more effective in disrupting the enemy network, a focus and activity that has not always carried through later operations. Much work is often done to develop friendly forces networks, but Malaya provides an early example of where there was a deliberate, and eventually well-coordinated, effort to identify, understand, and exploit the enemy network through applying small, intelligence-led actions.

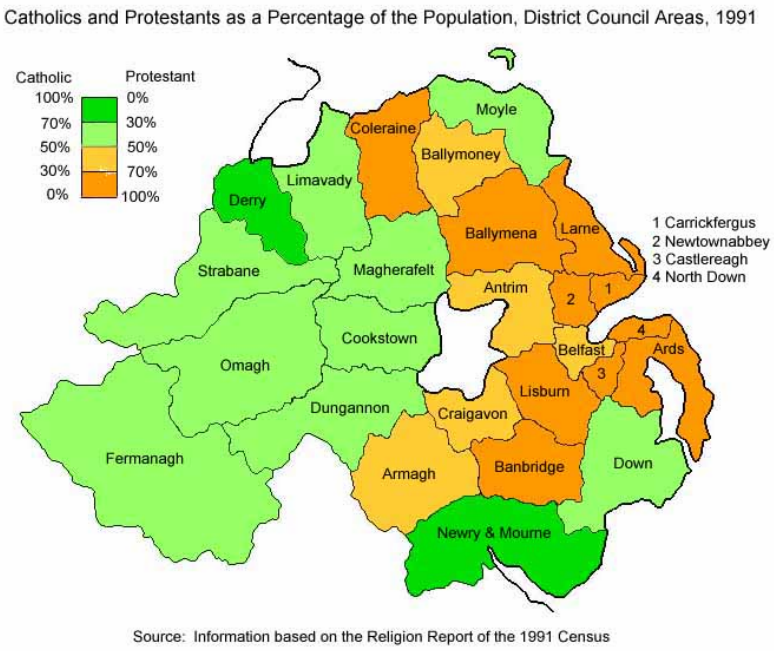
From 1954 onwards, each unit was assigned to a particular area, reinforcing their situational awareness and familiarity with terrain and people. It became evident that locating the rebels was more important than outgunning them, and a network was developed to include native trackers and tribal jungle populations to improve understanding of operations in the jungle.

CHAPTER 4.0 NORTHERN IRELAND – PERIOD ONE – 1969-1972

Historical Sketch

The United Kingdom government partitioned Ireland in 1921. The 'south' achieved its full independence in 1937 as the (predominantly Catholic) Irish Republic; the 'north' (six counties with a Protestant majority) became Northern Ireland (or Ulster) and remained under British allegiance. Up to the late 1960s, the Catholic minority in Northern Ireland had remained quiescent, despite the iniquitous anti-Catholic policies of the Protestant-dominated government in Belfast (i.e. Stormont). Major protests erupted in 1968, as Catholics took to the streets. Protestant mobs challenged the Catholic marches in several areas and, by 1969, the protests and inter-communal rioting had reached such a level that the police could no longer cope. In August 1969, the British Army was deployed to restore calm.

The violence persisted, but the Army was eventually able to interpose itself between the two factions as a peacekeeper. The Army also began policing the Catholic areas of Belfast and Londonderry, tasks previously undertaken by the Protestant-dominated police force (the Royal Ulster Constabulary – RUC). As well as protecting the Catholic community, the Army also initiated a moderately successful 'hearts-and-minds' campaign in Catholic areas. Even the Irish Republican Army (IRA), a Catholic self-defence unit, regarded the Army as an ally, partly because it was itself too weak to operate effectively.



With time, this goodwill eroded. Frustrated at the lack of progress toward a political settlement, IRA split between the 'Officials' (OIRA), who continued to reject violent means, and a more aggressively minded faction, the Provisional IRA (PIRA). Tensions between the Catholics and the Army finally came to a head during the 'marching season' of 1970. The Army was deployed to separate the Protestant marchers from agitated Catholic crowds but instead came to be seen as defending the Protestant marchers. Seeking to defuse the tension, the Army used CS gas, which drifted across a Catholic estate in west Belfast and thereby further heightened Catholic ill feeling.

In the subsequent months, PIRA increasingly challenged the Army's influence and control in the Catholic communities. Undermanned, the Army was unable to guarantee security. Once reinforcements were in place, the Army's (often clumsy) attempts to undermine PIRA were met with public and armed resistance. Eventually, both wings of the IRA came to regard the Army, rather than the Protestants, as their main enemy. Channels of communications with PIRA broke down in 1971 and, around the same time, the group launched a sustained bombing campaign.

In August 1971, the newly elected Conservative government in London responded to the requests from the Northern Ireland Administration in Stormont and announced the reintroduction of Internment—the

incarceration without trial of suspected PIRA members. Lacking both intelligence and finesse, the Internment operation served to radicalise the Catholic community, resulting in further mass protests and violence.

In the following months, the Army adopted a tough clampdown on PIRA in Belfast and a more conciliatory or laissez-faire approach in Londonderry. As the latter approach failed, a tougher line was called for. This led to the Bloody Sunday incident of January 1972, in which Paratroopers brought in from Belfast to help police a civil rights march were involved in an exchange of fire that left 14 civilians dead, none of whom could be proved to have been handling weapons. The fallout was immediate and immense. Troops were removed from the streets all over the Province in an attempt at damage limitation. Seeking greater control and tiring of the Stormont leadership, the UK government in Westminster imposed Direct Rule in March 1972.

DLoDs and Organisational Learning

Training

Though the Army had experience in dealing with riots, the domestic nature of the Northern Ireland campaign presented a new set of challenges. A number of methods employed elsewhere were deemed too aggressive for use in Northern Ireland.

A number of battalions underwent riot training as early as March 1968 (a full 18 months prior to actual deployment). Such training was conducted at the unit level and at the insistence of infantry battalion commanding officers. (COs). The training was based on the substantial experience of NCOs and a manual, *Keeping the Peace, Vol II*. There was however no dedicated urban-warfare manual or urban-warfare training area in the UK at this time.

Many units were deployed to Northern Ireland from Germany, where their role was mechanised infantry. Others had been trained for jungle fighting, Arctic warfare, the air portable role, or public duties (drill). These units lacked proper training facilities for urban operations and had to devise an improvised pre-deployment training programme. To act in the infantry role, non-infantry units (artillery, armour, engineers, logistics, ordnance, etc.) were deemed to require approximately ten weeks of pre-deployment training.

Units with sister battalions could swap personnel and build on accumulated familiarity and experience. In this manner, incoming units inherited the knowledge gained by its previously deployed sister battalion.

Troops often received minimal notice prior to deployment. This left little time for training. The very first units to deploy to Northern Ireland received a briefing pack with lists of suitable background reading material. A booklet was later produced: '*Notes on Northern Ireland*'.

By 1972, training for Northern Ireland had become more formalised and available. HQ UK Land Forces and NITAT (Northern Ireland Training and Advisory Team) had by this time created a coherent training package. A Northern Ireland-specific training facility had been constructed and a team was deployed to brief and train incoming battalions. Training courses were created to help prepare officers from non-infantry regiments and to improve IED and booby-trap recognition.

Equipment

The selection of equipment for the troops in Northern Ireland underwent a process of trial-and-error based on operational experience. It was particularly important that the Army resemble a police force, which

ruled out equipment deemed to be overly aggressive. The urban environment also ruled out certain heavy weapons.

As tracked vehicles could not be used in the domestic urban environment, wheeled armoured vehicles (such as the *Saracen* and the *Pig*) were put into service. The *Saracens* were noisy and intimidating and therefore preferred to the quieter *Pigs*. The latter could however be fitted with ‘wings’, which acted as screens for troops during riots. However, the *Pig* was liable to breakdown.

VHF A41 radios of the Larkspur range would only work in certain parts of the urban environment. They were also bulky. By 1972, UHF Motorola-style (Pye) radios had been introduced to great effect. However, this system was insecure and forced troops to code their messages prior to transmission. Communications were thus often delayed.

A41 Larkspur Radio
Source: http://home.hccnet.nl/l.meulstee/larkspur/a412.jpg

A limited number of helicopters were available, however, no entirely satisfactory role emerged for the helicopters in the early years and demand was therefore minimal.

Personnel

There were two resident battalions in Northern Ireland in 1969. Troop numbers in the Province rose from 2,500 in 1969 to 8,500 in 1970 and to 10,000 in early 1971. The force peaked at 23,000 during *Operation Motorman* in July 1972. (Northern Ireland held a population of 1.6 million in an area of 5,000 square miles). A lack of numbers did, on occasion, have strategic consequences, as outnumbered soldiers would more readily use excessive force. Gaps in the provision of security also allowed PIRA to step into the breach and gain popular support.

Though accounts differ, soldiers were generally adept at community relations. Officers could and would negotiate with both the Protestants and Catholics communities (including IRA representatives). As was seen, this goodwill did not endure.

The Army of the late 1960s was competent and able to deal with riots. With the end of conscription in 1962, the Army had become a professional force, many of whose members had previous experience in riot situations.

Information

The first British military intelligence unit was set up in Ulster in March 1970 to investigate Protestant extremists. Following the 1971 PIRA bombing campaign, the Army’s attention shifted toward the Catholic community.

Troops initially suffered from a lack of detailed maps. Within weeks, the Armed Forces received a useful ‘tribal’ map, which marked Protestant and Catholic areas in orange and green.

The early months saw limited formal cooperation between the police and the Armed Forces, though the two did communicate at lower levels. Special Branch (SB) was especially wary of sharing information with the Armed Forces. The two services were operating on different timelines: whereas the Forces

deployed on 4½-month tours and wanted to use intelligence for immediate and visible effect, Special Branch remained in theatre and preferred to accumulate intelligence for greater long-term use.

Dual-roled as a peacekeeping and police unit, the Armed Forces required detailed information about the most radical Catholic areas. Most battalions built their own intelligence databases using information gained through foot patrols, 'p-checking' (personality-checking) people on the streets, door-to-door censuses, and the use of informers. Following the introduction of Direct Rule, the Army was temporarily kept off the streets and had to rely on deep cover operations to gain intelligence.

The Army gained local intelligence but lacked a real intelligence base, resulting in indiscriminate measures such as Internment. The use of controversial interrogation methods (such as sensory deprivation) was effective in gaining intelligence but caused a furore when details of the proceedings were made public. The Army was operating from a position of weakness and was unable to stop PIRA's bombing campaign. Effectively, the enemy had the information advantage.

There was no formal means of informing incoming battalions of the situation in Northern Ireland. The small-scale nature of the Army and the close-knit officer corps did nonetheless allow for an information conduit. Personal relationships between COs were common and resulted in quick, informal briefs by telephone. Occasionally, however, the regimental system would encourage competition between battalions, resulting in information being closely guarded.

The incoming battalions were paired with a neighbouring resident battalion to ensure some continuity in approach and awareness. However, the accumulation of intelligence was hampered by the short 4½-month tours of the non-resident battalions.

MI6 (or SIS) was active in the Province and had good intelligence on the old IRA but not on PIRA. A change in personnel in 1971 resulted in increased negotiations with PIRA, which came to be perceived as the real threat. In contrast, MI5 concentrated mainly on the Marxist Official IRA.

There was no mechanism to fuse the Army's low-level intelligence with the strategic-level intelligence gained by MI5 and MI6. The result was a lack of operational intelligence.

While attempting to protect its soldiers, the Army was often caught distorting the truth in its statements on various controversial incidents. In other instances, the Army would fail to refute rumours and false claims. In this way, the propaganda battle often ran in PIRA's favour. In late 1971, an information policy cell, a PR think tank, was set up at Army HQ to focus specifically on the propaganda war. From then on, the Army received training in dealing with the media.

PSYOPS could only be conducted at unit level. Because Northern Ireland is part of the UK, any overall PSYOPS campaign had to be directed by the government rather than the military.

Doctrine and Concepts

The Army benefited from *Keeping the Peace, Vol II* and various IS (riot) pamphlets. However, commanders generally fell back on experience rather than field manuals. Prior experience with LIO meant that several soldiers felt confident relying on habit rather than doctrine. This resulted in considerable risk-taking, which may account for the proactive approach adopted by the Army.

Lacking in counterinsurgency training, units formulated an improvised approach that often sought to mirror the behaviour of their adversary. Individual units thus learnt different lessons and approached

situations differently, which limited the possible cross-fertilisation of ideas. Interestingly, each approach was informed by a general understanding of the limited utility and political side effects of the use of force.

There was no formal means of communicating lessons learnt during the initial stages of the campaign. Instead, an informal information network was established among the close-knit officer corps. The propagation of lessons learnt was later formalised with the establishment of NITAT and the extensive urban Close Quarter Battle ranges. Experienced officers and NCOs were used as instructors to ensure an effective learning process.

In 1971, a tactical doctrine retrieval centre was opened at the Staff College to compile documentation pertaining to the situation and conditions of Northern Ireland. Hitherto, the Army had had no means of gathering written accounts of the operation.

Organisation

The *de facto* separation of the Army, police, and civil administrators led to three different campaigns being conducted simultaneously. Civil affair representatives were finally deployed in September 1971 and, within a short amount of time, one had been stationed in each police division.

The police divisions' areas of operation did not correspond to the Army's brigade boundaries, which caused occasional confusion.

The resident battalions had two-year tours; the others (the roulement battalions) were rotated after 4½ months. Tours were kept short to maintain troop morale and normal training cycles. Short tours also helped familiarise a greater number of troops with the local conditions and thereby facilitated future deployments. However, 4½-month tours did not leave much time in which to achieve enduring results, particularly as the first four weeks would usually be spent familiarising the troops with the local area. Staff at brigade level were on two-year tours, which helped maintain an element of continuity.

The Army re-roled units as infantry in Northern Ireland. The first two soldiers killed in Northern Ireland (Belfast – Feb 1971) were both from the Royal Artillery (as were the first two soldiers killed in Londonderry – Aug 1971).

Infrastructure

Troops were initially accommodated in a most *ad hoc* fashion. The Army later took over large buildings, which could hold entire battalions. In Belfast, accommodation consisted of a submarine depot ship, HMS *Maidstone*. In Londonderry, a naval base became the main barracks (for two-year tours). Other purpose-built 'forts' were later constructed in Belfast and Londonderry.

The early stages saw a lack of suitable accommodation for prisoners. As a result, troops could not arrest and detain as many suspects as they would have liked.

Logistics

Some minor setbacks notwithstanding, the maintenance of logistical flows was comparatively unproblematic given the small size of the province and the proximity to bases of operations. Furthermore, few personnel regularly operated more than a few hundred metres from their barracks.

Network Strengths and Weaknesses

Appropriate Connectivity

Quality of networking, degree of networking

At the outset of the conflict in Northern Ireland there were several network challenges at the strategic level in Government. There was no effective military/police/civilian coordination, and the RUC, had lost control and had no effective network, either physical or social, on which to build.

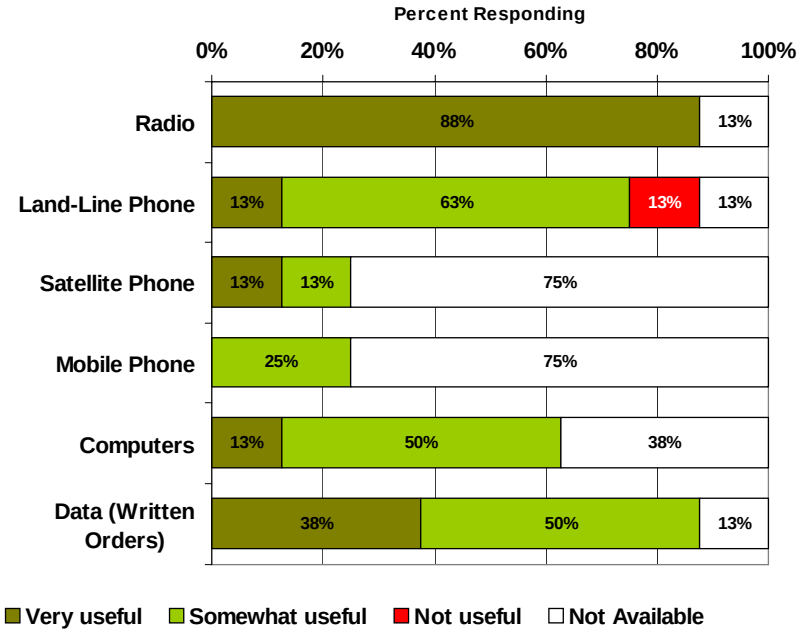


Figure 4.1 - Utility of Communication Systems to operations in Northern Ireland

At the tactical level communications were very poor, there were no secure communications, and the RUC operated on a different network to the Army, using different radios with different frequencies that made channel switching impossible. As limited as the radios were, Figure 4.1 illustrates that they were still the workhorses of the operation.

Larkspur radios (the predecessor to Clansman) were unreliable in the tightly enclosed urban environment, and heavy and bulky for troops to carry in riot and public order situations. Such insecure communications were adequate for time sensitive information, but limited the Security Forces' ability talk to helicopters, and organise re-supply, reinforcement, or any other activity if it allowed the IRA time to intervene.

Looking at the organisational connectivity of the time there were no joint ops rooms, no joint procedures, and no joint data or communications systems. Anything that the Army and the Police did together had to be organised and planned on a case by case basis, with a labour and time consuming phase of meetings to plan even quite simple activity.

Information and Intelligence

Quality of organic/individual information, quality of shared information, and 'ability to share information

The paucity of good intelligence reflected a top-down failure, at that stage, to gain an advantage over the IRA at strategic, operational or tactical levels. The Province was seen as something of a backwater in the early days, and the poor standard of intelligence training in the Armed Forces for such operations at any level left a heavy dependence on a demoralised and less-than-effective RUC.

However, not only was the physical network between the Armed Forces and the Police poor, the social network was no better in the early days. The Army had a difficult relationship with the police, given that the Army had been called in to bolster, and in some cases replace, the RUC. This created an unhelpful combination of hurt pride on one side, and a lack of trust and confidence on the other.

During the period of the military leading the campaign, the information and intelligence areas did not develop well. There was a lack of trust, with the Special Branch planning and conducting their own operations, and something of a wall developed between the two intelligence-gathering bodies, with the police and SB on one side, and the Armed Forces on the other.

It became clear that the Army was not going to get solid, useable intelligence from the Police until they started providing some of their own, and demonstrated that they could be trusted with intelligence without taking a short-term approach.

Organisational structures and operating procedures did not support connectivity in this early period. There were no coterminous boundaries between the Police and the Army, and commanders from both organisations were often left having to liaise with various units whose own area of responsibility (AOR) covered or overlapped their own in some way. This sometimes weighed down the liaison effort and contributed to generally very poor common situational understanding.

In addition there were several counter-productive intelligence-gathering efforts at the time, including large-scale searches—seen as random by the population—and early cultural errors such as male soldiers searching female civilians.

Notwithstanding the above and a generally slow strategic response to the importance of networking and improving the reach and quality of the same, good ideas were beginning to build at the tactical level. Unit intelligence cells became increasingly effective at establishing a local focus, and it improved the morale and focus of the patrolling servicemen to know that they had an organisation to which they could pass the information they were gathering.

In addition, units improved their own intelligence gathering output by selecting 'chatters' to take the lead on talking and connecting with the public. It was recognition at the lowest levels that some individuals are more inclined, and more skilled, at talking to others. The point is a simple one, but the basic level of information and intelligence flow improved as a consequence.

It is clear, however, that the connectivity and capacity of the network was limited, and that local situational understanding was the most that could generally be achieved. In some ways this physical and social network limitation was further constrained by a mindset amongst senior commanders that this was a 'Corporal's war', and that junior commanders should be allowed to get on with their tactical challenges as

they saw fit it. Not an unreasonable approach in itself, but often the freedom of action intended was not given the necessary levels of information and understanding to allow it to be truly effective.[15]

Shared Understanding

Quality of individual awareness, quality of interactions, and quality of shared awareness.

The degree of shared situational understanding was poor during this period. The low level of connectivity and understanding between the Police and the Army was often reflected in Units taking a highly localised approach to the tactical challenge at hand. In some cases this was hardly surprising, with some Unit's having responsibility for very small (i.e. a square mile), but highly volatile Areas of Operation (AO). In addition, in the very early days, there is little evidence to suggest that the IRA was able to take advantage of such low levels of understanding, but as they got more experienced, they sought to exploit such weaknesses in information and understanding.

To consider specific examples, there were no collaborative planning tools to allow different levels of command to improve response and planning times, and no common picture to allow senior commanders to review and prioritise across time and space. This lack of common picture also led to more tactical surprises than might have otherwise transpired if commanders had had a clearer, or earlier, understanding of flank or related activity. Figure 4.2 illustrates who operators felt were providing them with the most useful information.

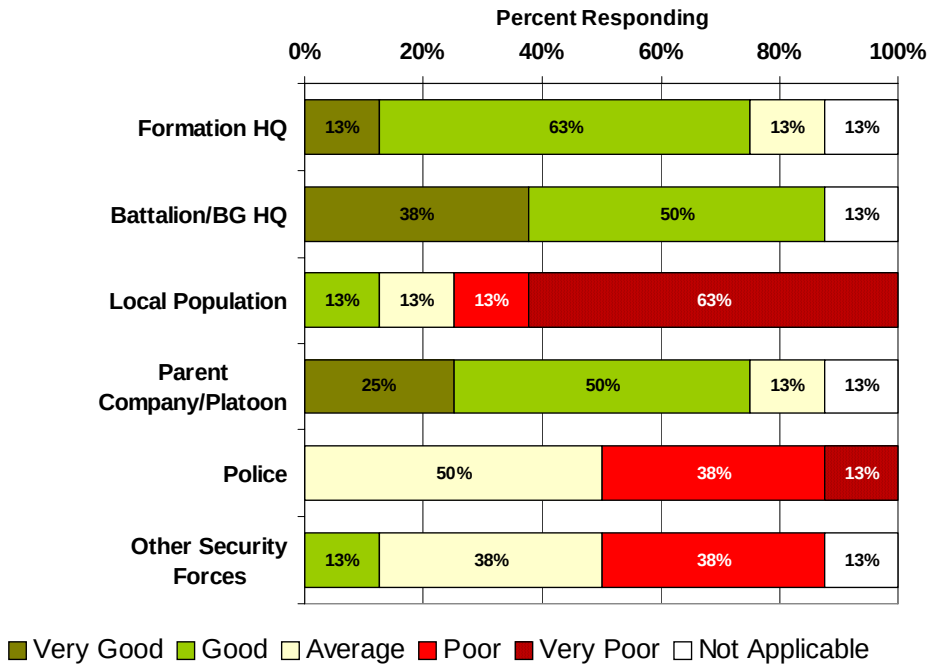


Figure 4.2: Rating of information from sources in Northern Ireland

[15] Brig Monro, interview.

There were also very low levels of understanding relating to the terrorist MO, etc. Special to Theatre Training in these early years was extremely limited, when it took place at all, and much of the focus was on the SOPs and TTPs for the unit.

Such SOPs tended to be at a unit level in this period, resulting in a collection of individual unit approaches, but little coherence across the province. This manifested itself in the network area through a series of different reporting formats and much duplicate or inaccurate reporting of terrorist activity, consequently leading to less effective follow-up.

Agile Groupings

Quality and timeliness of decision making; synchronisation of actions

The early years of the campaign saw large numbers of troops on the streets, and very little reported or claimed agility in their activity. The very low levels of information relating to terrorist locations, capabilities or intent meant that mass had to be used to dominate the operational environment. The heavy footprint on the ground, and the lack of precision in application or control, made for an early period that was defined by operational and organisational incoherence that mostly prevented, rather than provided for, agile groupings.

In addition, the technology of the time did not provide for an optimized comprehensive approach at the strategic level, or for collaborative planning at the tactical end. There was little synchronization of forces, and units continued for some time to be used within their own AOs only, rather than have a more flexible remit.

The low level of training had an influence in the lack of agility, as units continued to apply out of date, conventional approaches until experience showed them the value of adapting. There was no Northern Ireland Training and Advisory Team (NITAT) at this stage, and the lack of doctrine meant that units developed their own SOPs and TTPs, leading to good organic drills, but very little integration and interaction.

At the tactical level, using passwords and nick numbers always slows the tempo, and a lack of secure communications in such an environment was a major constraint.

The movement of troops around the province to provide in-theatre reserves became more widespread, but was then bought into question when Paratroopers from Belfast were put into Londonderry in January 1972 to deal with the Human Rights marches, a period which included ‘Bloody Sunday’. This demonstrated the need for planners to reflect on the cultural and training implications of moving troops from one AO to another with any speed. It provides a good example of where the paucity of a common understanding did not enable the mental agility that underpins the physical agility of units to operate out of their own AO at short notice.

Part I

CHAPTER 5.0 NORTHERN IRELAND – PERIOD TWO – 1972-1976

Historical Sketch

In the face of mounting violence in Northern Ireland, the central government in London increasingly came to regard the Protestant-dominated government in Stormont as an integral part of the problem. After some two years of instability, a large segment of the Catholic minority had been alienated, and both Protestants and Catholics had stood up paramilitary organisations. In March 1972, the Conservative government suspended the Stormont government and imposed Direct Rule. Northern Ireland was now to be administered from Whitehall and the newly created Northern Ireland Office. Meanwhile, the British Army in the province was following three core objectives: the defeat of PIRA, the establishment of a secure environment and the prevention of a Protestant insurrection.

The introduction of Direct Rule was interpreted as a victory for PIRA and convinced its leadership that the British were on the verge of defeat. To capitalise on their apparent advantage, PIRA proposed a ceasefire and met government representatives to discuss a political settlement. PIRA demanded the withdrawal of British forces and the creation of a United Ireland, demands that were unacceptable to the British government as they contravened the express desire of Northern Ireland's majority Protestant population to remain part of the UK. The talks collapsed.

The deadlock drove the province to a new and more brutal phase of hostilities, as PIRA attempted to coerce the British government into accepting its demands. PIRA's bombing campaign reached its peak with the detonation of 26 bombs in Belfast on 21 July 1972, a day that became known as 'Bloody Friday'. In response, the British government launched *Operation Motorman*, deploying nearly 30,000 troops to remove barricades erected by the Catholic population and restore control of what had effectively become no-go areas in Belfast and Londonderry. The government had tolerated these sanctuaries as a demonstration of good faith to PIRA, but this stance changed with the collapse of negotiations and the increase in violence.

The government proceeded to mobilise political support within Northern Ireland for a more representative system of regional government. Negotiations between the major political parties over the future constitution for a new government culminated in the Sunningdale Agreement of December 1973, which established a cross-border governmental body (the Council of Ireland) and a power-sharing government.

As these bodies never gained the support of the Protestant population, they were effectively stillborn. In the early summer of 1974, opposition to the new government prompted a series of strikes, organised by the Ulster Workers Council (UWC), which brought the province to a standstill. The government was unable to respond effectively to the strike and the Army avoided taking direct action, fearing that this would escalate Protestant paramilitary action and create a 'two-front war'. Lacking support from central government and the security services, the new power-sharing executive resigned.

Talks between the government and the paramilitaries continued with the legalisation of PIRA's political arm, Sinn Fein, as a political party in 1974. By this time, the Army felt that it had gained the military advantage and that PIRA was a spent force. However, a final push was prevented as PIRA and the British government declared a ceasefire in 1975, which lasted for the better part of a year. Violence nonetheless persisted, and featured a rise in sectarian killings between Catholic and Protestant paramilitary groups.

DLoDs and Organisational Learning

Training

Units deployed to Northern Ireland in the early 1970s received only the most basic training. The counterinsurgency training for officers at the Royal Military Academy Sandhurst was relatively superficial and the focus was mainly on riot control using lethal force.

Northern Ireland Training and Assistance Teams were created in the spring of 1972 and set up in the UK and West Germany. The quality of NITAT training improved with the Army's understanding of PIRA and exposure to the conflict. The training covered the history of the troubles, the principal paramilitary organisations and the political situation in the area to which a battalion was being deployed.

In 1972, training touched upon: photography, sniper training, weapon handling and shooting, operating in urban areas, locating enemy snipers in an urban environment, patrolling in urban areas, manning vehicle check points (VCP), crowd control and riots, and maintaining security at bases. An important omission, to some, was the subject of law and its application to soldiers on operation in the province.

The training in surveillance improved with the abolishment of the Military Reconnaissance Force (MRF). With the creation of 14 Intelligence, all prospective candidates had to go through a rigorous selection process and six months of focused training.

Equipment

The Army lacked non-lethal weaponry; and the plastic bullets available were nearly as lethal as a standard 7.62mm round. There were numerous calls for a rifle smaller and lighter than the SLR and that could fire short automatic bursts as opposed to single shots. There was also a general request for more night-vision rifle-sights. These were invaluable when setting up over-watch to cover patrols as they moved through an area.

Radio communications were inadequate. The standard man-portable radio, the A41, and the C4L vehicle-mounted radio both operated on VHF, which worked infrequently in the urban environment. PIRA was also able to intercept radio traffic over the insecure net. New UHF radios were issued to the battalions, but technical difficulties remained. Furthermore, PIRA and Ulster Defence Association (UDA) became adept at jamming army radio signals and listening to radio communications. There were insufficient pocket phones for each battalion; the allocation in 1973 was 67 per unit, but a minimum of 85 was required to ensure effective communications.

Some battalions used the 'Anson machine', a data device that gave speedy and accurate information on a suspect and was easily operated. It provided a means of obtaining and cross-referencing all information that was contained in the Personality and Vehicle cards. Information was stored on a series of cards, known as Anson Coincidence Feature Cards.

Personnel

The officer corps was drawn primarily from the upper middle classes and over 90% of army officers went to public school before joining the army - usually at the age of eighteen. A small minority of the officer corps were university graduates. The rank and file were generally recruited from the lowest socioeconomic strata of British society.

Infantry units generally attracted the least privileged and most poorly educated people. The regimental system also contributed to the creation of army sub-cultures based on geography, which would affect a unit's approach toward the urban environment and its attitude toward the province's religious divisions.

Non-infantry regiments were deployed to Northern Ireland to maintain the rotational cycle and to mass troops when necessary (most notably during *Operation Motorman*). The deployment of non-infantry regiments was criticised; units from the British Army of the Rhine (BAOR) were trained for the possibility of a major conventional war in central Europe and were not ideally suited for urban LIO.

The Ulster Defence Regiment was created in January 1970 as a locally recruited, mainly part-time auxiliary force of soldiers to support the regular army. Initially, seven battalions were raised; the size of the force increased by a further four battalions in January 1972.

Information

The biggest problem confronting the Army in 1972 was the lack of intelligence on PIRA. RUC Special Branch had been discredited during the period of Internment and the RUC was both demoralised and disorganised. Brigadier Frank Kitson, commander 39 Infantry Brigade, implemented an array of measures designed to create a comprehensive intelligence picture of PIRA. These measures were not fully implemented until mid-1975.

Soldiers played the key role of acting as the army's 'sensors'. Foot patrols gathered information about the community in which they were operating. Members of the public were routinely stopped and questioned. Vehicle checks and house searches became key activities. This practice spread to areas of Belfast and Londonderry opened up during *Operation Motorman*. The aim was to determine a pattern and detect changes therein. Each unit developed a card file on all males in their area over the age of twelve. In 1971, the Army searched 17,000 homes; in 1972, this number increased to 36,000 and in 1973 it stood at an incredible 75,000. Over four million cars were also searched in 1973-74.[16]

The Army apparently requested the deployment of the Special Air Service (SAS) in the early 1970s to support its surveillance operations. Fearing an escalation in the conflict, the government denied the request. It was not until 1976 that formal SAS units began operating in the province. Small SAS teams were most probably conducting training in Northern Ireland before 1976.

From 1975 onwards, computers were increasingly used to manage information. Computers were used to store vehicle and population details, and to identify the movement of PIRA from Eire to Northern Ireland (based on networked information flows between several vehicle checkpoints). The computer system was linked to the operations rooms of the brigade headquarters and to control sections in each of the battalions. Each battalion had access to Visual Display Units equipped with transmitters and receivers, which created a secure means of communication. The military computer system could tap into that of the Northern Ireland Health Service, which provided the army with a useful source of information.

In general the flow of information went up vertical stovepipes. Units on the ground had no sense of how significant this information was or how it was used by the intelligence services. Although frustrating, there was a general acceptance that information had to be passed on a need-to-know basis.[17]

[16] Thomas Mockaitis, *British Counter Insurgency in the Post Imperial Era* (Manchester, Manchester University Press, 1995), p. 110.
[17] Interviews with Col. David Benest, and Lt Col Bob Bruce by KCL.

Much like in Malaya, a committee system was established to ensure good communications between and within agencies and services. However, the top-level security meeting that headed this structure was too big of a forum, which impeded decision-making and the flow of information.

Effective RUC-Armed Forces cooperation was rare. The RUC had initially operated from a position of weakness, but grew increasingly assertive and suspicious of the Armed Forces. There was no general commitment to cooperation and information sharing between the two services.[18] In fact, the RUC was itself split between sub-groups that often failed to consult one another or share vital information.

Notwithstanding all such limitations, by 1975, the Security Forces had achieved a great deal of success in acquiring intelligence on PIRA. They had effectively penetrated the organisation, a process predicated on the accumulation of data, the creation of new covert forms of surveillance, and the development of information systems and computers for more effective information management.

Doctrine and Concepts

There are three competing views of the Army's use of doctrine in the early years of Northern Ireland: 1) the Army failed to remember its counterinsurgency doctrine and therefore experienced early setbacks;[19] 2) these setbacks were caused by the application of colonial counterinsurgency doctrine to a domestic affair;[20] and 3) the Army abandoned counterinsurgency doctrine from 1976 onwards in favour of an 'internal security strategy' that drew on German, Italian, and Spanish experiences in dealing with local terrorist groups within their own states.[21]

The Army did not produce formal written doctrine on counter-revolutionary warfare until 1977. The basic tenets of that doctrine were informed by previous works on counter-insurgency such as the articulation of a clear political aim, the importance of operating within the law, the interagency approach, etc. These tenets affected decision-making prior to their crystallisation as formal doctrine; there was an institutional memory or a common set of procedures that formed an informal or implied doctrine within the Army.

Some analysts have concluded that the British Army failed to promote a hearts and minds campaign in the 1972-75 period. This conclusion is too stark. Community and public relations were emphasised and links with the population established. The units conducting extensive, and sometimes intrusive, surveillance operations also sought to mitigate the impact of these activities on the population.

Organisation

By the late 1970s, the two resident battalions of 1969 had increased to six, with an equivalent number doing six-month tours. There is some evidence that the length of tours affected the unit's performance.

A third brigade headquarters was deployed in February 1972. This was part of a general reinforcement of the province. The new brigade was based at Lurgan and was responsible for the security of the border and towns surrounding Belfast. In addition, the strength of the RUC increased from 3,500 personnel in 1971 to over 6,500 in the mid 1970s.

Battalions went through a process of reorganisation before deploying to Northern Ireland: heavy weapons were left behind; platoons of 30 soldiers were restructured into multiples of twelve men (which were

[18] Interview Col David Benest by KCL.
[19] See for example Mockaitis (note 25), pp.96-141.
[20] Interview with Col David Benest by KCL.
[21] See Singer (note 1).

divided into three teams of four) and the intelligence capability within each battalion was expanded significantly. An Intelligence Corps NCO (on a two-year deployment in the Province) was attached to the battalion when first deployed to ensure continuity. By 1974, approximately 80 soldiers were allocated to a battalion intelligence cell.[22]

Direct Rule resulted in the creation of the Northern Ireland Office, the import of British civil servants, an expansion of MI5 and the streamlining of a hitherto divided command structure. The position of Director Controller of Intelligence was created in 1972 in an attempt to coordinate M15 and MI6 activities and to provide the Secretary of State for Northern Ireland with the latest information. These actions were mere palliatives and failed to address the fundamental need for a central intelligence organisation to direct and coordinate the intelligence effort.[23]

The committees system in Northern Ireland was designed to ensure interagency coordination and the quick dissemination of intelligence. It was however less effective than its Malayan predecessor: there was no Director of Operations, the Army's relationship with the RUC was generally poor, and there was no political representation at the lower levels of the committee structure.

The Army, police, and civil authorities used different boundaries, which undermined organisational effectiveness. There was a notable shift from platoon- and company-sized operations to the four-man brick as the basic tactical unit.

In the absence of an effective intelligence capability, the Army developed its own covert surveillance units to monitor PIRA. The most significant development on this front was the creation of the MRF, which relied on information provided by informers.[24]

Later, the Army created a new surveillance organisation, 14 Intelligence Company, whose primary function was to watch PIRA and their Protestant counterparts. Recruitment began in 1973 and members from all the services were eligible to join.

Infrastructure

There is nothing on this subject in the literature for this phase.

Logistics

A survey of battalion post-action reports indicates that all regiments were satisfied with the logistical support they received whilst serving in Northern Ireland. The only regular complaint concerned the poor provision for clothing that wore out very quickly during operations.[25]

[22] 3 Para Post Tour Report, February-June 1974.
[23] See David Charters, 'Intelligence and Psychological Warfare Operations in Northern Ireland', *RUSI Journal* 122/3 (September 1977).
[24] See Roger Faligot, *Britain's Military Strategy in Ireland: The Kitson Experiment* (London: Zed Press, 1983) pp.1-39.
[25] Post Tour Reports

Network Strengths and Weaknesses

Appropriate Connectivity

Quality of networking, degree of networking

At the strategic level, the Government developed a more coherent approach to the challenges in Northern Ireland, and the first comprehensive campaign plan across the lines of operation began to deliver results. Strategic direction became clearer, and was communicated in a more effective way. The strategy of hearts and minds, learnt and forgotten from Malaya, took hold. Separating, rather than destroying, the terrorist became the focus. Arguably for the first time, the Security Forces in the province began to operate to a common purpose.

Common networks began to appear, though they were still insecure, and the IRA began to demonstrate their willingness to try and exploit the Security Force network through buying and issuing radio receivers to listen into military nets, and to develop bugging of telephone lines, in the latter case through infiltrating the major exchanges. This raises the question of the increased vulnerability that attends an improving and growing network. Protective measures were taken to limit IRA intelligence gathering activities, much of them procedural 'work arounds' in the absence of the technology to solve the problem. This early example of the enemy exploiting the friendly force network provides a cautionary note for the future. Serbian operators in Kosovo tried the same, and as a guiding principle, the Security Forces should always ensure the security of communication interfaces and invest in information assurance in equipment and IT networks.

The general level of access to data improved, with the early stages of a province wide information infrastructure, and security forces began to understand communication freedoms and constraints.

Intelligence, Surveillance, Target Acquisition, and Reconnaissance (ISTAR) plans and priorities began to be developed jointly between the Military and Police, and liaison roles and joint planning improved connectivity.

At the tactical level, the mainstay of unit's communications remained the A41 and the C4L radios, both operated on VHF, which is not considered reliable in an urban environment.

Information and Intelligence

Quality of organic/individual information, quality of shared information, and ability to share information

For the first time, the emphasis is placed on intelligence gathering rather than attrition of the terrorist organization. An increase in Resident Battalions from 2 to 6 provided intelligence cells that were able to build, through time and continuity, a more detailed intelligence picture to contribute to HQ Northern Ireland. These intelligence cells also began to receive more attention and investment in their selection and training, leading to improved performance, and increased trust from the RUC, who had previously (and to some degree still did/do) see the incumbents of the basic unit Intelligence Cell as enthusiastic amateurs. In tandem with the increase in resident unit intelligence cells, there was an associated improvement in the coordination of intelligence assets across the province, and recognition that certain key roles required a greater degree of continuity.

The period also saw the first use of computers to process and communicate vehicle and personnel information from databases that incorporated information gathered from border checkpoints, urban and

rural OPs, and fixed and mobile VCPs. More effective tools and processes led to better targeting of terrorists, and many were arrested in focused intelligence-led operations that began to seriously impact on the leadership and active membership of the IRA.

Shared Understanding

Quality of individual awareness, quality of interactions, and quality of shared awareness

This period in Northern Ireland saw shared understanding improve, but through process improvement and training, rather than technological enhancements. For instance, a major effort was made to establish and understand patterns of life, and to recognise and record what constituted normalcy in the different areas of the province.

Liaison between units and police divisions improved, though there remained a great reliance on the relationship between commanders.

The creation of PIN (Province Incident Net) bettered operational understanding and coordination. The quality of interactions improved as the need for information sharing became clear.

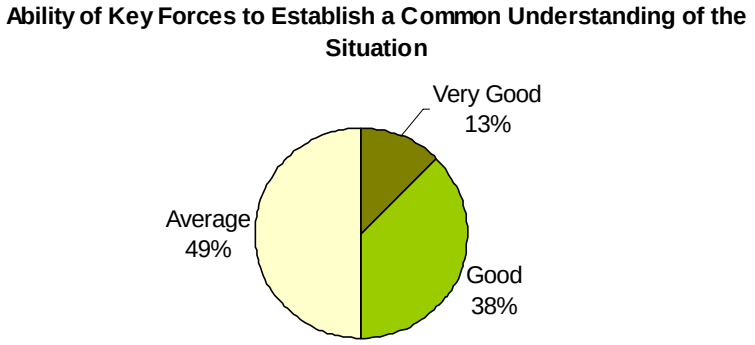


Figure 5.1 – Common understanding in Northern Ireland

Better training through the creation and development of NITAT improved the general level of awareness and began to establish a consistent strategic and operational context for commanders to work with. For the first time, low-level commanders felt they understood the strategic aims.[26] This is evidenced in the high rating in Figure 5.1.

The formalisation of post-tour reports (PTR) also assisted in raising the level of shared awareness, although informal contact had always existed between units passing through the province. The PTR made a difference as it provided a common template that ensured all areas of the operation were covered, and within which commanders were encouraged to be open and honest about success and failure during their tour in their operation.

The Forces also developed the practice of key staff deploying forward early on reconnaissance trips, and then acting as an advance party for their own units in order to provide more coherence and support the transfer of information and intelligence. Units and commanders found that they had to respond to

[26] Monro, Brunt, Interviews.

additional equipment and new technology coming into service by additional training, and through increasing lead times on reconnaissance or advance party activity. This reflects the fact that troops in-theatre will be likely to be using equipment and assets that may not be standard issue, and may only exist in theatre if they have been a Commercial or Military Off the Shelf acquisition through a Urgent Operational Requirement. As this is an increasing feature of intervention operations it remains an enduring lesson, and one not always factored in to the time and space equation of the reconnaissance plan.

Agile Groupings

Quality and timeliness of decision making; synchronisation of actions

The approach to patrolling switched markedly from presence and dominance patrolling to intelligence-led, focused activity. Whilst this still often meant the deployment of large numbers of soldiers, it was the start of more intelligent application of combat power.

There remained a need, in this period, for mass to provide where intelligence-led operations still could not, but it was also a period that saw the start of synchronised activity between the RUC and the Military, and the establishment of certain bespoke organizations, such as the MRF, which was specifically designed to be lighter, better trained, and more agile than conventional units in the Province.

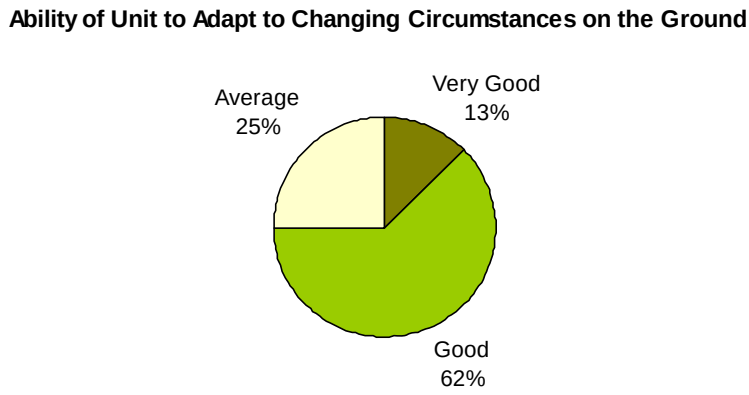


Figure 5.2 - Agility on the ground – Northern Ireland

The technology still did not exist to allow for a step change in the command and control of forces, and there was no evidence yet of collaborative working at anything more than a very basic level, but the culture in Northern Ireland was changing, and the freedom of action that was such a feature of Thompson's approach and legacy from Malaya began to become more evident. In addition, the improvements in information and intelligence handling led to faster and higher quality decisions, leading to several major successes against the terrorists. Figure 5.2 illustrates the confidence the security forces felt in their own agility and flexibility.

In terms of measuring performance against the four attributes of agility, namely; Responsiveness, Robustness, Flexibility, and Adaptability, the Security Forces were demonstrating great flexibility, and were rapidly developing their ability to adapt to lessons identified and recognised terrorist capability and intent. They were, however, still well short of being sufficiently well networked to be particularly responsive, and were not robust enough to sustain multiple concurrent missions.

CHAPTER 6.0 NORTHERN IRELAND – PERIOD THREE – 1976-1994

Historical Sketch

With the 1975-76 ceasefire, Whitehall shifted to an 'internal security policy' that came to be known as 'Ulsterisation'. This new policy rested on two pillars: police primacy and the criminalisation of all terrorist acts. The high profile of the army was recognised as exacerbating state-community relations in the province and therefore reduced; it was also believed that a traditional counterinsurgency campaign could not, for political reasons, be employed properly in Northern Ireland.

With greater emphasis on police work, the RUC was reorganised and expanded. Meanwhile, the Army improved its training, organisation, and upgraded its equipment. These reforms robbed PIRA of the initiative and forced it to focus on mere self-preservation. In 1977, the movement shifted from an overt military structure to that of a cell-based revolutionary movement.

Paramilitary violence in 1979 saw the murder of two senior UK dignitaries and an ambush in Warrenpoint that killed 16 soldiers from the Parachute Regiment, and two from the Queen's Own Highlanders, including their Commanding Officer. Despite intense pressure to respond forcefully, Whitehall persevered with 'police primacy': it expanded the RUC by 1,000 officers and appointed a Director of Intelligence to improve RUC-Army intelligence sharing.

During the late 1970s, the government was either unable or unwilling to work toward a viable resolution of the conflict. The Hunger Strikes (1980-81) forced the Thatcher government to reengage with the province. These strikes were themselves a product of 'Ulsterisation', PIRA prisoners were protesting against their new status as convicts, where before they had been political prisoners. The Hunger Strikes appealed to and radicalised many Irish Catholics, both in Northern Ireland and across the border. Each death of a striker would prompt rioting and a surge in popularity for Sinn Fein, PIRA's political arm. To capitalise on the support, Sinn Fein entered into electoral politics in 1982 and experienced initial successes against moderate Catholic parties.

Yet PIRA's 'golden era' proved transitory. By the late 1980s, the group's political and military campaign was unravelling. The police and military had the advantage in the province and PIRA's offset strategy – a bombing campaign on the mainland and in Europe – was backfiring. Meanwhile, Sinn Fein was forced into seeking an alliance with the Social Democratic and Labour Party. Amid continued violence, PIRA entered into unofficial talks with the government in 1989.

In 1993, the prime ministers of the UK and the Republic of Ireland issued the Downing Street Declaration, which earned the support of moderate parties from both sides of the conflict. Isolated, PIRA agreed to a ceasefire in August 1994. The subsequent negotiations moved slowly, partly because Prime Minister John Major was at this time dependant on the Unionists in Parliament. Frustrated at the lack of progress, PIRA returned to violence in February 1996. However, its subsequent campaign was counter-productive and reinforced the pressure to find a peaceful solution. The British, who were eager to avoid another breakdown in negotiations, also felt this pressure. In July 1997, PIRA renewed its ceasefire, paving the way for the Good Friday Agreement on 10 April 1998. While PIRA remains committed to the Accords, hard-line splinter groups have since emerged. The two principal factions – Real IRA and Continuity IRA – remain opposed to the agreement or any sort of ceasefire.

DLoDs and Organisational Learning

Training

A formal and systematic training regime was in place by the mid to late 1970's. All battalions due to deploy were processed through the NITAT, which provided an educational programme on the history of the troubles and disseminated the best practice identified since the late 1960s. This formalised the commitment to the minimum and proportional use of force.

NITAT also provided a comprehensive tactical training package to all units. Units were assessed during training, and personnel deemed unsuitable or unfit for the environment were removed from the unit for that tour.

The training varied according to rank and/or function. Training could last up to a year, but the average was three months. A majority of respondents to the survey felt there was good access to training (Figure 6.0).

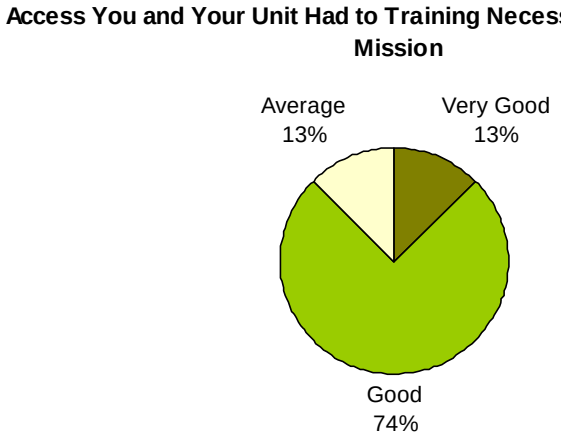


Figure 6.0: Quality of training for Northern Ireland

Equipment

There were some reports of radio communications and the radio network being unreliable.[27] PIRA attempted to intercept their opponents' communications, mostly through tapping. In response, the Army gradually introduced more secure systems of communications.

Equipment was deployed to counter terrorism included high-end surveillance, monitoring, and bugging systems. The Army's access to this equipment was limited. From 1977 onwards, most surveillance and intelligence gathering was conducted by Special Forces and key units in the RUC Special Branch.

The surveillance systems became increasingly miniaturised, advanced, and reliable. The use of such equipment also became more imaginative. When effectively placed, such equipment was a more discrete alternative to manpower.

[27] Royal Green Jackets Post Tour Report, 1991 – 1992.

According to one member of PIRA, this technology made it extremely difficult to evade British attention, it apparently brought the organisation to a standstill. CCTV was used as a means of surveillance but was found to be an unsatisfactory substitute for troops on the street.[28]

Computers were increasingly used to manage information. The Vengeful system monitored the movement of cars in the province. The system to monitor the movement of individuals was called Crucible and relied on the filling in and filing of highly detailed card indexes. The system was labour-intensive and required constant updating.

A personal computer (designated '3072') was purchased in 1976, but lacked the necessary memory and therefore had little impact on intelligence-collating activities. In 1987, a computer system with a greater memory was developed (Crucible). Despite a number of software problems and persistent memory shortages, Crucible became a key source of information for battalion intelligence cells.[29]

Both the Security services and PIRA relied on technology to gain the upper hand. PIRA developed more stable explosives, detonation and timing devices. From 1972 onwards, bombs were most often detonated remotely. PIRA later coded the signal to counteract jamming. When the government's R&D establishments' introduced man-portable inhibitors that prevented the b ombs from exploding, PIRA found a gap in the inhibitor's electronic magnetic range. This flaw was corrected within a year, after which PIRA maintained a constant battle to find new channels and frequencies for attack, including reverting to old-fashioned but impossible to jam methods like the command wire.[30]

Gazelle Helicopter over Northern Ireland
Source: http://www.army.mod.uk/img/royalirish/NI_Gazelle.jpg

Aerial reconnaissance improved with the establishment in 1973 of the Reconnaissance Interpretation Centre (RIC) at RAF Aldergrove in Northern Ireland. The Army Air Corps deployed *Gazelle* helicopters equipped with a specially stabilised TV camera mounting. It also fitted infrared surveillance systems to its *Beaver* spotter planes, which helped detect command-wire bombs and arms caches.

According to one source, troop withdrawals became possible by the late 1970s and early 1980s partly because of the deployment of sophisticated surveillance and monitoring systems throughout the province.

Personnel

By 1982, force levels had fallen to 11,000 regular troops and the government was working to a target force of 7,000 men.[31] In December 1997, total army strength, including six UDA battalions, stood at over

[28] Coldstream Guards Post Tour Report, 1992
[29] 1 Coldstream Guards Post Tour Report, October 1989.
[30] Mark Urban, *Big Boys' Rules: The SAS and the Secret Struggle Against the* IRA (London: Faber &Faber, 1992), p. 113.
[31] Desmond Hamil, *Pig in the Middle: The Army in Northern Ireland 1969*-84 (London: Metheun), p.264.

15,000. The target figure was thus not met. A majority of respondents to the survey felt that manpower levels in Northern Ireland at this time were sufficient (See figure 6.1).

Throughout this period, the social composition and educational background of the Army Officer corps changed significantly. By the mid-1990s, the number of officers from the state educational system increased from 10% in the 1970s to over 50% of the officer corps. Meanwhile, the proportion of British Army officers with university degrees was increasing. A larger proportion of the officer corps was also recruited from the ranks and, by the end of the 1990s, this element accounted for nearly one third of the officer corps in the British Army.

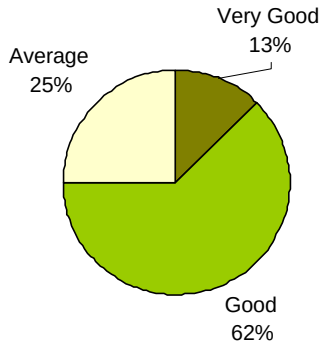


Figure 6.1: Respondents view of manpower levels in Northern Ireland

Repeated deployments resulted in a wealth of operational experience, particularly in the officer corps. The Army had by this stage developed a very good tactical and operational awareness of the conflict.

The Ulster Defence Regiment (UDR) was reorganised in 1978. The force was re-aligned to work in certain focused areas rather than across the province, and fulltime commitment was encouraged. Though low Catholic representation in the local security forces (RUC or UDR) made it difficult for them to enlist Catholic recruits or gain the confidence of the Catholic community.

Information

The committee system provided vertical communication links but its functions increasingly transferred to the Tasking and Coordinating Groups (TCGs – see below). Furthermore, the lowest levels of the committee structure lacked political representation, which undermined coordination. Information flows between Special Branch and the Army were still limited in the early part of this period, with the Special Branch unwilling to release information for fear of compromising its sources.

Though information flows within each service were adequate, the sharing of information between services suffered from protectionism of information. In this sense the TCGs fulfilled an important role.

Although the ‘green army’ continued to collect intelligence during its patrols, fewer people in the Catholic community were prepared to share information. PIRA’s shift to a cell system in 1977 also limited the utility of such intelligence gathering.

The Army’s special surveillance unit, 14 Intelligence Company, the SAS and the RUC Special Branch and the special surveillance units helped create a detailed overview of terrorist activity in the province. These

units relied on electronic-surveillance systems and human intelligence provided by paid informers. Information management of Vengeful and Crucible was handled by the Joint Surveillance Group and was staffed by the Army's Intelligence Corps. The provision of information varied according to rank and position. General information was communicated via the PIN.[32]

The legal system was used to generate information for the security services. The Northern Ireland (Emergency Provisions) Act of 1973 facilitated this process by allowing confessions to be used as evidence in courts, so long as the judge deemed that it had been obtained voluntarily and not through torture.[33]

PIRA members often passed information under questioning, which then tended to generate valuable intelligence. The rate of successful convictions increased dramatically. The 1974 Prevention of Terrorism Act gave the police the power to hold suspects for up to seven days without charge. According to Geraghty, the Act was primarily used as a means of gathering intelligence.[34] A later inquiry provided the prisoners with greater rights whilst in custody. Responding in part to this measure, PIRA shifted from a military structure to a cell system. The new structure required far less people, a lower level of popular support, and was more difficult to penetrate. Information was kept on a need-to-know basis.

PIRA also sought to assassinate those soldiers involved in surveillance operations. The Army and police force nonetheless continued to invest in the development of its surveillance capability as the principal means of defeating PIRA.[35]

Informer networks provided vital information for the security services, particularly following PIRA's restructuring. The Army retained control over the running of agents; it was an activity that moved first from the brigade to the battalion level and then to a centralised human-resource-handling group known as the Field Research Unit (FRU).

PIRA created its own security department in 1980 to deal with the threat of informers (otherwise known as touts). Several measures, including amnesties, were used to deter potential and current informers.

Doctrine

British counterinsurgency doctrine faced five challenges: a) the failure to achieve a political settlement complicated the push for political primacy and meaningful political reform; b) the recognition that the existing British counterinsurgency strategy was not appropriate in a liberal democracy; c) the radicalisation of the Protestant community; d) PIRA's changing *modus operandi*; and e) the media's coverage of the conflict.

The Labour government settled in for a long war that resulted in the formulation of a new strategy: 'Ulsterisation'. This policy reduced the visibility of the Army, which was recognised as antagonising the local population. 'Ulsterisation' changed the Army's approach to the conflict but the underlying principles of British counterinsurgency doctrine remained in place. The vast majority of the Army continued doing what it had been doing since at least 1972: winning hearts and minds, trying to get information on the terrorists, and containing PIRA. Greater emphasis was placed on the use of Special Forces to prosecute the military campaign.

[32] Interview Lt Col Bob Bruce.
[33] Peter Taylor, *The Brits: The War Against the IRA* (London: Bloomsbury, 2002), p. 200.
[34] Tony Geraghty, *The Irish War: A Military History of a Domestic Conflict* (London: Harper Collins, 1998), p.96
[35] Urban, *op. cit.* p.45.

The Army released a doctrinal publication, *Counter Revolutionary Operations*, in 1977; it was the Army's first official position on counterinsurgency.[36] The doctrine was consistent with what are now recognised as the six principles of counterinsurgency.

The Army was instructed to provide security for the police so that it was able to carry out its normal role as the guarantor of law and order in the province.

Organisation

In 1977, the Army had 14 battalions in Northern Ireland. They were deployed in fixed areas known as tactical areas of responsibility (TAORs). Regular and UDR battalions were divided between three brigade headquarters. The number of regular battalions fell to ten by 1980. As a result, it was decided to remove 3 Brigade HQ from the province order of battle. The brigade commanders reported to the Commander Land Forces (CLF) who in turn reported to the General Officer Commanding (GOC) Northern Ireland.

The 'green' Army by this stage were playing very much a supporting role in the military prosecution of the conflict. In the mid-1980s, the SAS and 14 Intelligence Company (150 troops) killed some 18 terrorists while the 12,000-strong force on the streets killed only two.[37]

The SAS deployment of a squadron to Northern Ireland proved difficult to sustain, mostly due to the service's short tours and limited number of operational squadrons (four). Troops in 14 Int usually did a minimum tour of a year. These soldiers could also specialise; in contrast, the SAS had to remain proficient in a range of different areas.

The CLF Major General Glover implemented changes that effectively merged the SAS and 14 Int into the Intelligence and Security Group (NI), which came into being after Glover departed (1980). The SAS commitment was reduced from a squadron of 70 to troop of about 20 men. Their tours were extended to a full year, which contributed to a greater sense of continuity. The Group now had three surveillance detachments and a troop of SAS who were held in central reserve ready to be deployed. The activities of the Group were to be integrated by the Special Branch's three Tasking and Coordinating Groups (TCGs).[38]

Assuming the lead, in this period, the RUC grew from 6,500 to a force of over 8,300 fulltime officers and 4,500 reservists.[39] Intelligence gathering was split between Special Branch and the Criminal Investigation Division (CID). Despite a division of labour (Special Branch focused on informers; CID on interrogations), cooperation was often poor.[40] This led to the establishment of the Regional Crime and Intelligence Unit, three of which were created for each RUC regional headquarters.[41]

New specialist units were created. The RUC imitated 14 Intelligence by creating a new surveillance team, E4A. Its personnel were trained by the SAS and MI5 and they were skilled in the provision of both human

[36] MOD, *Land Operations Volume III- Counter Revolutionary Operations: Part 1 General Principles* (London: MOD, 1977)
[37] Ken Conner, *Ghost Force: The Secret History of the SAS* (London: Weidenfeld & Nicholson, 1998), *p*.191.
[38] Urban, *op. cit.*, pp.138-140.
[39] Bruce Hoffman and Jennifer Morrison Taw, *A Strategic Framework for Countering Terrorism,* RAND Corporation N-3506-DOS, (Santa Monica, Ca: RAND, 1992), p. 22
[40] Urban, *op. cit.*, p.20
[41] *ibid*., p. 29

and electronic intelligence. The RUC also created the Headquarters Mobile Support Unit (HMSU), used to neutralise terrorist suspects, and, in 1979, the Bessbrook support unit for border surveillance.

Coordination of these different units was managed by TCGs, which were under RUC control and represented the key intelligence services. There were three TCGs each covering one of the three operational areas of 14 Intelligence. The TCG became a vital nodal point in decision-making and gradually absorbed many of the tasks of the previous committee system.[42]

In 1977, the then CLF, Major General Dick Trant, implemented a reorganisation of the Army's surveillance capability. Close Observation Platoons (COPs) were attached to residential-tour battalions (and to one short-tour battalion) to provide select training in intelligence gathering and surveillance work. COPs numbered about 200 personnel in total and provided basic low-level intelligence.[43]

Infrastructure

An estimated two million men would have been required to seal the border with the Republic of Ireland. Border patrols were reduced in 1973 to minimise casualties and replaced with observation posts (OPs) and a smaller number of forts. Also, RUC police stations were reinforced to minimise casualties.

From 1985 onwards, PIRA targeted army and police buildings on the border, including attacks on civil contractors used to repair and maintain this infrastructure.

Logistics

A survey of post tour reports indicates a general satisfaction with the provision of supplies. There were certain equipment shortages and soldiers still felt they had to buy supplementary equipment and clothing.[44]

Network Strengths and Weaknesses

Appropriate Connectivity

Quality of networking, degree of networking

The final period of our research into Northern Ireland saw a vast improvement in both the quality and the degree of networking across government, and across the province. Secure communications became widely available, and security forces were able to transfer information quickly and securely.

New networks developed, such as the PIN was created to give everyone in the security forces a better understanding of what was going on, and allowed for the secure exchange of information right across the province. The PIN also enabled the automatic cueing of various agencies to incidents. So that organizations such as Bomb Disposal, emergency services, criminal investigators, etc., would be immediately dispatched to support an incident, and receive updated information either as they travelled, or on arrival at the Incident Control Point.

Investments in network infrastructure, such as Vengeful and Crucible, two computer database systems, ensured that the latest information on individuals and vehicles was instantly updated across the province,

[42] Interview Col. David Benest by KCL.
[43] Urban, *op. cit.*, p.45.
[44] 1 Scots Guards Post Tour Report, 1987.

and a series of warning and alarm functions could alert security forces to suspect individuals or vehicles within seconds of an incident.

The period also saw a new approach from the security forces as they took on the requirement for Electronic Battlespace Management. The plethora of life saving technology such as Electronic Counter Measures to defeat Improvised Explosive Devices had to be coordinated, and their use and proximity de-conflicted to ensure that the security forces own technology did not become an impediment. In the case of attempts to jam a radio frequency detonation, the IRA and the Services engaged in a long game of invention and counter-invention as the terrorists sought to identify methods that could work around the security forces network.

A greater understanding of the art of communication, and the ways in which the various technologies could be used to best advantage, ensured that the forces got the most out of the technology available.

Information and Intelligence

Quality of organic/individual information, quality of shared information, and ability to share information

Specialist agencies begin to appear such as 14 Intelligence Company and the RUC's E4A. Whilst the British government continued to support a significant deployment of conventional troops to Northern Ireland they were definitely there to play a supporting role in the conflict. The different roles can be seen from the available statistics. In the period of the mid 1980s, the SAS and 14 Intelligence Company killed some eighteen terrorists with only 150 troops, in contrast during the same period a force of 12,000 troops constantly on the streets on Northern Ireland killed only two terrorists.[45]

The successful exploitation of information in the conflict in Northern Ireland allowed the seizure of arms caches of the IRA, achieved forewarning of planned IRA operations and sometimes prevented them, allowed special operations that resulted in the arrest or 'neutralisation' of insurgents and, increasingly, the successful conviction of those who sought to take up arms against the state.

It is also clear that the combination of human and technical surveillance and the use of an extensive informer network did exert a more general, but still important effect on the campaign. For example, according to Brendan Hughes, former IRA commander of the Belfast Brigade, technical surveillance played a critical role in containing the IRA. He readily admitted that the proliferation of listening devices, cameras, and sensors brought the IRA to a standstill and made it impossible for them to move anywhere in the province covertly.[46]

Shared Understanding

Quality of individual awareness, quality of interactions, and quality of shared awareness.

Shared understanding in this later period came from the top down, and a combination of process and technology began to make a real difference. Of particular note at the strategic level was that the Government was far clearer about the intent. There was clear direction to security agencies, and better division of responsibility, even if it was occasionally ignored. Figure 6.2 illustrates that those who participated in operations at that time felt mostly well informed.

[45] Ken Conner, *Ghost Force: The Secret History of the SAS* (London: Weidenfeld & Nicholson, 1998), *p.*191.
[46] Taylor, (note 21), p.302.

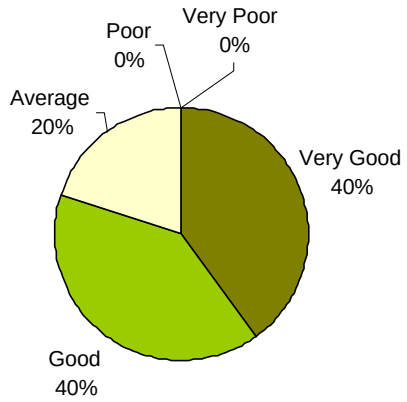


Figure 6.2 – Respondent's own Unit's awareness of the battlespace

The joint procedures put in place by the Chief Constable of the RUC and the GOC Northern Ireland allowed for the Police and the Armed Forces to formalise their respective responsibilities, and the technology available supported collaborative planning leading to improved operational effect.

The creation of coterminous boundaries further improved Military / Police understanding and relations, and ensured that at each level a police commander is only dealing with one military commander. This led to improved liaison and much faster planning and execution.

There was also an important dividend from the sheer length of common experience amongst the Military and Police. General levels of trust increased, and whilst to some extent such dynamics will always be a matter of the relevant characters getting along, both the military and the RUC were beginning to put some of their more crass approaches of the past behind them, and were able to enjoy a new sense of mutual respect. This newfound respect led to higher levels of common understanding as reflected in Figure 6.3 below.

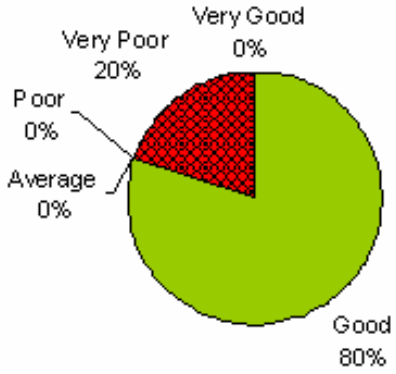


Figure 6.3 - Ability of key forces to establish a common understanding

Agile Groupings

Quality and timeliness of decision making; synchronisation of actions

There is no question that by the early 1990's, the British had learned the lesson of keeping the footprint of security force presence low whilst planning and resourcing for high impact intelligence-led operations. 14 Int, E4A, the HMSU, and the TCG all grew in competence as small organizations of highly specialized individuals who could apply force in a new and precise manner.

Not only did these organisations allow for more precise and flexible application of force, they allowed conventional forces to be used in an economic manner. Reducing the footprint of soldiers on the ground had long been a political aspiration, as their presence on the ground did little for any feeling of normality. However, for a long time that presence was required to maintain the edge over the terrorist and restrict his movement and operations. Politicians and commanders welcomed the move towards a lower level of framework patrolling, which reduced the number of troops on the ground until and unless intelligence required the deployment of additional 'surge' operations.

The approach had various advantages, not least that fewer soldiers were on the streets to be targeted. As the system matured and commanders developed confidence in the new approach, it enabled the more efficient use of reserves, and allowed some of these reserves to be rear-based on the mainland UK for the first time.

The later years in Northern Ireland were characterized by more imaginative and flexible use of troops, who themselves became used to being deployed in support roles all round the province, and not just within the Brigade AO. The resident units became particularly familiar and adept at moving around the province, and rated their own ability to adapt very highly, as seen in Figure 6.4.

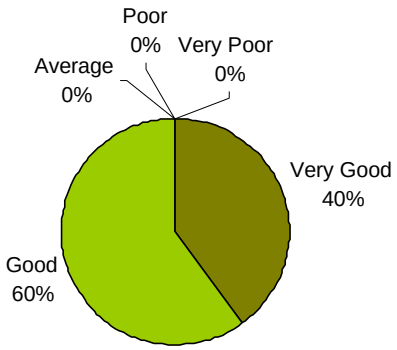
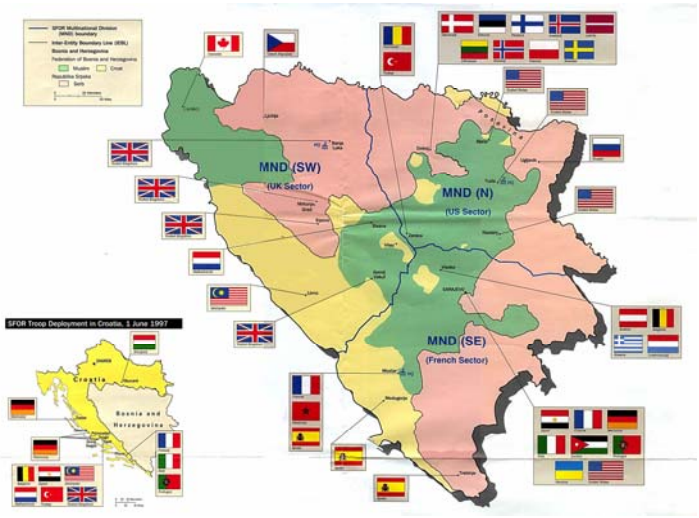


Figure 6.4: Own unit's ability to adapt to changing circumstances

CHAPTER 7.0 BOSNIA

Historical Sketch

In 1992, Bosnia-Herzegovina conducted a referendum on whether it should seek independence from Yugoslavia. Bosnia's Serb community boycotted the referendum and, within a short time, the ethnic tension triggered a prolonged ethnic conflict between Serbs, Croats, and Bosniaks. In response, the United Nations (UN) extended the mandate of the Croatia-based UN Protection Force (UNPROFOR), resulting in the redeployment of 40 monitors to Bosnia in April 1992. Amid continued violence, UNPROFOR negotiated with the Serb and Bosnian forces to gain control of Sarajevo airport, which was to be reopened for the distribution of humanitarian aid.



The UN Security Council passed Resolution 770 on 13 August 1992, calling upon member states to take all necessary measures to facilitate the delivery of humanitarian assistance to Sarajevo and other parts of Bosnia and Herzegovina. In response, Britain deployed a reinforced battalion group of 1,800 men to UNPROFOR. A second infantry battalion was later added along with an armoured regiment (battalion) and a logistics and engineer battalion. A Brigade Headquarters was deployed to command this force, which became known as BRITFOR and consisted of 3,200 personnel. Later on, an aviation squadron and an artillery troop were dispatched in 1995 as part of the move towards a UN rapid reaction force. The size of BRITFOR then grew from 3,500 in April 1995 to 8,500 in September 1995.[47]

British troops in Central Bosnia operated without guidelines, let alone doctrine, as there was none for this type of mission. The mission statement – to undertake convoy escort duties – was soon recognised as a relatively minor task, and without any specific orders, the British troops began to adopt a more general peace-support role. This shift accelerated with the signing of the Washington Agreement by Croat and Bosniak representatives in March 1994. Facing an ambiguous, complex and often violent situation, the British officers on the ground developed *ad hoc* operational modalities and procedures, which were often informed by the Army's previous experience in low-intensity and counterinsurgency operations.

In July 1995, Serb troops infiltrated the UN 'safe areas' and massacred thousands of Bosniak civilians. Meanwhile, Croatian forces (materially supported by the US) made substantial territorial gains at the expense of the Bosnian Serb Army – an advance featuring indiscriminate violence and reprisals against the civilian Serb population. In August-September, NATO launched an aerial bombing campaign against the now beleaguered Serb forces. In November, following intense international pressure, the leaders of Serbia, Croatia, and Bosnia were convened at Dayton, Ohio, where they signed a comprehensive peace agreement.

To ensure the implementation of the military aspects of the agreement, NATO deployed an Implementation Force (IFOR) on 20 December 1995. At this point, the British forces took command of Multinational Division South-West (MND (SW)). This division had six battle groups, of which three were

[47] Op Grapple 6 – HQ BRITFOR End of Tour Report (Oct 1995) p.4.

British. In June 1996, the mission of IFOR changed from overseeing compliance with the Dayton agreement to include general reconstruction activities.

DLoDs and Organisational Learning

Training

Northern Ireland training helped the Army adapt to the conditions in Bosnia. As in Northern Ireland, personnel serving in Bosnia, who would visit the incoming units to provide briefings, passed on lessons. Key personnel from the incoming units also conducted reconnaissance visits.

The 1 Cheshire Battle group – the first to be deployed – received inadequate training, as there was little prior knowledge regarding the operation. Follow-on brigades were able to learn from 1 Cheshire and therefore concentrated on liaison work, operating with interpreters, VCP drills, mine drills, etc. The lessons learnt in theatre were quickly and efficiently translated into training programmes.

Army units generally found the transition to Bosnia relatively straightforward – no doubt a product of previous experience in Northern Ireland. In contrast, non-infantry units required more extensive training, which they often did not receive.

The British, as compared to some other militaries, believe that they are allowed to train for operations rather than that training being used by higher formation as a way of testing the unit. As such, the respondents felt that they were allowed to make mistakes, and encouraged to improvise and experiment in order to be more effective on the operation itself.

Equipment

Bosnia saw the British Army's first operational use of the Warrior armoured personnel carrier/fighting vehicle (APC/FV). Each battalion was equipped with 45 of these vehicles, which proved to be effective and robust. Lighter tracked vehicles, such as the Spartan or Scimitar, were also beneficial in that they could use roads unsuited for the heavier Warriors.

The un-armoured Land Rover proved itself as an effective liaison vehicle. In contrast, the use of RB44 trucks was deemed a failure.

The radios available were not fit for purpose. The VHF and HF sets were built to operate in Germany, where units and sub-units communicate over short distances and in a rolling country. In Bosnia, sub-units were stationed far apart and in difficult terrain. Given the emphasis on impartiality, there was no perceived need to maintain secure communications.

Communications improved with the use of Satcom systems, such as Mentor and Mapper. Nonetheless, each system had vulnerabilities and drawbacks. Further improvements were made during the IFOR phase. Secure commercial radios (SCR) and Euromux had by then replaced the Ptarmigan system. The communications network of the International Police Task Force (IPTF) was also made compatible with that of the Army.

The shift from UN to NATO represented a step backwards in terms of operational efficiency. One unit that experienced the changeover complained that much of their communications equipment was withdrawn, which reduced its capacity for quick communications. Quick changes of armaments during the UN-IFOR changeover also resulted in logistical difficulties.

Personnel

The original troop strength of 1,800 increased to 3,500 by 1995, and then up to 8,500 by the end of that year. Each battalion in Bosnia served for six months, but specialised personnel within the combat service support role, such as engineers and signallers, often found themselves serving virtually back-to-back tours.

The quality of personnel was vital in terms of building up the information networks that came to be established (see below). The rate of reporting to the various command elements and agencies involved resulted in a chronic shortage of clerks. There was also an overall lack of trained personnel to handle Mapper and Pampas Grid. Many had to be trained in situ.[48]

Information

The Army initially had minimal information about the interior of Bosnia. This shortfall necessitated close liaising with international organisations, other government departments, intelligence services and NGOs.

Most information was collected locally, during patrols of convoy routes or by effective liaising. Local information could also be put to use more immediately and effectively. All information collected by the Cheshires was based on human intelligence (HUMINT). Despite being promised information from other technical sources, this never materialised.[49]

The Cheshires established a system of liaison officers (LOs) to ensure smooth communications and coordination with the various agencies and organisations in theatre. The Unit LOs would work with major agencies such as United Nations High Commissioner for Refugees (UNHCR), International Committee of the Red Cross (ICRC), many of which were also represented at military HQs. The sub-unit LOs would talk to whoever was in a company area: commanders of local militias (sometimes of all 3 sides), mayors and dignitaries, and local representatives of aid agencies.

Information sharing in Bosnia was intimately tied to respect. Troops gained respect from aid agencies by proving themselves efficient and, more importantly, from 'opponents' by occasional uses of force (e.g. returning fire when targeted, but remaining restrained in the level of that fire). Negotiating is always best done from a position of strength, but not from one of overwhelming power.

Communications between British sub-units were patchy; the terrain was unfavourable, the equipment poor, and the network between different command posts often down. This lack of communications afforded the commanders a level of decision-making autonomy that was often appreciated. This latitude was absent later when the Cheshires returned as part of IFOR on 20 December 1995.[50]

Though there was an effective information campaign to inform the domestic (UK) audience, little thought had gone into getting the message of UNPROFOR across to *local* audiences. During IFOR, the UK deployed 15 (UK) Psy Ops Group to MND (SW) – a first in UK operations. Only 12-14 personnel were sent, however. They formed part of IFOR's Information Campaign (IIC), whose focus was on reassurance of the local population.

[48] Opponent Grapple 6 – HQ BRITFOR End of Tour Report, (Oct 1995).
[49] 1 Cheshire Group Post Operational Tour Report, (13 July 1993) p. C-2.
[50] 1 Royal Regiment of Fusiliers Post Tour Report, (29 Feb 1996) p.3.

Doctrine and Concepts

There was no doctrine for the operation in Bosnia. The doctrine that came to be written (*Wider Peacekeeping*) as a result of the Bosnia experience was very cautious in tone and concerned about a possible escalation from peace operations to open hostilities. This put the onus on the peacekeeping principles of consent, impartiality and the avoidance of excessive force.

There was a disconnect between the cautious and UK-based writers of doctrine and the troops in the field, who felt that peace operations such as Bosnia could be accommodated within the basic British approach to low-intensity warfare. Indeed, the MND (SW) post-operational tour report makes specific mention of *Wider Peacekeeping* as being 'too prescriptive'.[51] *Wider Peacekeeping* was quickly replaced by the less cautious doctrine, *JWP 3-50, Peace Support Operations* in 1996.

Organisation

The UK Battalion Group had main positions at Vitez and Gornji Vakuf, with widely spread outposts on the road from Split to Tuzla. Later these were expanded to include Zepce and Gorazde. MND (SW) operated at various locations in southwest Bosnia with a HQ at Gornji Vakuf.

The C2 structure was problematic, featuring – initially – parallel UN and UK chains of command. Under General Rose's command of UNPROFOR, the C2 structure was simplified, as the second UNHQ at Kiseljak was removed. Rose also streamlined the command arrangements, establishing two one-star commands on Gornji Vakuf (Sector South West) and Tuzla (Sector North East). This last initiative was unpopular with battalion commanders, as it created another layer of command between Rose and his COs. Choosing such an unimportant town as Gornji Vakuf as a HQ also complicated the liaising with aid agencies since none of them bothered to co-locate there.[52]

The regimental system and the long-standing ties between personnel resulted in a high levels of confidence and trust. However, the IFOR era was marked by language difficulties and cultural differences that contributed to an overall 'lack of coherency'[53] or 'little unity of purpose'.[54]

Infrastructure

Troops were accommodated in schools or factories. Houses were rented, at least initially, at above market rates, which caused some friction and destabilised local economies. Troops were widely and thinly spread so as to cover as many locations as possible. Roads were of a generally poor quality, which sometimes prevented the use of heavy vehicles.

Logistics

The geographic spread of British units necessitated substantial investment in logistic capacity (by 1995 each week: 200,000 litres of fuel, 25 tonnes of food, 60 tonnes water). Moving cargo over long distances put severe pressure on available assets. The DROPS system proved to be very effective as did the help of the Dutch and Belgian transport battalions. Terrain also made movement difficult.

[51] HQ MND SW Post Operational Tour Report – OP RESOLUTE 2, 26 June-17 Dec 1996 (Jan 1997) pp.2-11.
[52] Williams (Undated).
[53] Ibid.
[54] 1 Royal Regiment of Fusiliers Post Tour Report (29 Feb 1996) p.4.

Experience with logistic movements counted for little in Bosnia. One CO noted that "experience gained running 10,000 trucks in the Gulf War was only marginally applicable to a Bosnian winter civil war scenario". He noted that his men in Central Bosnia understood this, but those in HQ BRITFOR in Split did not, and their attempts at micromanagement were counterproductive.[55]

British soldier directing supply truck
Source: http://www.nato.int/sfor/nations/uk.htm

The ability to deploy a reinforced battalion group with all adequate provisions was occasionally called into question. With the Cheshires, 400 troops had to spend a winter under canvas because accommodation units took so long to reach Vitez.

Network Strengths and Weaknesses

Appropriate Connectivity

At every level, from Strategic through Operational to Tactical, the degree of net readiness and the quality of the physical network was described as poor. Radios and Satellite phones were the predominate communications systems (as illustrated in the response in Figure 7.0) and whilst computers were available to many, they were not yet viewed as essential communications tools. The robustness of the network was criticized for being open to physical and technical attack,[56] and it was only with the arrival of IFOR that the UK began to have a more coherent, resilient communications plan. In some cases the warring factions were able to out-manoeuvre British Forces on the basis of information gathered from listening into the insecure radio networks.

The degree of coordination was also seen as poor, with various specific examples, such as the intra-Governmental friction between ODA and FCO,[57] and, at the tac/op level, the move of 1 DWR from Central Bosnia to Gorazde.[58] At the strategic level, the available networks were not used intelligently enough to obtain a clear plan from the beginning. Whilst several governmental departments had information gathering teams in Bosnia, the reports coming back were in some cases contradictory, and in all cases were limited to the departmental area of interest. Consequently, it became much harder for those in the UK to gain a reasonable level of understanding.

Once again the situation underlined the importance of quickly establishing sufficient clarity of aim, commonality of purpose, and a sense of urgency into delivering the plan. In the early days of Bosnia there was no coherent cross-Governmental plan, and there were several conflicting Departmental agenda's causing friction and confusion.[59]

[55] Williams (1994).
[56] Colonel Borwell, Interview
[57] Dr Gilbert Greenall, Interview
[58] Colonel Nick Borwell, Interview
[59] Dr Gilbert Greenall, Interview

In addition, inter-Service and multi-national coordination failings further challenged connectivity. Some pilots in the Air Component felt that they were often unsighted on ground initiatives or precise friendly force locations other than the fixed bases. [60] Whereas many of the ground commanders had very little idea as to what the Maritime and Air Components were actually doing as their part of the operation. Understanding that the Royal Navy was providing control of the Adriatic, and the Royal Air Force were enforcing the no-fly zone, was about the level of joint understanding at unit and sub-unit level in the Land Component.[61]

At the lowest tactical levels, where commanders were often dealing with convoy control and security, respondents often mentioned that some sort of tracking tool would have hugely increased the efficiency of the escorts. There were several briefings that took place before major (scheduled and officially sanctioned) convoys were to leave Croatia for Bosnia, but once in motion the progress and location of

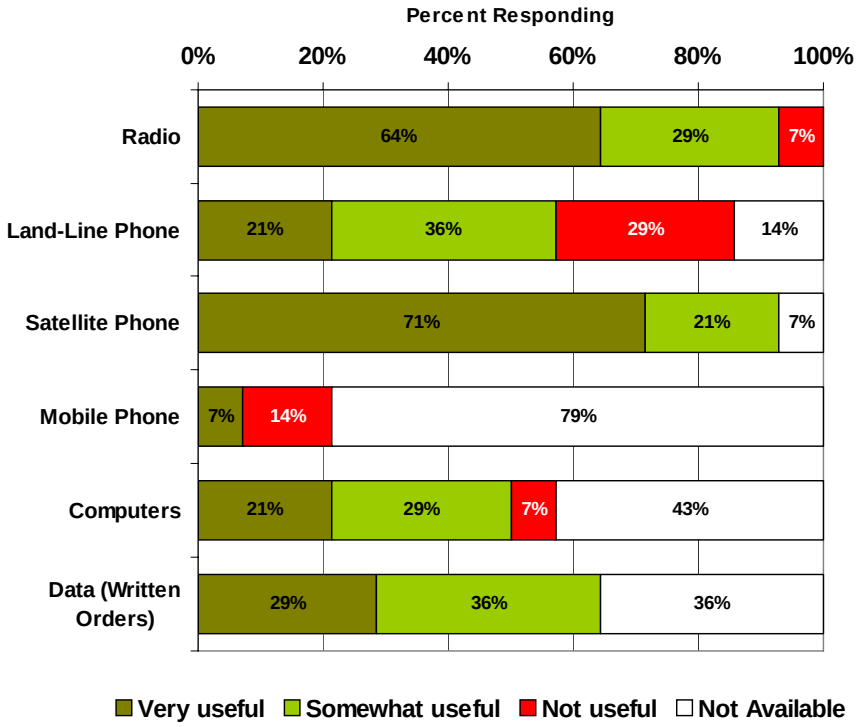


Figure 7.0 – The utility of communications systems in Bosnia

these convoys had to be constantly observed by UK forces. This was a particularly resource heavy approach to a problem that could have been monitored for large parts of the journey on a screen in the relevant HQ.

Respondents and interviewees also spoke of a virtuous circle in the liaison world, whereby forces on the ground that had established good relationships with local commanders often enjoyed greater freedom of movement in a less hostile environment, which in turn allowed them to liaise more and so ensure the

[60] Group Captain Stringer, Interview
[61] Brigadier Binns, Interview

environment remained calm. Figure 7.0 describes the tools that respondents felt most useful in maintaining communications in Bosnia.

Information and Intelligence

Reports from the early days of Bosnia highlight a paucity of information and intelligence, and low levels of quality and accessibility.[62] As discussed above, general levels of air/land coordination were not good: this resulted, in an intelligence sense, in stovepipes of information and intelligence that did not get to the operators who required it. All-source exploitation did not exist, and the Security/Information balance was weighted hard over to security.

The general level of information sharing was variable, Figure 7.1 shows that many respondents felt they had adequate or above adequate channels for information sharing with UK forces, but several commented that these channels were under-used, particularly top down. Figure 7.2 illustrates from where most commanders felt they were getting their most useable intelligence. Not surprisingly this centres on their unit, but of note is the high figure given to the local population, in strong contrast to the response to the same question asked of respondents in the Iraq case study.

Friendly relations between British patrol and locals
Source: http://www.nato.int/sfor/nations/uk.htm

BOSNIA: Ease of Sharing Information with UK forces

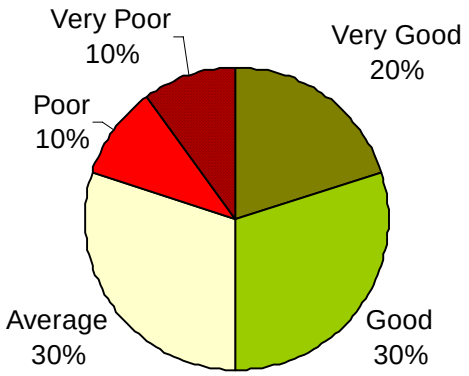


Figure 7.1 – Ease of information sharing within UK forces

[62] Colonel Cameron, Interview

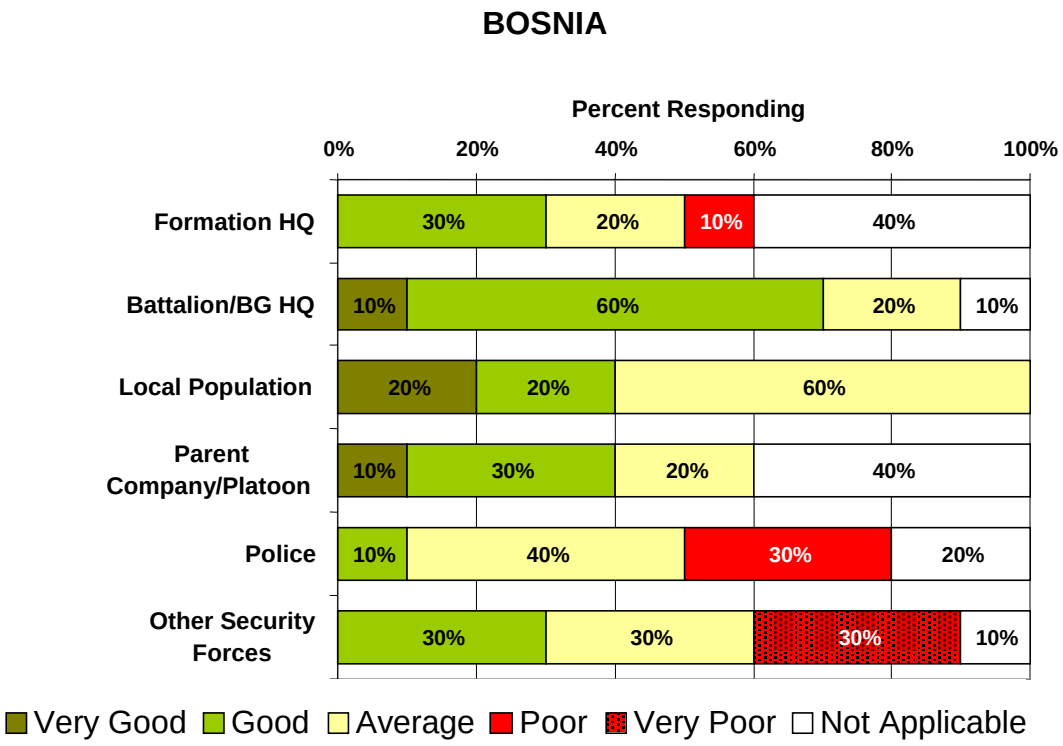


Figure 7.2 – Quality rating of information received

Information sharing was limited in technical terms by a lack of resources; particularly secure communications. Operators using radios and satellite phones had to use veiled speech and codewords in connection to time-sensitive information, and this slowed both information flow and operational tempo.

Information flows were also limited in a process sense because procedures were not in place to share information across Government bodies, or even neighbouring units, with any ease. Add to this the complexity of multi-national communications, SOPs and equipment, and it is not surprising that it was only with the arrival of IFOR, and NATO standards, that forces on the ground began to develop more efficient information exchange, and to operate in a more joint, and combined manner.[63] That said, UK forces went out of their way to achieve influence and thereby gained an information advantage. With even the most lateral of information gathering enterprises being embraced in the operation, the UK forces in Bosnia tried every approach possible to gain intelligence, and at the local level often succeeded. What was missing was any way of collating and developing this at the formation level and above.

It is worth mentioning that the geography of the country also had an effect on the way information was packaged, and particularly in framing Commander's Critical Information Requirements (CCIRs). The MO of the warring factions, the limited manoeuvring being demonstrated, and the closed nature of some of the valleys and terrain all led to some very localised intelligence assessments. All of these factors led

[63] Lt Col David Robson, Interview

to an intelligence cycle that was often driven from the bottom up, and which in the context of the other operations being examined in this study, took place in a relatively benign environment.

Regarding multi-nationality, Bosnia was one of the first multi-national intervention operations of the post-cold war period, and saw the Armed Forces of several nations operating alongside each other during operations for the first time. Consequently, and predictably, there was poor information sharing between national components, and between their intelligence organisations. There is always, in any UN, NATO or coalition force, a combination of natural, and slightly less natural, allies with a variety of strengths and weaknesses, but it was the view of several commanders that the UK did not sensibly exploit the quality and quantity of information that was held by other nations.[64]

In addition, many of the respondents[65] felt that other government departments (FCO, MI6, etc.) were withholding certain information, and there was a very high level of acceptance about this. As an observation on the UK culture of 'need to know', Bosnia appears to have been the last operation where military commanders remained relaxed about other government departments not sharing intelligence. From Kosovo to Sierra Leone, and Iraq, and indeed in the later years of Northern Ireland, a much more open intelligence architecture and database was demanded and expected by the military.

Interestingly, respondents returned a very consistent message on the amount that they learned whilst in Bosnia. Fig 7.3 below shows weaknesses in the organisational learning of forces prior to their tour, but consistent, and high levels of knowledge by the end. This would indicate that whether through formal or informal, physical or social connections, most felt that they had received sufficient information to allow them to make sensible operational judgements.

[64] Colonel Cameron, Brig Binns, General Ridgeway
[65] Colonel Borwell, Lt Col Robson

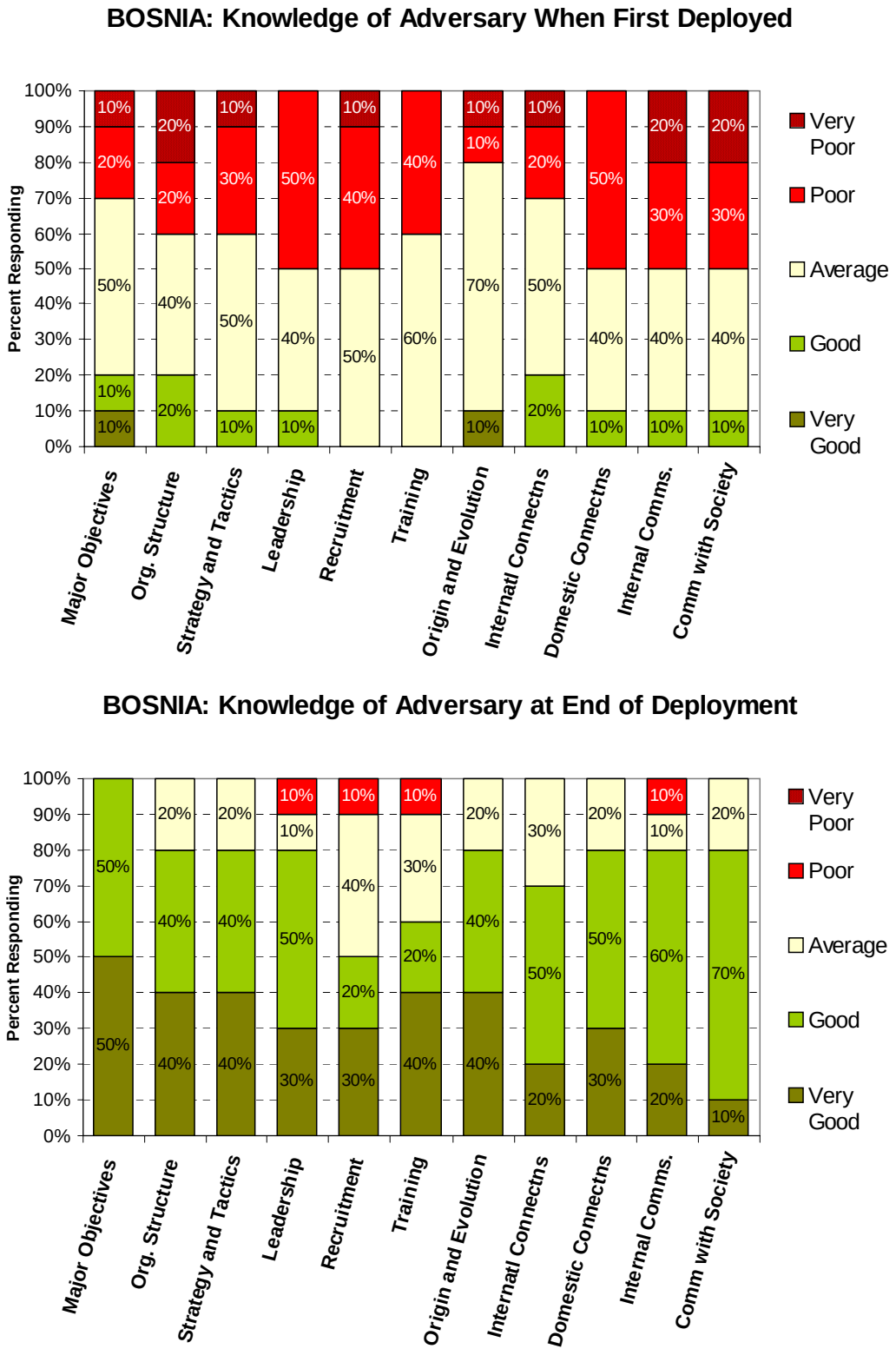


Figure 7.3 – Increased Knowledge through operational experience

Shared Understanding

At the strategic level it took some time for the Government to identify what should be done beyond the presence of troops in theatre as a signal of intent and a force for good. The various Government departments had different approaches to the problem in hand and there was no single overseeing authority to provide prioritisation or direction.

There were significant problems in establishing and maintaining a common understanding on the ground in Bosnia, and any quality or timeliness in the content or passage of information and intelligence was seen as very much a bottom-up affair. The entire operation, until the arrival of NATO in the guise of IFOR, was marked by the emphasis on local liaison leading to local information, knowledge and understanding. Few interviewees were willing to give higher formation or any Government agency any credit for gathering and passing intelligence, and most recalled using their own resources to gain sufficient local knowledge, almost on a daily basis, in order to operate.[66]

Informal social networks were the order of the day, but there was little fusion or coordination of this, and much duplication of effort. The Faction Commanders would only give so much time to the 'international community' and it was rare for Unit, Formation, UN, or other international bodies to coordinate meetings or contacts. Consequently, information tended to be given out in a haphazard way, somewhat dependant on the mood of the Faction Commander and who had talked to him first. Figure 7.4 demonstrates how little confidence there was in gaining a common picture, with 60% of respondents measuring it as 'average' or worse.

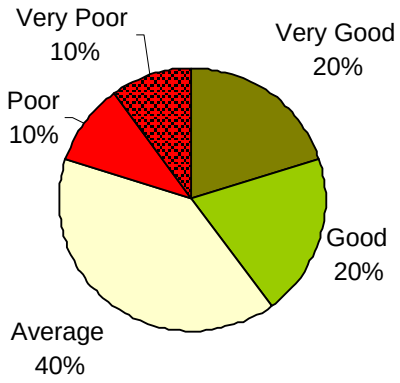


Figure 7.4 – Ability of own forces to establish common understanding

The quality and quantity of shared information was judged as poor, with much of this down to the limitations attendant to units and sub-units depending on their own intelligence and their own (limited) intelligence gathering resources or experience. All Land Component interviewees spoke of dependence on own sources, all the more notable given that many were only sub-unit commanders at the time.

Even recognising the isolated nature of the deployment in Bosnia, there is no evidence prior to the arrival of NATO of collaborative planning in anything other than the traditional planning groups and orders groups. NATO brought a commonality of process and equipment that provided for a greater degree of

[66] Brig Binns, Colonel Cameron, Colonel Borwell, Interviews

collaborative planning, though for resource reasons it was still fairly limited. As far as the UN period is concerned, the key tool identified as providing information advantage was the satellite phone.

The overall assessment was that the UK had enough of an information advantage given the significant factor that the warring factions did not generally target UK forces. Less certain is how the UK would have coped in the face of more direct opposition or a more hostile environment. Opinions vary as to whether the UK would have simply invested more, or whether the UK mission would have been seriously challenged. NATO's entry into the Bosnian arena removed the question.

It is worth observing however, that the information needs of the UK forces were moderate in comparison to identifying the intent of an enemy seeking advantage within a given battlespace. Given this, UK forces felt they had enough information to achieve their aim.

On the Air Component side there was better sharing of info between various contributing Air Forces than between the RAF and British Army.[67] Within inter-Service channels there was much duplication of effort because information or intelligence held by one Service was not readily available to another. In addition, different Services covered different AOs, populated different databases, and in some cases reported to different organisations, as was the case during a period when the British Army worked with the UN, and the RAF with NATO.[68]

Agile Groupings

For much of the period that the UK served under UN leadership, the tasking and roles of the ground forces did not require a great deal of physical agility, though the UK preference for the manoeuvrist approach meant that units and commanders developed some original and lateral ways of achieving the mission given to them.

Of note is the fact that many respondents and interviewees saw their own units as having very good agility, but were much less confident about their ability to coordinate activity with other units, even from the same nation. See figures 7.5 and 7.6 below:

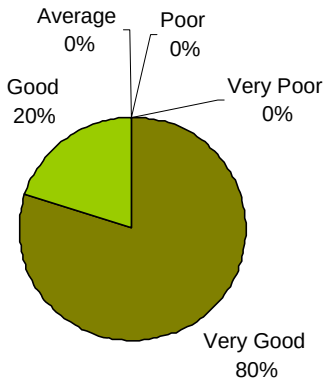


Figure 7.5: Ability of own unit to adapt on the ground

[67] Group Captain Stringer, Interview
[68] Ibid

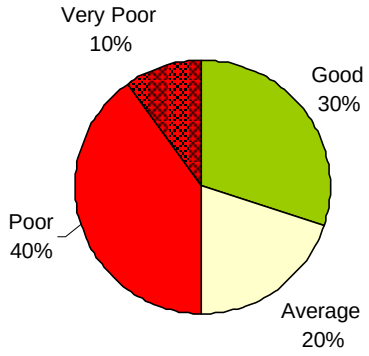


Figure 7.6: Ability of own unit to coordinate with others

Whilst this could be seen as natural unit pride, it also reflects the fact that communications were often so basic and fragile that the activity of effective coordination with others was seen as very difficult. The UK forces were sufficiently networked to enable a company group to move from Central Bosnia to Gorazde, in Serbian held territory, but the operation left the Company Group very exposed even though they were not seriously challenged by the Serbs in anything more than minor tactical skirmishes.[69]

In terms of the footprint on the ground and networks replacing mass, there were some good examples from Bosnia. One being the issue of satellite phones to liaison officers where the intelligent use of networks significantly reduced the footprint. The alternative would have been an additional need for a communication centre or node from the Royal Signals that would need protection, as well as requiring manpower and real estate.

However, there were other examples where the lack of a network specifically increased the footprint, such as 1 DWR having to patrol with two Land Rovers per Section because of its exposed position and the vulnerability of its communications.[70] In general, the Bosnia operation under the UN was not seen as a period of either great agility or great manoeuvrist activity for UK ground forces. The static nature of many tasks meant that few ranged beyond a limited local area, and the threat was such that there was little synchronisation of forces evident, or even necessary.

Later in the operation, when NATO provided the IFOR deployment, the larger numbers and more comprehensive communications network ensured that UK forces were more capable. Though UK forces were not being targeted at this stage, they still had to maintain an information advantage over the former warring factions, and forces were heavily involved in operations to capture those indicted for war crimes. These operations were highly sensitive, and required great coordination and security in their planning and execution. Common tools, as well as increased secure communications ensured that such arrest operations could be planned collaboratively, and that the forces involved could, and often had to, respond to changing circumstances on the ground.

Later, when the NATO IFOR restructured as the NATO Sustainment Force (SFOR) communications were sufficiently robust to allow two major resourcing initiatives. The first of these initiatives was the creation

[69] Colonel Borwell, Interview
[70] Colonel Borwell, Interview

of Balkan rather than Bosnia support units that could also (because the network provided sufficient lead-time and warning) support troops in Kosovo.

The second initiative was the NATO development of the practice of an ‘Over the Horizon Reserve’ (OTHR). This allowed for reserve personnel to be kept out of theatre and working on other tasks. The approach was popular with troop contributing nations (TCNs) and locals alike. The TCNs liked it because they did not have to provide and resource additional troops, and the locals felt it kept the footprint of foreign soldiers down. All of it was made possible by a network that was capable and robust enough for commanders to plan collaboratively and get the reserve into action in time.

CHAPTER 8.0 SIERRA LEONE

Historical Sketch

The Revolutionary United Front (RUF) was formed in 1991 with the aim of overthrowing Sierra Leone's government. In the following years, the RUF gained control of most of the countryside. In 1995, the government hired a mercenary force and the RUF were pushed back. Years of political instability and failed negotiations followed and, in 1999, the RUF launched a second offensive. The ensuing hostilities reached Freetown, where thousands were killed, maimed and wounded before forces from the Economic Community of West African States (ECOWAS) were able to drive the RUF into retreat.

This last engagement led to the Lomé Peace Agreement of July 1999, which offered the RUF leadership amnesties and some political representation. The UN Mission in Sierra Leone (UNAMSIL) was formed and deployed to oversee a Disarmament, Demobilisation and Rehabilitation (DDR) process. The RUF however refused to disarm and instead launched attacks on the UN forces. In early 2000, the RUF seized a number of peacekeepers and UN Military Observers (UNMOs), including some British personnel.

By May, the RUF again appeared to be on the offensive. The DDR process had by this time reduced the Sierra Leone Army (SLA) and the UN was evacuating its civilian staff. Facing a deteriorating situation, Britain decided to take the lead in rescuing the hostages and scrambled forces for an intervention. It was further decided that Britain would maintain a presence in Sierra Leone to strengthen the struggling UNAMSIL, whose military command was in disarray.

With the agreement of President Kabbah of Sierra Leone, British forces secured Lungi International Airport on 7 May. Amid further violence in Freetown, the evacuation operation was set in motion the following day. Within a short period of time, most foreign personnel had been rescued.

The British mission was now widened to include support for UNAMSIL, the provision of assistance to the SLA and preparation for humanitarian tasks. By securing the airport, the UN was able to fly in reinforcements. Meanwhile, the British forces provided training to SLA battalions. They also conducted a series of demonstration flights, live-fire exercises and demonstrations to deter the RUF. To reassure the civilian population, the British forces engaged in other types of tasks, ranging from football matches to active patrolling of the streets of Freetown.

Individual RUF fighters surrendered, but the group continued to press westwards towards Freetown. This resulted in an engagement with British forces on 17 May, in which the RUF suffered substantial losses. The firefight enhanced the status of the British force and undermined the RUF. Hours later, the RUF's political leader – Foday Sankoh – was found and escorted by the RAF to a place of safety in Sierra Leone. The development prompted internal feuding within the already weakened RUF.

On 19 May, the UN Security Council increased UNAMSIL's authorised strength to 13,000 and removed the restrictions on the supply of arms to the government of Sierra Leone. Henceforth, the SLA could be re-

equipped and re-trained to take on the RUF. In Sierra Leone, the UN continued to negotiate with the RUF for the release of the personnel still held captive. A significant number of personnel were released. UN and British forces launched an extraction operation on 15 July to free the remaining captives, including a British UNMO.

DLoDs and Organisational Learning

Training

As the operation took place at very short notice and Sierra Leone had not been identified as a location for a potential deployment of British forces, no specific training had been undertaken for this operation. Subsequent deployments after Operation PALLISER involved some training for preparation for the Short Term Training Team, but this falls outside the remit of this study less to say that that training was informed by the experience of those on PALLISER.

This does not mean that there had been no training in this type of scenario. There had been a series of exercises conducted by elements of 16 Air Assault in the NEO role and it was seen as a likely task for the brigade.[71] Moreover, the interaction of many of the units deployed on the ground was helped by their often being drawn from 16 Air Assault Brigade and thus they had all in general conducted this type of exercise. There was therefore a collective understanding within the land component. Similarly, the Amphibious Ready Group (ARG) has also exercised in this role.

Two elements had relatively little experience. The Joint Force Air Component Command (JFACC) was being trialled aboard *HMS Illustrious* and was in the process of being stood up. It proved in this case less successful than hoped partly because there was less of a need to create a coordinated air picture within the context of this operation and this added an extra command level.

The other inexperienced force element was the ORLT deployed with Brigadier Richards in command. At the time this deployment was seen as a test of the concept and all those interviewed agreed that it worked. The ORLT formed the basis for the JTFHQ with additional staff deployed from London and also Ghana where there was a British training team at the peacekeeping centre. The ORLT had conducted a number of exercises prior to the deployment and thus drew upon a relatively experienced team.

The ORLT/JTFHQ concept worked because the idea had been appropriately thought through, resourced, and contained an experienced core team. It highlighted the benefit of local expertise – in this case that of Brigadier David Richards, Commander of British Forces in Sierra Leone. The key to the success was Richards' ability to utilise his network to maximum advantage.

The training to understand the peculiarities of the region, climate, etc., was poor. Some units had trained in East Africa where the British Army retains strong links, particularly in Kenya.[72] However, there was a definite loss of knowledge of how to operate in West Africa. The one area that received particular prominence in the press was that of Tropical Medicine. But the issue was more widespread. Some residual knowledge remained through various Defence Attaches and those who had served as UNMOs but they had not been de-briefed to help provide a context. It is worth noting that 42 Cdo utilised the

[71] Interview of Lt Col. Ben Baldwin by KCL.

[72] http://www.mod.uk/DefenceInternet/DefenceNews/TrainingAndAdventure/UkkenyanAgreementABoostForArmyTraining.htm

knowledge of the Nigerian Battalion of UNAMSIL's understanding of the country to help provide the context into what was usual and unusual behaviour.[73]

Equipment

As with training there was no equipment specifically acquired for this operation, even under an Urgent Operational Requirement, because of the short notice of the deployment. From the interviews conducted there appears to have been a general expectation that the communications would not work very well, and that was to be expected. Most argued that, to a degree, this did not matter given the capabilities of the RUF, and there was an expectation that people would work around the weaknesses of the system.

In terms of communications, a number of 'work arounds' were used, in particular, the use of Liaison Officers was highlighted as important and to a certain degree the Special Forces and their communications provided the glue that held the system together. Moreover, the proximity of many of the units at Lungi International Airport meant that recourse could be made to face-to-face communications. In the short term 1 PARA also 'borrowed' a number of sat phones from UNAMSIL and the general provision of satcoms was increased at both unit level and at JTFHQ following the operation.

The overall communications capacity provided by government satellites was insufficient and recourse had to be made both to US military, and commercial operators, to provide the necessary capacity. There have been a number of steps taken to improve this capacity with the most recent being the PFI contract for Skynet 5.[74]

Secure communications to the senior civilian defence leadership were problematic. At the time the Secretary of State for Defence lacked secure mobile communications. This caused some problems as he was in his constituency when the crisis began and the department did not think it wise to make the public gesture of returning him to Main Building.[75] Non-military government departments also lacked secure communications infrastructure.

There was an interesting difference in the capacity of 1 PARA and 42 Cdo in developing the information picture. 1 PARA were more directly dependent on the JTFHQ for the intelligence picture. 42 Cdo, as part of the ARG, were directly linked to the Naval Task Group information network and were able to retain a rear link to this to provide additional information.

Overall, a good information network was created. In general there were positive comments at the availability of assets ranging from a LEWT team to Nimrod R1s. This enabled a significant picture to be built up. Nevertheless, there were some capacity constraints, for example, some R1 support was initially lacking because of other ongoing operations, and the Harrier GR7s were not deck qualified and unable to engage in a reconnaissance role. Alternative solutions were provided in this operation with a limited capacity provided by FA2s and also through the use of handheld digital cameras from Gazelles.[76] This was helped by the lack of a significant SAM threat, which allowed the relative free deployment of helicopters forward, including SKAEW2s off the coast.

[73] Interview of Major Andy Muddiman by KCL.
[74] http://www.mod.uk/DefenceInternet/DefenceNews/EquipmentAndLogistics/ThirdBritishBuiltCommunicationsSatelliteWillGoIntoOrbit.htm
[75] Interview of Lieutenant-Colonel Nicky Moffat by KCL.
[76] Interview of Major Andy Muddiman by KCL.

More generally, Brigadier Richards could take a number of risks because of the equipment interoperability of 1 PARA and 42 Cdo and the picture he had of what was happening. For example, 7 RHA 105mm guns were not deployed to Sierra Leone because of the amount of space they and their accompanying ammunition took up within a constrained air bridge. Instead, when Richards called for artillery to be deployed to Lungi International Airport after the attack on the Pathfinders at Lungi Lol, the guns deployed with the ARG was lifted ashore and handed over to 7 RHA much to the annoyance of 29 RA.

There were limitations posed by the airlift, and the lack of a C-17 capability at the time was evident.[77] This meant that reliance had to be placed on chartered Antonovs. Fortunately a number of Ukrainian ones were available at the time, but their use did place limitations on what equipment could be moved forward. The other limit was self-imposed. Lungi International Airport could take wide-bodied aircraft and the UN used such aircraft. However, the RAF insisted that the threat environment meant that the air bridge between Dakar and Lungi International Airport should be limited to appropriately configured C-130s and precluded the use of VC-10s and Tristars direct to Sierra Leone. This resulted in a delay some equipment and capabilities entering the AO. It also raised issues about what could be transported on commercial rather than Service transport.

Added to this was a degree of confusion over the prioritisation of deployment with a need for improved clarity between the component elements. For example, the SLE of 1 PARA deployed on light scales and there was some delay in getting their rucksacks back to them in theatre. Both the CO of 1 PARA and 42 Cdo acted in the LCC role and were thought of highly by their own personnel.

In one respect, the weakness of the strategic lift was offset by the self-deployment of the Chinook force. A number of interviewees saw the Chinooks as a force multiplier capable not only of supporting UK forces in terms of lift, but also potentially in CASEVAC and other support roles. They facilitated the evacuation of EPs at the beginning when the road route was not secure and later supported the reinforcement of UNAMSIL units forward. Their one weakness lay in their inability to be air-to-air refuelled.[78]

Chinook test-firing flares in Sierra Leone
Source: http://www.boeing.com/news/releases/2000/news_release_000724n.htm

Personnel

All those interviewed praised the leadership of Brigadier Richards. He clearly understood and conducted the campaign at the operational level, recognising the political constraints that he and the British High Commissioner were under and achieved a successful outcome. He created a network that enabled him to maximise his advantages and put his opponents at a disadvantage.

[77] http://www.raf.mod.uk/equipment/c-17.html
[78] Interview of General Lord Guthrie by KCL.

He demonstrated the value of the commander knowing the region and the key players, particularly on the political side. He was able to develop an appropriate force package and engage all lines of operation to achieve the desired end state of the government. This raises the question for the UK of whether the on-call 2 star commanders should be given specific regions to specialise in.

Both the Royal Marine and Parachute Regiment communities are relatively small and have strong links with the Special Forces community. Working relations and information sharing between PARA, 42 Cdo RM and Special Forces were therefore good. There was a high level of trust between the various commanders and their units. For example, 1 PARA were content to rely on SF for information distribution because they knew them and therefore did not feel they would be surprised.

The ORLT was effectively trialled and came through as a clear success that has now been used on a number of subsequent operations. There is a clear value in having a team of experienced officers capable of making a rapid assessment as an instrument for facilitating an operation.

Troops arriving at Lungi International Airport
Source: http://www.raf.mod.uk/news/archive/2000/palnews.html

It is important that such a team has an appropriate SF component to develop an early picture. Director, Special Forces (DSF) highlighted the lack of time between SF and 1 PARA deployments and felt that there is generally a need for an earlier SF deployment to assist in the construction of the information picture prior to deployment.[79] In this case this was partially compensated for by Brigadier Richards but only to a certain extent. More importantly the initial focus on the Non Combatant Evacuation Operation 1 PARA gave the SF some time to begin to build this picture.

What is clear was the lack of an understanding across government of how military operations work. Other departments of government, particularly DFID had no appreciation of MOD SOPs/requirements. For example, ministers initially tried to insist that land component stayed on the runway to protect it and was concerned to find them over 20 miles in land. Moreover, at least in DFID's case, they had no provision for dealing with highly classified materiel and lacked the secure communications of other departments. This meant that they had to leave their building to attend secure meetings, or to read secure information, which was inefficient and caused some time delay.

Information

The initial information picture was sparse, for example the Chinooks deploying from RAF Odiham lacked maps of the entire region, let alone Sierra Leone. Those maps that did exist were dated in terms of the up-to-date information they portrayed. The ARG was fortunately able to use its initial pause phase off the Sierra Leone coast to conduct a hydrographical survey of the harbour and the Sierra Leone River that facilitated later operations. These would have proven to be more problematic without this information.

[79] Interview of Brigadier John Holmes by KCL.

The lack of maps has now partially been overcome by the creation of an online database with rapid printing facilities. However, their accuracy cannot be guaranteed without regular updating and thus shows the importance of elements such as the Hydrographic ships.

The operation did show how quickly a picture could be built up in a relatively cooperative environment. This was facilitated by the relatively large and disparate nature of the collection assets available. It also demonstrated the value of having both technical and human sources. On the human side, information included surrendering RUF members who had elected to leave the RUF and enter the DDR process. They provided a valuable insight into how the RUF operated and the tensions within it.

The local population were keen to identify RUF and provide assistance to the British forces because they had suffered severely from previous RUF attacks. Firstly, they were able to identify some RUF members who had infiltrated through British forces. Secondly, they gave warning of the advance of the RUF towards Lungi Lol and thus allowed the Pathfinder Platoon to win a highly significant tactical battle, which proved to be a turning point in the campaign. The support of the local population was gained through the physical presence of British forces, which reassured the population with its presence, and through the population's own fear of the RUF.

Elements of UNAMSIL also provided an invaluable source. UNAMSIL had an advantage in that they had been in Sierra Leone for some time and therefore understood how the place worked and what was unusual, i.e. they could place events in context.[80] Most UNAMSIL battalions had built up a good picture of what was happening but the level of interaction with British forces depended on personal interaction with respective battalion Intelligence Officers.

SIGINT and COMINT came in through a variety of different sources and played an important part. 42 Cdo, in comparison to 1 PARA, had the advantage of the additional link to the NTG and the capabilities provided by the fleet. The case study also highlighted the value of SIGINT deployment by GCHQ to the BHC.

In general there was the capability to intercept and to a degree jam the RUF's network. The RUF used basic code words, but they this was not very secure and their operators were frequently lambasted for this. The LEWT team employed locals to listen in for them and provide translation. This enhanced the early warning network and ensured that at Lungi Lol, for example, the RUF received an appropriate reception. There were a number of other forward deployments in response to this communications capability but no contacts followed.

Brigadier Richards emphasised the importance of the information campaign from the beginning and saw it as one of his lines of operation.[81] To achieve this he used a variety of means:

- Great importance was placed on the local radio network, which was the principal source of communication across the country. Richards was regularly interviewed on it and was involved in a series of programmes.[82]

- A series of leaflet drops was undertaken. These proved successful in getting some RUF to enter the DDR process.[83] Evidence was provided for this by their arrival at various UK units clutching the leaflets.

[80] Interview of Major Andy Muddiman by KCL.
[81] Interview of Lieutenant-General David Richards by KCL.
[82] http://news.bbc.co.uk/1/hi/uk_politics/761701.stm
[83] http://www.army.mod.uk/15psyops/_sierra_leone.htm

- A series of overt coercion messages were sent. These included sending frigates up the Sierra Leone River to conduct a live-firing exercise, the use of fixed wing and helicopters to provide an air presence. The Chinooks were also used to provide live fire demonstrations using their on-board mini-guns. The mortar teams with 1 PARA regular engaged in live fire exercises and used illumination rounds to show their presence.

However, there was a degree of tension within the information campaign between the messages being sent within Sierra Leone, internationally, and at home in the United Kingdom. Partly this was intentional. Although the British government had a restricted vision of what it was prepared to continence, it was content for Brigadier Richards to exaggerate this locally to help deter the RUF, and Richards attempted to convince the RUF that the British were prepared to do anything. The problem lay in that the international press picked up these different messages and through their own networks, exposed the differences. This led to questions about mission creep being raised in the House.

Overall, the interviewees have stressed that the emphasis was on knowledge, not on information, with the idea that information went up the command chain and knowledge came down. All seemed content with the picture they had and where there were gaps they felt confident in either the early warning chain or their own abilities to react. All highlighted the value of the regular O Groups as a mechanism for knowledge transfer and stressed the value of face-to-face communications. The involvement in O Groups varied depending on role and location.

In general this was a very well resourced intelligence picture, far more than people had come to expect from training and there were several stories of the picture not always being believed because training (with inferior feeds) had developed a degree of cynicism.

Doctrine and Concepts

There was interim NEO doctrine in operation at the time. This is no longer locatable having been replaced virtually straight after Operation Palliser by *Joint Warfare Publication 3-51* which drew on the experiences taken from this operation.[84] In general, the forces deployed tended to fall back on their Northern Ireland experience and the Rules of Engagement (ROE) where there was any knowledge vacuum.[85]

More generally the Commander of the Joint Task Force (CJTF) had a vision in which he had escalation dominance and was able to control the battlespace. Some concepts and elements of doctrine were developed in situ. For example, the concept of operations for the Information Operations campaign was developed from scratch and there was no established doctrine for this area that, from a British perspective, was still in its infancy.

Brigadier Richards identified the confidence of the local population and UNAMSIL forces as critical vulnerabilities, and once the NEO had been completed, he focused on securing these confidences whilst undermining any cohesion within the RUF. He aimed to paralyse RUF's decision-making structure as far as it existed and achieved that from what little evidence there is.

Overall, this was an effects based campaign that remained focused at achieving the strategic and operational goals.

[84] 'Non-combatant Evacuation Operations', *Joint Warfare Publication 3*-51, Joint Doctrine and Concepts Centre, August 2000.
[85] Interview of Lieutenant-Colonel Ben Baldwin by KCL.

Organisation

The British system for managing such operations via Cabinet Office, MoD's Crisis Management Organisation (DCMO), and Permanent Joint Headquarters (PJHQ) had been developed over the previous decade and drew on the experience gained from both the 1982 Falklands Conflict and 1991 Gulf War. On the ground the British High Commission and JTFHQ effectively acted as the political and military leads and worked hand-in-glove with one another. The availability of the BHC as a facility proved invaluable, as did the facilities at Dakar.

This operation was the first practical test of the ORLT/JTFHQ concept. It clearly worked and enabled Brigadier Richards to engage at the military-strategic and operational levels from the start rather than build up from the tactical level. In particular, the inclusion of an SF element was an invaluable means of beginning to develop the information picture.[86] A number of weaknesses were identified which have since been addressed.

The main organisational weaknesses were threefold. Firstly, the control of the air bridge in terms of prioritising incoming loads could have been improved. There were clear weaknesses in coordinating the various elements deploying by air and deciding which order they should be deployed in. Here the links between JTFHQ forward and rear, PJHQ and No.2 Group needed to be improved.

This was complicated by the ad hoc nature that permeated the deployment. A number of units deployed well within their NTM in order to meet the needs of Brigadier Richards. This meant that a number of short-cuts were taken which resulted in a degree of confusion and loss appreciation of who and what had been deployed and when this had occurred.

The second weakness lay in the use of the JFACC. By chance this was on board *Illustrious* when the operation began and when it arrived in theatre it sought to takeover and manage the air picture.[87] In most operations this would have been important. However, the relatively few air assets being used and their type – mainly helicopter – and the fact that there were other assets to coordinate with – UN and GOSL - meant that this became an overly bureaucratic exercise and after a few days it was effectively abandoned. The key point to make is whilst there is a need for templates to conduct operations at times these need to be put aside because of the particular circumstances of an operation.

Overall, the operation was facilitated by the familiarity of many personnel involved with one another. This also partly explains the success of the ORLT concept. This allowed short cuts to be made at times in the command chain. For example, the deployment of C Company 1 PARA on Sunday 7th May was facilitated by the knowledge of 1 PARA's personnel with the SF community. In this case the CO SF Standby Sqn and the CO SLE were friends, having served in the Parachute Regiment together.[88]

There was also a shared mentality within the land assets deployed. They expected to go and act on short notice. For example, the command group of 1 PARA had shared the operational deployment experience of Kosovo together. This mentality was evident by the way in which various units within 16 Air Assault Brigade were able, at extremely short notice, to backfill when other units proved to be unavailable. This mentality was also shared by the ARG. It also highlighted the flexibility of their respective organisations. For example, 1 PARA was able to absorb D Company from 2 PARA into its midst without any apparent problem.

[86] Interview Brigadier John Holmes by KCL.
[87] Interview Wing Commander Rich Mason by KCL.
[88] Interview Lieutenant-Colonel Ben Baldwin by KCL

The third element was the lost knowledge of Sierra Leone and conducting operations in West Africa. The issues relating to tropical medicine in the region have been picked up and measures taken to try and alleviate this. However, the reasons behind this lost knowledge have far wider pertinence for the Ministry of Defence especially when both civil servants and military person are frequently rotated between tasks. Brigadier Holmes summed up the situation by stating that Operation BARRAS would have at a minimum been extremely difficult without the working knowledge developed during Operation PALLISER and Operation SILKMAN.[89] This ranged from the conduct of helicopter operations to appreciation of what can and cannot be achieved during a normal day in West Africa because of the weather and an understanding of the cultural context. Retaining this knowledge is the challenge within an organisation that inherently focuses on what is going on today and tomorrow and suffers from resource scarcity.

Infrastructure

The infrastructure can be divided into four localities:

United Kingdom

It is standard operating procedure to use South Cerney as the air movements centre for land forces being deployed by air. Its proximity to both Brize Norton and Lyneham was important, but it was also the way it is used for briefings and updates to shift mindsets from peace to the operational environment. It proved also useful in bringing different elements together. In this case it worked well with 1 PARA and its accompanying assets meeting at South Cerney where they were able to draw on pre-positioned equipment prior to flying out.

FMB Dakar

This French base in Senegal was an invaluable means of deploying forces forward to within range of Sierra Leone before they were called forward. Moreover, as there was concern about which air assets could be landed at Lungi International Airport, the RAF were able to use some of its other aircraft, such as its Tristar and VC-10 fleet, to bring forces forward and maximise the use of the appropriate Hercules aircraft into Lungi.

For the maritime dimension, it provided a useful means of linking resources in the UK to the ARG via the Fort class boat running a shuttle service. Thus a number of personnel who did not embark at Gibraltar were forward deployed by air to Dakar and then helicoptered onto the Fort boat for onward dispatch to the ARG.

Both the local authorities and the French forces proved very helpful, and the British Defence Attaché (DA) was able to calm tensions when necessary. The DA was also able to provide an important conduit between British forces and the Senegalese and French governments/militaries.

ARG

The availability of the ARG and its self-sustaining capability proved vital for this operation for a number of reasons. Firstly, it allowed Brigadier Richards to run a number of calculated risks with 1 PARA's deployment. He knew that in travelling light they could seize the initiative but this would leave them vulnerable to because of ARG deployment to provide logistical backup. This was reinforced by the use of a FORT boat in the shuttle supply role.

[89] Interview Brigadier Holmes by KCL.

Secondly, the ARG was also used as a means of providing rest and recuperation for forces deployed ashore. Once the situation had begun to stabilise 1 PARA's companies were all rotated through Ocean.

Thirdly, the ARG also allowed the ground footprint to be minimised. This had a number of advantages. As the RUF seemed keen to capture a British soldier at one point, it helped minimise the number available for capture. At home the political leadership were also keen to minimise the deployment for the domestic audience and the ARG allowed them to talk in terms of troop numbers in country knowing they had a back up.

Fourthly, the ARG was able to compensate for the very poor infrastructure ashore because of lack of investment and civil war that had blighted the country over the previous decades. By its very construction it contained all the appropriate logistical back up. For example, once the Chinooks were deployed there was an element of downtime between their standard spares packages being used and the system for replenishment getting underway. In the case of the ARG all the Sea King HC4s had full serving support and as they were not deployed ashore their tempo of operations could be sustained at a higher level. More significantly the crews arrived in theatre fresh and not tired after a long self-deployment.[90]

Sierra Leone

The availability of the British High Commission (BHC) was a very important asset. For example, it meant that a team from GCHQ could deploy quickly and operate from a base prepared with secure communications. It could thus serve as an initial base for the ORLT/JTFHQ without the need for them to start from scratch. It also served as a venue for a series of functions that supported the emphasis on a return to civil society.

The importance of Lungi International Airport has already been stated. It provided the key entry/exit point until other airfields could be improved.

Logistics

The availability of equipment was generally very good, partly due to the fortunate proximity of both the ARG and *Illustrious* groups to Sierra Leone. This highlights the value of training in the Mediterranean as a halfway house to the Gulf and also part way towards Africa.

In some respects this operation played to the relative advantages of both air and sealift. The rapid deployment by air ensured that Lungi International Airport could be secured and thus as long as the political will remained, the British forces could not be driven out of the country and UNAMSIL could remain unreinforced.

Nevertheless there were a number of logistical issues. The speed of the operation and the limits of the United Kingdom's then airlift capacity, matched to constraints placed on what assets could be used where meant that there were bottlenecks and delays getting personnel and equipment in theatre. The lack of a strategic lift capability (this was pre-C-17 or A400 days) meant that reliance had to be placed on contracting for this facility from the civil market. Fortunately during the first week a number of Antonovs were available for use. If the RAF was in possession of its 4 leased C-17s, then the airlift would have been significantly faster. The situation was compounded by a degree of loss of control of the airlift as elements competed to get their people and equipment deployed.

[90] Interview of Wing Commander Rich Mason by KCL.

The airlift also confirmed that some equipment transport by air was inappropriate. For example, 7 RHA light guns actually reached Dakar but were not deployed forward. The problem lay in transporting the accompanying ammunition, which, because of its weight, quickly filled aircraft. Using 29 RA light guns was far more efficient.

The ARG provided a self-contained and much needed backup for the air deployment. The use of the Fort boat to shuttle extra provisions, etc., ensured a maximum forward presence without overly stretching the logistical arrangements.

Network Strengths and Weaknesses

Appropriate Connectivity

The operation in Sierra Leone was a great success in almost all of the information measures that would typically be applied. Official military records, professional commentary at the time, and respondents and interviewees in this study all reflected a well-connected, well-led force that gathered and utilised all available information.

The operation saw considerable use of satellite phones, and strong and robust links established between the Joint HQ on shore and the Maritime and Air Component HQ afloat. The close social and informal ties amongst the specific units, as well as the networks developed by those units with the locals, were seen as major factors. Figure 8.0 shows some very strong links both within the Joint Force, and with locals. These responses are particularly strong, and imply an organisation that had a very collective mindset, as well as a liaison approach that was very was very successful with the locals.

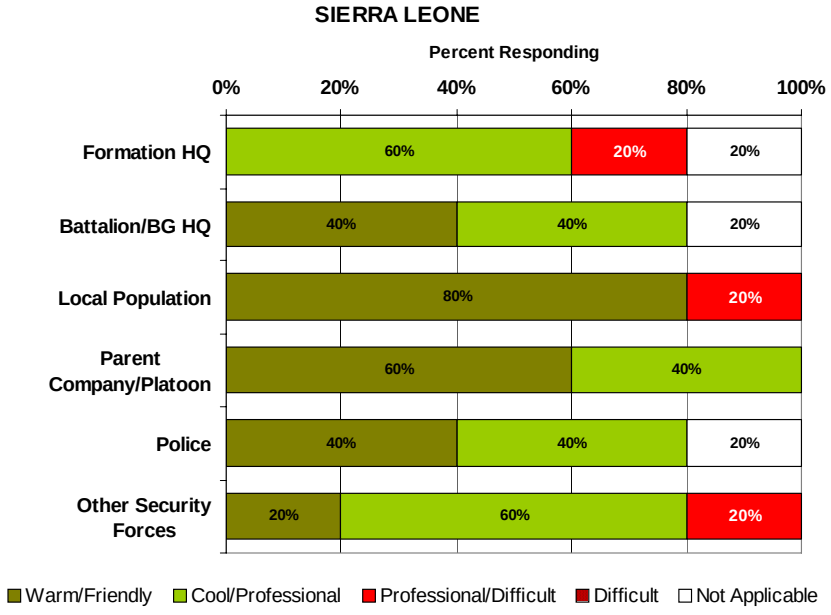


Figure 8.0 – Relationship mapping in Sierra Leone

At the strategic level, it is worth noting that the MOD/DFID/FCO planning group was more connected than is sometimes the case, and that despite some problems with secure communications in Whitehall, the planning group was well networked and effective. The existence of the British High Commission was

critical, and the coordinated engagement of several Departments in information gathering underlined the value of a comprehensive and coherent approach to such crises.

For PJHQ, this operation provided the first opportunity to fully test the OLRT concept, which proved very successful. The combination of experience and background that a small OLRT can provide, allied with the speed and agility with which it can move, indicates that it is highly suitable as the first (non-SF) reconnaissance component to be deployed. All the evidence from Sierra Leone supports the fact that having such a group form the basis of the JTF HQ provided a highly effective framework on which to build.

The task force also enjoyed reliable and secure communications to London, and developed close links with in-theatre personnel from other departments. The result of this was a very cohesive group of informed decision makers in Sierra Leone, briefing London through regular and secure channels, leading to improved tempo and an information advantage over the RUF, and exploitation of their fractured C2 construct.

The operation also provided a rare example of a joint ISTAR activity that was rapidly and quickly put into place. RN, RAF, and Army assets were all coordinated through the JTFHQ, and limited resources sensibly used. The existence of the ARG offshore provided some very welcome additional connectivity and resource to the CJTF himself[91].

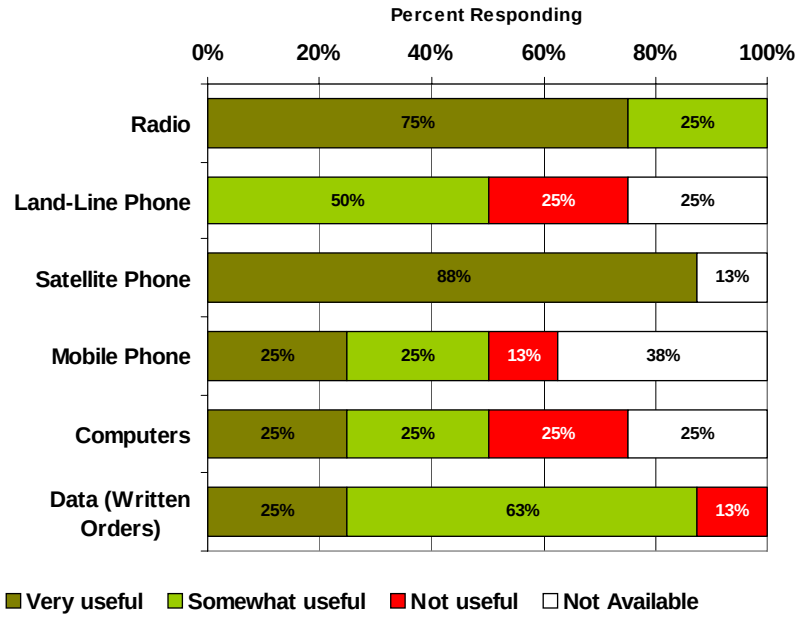


Figure 8.1 – Utility of Communication Systems

The network was seen to be robust enough in theatre given the opposition, but HF and VHF links to the Unit HQ from sub-units in the jungle were poor, and in the instance of the Pathfinder contact with the

[91] General Richards, Interview

RUF, the news had to be passed via a borrowed sat phone.[92] Figure 8.1 illustrates the respondents view on the utility of different systems.

It is clear from respondents and interviewees that Media Operations were seen as mission critical from the outset and this operation, more than any of the earlier ones examined, provides evidence of a knowledgeable and imaginative approach. Even at sub-unit level the importance of information operations was emphasised, and contact between service personnel and locals encouraged. In relation to connectivity, this approach recognises the third element of what Clausewitz called the 'trinity' of Government, the Armed Forces, and the people. It is notable that the value of such a network approach was recognised by forces in Sierra Leone from the very beginning.

Information and Intelligence

At the strategic level there was a high level of intelligence achieved through speaking to the political and UN players in theatre. However, it was not always possible to relate to, or predict, tactical activity given the unstructured nature of the RUF, and the strong likelihood that they themselves were unsure of their future intentions from day to day.

What the strategic and operational overview did provide was the parameters of what was likely to happen, and so planners could focus accordingly. Figure 8.2 demonstrates the confidence that respondents had in sharing information internally, albeit within a relatively small joint force concentrated in space. It nevertheless reflects a comfort with tools and procedures that clearly allowed for generally good levels of information exchange.

An additional advantage offered by a greater grasp of the available information is that it allows for more accurate briefing of the local population, and any British citizens (or 'Entitled Personnel or EPs' as they were known in Sierra Leone) in the area. As such EPs often play a key role in indigenous populations, keeping any NEO down to the smallest possible scale helps with civil coordination activity.

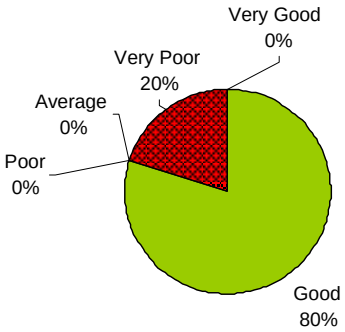


Figure 8.2 – Ease of information sharing amongst UK forces

The presence of MI6 and GCHQ operators in theatre, and their close links with the Joint Force, provided for higher than usual levels of information. In addition, the High Commission and its staff provided much to the Commander in particular.

[92] Major Craddick, Interview

The intelligence gathering elements in theatre achieved a good balance between security and availability, recognising the limited RUF capability to intercept anything other than non-secure HF and VHF traffic. A UK Light Electronic Warfare Team (LEWT) was used to good effect in conjunction with interpreters to listen in on the RUF nets.

One of the other strengths of the High Commission was its location on the outskirts of Freetown, offering an accessible fixed point for those locals who sought to assist the British, and there were many who provided essential information through 'walk ins' to the Commission compound.

Shared Understanding

Within the small force concerned, there was considerable confidence at the levels of common understanding achieved, and very little negative commentary. Sub-units felt informed by their Unit HQ, and at a force level the ground elements of one of the Parachute Regiment battalions, a Royal Marine Commando, and a Special Forces component were familiar with each other's operating procedures and had a broadly common approach to life.

Maximum use was made of the understanding that the UN had of the RUF and its intentions, with commanders exploiting both databases and the experience of those in theatre to build a picture of the RUF and try to establish likely courses of action.

Vital, yet again, were the existence and contribution of liaison officers, who moved apace between local bodies, the UN, and the force elements to gather and share information.

The close proximity of the force, at least the force ashore, was a feature that supported establishing a common picture in a joint force. Nevertheless, the effort to communicate, and the ethos of sharing information were driven from the top down. The capacity to fuse, exchange and exploit multi-source intelligence products was a feature of the joint HQ, and included, on occasion, real time monitoring and the use of HUMINT from other Governmental Departments.

Also a feature was the collaborative planning between the JTFHQ and the Joint Force Air Component HQ on HMS Illustrious. Through the use of common planning processes and an established Command battle rhythm including faster briefing and update loops, the tempo of operations was increased while the footprint ashore was minimised.

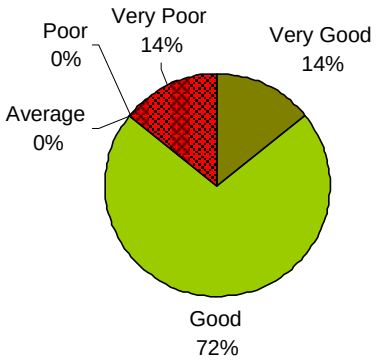


Figure 8.3 – Ability of UK forces to establish common understanding

Agile Groupings

At the strategic level this operation demonstrated the value of a comprehensive and coherent approach, supported across government, and free of departmental agenda and idealism. The confidence that this base of support gave the CJTF led to a more agile approach.[93]

Respondents and interviewees rated the agility of their own units very highly, and considered themselves capable of responding rapidly to any change in the tactical situation on the ground. Figures 8.4 and 8.5 illustrate the confidence most respondents felt in both areas. The same group experienced occasional difficulties in coordinating with others, but over 60% reported this area also as being 'very good'. The trust that the force had in itself, its leaders and each other was reported as being a major factor. The familiarity which the sub units and units had with each other leading to reduced planning and rehearsal time, and increased confidence and pace.

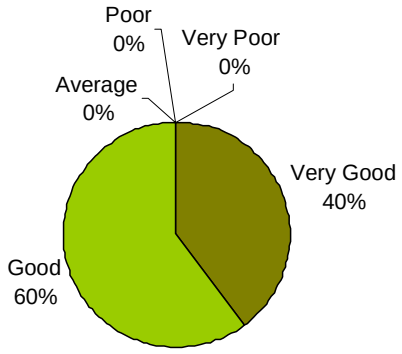


Figure 8.4 – Ability of own unit to adapt on the ground

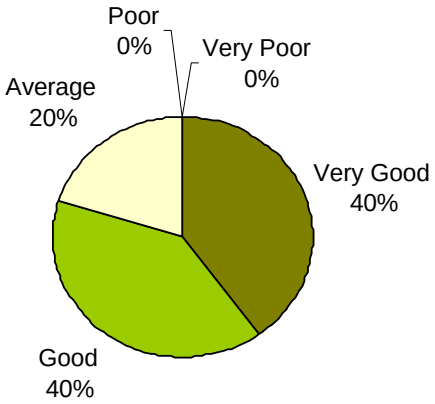


Figure 8.5 – Ability of own unit to respond to changing situation

[93] General Richards, Interview

As has already been mentioned, deployment of the OLRT for the first time in anger was seen as great success, with particular emphasis being carried forward on the need for the team to be multi-skilled, as well as representing different service backgrounds and experiences.

The Special Forces that deployed were equipped and trained to be as fast moving and decisive as possible, and were particularly well integrated with the rest of the force, again partly as a function of size and scale. Likewise, Government Communication Officers were deployed and provided excellent coverage of rebel communications, all of which contributed to knowledge, and therefore agility.

There is evidence that the independent, self-synchronising nature of the force elements involved added organically to the C2 agility that the CJTF enjoyed. Various respondents reported a growing ease with the mission command and maneuverist approaches as experience demonstrated that they would not be penalised for taking decisions on their own.

CHAPTER 9.0 IRAQ

Historical Sketch

In the aftermath of the terrorist attacks on New York and Washington, DC on 11 September 2001, the George W. Bush administration of the United States came to see Saddam Hussein's alleged manufacturing of weapons of mass destruction (WMD) as a threat to US national security. Though this issue had been on the United Nations (UN) agenda since the 1991 Gulf War, repeated attempts to disarm Saddam Hussein had seemingly failed. Following 9/11, the US administration grew increasingly concerned with the possibility of a technology transfer between Saddam Hussein's regime and a terrorist organisation such as al-Qaeda. To forestall such an eventuality, the US and the UK lobbied for renewed and more forceful action to dismantle Iraq's WMD programme. On 17 September 2002, UN weapons inspectors were redeployed to Iraq; if action was to be taken against Saddam Hussein, it would be predicated on the findings of the inspectors and the degree of openness and cooperation tendered by the Iraqi regime.

The initial reports of the weapons inspectors were inconclusive and divided the UN Security Council between those supporting military action (the US and UK) and those who wanted to give the inspectors more time before resorting to war. With UN negotiations ongoing, the US and UK massed military forces in the Gulf. Facing an apparent deadlock at the Security Council, President Bush offered Saddam Hussein an ultimatum to leave Iraq or face military action. The following day, 19 March 2003, a US-led coalition of states (that included the UK) launched military operations against Saddam Hussein's Ba'athist regime. Within six weeks, the Coalition controlled most of Iraq and Saddam Hussein had been toppled.

Political power now rested with the Coalition. Authority was gradually transferred to Iraq via a series of increasingly representative political bodies. Finally, on 28 June 2004, the US Administrator Paul Bremer handed over power to a newly appointed Iraqi Prime Minister, Iyad Allawi, which led the way to national elections in January 2005.

Coalition forces remained in Iraq to help stabilise the country and train Iraqi forces. They were faced with an insurgency resisting the US-UK presence and the emerging Iraqi state and security structures. The insurgency was composed of Iraqi nationalists, Ba'athist sympathisers, foreign jihadists and criminal elements. Because the Sunni minority had enjoyed a privileged status under Saddam Hussein, it felt disempowered and particularly excluded from the changes underway. The insurgency was therefore most intense in the Sunni-dominated heartland of Iraq, which was also the American-administered zone.

UK troops were put in charge of the Shia-dominated south and faced a more permissive environment. The UK-controlled Multinational Division South East (MND (SE)) did however witness several spikes in insurgent activity, resulting from increasing Shia frustration at the perceived lack of political and economic progress. Such discontent fuelled local Shia militias, most notably the Mahdi Army, led by Moqtadr al-Sadr. Violence against British forces peaked in and around the southern town of Al Amarah between March and August 2004, and from 2005, a more sinister, externally backed insurgency seemed to be developing.

In November 2004, British troops of the Black Watch Battle Group were deployed out of area to a forward operating base on the eastern bank of the Euphrates in support of US forces. Op BRACKEN placed the Black Watch firmly in the volatile US sector and under the authority of a US Marine Corp Marine Expeditionary Unit.[94] The opportunity for comparison with Black Watch operations in MND (SE) and the experience of operating with US forces in a US sector makes Op BRACKEN an important element of this case study.

DLoDs and Organisational Learning

Training

Adequate time for good training was considered an essential prerequisite by all those interviewed. The opportunity to practice core skills of weapons handling, tactics, techniques and procedures were stressed as the foundation for the operation.[95] The opportunity to train adequately was variable, with several contingents being deployed on short notice.[96] These units were reliant on in-theatre training packages, which were conducted at the discretion of Brigade Headquarters (Bde HQ).

The Black Watch redeployed for Op BRACKEN without adequate training. Task-specific training was difficult, as the 1 BW adopted a Bde Reserve role and had to adapt to the changing environment. Thus training had to be focused, but maintaining a high state of readiness while waiting for specific tasks proved challenging.[97] In this instance the training worked, which was testament to common doctrine and training, a period of mutual education, and strong relationships with other units.

Pre-deployment training prioritised high-intensity combat, but was later supplemented by specialist training based on the particular challenges of operating in Iraq. After a slow start, the Iraq-specific training was widely seen as increasingly responsive to the lessons learned on the ground. A good feedback loop was formally instituted early in the post-conflict phase, which helped to incorporate lessons into later pre-deployment training.

The training included a cultural-awareness package and historical-background briefings on Iraq. This cultural dimension improved with time. Pre-deployment training was informed by past LIO experience in unfamiliar environments and emphasised the need for rapid transitioning between postures. Interviews, battle diaries, and Post Operational Reports reveal a shared view that force protection is potentially self-defeating when it comes at the expense of 'hearts and minds' activities.[98]

Ideally, respondents felt that a three-month period should be dedicated to pre-deployment training. This training would normally include a bespoke package from the Operations Training and Advisory Group (OPTAG), standard battalion-level skills and drills, as well as (ideally) Bde-level exercises and Division-level scrutiny of the Bde HQ to ensure drills are slick across the command. OPTAG's largely technical and legal training packages were regarded as valuable. OPTAG evolved out of the old SOTAT and NITAT (Northern Ireland Training Advisory Team) packages, which may explain the initial weakness of its cultural elements.

[94] 1BW/BHQ/321 (08/12/04) – 1 BW POR For Operation Telic 4.1 (Draft)
[95] See for instance Interviews with Brigadier David Rutherford-Jones & Maj J Coote by KCL.
[96] 20th Armoured Bde POR, Operation Telic III, 20X/G3/3028/9, 04/07/04.
[97] Interview with Maj. M Ewing by KCL.
[98] For instance, interviews with Brigadier Rutherford-Jones & Maj C Antelme by KCL; 1 BW interviews by KCL.

Brigade Commanders were afforded considerable latitude to design and run the training programme and have increasingly taken on the responsibility for providing cultural and social aspects as well as the core martial skills.[99] Outgoing Bdes often work up incoming Bdes with senior Bde HQ staff (Bde Cdr, COS, DCOS, etc) acting as mentors for their successors during exercises. Realism was perceived as key to good pre-deployment training, it should place subordinate officers and men under intense pressure for limited periods.

Advance reconnaissance, properly conducted unit handovers and continual in-theatre training were considered essential. Company (Coy) Commanders normally conducted between one and two weeks of reconnaissance prior to deployment, operating alongside the individuals they would take over from. Ideally, the Bde Cdr and COS, all Battle Group (BG) Commanders, Coy Commanders, and even Platoon Commanders should make extended visits to theatre, preferably in relevant (BG HQ, or sub-unit) groups, prior to specific training. Once deployed, in-theatre training must continue and performance must be periodically reviewed.

Officers built up strong relations with their predecessors; these social networks generated regular updates and advice on appropriate behaviour in widely divergent circumstances. Joint patrolling during handover periods was seen as important tactical preparation. Such an introduction to all key local contacts was frequently cited as crucial for the pursuit of longer-term strategic objectives.

UK forces were keen to engage in longer-term peace-building activities despite significant periods of instability. The inculcation of tactical flexibility was commonly held to lie at the heart of a successful operational tour. Past experience was also regarded as important, with Northern Ireland and Bosnia frequently cited.

British troop working on computer in Iraq
Source: http://www.newseditor.co.uk/looking%20for%20trouble%20picture%20index.htm

Equipment

The overall standard of British equipment was high. The asymmetric tactics of the insurgents targeted the conventional forces' weaknesses. The insurgents remained difficult to identify and attack. Enhanced networked capabilities assisted in identification, responsiveness and battlespace management, particularly in disseminating accurate and timely intelligence, gaining situational awareness and in seizing and retaining the operational and tactical initiative.

Tactical communications were sometimes a source of frustration. Troops had to rebroadcast and relay messages and certain pieces of equipment were less than reliable. Operational communications occasionally suffered from lack of US-UK interoperability. Strategic communications were described as "brilliant" with e-mail and telephone links to Basra and London.

The Personal Role Radio (PRR) was seen as a simple, cheap and highly effective networked capability.[100] It allowed for instantaneous situational awareness at tactical level and gave the well-trained commander the ability to react quickly and effectively. However, it clearly had range limitations and could be easily damaged.

[99] Anonymous, 3 Div HQ staff officer interview by KCL; Interview with Brigadier Rutherford-Jones.
[100] Interview with Brigadier David Rutherford-Jones by KCL.

Subjects cited the potential utility of any capability that could provide accurate and immediate intelligence concerning friendly positions, i.e., some form of Blue Force Tracker.

In addition, the prospect of greatly enhanced 'Red Force' tracking was of obvious interest though subjects were sceptical as to its utility in an environment such as Iraq, where enemy forces are typically indistinguishable from the indigenous population.

At company level and below, one finds scepticism regarding Network-Enabled Capabilities (NEC): officers warned against assuming that such assets would be equally useful across the conflict spectrum. The key for NEC technology must be its utility as an enabler for more effective action. Intelligent human interpretation will always be necessary, placing a natural limitation on NEC. Officers displayed a general concern that over-reliance on NEC would be inappropriate in the circumstances of Iraq though they did *not* dismiss its utility or potential if it could be rapidly integrated into their operations.

The use of *Warriors* and *Challengers* sent a strong statement of intent and military capability and response if challenged, on the other hand *Snatch* vehicles (less well-protected armoured land rovers) sent a different, more understated message that some felt was not always helpful.

The key concern (below Bde level) regarding C^4ISTAR was related to whether UK forces had the infrastructure and budget to buy, develop and exploit the right capabilities. UAVs were generally seen as highly useful.

Personnel

All primary and secondary sources praised the quality of service personnel across the spectrum of activities and role specialisations. Quality was linked directly to training and recruitment. Accounts stress the forces' agility, flexibility, initiative, and morale.

Experience taught that all deployed personnel needed to develop a flexible mentality and situational awareness. Commanders felt it was sometimes difficult to get this across to non-combat forces. The quality and duration of training is crucial in this respect.

The knowledge of different units' respective capabilities varied. As BGs are composites of multiple units, a firm grasp of their relative strengths and weaknesses is essential. The lack of such knowledge sometimes prevented assets from being fully utilised.

Information

Secret intelligence gathering remained problematic. The complex nature of LIO and the cultural divide between Iraqis and non-Muslim Westerners made it difficult to create a strong intelligence network.

The forces lacked the sort of established framework and context they came to expect and rely on in Northern Ireland, which made it difficult to act upon whatever information was available. In contrast, officers operating higher up the command chain argued that their subordinates were not aware of how often tactical operations were informed by good and advanced intelligence. Certainly, theatre-level intelligence was regarded as good and as vital for achieving the soldier-diplomat function.

Emphasis was placed on human intelligence. The establishment and maintenance of social networks was imperative, at least until a strong indigenous intelligence capability could be developed. Engagement with the local community was stressed as probably *the* key source of information. Coy Commanders expressed

interest in capabilities that could improve the cultivation and retention of local support: a robust, integrated database of contacts and social networks. At present, successor units are reliant on their own relationships with predecessors for such intelligence.

Enhanced NEC could significantly improve the ability to disseminate lessons learned and ensure that all the appropriate elements of training are covered (without undermining Div and Bde Commanders' ability to tailor their own training packages appropriately).

Communications were often inadequate at the tactical level, especially during engagements. An enhanced ability to communicate both horizontally and vertically during combat would be hugely beneficial. Current trialling of *Bowman* in Iraq was viewed as an exciting prospect.

Information flows were described as variable. Barring the problems experienced on the tactical level, flows were generally good between levels within MND (SE). A lack of appropriate IT at Bde and BG level sometimes complicated the transfer of classified intelligence.[101] Vertical and horizontal communications were cited as good. Information flows in all directions worked best when social networks complimented formal infrastructure, though the ability to combine formal and informal information networks was seen partly to be a function of size.

Technological difficulties meant that clear, robust, and responsive C^4 infrastructure and networks were sometimes not in place between contingents and HQs. C^2 arrangements for the passage of convoys through different areas were regarded as unclear. Generally, however, C^2 was seen as better than most respondents previous experiences.

UK-US communications were good, though complicated by variable security clearances when other powers were involved. British defence spending must prioritise continued compatibility with US systems if the UK is to retain its status as an integral coalition partner. Likewise, the US must consider the ability of key allies to remain interoperable if it wants to operate effectively within a coalition.

Mixed information flows meant that UK forces tended to watch developments in US areas for trends rather than receive coherent information about them. Likewise, US forces transiting MND (SE) sometimes experienced unnecessary difficulties due to communications failures. Gen. Ridgeway stressed the desirability of a 'Single Intelligence Battlespace', with the concept of information being passed to all levels as quickly as possible.[102]

MoD is looking at ways to restructure deployable HQs to better utilise ISTAR (such as Project Roberts). Despite the perceived necessity for enhanced information-management networks, participants in this study were keen to emphasise that this *should not be achieved at the expense of UK forces' distinct approach to LIO*. Past experience in LIO has illustrated the importance of the human dimension; the technical aspects of NEC could and should complement this notion.

In the case of the BW, the compressed timeframe of the Dogwood deployment and insecure environment hampered 1 BW's ability to conduct intelligence-led operations. Patrols had insufficient time to generate the information necessary to generate intelligence. Force protection therefore guided the majority of operations.[103] 1BW eventually went out and sought information through a variety of means, including methods practised by UK forces in previous LIO.

[101] 1 Mech Brigade POR.
[102] Gen. Ridgeway, interview, 05/08/05.
[103] B Squadron, 1st QDG, Op BRACKEN POR

Doctrine and Concepts

UK forces benefited from their ability to engage with the local population, escalate force rapidly, and then re-engage with the local population almost immediately. This ability to 'smile, shoot, smile'[104] is a classic component of the British 'hearts and minds' approach. Dedication to this principle was more intuitive than doctrinal.

There was no formal delineation between counter-insurgency (COIN) and peace-support operation (PSO) doctrine at the tactical level. Doctrine was not used to determine actions. Good training was cited as engendering tactical flexibility.

The value of doctrine lay in its adaptability to circumstances. British COIN and PSO doctrine are inherently broad, framing principles rather than narrowly prescriptive rules based on previous experiences. Officers with experience in different LIO are cautious about drawing too many parallels between them. The utility of current UK COIN doctrine lies instead in the six principles, precisely because they are generic and their application is flexible.[105]

Core doctrinal concepts were valuable in informing action at the tactical level. Principal among the concepts were the i) manoeuvrist approach, ii) maintenance of the aim, and iii) mission command. The three concepts encouraged i) flexibility of mind, ii) a consistent understanding of main effort, and iii) an emphasis on decentralised decision-making and delegated authority.

The overarching concept of the Comprehensive Approach was viewed as potentially important, but as failing at present. Cooperation with NGOs and coordination with government departments remains problematic in Iraq. Maintaining security was critical. The newly created Post-Conflict Reconstruction Unit (PCRU) has the potential to bridge the gaps between UK government respondents[106], but will need political and financial investment.[107] NEC could be helpful if it allows stronger cross-department information sharing and the development of better physical and social networks.

Organisation

The coalition in Iraq was an *ad hoc* arrangement, comprising diverse national contingents with different levels of experience of working together and variable degrees of interoperability. Problems manifested themselves in several areas such as technological compatibility and common understanding of working practices and trust. UK-US cooperation was comparatively smooth, though the pace and price of change is making it problematic for the UK to keep up.

Coalition forces expressed satisfaction with the organisation of the Multi-National Force-Iraq (MNF-I): the US takes primary responsibility for the majority of the country and the UK acts as the senior supporting partner, and as an interface with the other coalition contingents placed under its command in MND (SE). However, access to information about military-strategic policy or even tactical intelligence was sometimes inadequate, particularly for those operating at the tactical level and in MND (SE) (where contingents were often unfamiliar with the core aspects of the US approach to stabilisation operations in Iraq). As tactical action can have strategic effect, MNF-I's downward flow of generic strategic guidance may have to be improved.

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[104] CO PWRR
[105] For instance, Dr SE Griffin and Lt Col I Thomas, Seminar on the Principles of COIN Doctrine, ACSC, 23/02/06.
[106] Granville-Chapman, Gen Sir Timothy, Interview with PA Consulting; Dutton, Maj Gen, Interview with DCBM/J6, 27/10/04.
[107] Ridgeway, *op. cit.*

Communication between sectors, contingents, and even units, were variable throughout MNF-I. Organisational shortcomings were usually overcome once exposed. From the British perspective, the continued employment of liaison officers in US and Multinational HQs was seen as essential for the promotion of coordination and common understanding. Liaison officers are one of the best examples of how social networks can complement formal institutional networks.

Force structures within MND (SE) seemed to work well. C^2 arrangements were generally good, though technical problems persisted at the tactical level and operational interface. Increasingly well-developed feedback loops appear to have boosted the responsiveness of the strategic level with regard to sensitive subjects such as the changing of ROE.

The use of Battle Groups was seen as inherently flexible, allowing a relatively small force to respond rapidly and dominate its battle-space when necessary. Deployment strategies varied from Bde to Bde, raising interesting questions about the strengths and weaknesses of thinner deployments across wider areas, or the concentration of force on vital ground.

Infrastructure

Infrastructure, as defined in the UK Defence Lines of Development (DLOD),[108] is not the focus of this study, and little was picked up from the interviewees and respondents from the Iraq operation.

Logistics

Post-conflict operations in Iraq have fairly predictable requirements and are not prone to the same degree of logistical pressure as the build-up to, and sustainment of, high-intensity war fighting. However, the long-term requirement to provide logistical support not only for the immediate physical needs of deployed troops, but in support of wider reconstruction efforts has its own attendant problems and will eventually buckle under the strain if not properly addressed.

From the UK perspective, Iraq has confirmed the efficacy of the Joint Force Logistic Concept, which has increased supply agility. Though NEC definitely has potential to assist asset visibility (the addition of a simple tracker would be adequate), one interviewee was sceptical of the heavy focus on technology, regarding it as a 'distraction'.[109] In essence, "behavioural aspects are more critical and the softer areas more significant – conflict remains an art rather than a science…. The supply chain was conceptual as much as physical".[110]

Network Strengths and Weaknesses

Appropriate Connectivity

At the strategic level there was considerable evidence of cross-Government incoherence. The different departments involved in developing the strategy had significantly different views and objectives, resulting in directives and plans that were contradictory and lacked any symbiosis or potential combined effect. This lack of coherence and cohesion lasted a long time into the operation, and was felt most in the early post-combat phase where the transition from military tasks to infrastructure and civil administration

[108] JDCC, Concepts to Capability: Defence Lines of Development, (MOD: Shrivenham), 13/04/05.
[109] Interview with Col J Cowan by KCL
[110] *Ibid.*

support required the closest possible relationships and connectivity. In the case of Iraq the social network was limited and fragile as a consequence of departmental politics and agenda.

At the tactical level, connectivity was much improved over previous operations, and a COTS system was rapidly procured to replace the Ptarmigan secure radio coverage in theatre. This allowed for reliable and secure communications between formations HQs and the units, and allowed the Ptarmigan system to be refurbished for further use in a manoeuvre environment. Figure 9.0 records the relative value of each of the communications systems, with mobile phones proving extremely reliable for non-secure communications.

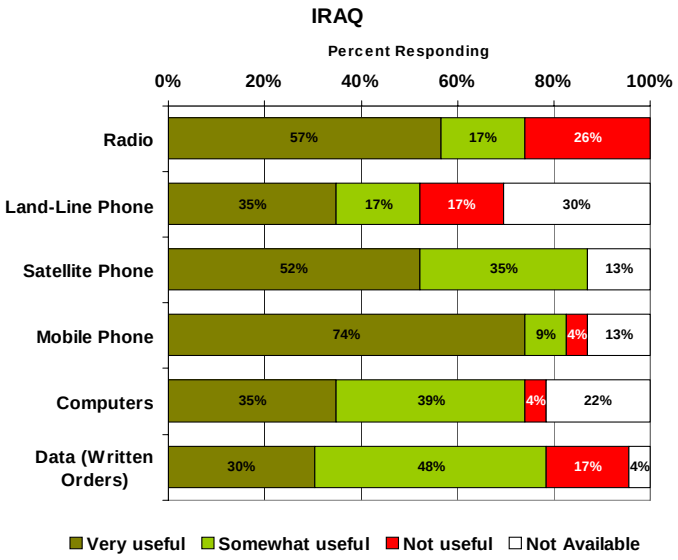

Figure 9.0 –Utility of communications systems in Iraq

An additional area of concern was the limited social network, and certainly the limited influence, that existed between the US and the UK as the junior coalition partner. Interviewees based in Basra were often surprised by directives that would appear in MND South West, but which had clearly been some time in the planning in Baghdad. Evidence from interviews and respondents indicates various clashes in the operating culture of UK and US staffs, with the UK personnel being unused to such directive control. There was a good link at strategic-operational interface in Baghdad, with the US Commander and his UK Deputy maintaining a close working relationship. Successive UK Deputies felt able to influence decision-making and to contribute effectively, and liaison officers were seen as invaluable.

However, communication with US forces was perceived as more variable. UK forces tended to watch developments in US areas for trends rather than receive coherent information about them. This may be due more to the nature of the environment and problems gaining accurate and timely intelligence than any specific communication/networking failure. However, there were instances of serious communications breakdowns especially with US forces transiting through UK areas. For instance, only a few hours after a major engagement between the PWRR and insurgents in Al Amarah in April 2004, a US convoy was ambushed as it went through the town. No prior notification of movement was given and US forces were unaware that they were transiting during such a period of tension.

An area of improvement was in the coordination of joint ISTAR activity. For the first time the national intelligence gathering agencies of the UK and the US were providing direct input into Brigade—rather

than Divisional level—decision making. This raises interesting questions about compression of command and the role of Divisional HQ in the intelligence cycle if this model continues. Figure 9.1 illustrates the difference a decade has made in the location of intelligence activity:

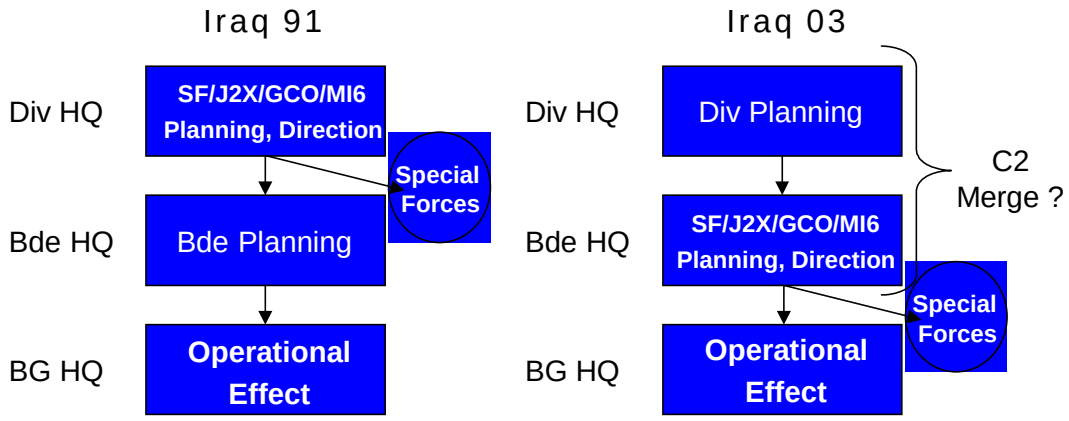

Figure 9.1 – Command Compression in UK formation HQs

It is worth noting that where the decision is made to locate a divisional level HQ well away from an urban area in order to increase levels of force protection, there will tend to be a continuing need for certain agencies to be closer to the population. Consequently, agencies will attempt to co-locate with the next level of command if it serves their purpose.

Information and Intelligence

A common theme of both interviewees and secondary sources was the comparative lack of specific intelligence in the early days of the Iraq operation. Two main reasons have so far emerged.

The first of these is the nature of operating in Iraq/Middle East – few if any of the sources expected anything other than generic information/intelligence in theatre. They viewed this as an inevitable by-product of the environment in which they were working. Even in the Shia-dominated south, it remains unlikely that Coalition forces will be able to develop any powerful intelligence network using local sources until a significant indigenous intelligence capability is re-developed. The quality of some intelligence was therefore usually viewed with caution, and Figure 9.2 illustrates the rating of local population and police information. Instead, British officers operating at Battalion level and below generally accepted that their COIN/counter-terrorist activities would be largely reactive rather than proactive and focused on developing good general relations with the community in order to achieve their mandate.

All commanders stressed the importance of cultivating friendly relations with the population by engaging with the wider community. In this regard, both Security Sector Reform (SSR) and economic and educational rehabilitation were stressed as core activities.

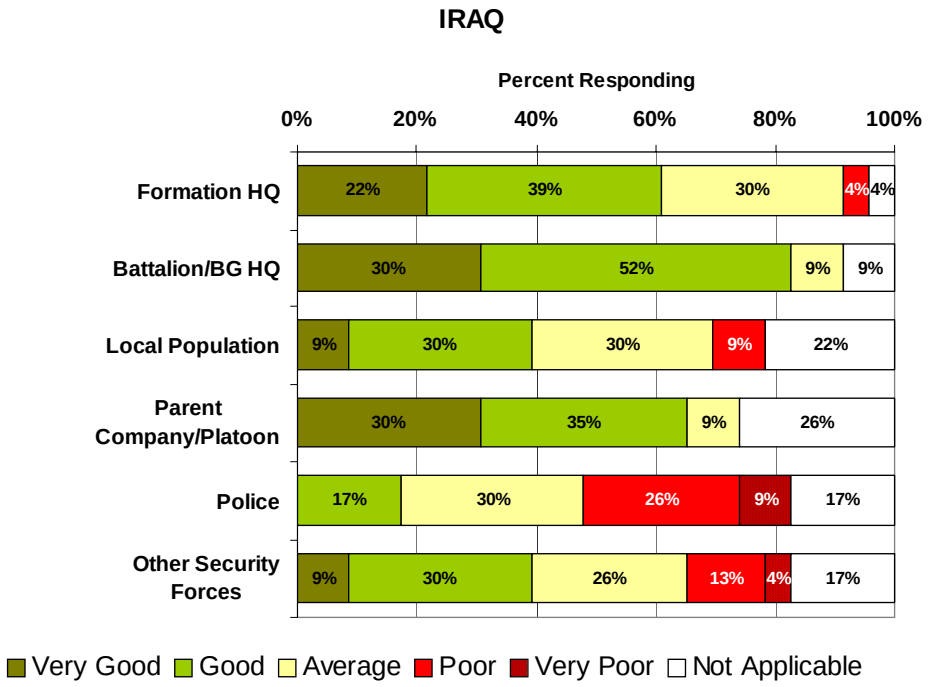

Figure 9.2 – Quality of Information from various sources

The second aspect was the limitations of technology-based intelligence in the Iraqi theatre, and the consequent reliance for much of the intelligence gathering to be achieved through HUMINT. This is especially the case given the nature of the insurgency. Without significant indigenous assets, the resourcing of this area is problematic as Anglo-Saxon characteristics stand out very clearly in such a population. The shortage highlighted the error of removing the previous police force, and its vast collection of informers.

Notwithstanding these limitations the UK forces developed an enhanced ability to identify, analyse and process information and intelligence in theatre, and with the input of national agencies at the Brigade level managed to exploit all-source information in a way that was not previously possible. Respondents report that the communications and linkages were in place for this, but the quality of the shared information was not always high. A dynamic that British forces soon came to experience was that of one tribal leader seeking revenge or retribution against another and achieving it through 'informing' on another tribe and having the British forces search the property of the other tribe and arrest its leaders. The origin and veracity of information became essential, if continuingly difficult, to establish.

It also appears the case that in the early days, and before a secure data link connected Basra and al Amarah, the units in al Amarah and the Maysan province felt that they were not being kept up to date with the latest intelligence and information, with liaison officers filling the gap and passing on the more confidential information face to face. This was a slow and ineffective method of dissemination, which improved dramatically when secure links were established between the two base locations.

It is reasonable to assume in this case that the greater connectivity and access to information that was enjoyed by Brigade HQ and co-located units may have increased the sense of isolation felt by units away

from Basra. Either short term secondments, or regular visits by national agency and formation intelligence operators would be one way of ensuring the most coherent information flow.

Shared Understanding

As has been the experience of researchers in earlier studies, at the strategic level there was very little shared understanding at the start of the operation in Iraq, and for some time afterwards. There was no clear plan beyond the military objective of taking Basra, and no articulated vision for how the various government departments would work with each other. More than that some senior officials in certain departments were briefing against each other, and significant damage was done to the trust and common approach that underpins shared understanding. Figure 9.3 highlights that less than half of the respondents felt common understanding was not what it might have been.

There were also no clear timelines. This caused considerable confusion when departments attempted to forecast budgets and resources, as well as leaving the local population with very little sense of commitment from the British. Any appearance of 'short-termism' is always dangerous in post-conflict situations, and only serves to encourage and embolden potential adversaries.

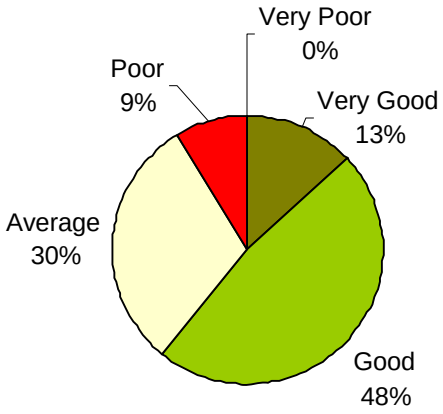

Figure 9.3 – Ability to establish a common understanding

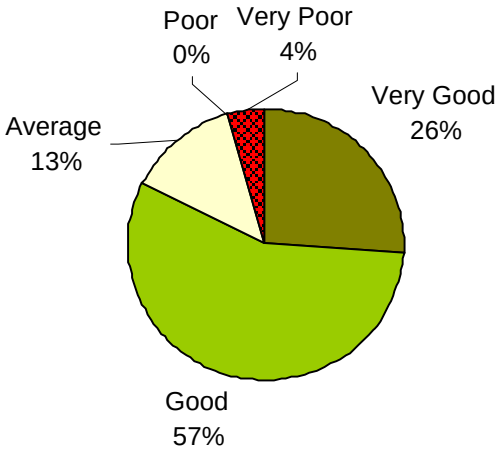

Figure 9.4 – UK Forces' understanding of current UK Doctrine

On the tactical side the changing operational level priorities issued from Baghdad confused commanders on the ground, and the last minute nature of major changes occasionally caused the Brigade HQ to lose the confidence of unit commanders if priorities could not be shaped and influenced at the UK Brigade level. To improve this position the Brigade deployed additional liaison officers to try to improve the timeliness of information in the HQ.

The secure data links discussed earlier did allow for a much-improved degree of collaborative planning, with a number of major Brigade operations being worked up with contributors from various remote locations on secure links into the principal planning group. Such operations usually had liaison officers operating in support of them, but a workable common operating picture, together with an improving ability to identify enemy trends and indicators, significantly improved collaborative performance and increased the agility and tempo of the force. Figure 9.4 indicates a strong understanding of UK doctrine amongst the force in this regard.

Finally, the shared understanding of the activities and presence of Special Forces allowed conventional forces to stay out of the way as required, and to support where necessary. Simply adding a Special Forces contribution to the common picture dramatically improved SF and non-SF relations and encouraged commanders to be much more supportive of SF operating in their area.

Agile Groupings

The area of agile groupings was one where the UK demonstrated clear and significant improvement over previous operations. Whilst Sierra Leone provided a good example of a joint force achieving rapid effect, Iraq was a case of maintaining agility over an extended period through intelligent use of technology and procedures combined with mission command.

Some unit commanders were initially cautious about the speed and frequency with which they found themselves re-tasked, but it is clear from the study that personnel at all levels became used to such an approach, and it is equally clear that the majority enjoyed such variety and freedom of action. The limited UK forces in theatre meant that senior commanders had to be highly flexible in the ‘task organising’ of units for different activities, balancing mobility against firepower, or stealth over mass.

Agility (like tempo, a relative value) was also increased by augmenting unit organizations and operations with operators from national intelligence agencies as appropriate. The Iraq operation saw the first widespread use of this approach, and it proved remarkably effective in a number of cases. The particular virtue was the focus of strategic assets at a tactical activity, and the finely tuned coordination of them at such a low level. Such an approach also had the effect of significantly widening the vista and thinking of those unit personnel involved.

Figure 9.5 shows how highly individuals rated their unit’s ability to coordinate with others, a much higher response than any previous operation. As with the later years in Northern Ireland, an improved ability to coordinate also allowed the British to use reserves more effectively.

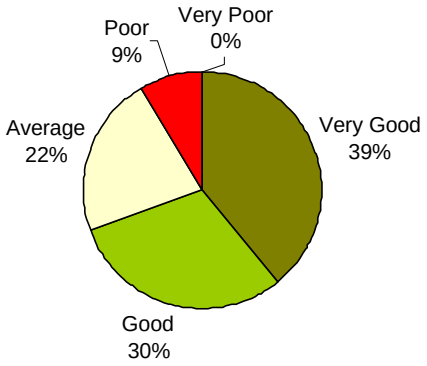

Figure 9.5 – Own unit's ability to coordinate with others

Part I

CHAPTER 10.0 CROSS OPERATIONAL NETWORK OBSERVATIONS

General

The study has been able to review elements of the network benefits chain over time, and can compare the strengths and weaknesses of a certain element of the NEC Benefits Chain in one operation over another. In reviewing and analyzing the information gathered, some fascinating insights have developed over which equipment, sources, or groupings are considered most important in each of the operations.

Appropriate Connectivity

Figure 10.0 shows the relative importance of communication systems in the operations covered. Most notable is the emergence of the cell phone as a communications tool in Iraq, despite its insecure nature. Radios and, once available, satellite phones, have retained their importance throughout all operations, re-emphasising the need for a reliable tactical Combat Net Radio, and with later reports from Iraq making encouraging reading with regard to the utility of Bowman, albeit in its limited form. Computers also seem to make clear headway as a useful communications system in the brief period between the Sierra Leone and Iraq engagements. This is mostly down to the speed with which the UK installed a Confidential and Secret level data link in Iraq, this was reliable, secure and was used as a significant aid to collaborative planning.

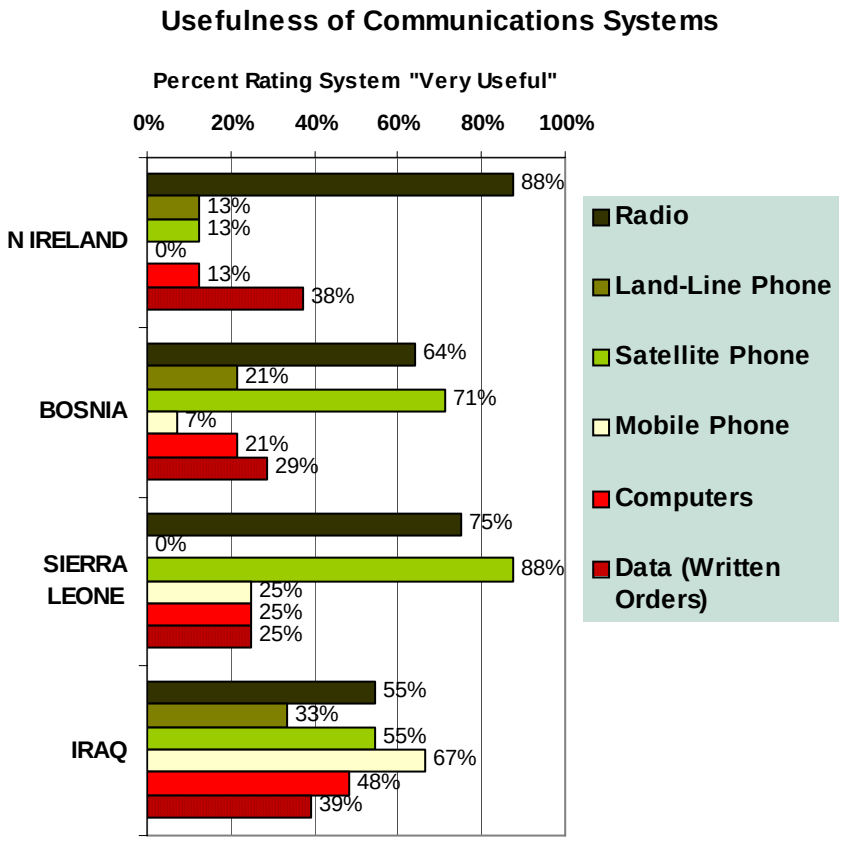

Figure 10.0: How useful were each of the following communications systems to the successful accomplishment of your mission? (Very useful; Somewhat useful; Not useful; Not available)

As shown in Figure 10.1, the quality of social networking appears to have been best during the Sierra Leone engagement, probably due to a small force, clear aim and a highly supportive and fearful local population. Bosnia and Iraq show a similar pattern, with relations generally good within British and other security forces, but with difficulties in dealings with the local police. The Bosnia engagement, however, appears to reflect a somewhat more difficult social relationships with Formation HQ. This would be consistent with the unusually independent and disparate ethos that pervaded UK forces during this operation

Overall the picture is inconsistent, with some discernable progress over time that demonstrates the value of learning, but with the variable of the attitude of the indigenous population being the major factor.

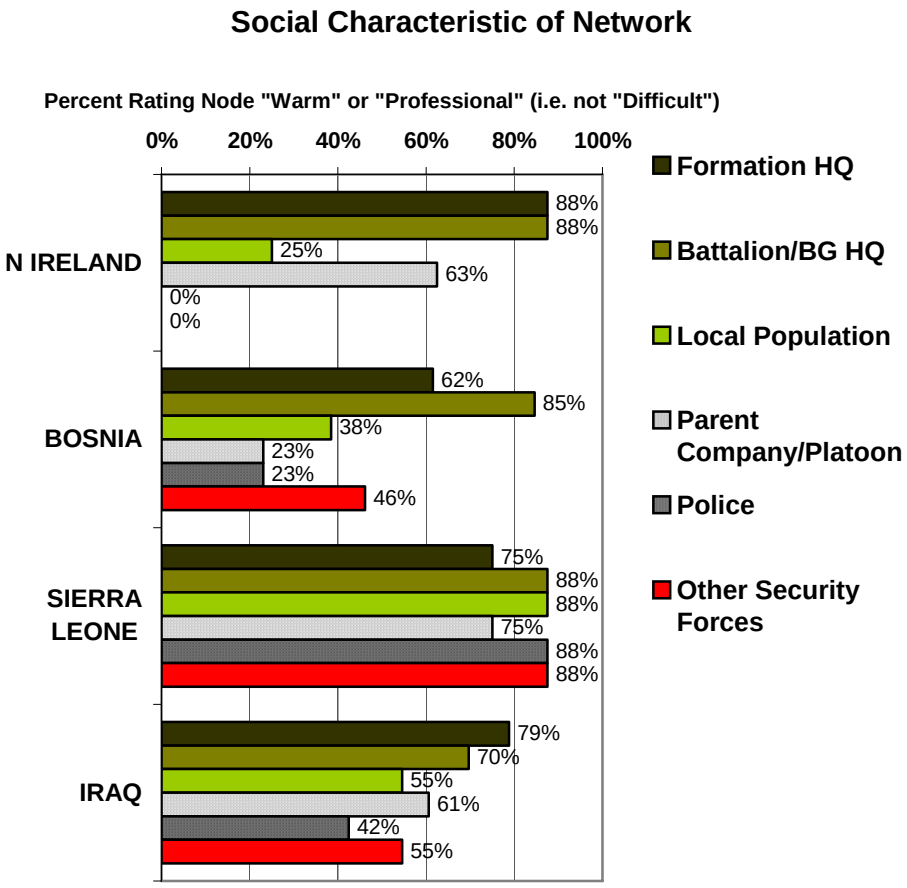

Figure 10.1: Which of the following best describes the relationship you had with each of the following people or groups? (Warm and friendly; Cool, formal, professional; Generally professional, occasionally contentious and/or difficult; Contentious and/or difficult)

Information and Intelligence

Responses to the survey suggest there were markedly more problems sharing information with other British forces during the Bosnia engagement than any of the others (Figure 10.2). Again this comment reinforces the unusual nature of the Bosnian operation, and the very high (and many said unhelpful and divisive) degree of independence that the Battle Groups sought and largely received from Brigade level.

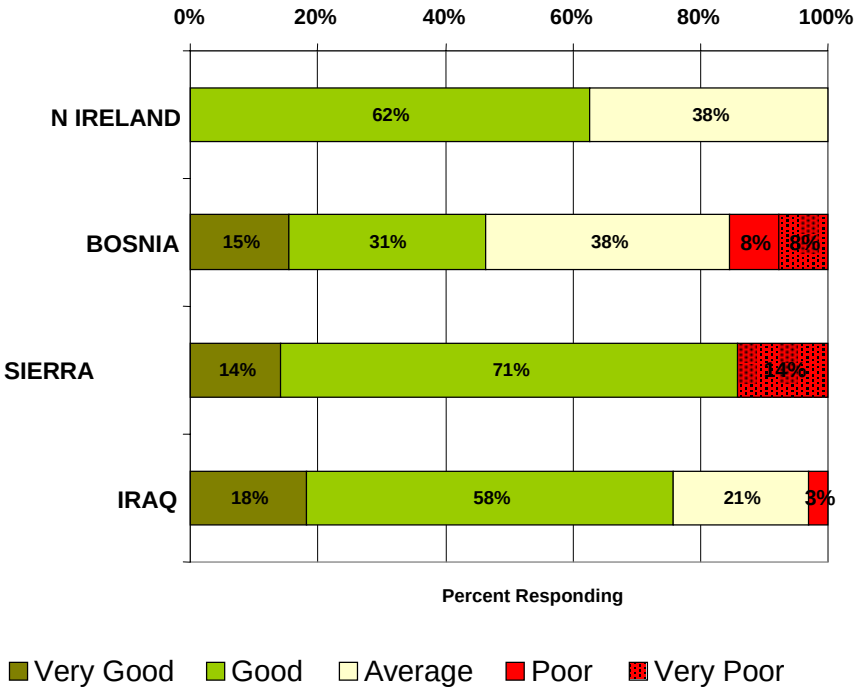

Figure 10.2: Rate the ease of sharing information with UK forces. (Very good; Good; Average; Poor; Very poor)

Whatever the limitations with information sharing inside UK Forces, that picture is much more positive than when the same question is asked of the ease with which information is shared externally. Most respondents said sharing information with other entities was to some degree problematic, with only Sierra Leone being marginally better off (Figure 10.3).

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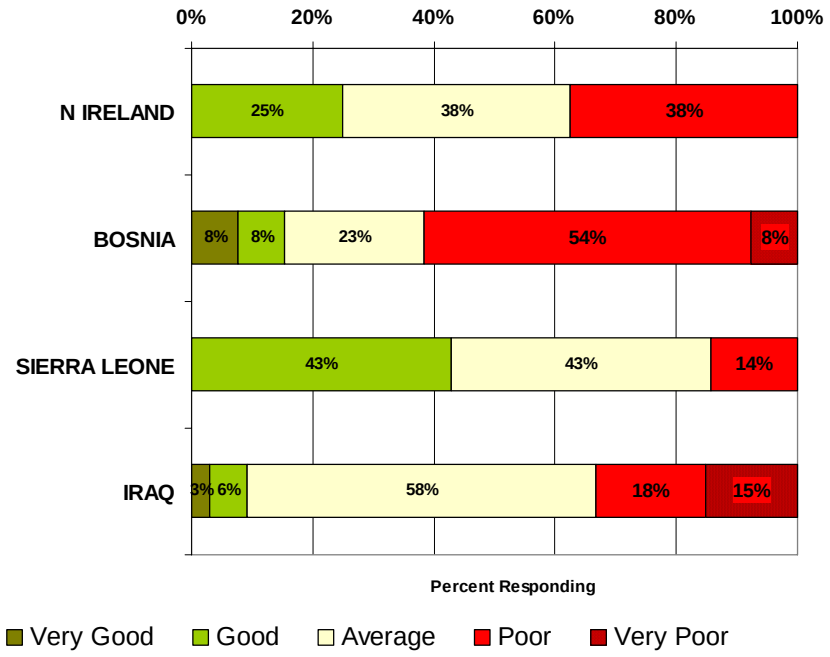


Figure 10.3: Rate the ease of sharing information with national forces, NGOs and others. (Very good; Good; Average; Poor; Very poor

When it comes to determining the benefits that information sharing provide to a unit's understanding of their battlespace, the most negative responses were from the early years of Northern Ireland (Figure 10.4). This tallies with the view that information sharing was poor in this period, and reflects the lack of tools and equipment to develop and improve situational awareness at that time, as well as the lack of political or strategic clarity.

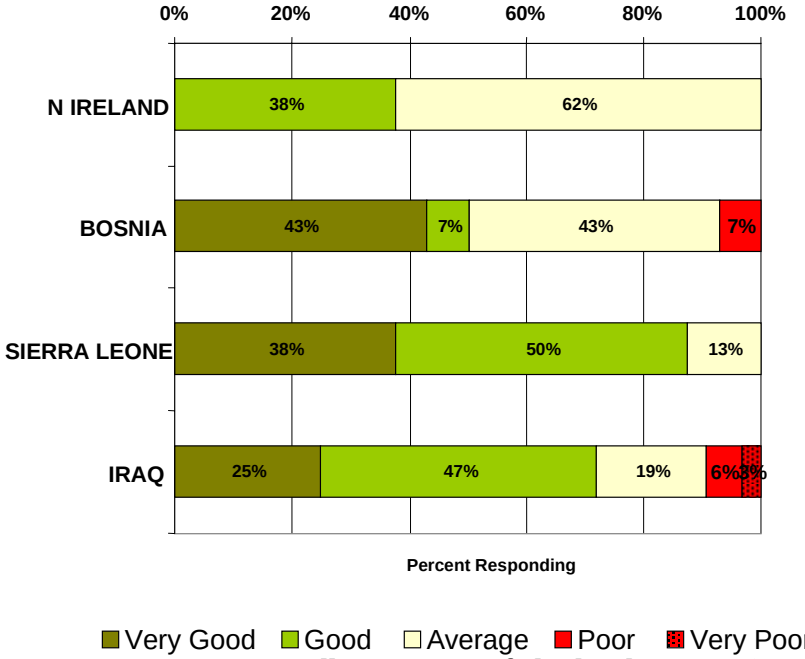


Figure 10.4: Rate your unit's overall awareness of the battle space. (Very good; Good; Average; Poor; Very poor)

There is broad agreement among respondents across all engagements that the police and other security forces were not sources of quality information (Figure 10.5). Less than half of respondents found the local population to be a source of quality information, with even the highly supportive people of Sierra Leone offering little intelligence of value[111]. With few exceptions, UK forces were deemed at least adequate sources of information. In Bosnia and Sierra Leone, the Parent Company or platoon was not rated well as a source of information, which is an interesting observation that can be understood in the case of Sierra Leone in that the Joint Force provided so much centralised information. However, it is a surprise in the case of Bosnia given the almost complete dependence on locally derived information in that operation.

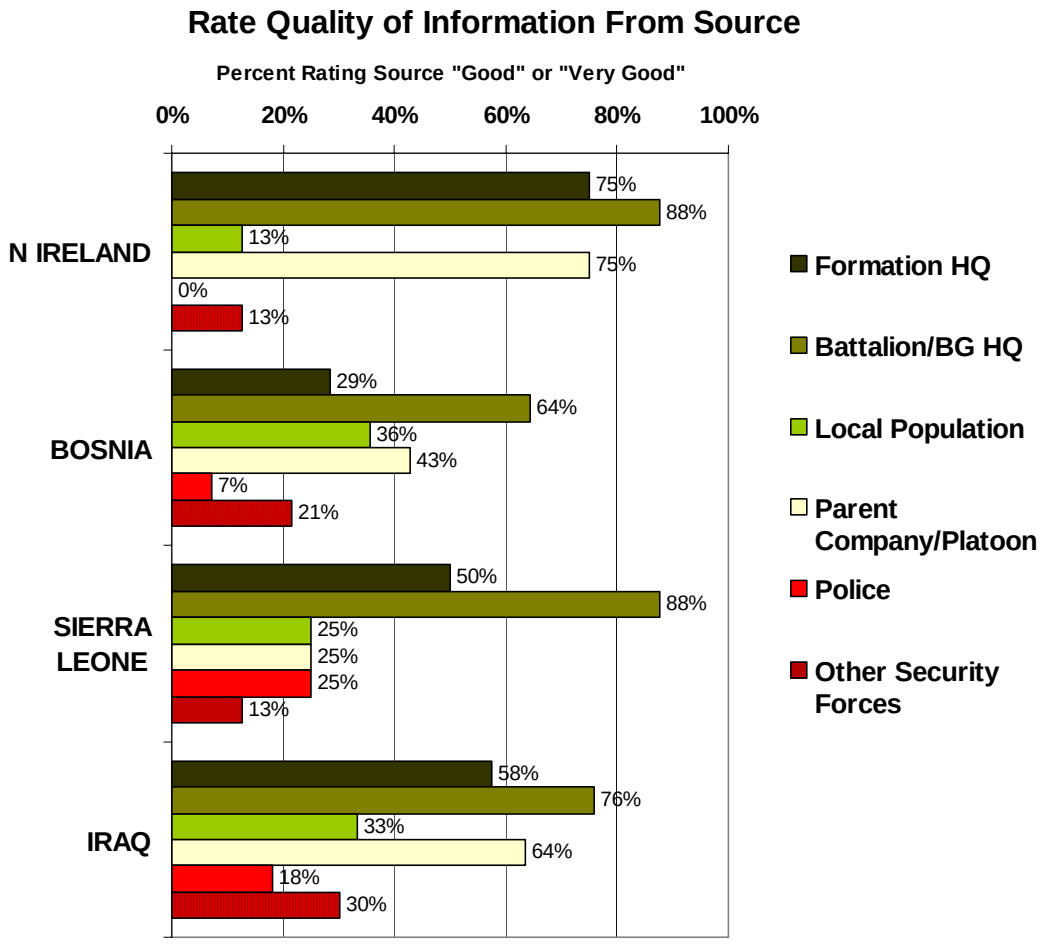


Figure 10.5: Rate the quality of information you received from each of the following sources. (Very good; Good; Average; Poor; Very poor)

Knowledge Gained Through Training

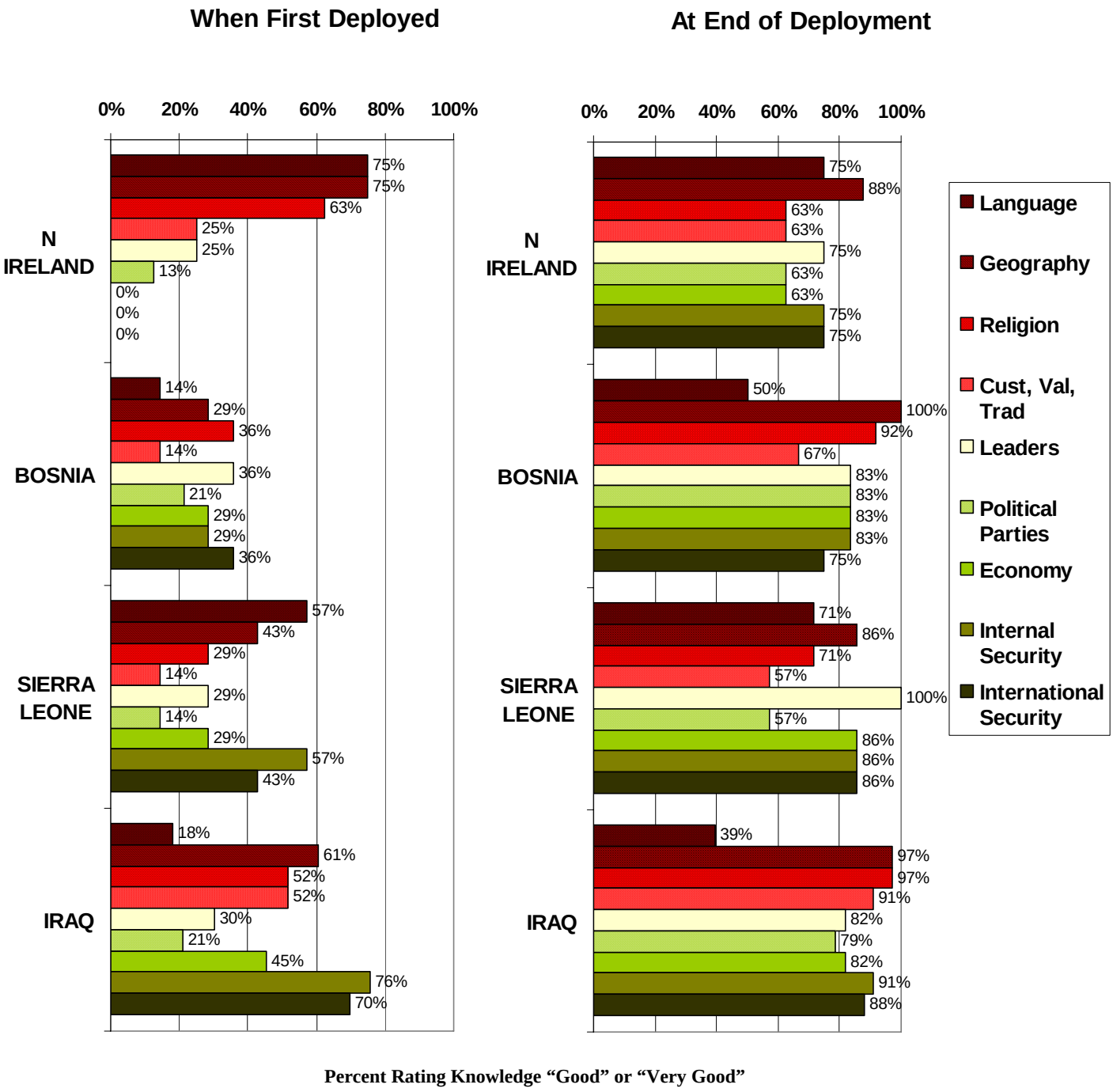
Figures on the two following pages (Figures 10.6 and Figure 10.7) illustrate the increase in knowledge achieved by respondents over the course of their deployment. With respect to knowledge of the host country there was a significant degree of learning reported in all countries.

[111] However, critical information for the rescue of the Royal Irish Regiment personnel was provided by a walk-in to the British High Commission.

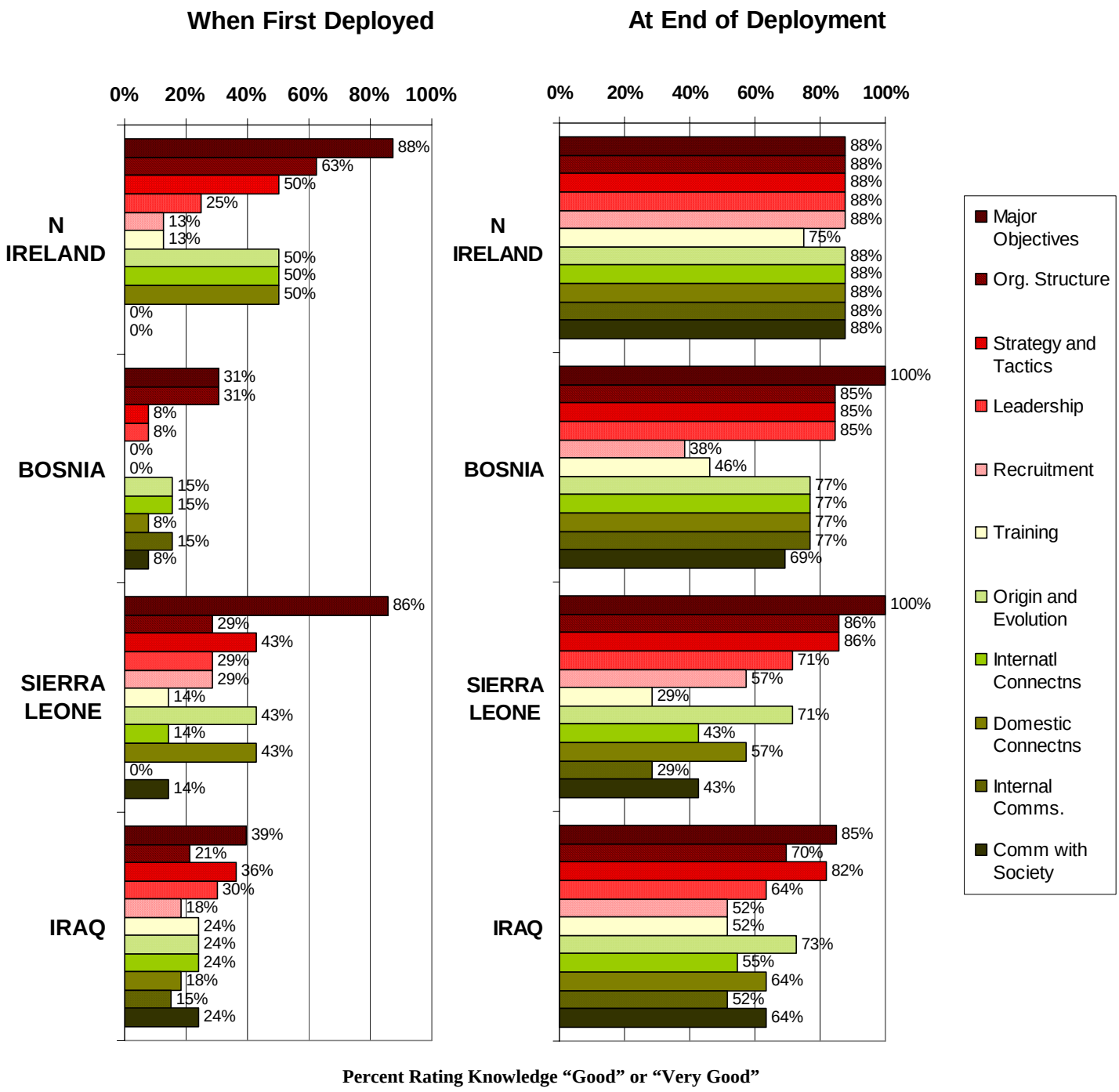
It is especially noteworthy that UK forces rate their education and understanding of local religion, traditions, culture, and values highly in each of the operations. Political learning is somewhat less complete. With respect to knowledge of the adversary, however, those serving in Bosnia were more satisfied with their learning than those who served in Iraq. This gave the less positive impression that the value identified in understanding the enemy was lost between these two operations, are at least not provided for to the same degree.

In some areas Sierra Leone reflected the least amount of learning about the adversary, probably due to the short lead-time for the operation, this was in some way ameliorated by the trust the Forces had in the strategic and operational understanding demonstrated by the strong leadership in that operation.

Despite the generally strong development once Forces were in theatre, it is impossible to get away from the implicit message of the graphs below that denote some very poor understanding in some areas *before* Forces deployed.



Figur10.6: Rate your own knowledge of each of the following aspects of the host nation when you were first deployed and at the end of your deployment. (Very good; Good; Average; Poor; Very poor)



Percent Rating Knowledge "Good" or "Very Good"

Figure 10.7: Rate your own knowledge of the adversary on each of the following characteristics when you were first deployed and at the end of your deployment. (Very good; Good; Average; Poor; Very poor)

Shared Understanding

Except for the Bosnia operation, most respondents said they were able to establish a good understanding of the situation (Figure 10.8). Sierra Leone respondents report the best level of understanding, reflecting the small size of Force, the limited objective, and the well-informed leadership in that operation. Interestingly, despite the scale and complexity of Iraq, several situational awareness tools and technologies that were beginning to come into service provided for a surprisingly high rating.

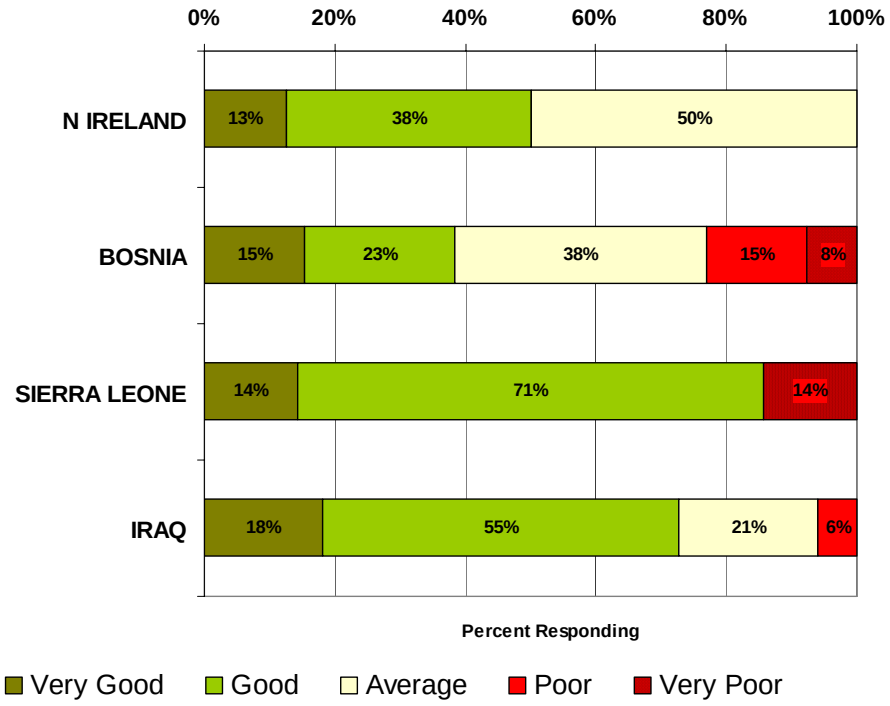


Figure 10.8: Rate the ability of key forces involved in the operation to establish a common understanding of the situation. (Very good; Good; Average; Poor; Very poor)

The majority of respondents in each operation believed they understood policy and doctrine related to the operation (Figure 10.9), though opinion was more sharply divided on whether lessons learned in the operations were passed on (Figure 10.0.1). In the case of Bosnia and Sierra Leone the problem came not with the gathering of lessons, which was done in detail, but in the passing on and subsequent accessibility of these lessons to follow on forces.

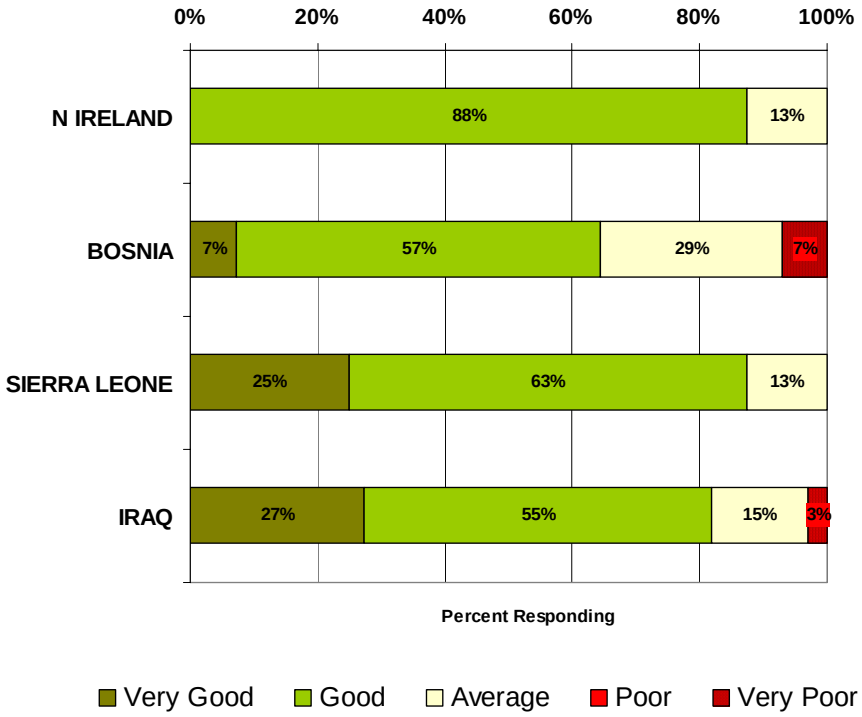


Figure 10.9: Rate your own understanding of policy and doctrine related to this engagement at the time you were involved. (Very good; Good; Average; Poor; Very poor)

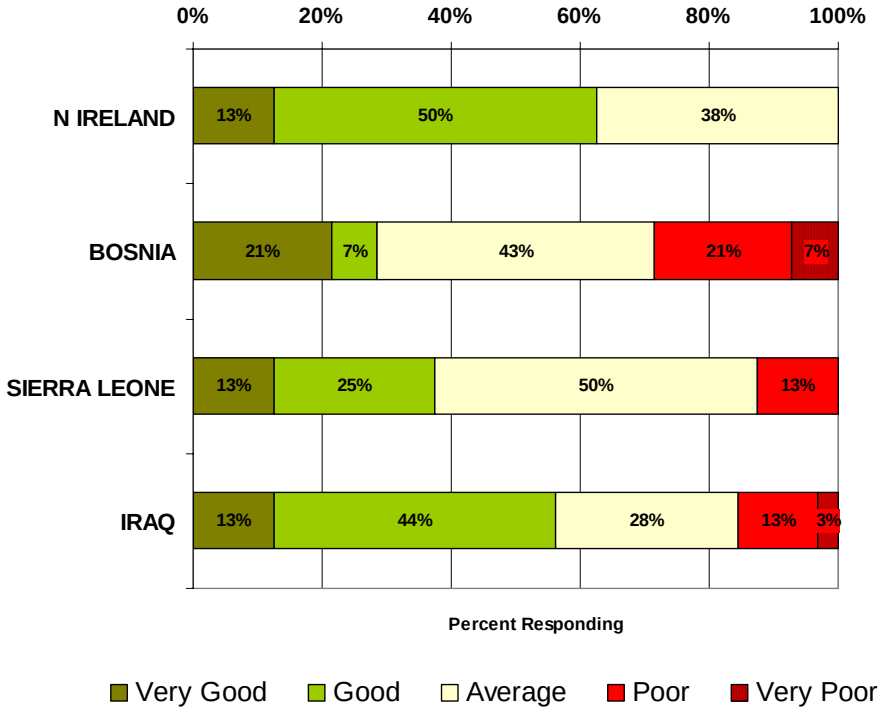


Figure 10.10: Rate the effectiveness of the military in passing on lessons learned from this engagement so they became reflected in doctrine. (Very good; Good; Average; Poor; Very poor)

Agile Groupings

Survey respondents across all operations rated the agility of their own unit highly (Figure 10.11), but significant problems emerge, most notably in Bosnia, when coordinating activities with other units (Figure 10.12).

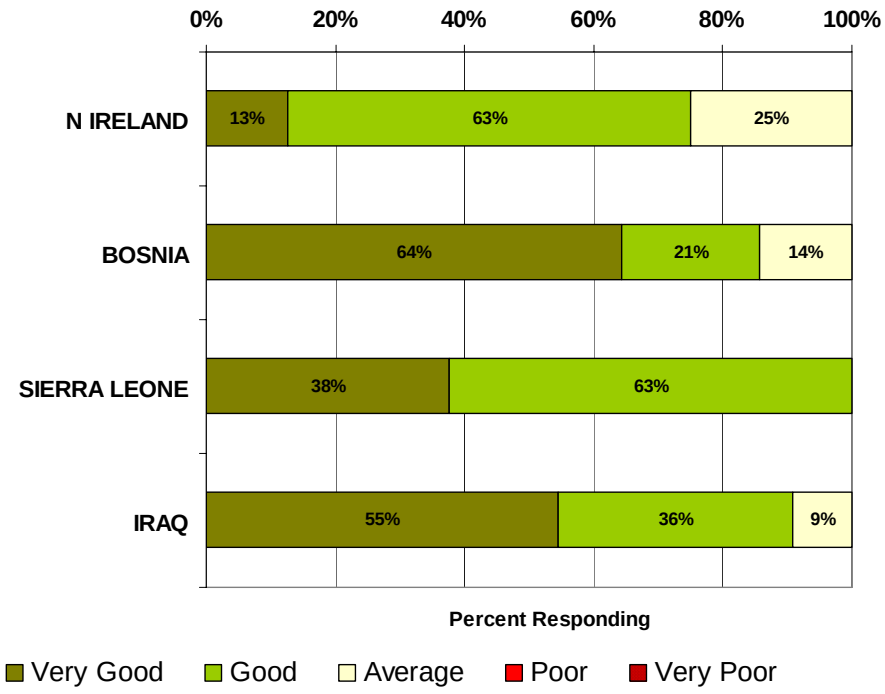


Figure 10.11: Rate the ability of your unit to adapt to changing circumstances on the ground. (Very good; Good; Average; Poor; Very poor)

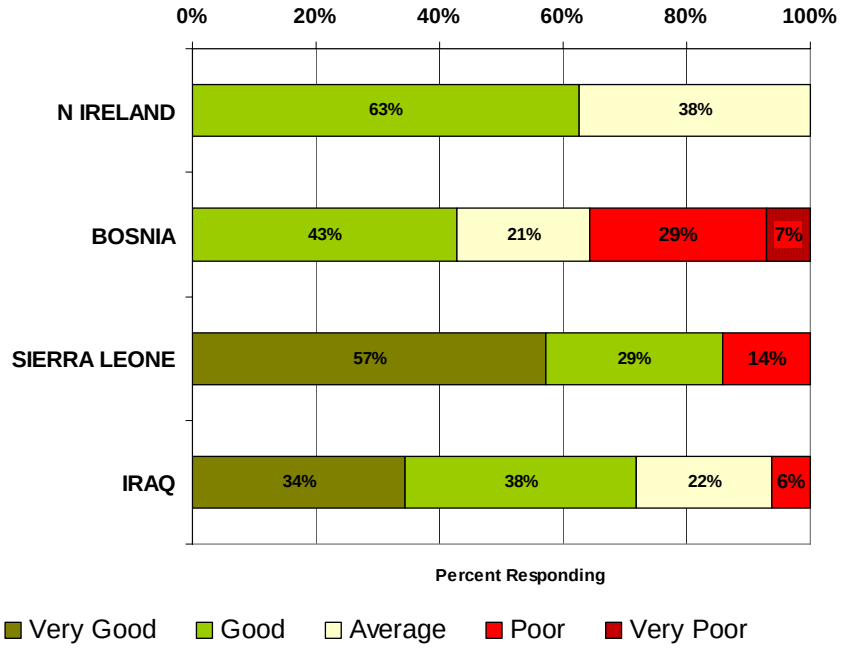


Figure 10.12: Rate the ability of your unit to coordinate its activities with other units. (Very good; Good; Average; Poor; Very poor)

More than one-third of respondents from the Bosnia operation rated the ability of their unit to coordinate with others as "Poor" or "Very poor". Most respondents thought their units were adaptable to changing circumstances on the ground, though respondents from the Northern Ireland operation were somewhat less positive than others (Figure 10.13).

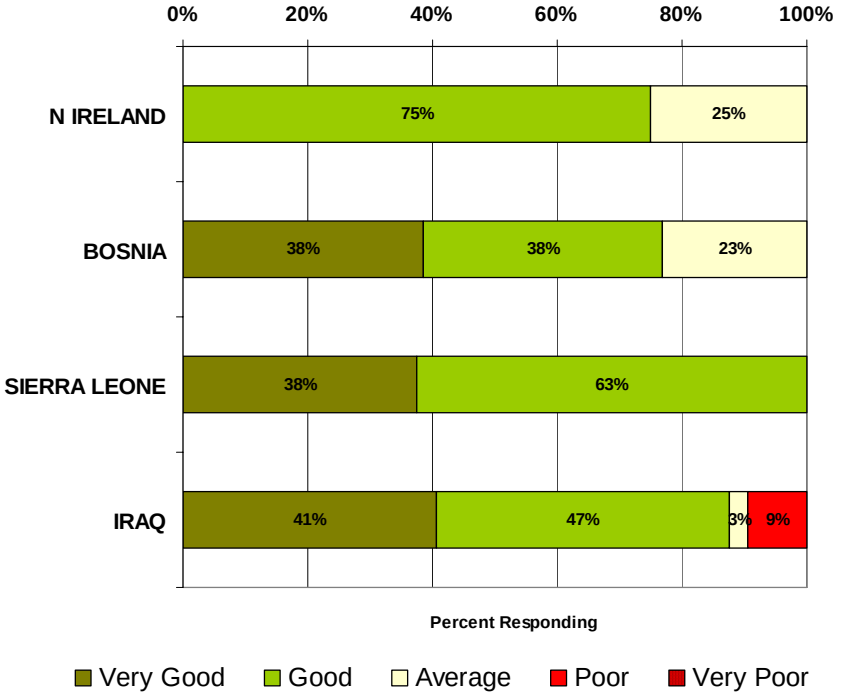


Figure 10.13: Rate the ability of the organization to change strategies and tactics in response to an evolving situation on the ground. (Very good; Good; Average; Poor; Very poor)

Likewise, senior leadership was generally perceived to be adaptable (Figure 10.14) and open to suggestions from below (Figure 10.15), but less so in Northern Ireland than in other engagements. Respondents from the Bosnia engagement also report a somewhat higher level of dissatisfaction with the openness of leadership to suggestions from below.

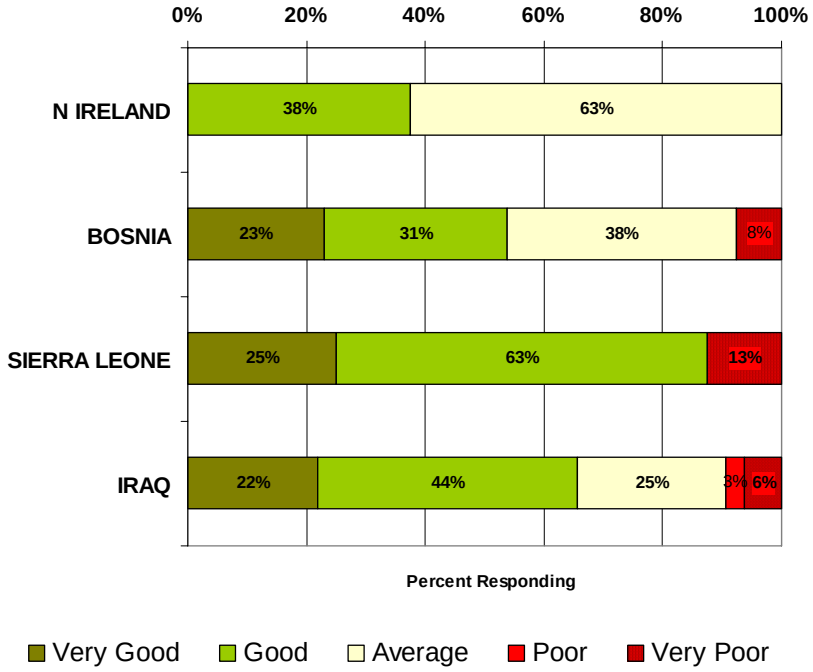


Figure 10.14: Rate senior leadership in the military on their ability to alter strategies and tactics in response to suggestions made internally. (Very good; Good; Average; Poor; Very poor)

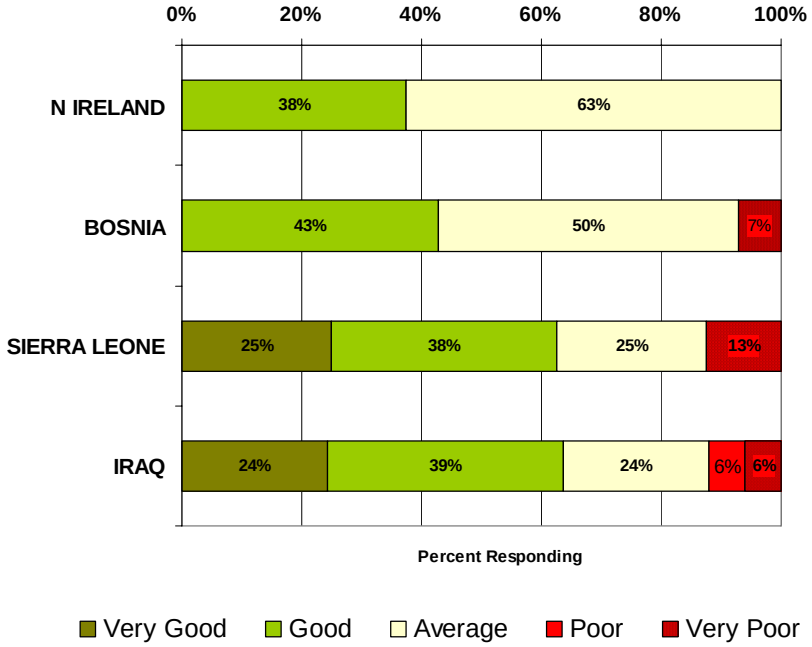


Figure 10.15: Rate senior leadership in the military on their openness to suggestions from subordinate staff about changing tactics, techniques, and procedures. (Very good; Good; Average; Poor; Very poor)

Training for all operations was deemed "Good" or "Very good" by at least two-thirds of respondents across the board (Figure 10.16). Access to manpower for the mission was rated at least "Good" by half of respondents across all operations, but a sizeable minority report problems in this area in Bosnia and Iraq (Figure 10.17).

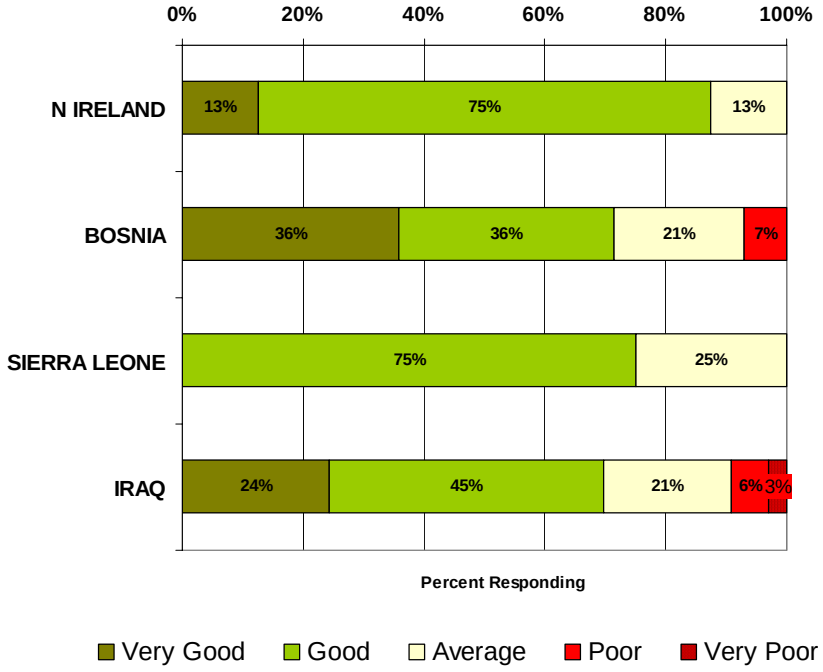


Figure 10.16: Rate the access you and your unit had to training that was necessary to carry out the mission. (Very good; Good; Average; Poor; Very poor)

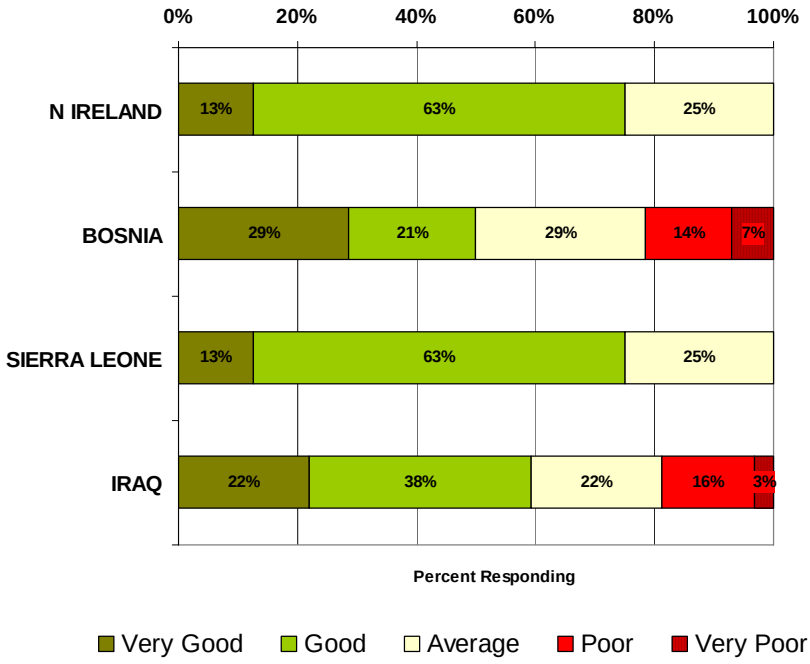


Figure 10.17: Rate the access you had to manpower that was necessary to carry out the mission. (Very good; Good; Average; Poor; Very poor)

CHAPTER 11.0 GENERAL CONCLUSIONS FROM THE HISTORICAL CASE STUDIES

General

The following section highlights the conclusions that have been drawn from the overall analysis of the multiple operations in this study. These conclusions have been grouped under the research questions from the Research Design Plan.

Research Question 1: Did the UK Develop a Unique Approach to Dealing with LIOs?

The evidence gathered in the study has demonstrated that the British did develop a unique approach, and that it was, and remains, an evolving approach rather than a model or template. This inherently flexible approach is sustained through a variety of different types of operations, and allows for a lack of discernible consistency in operational terms from one very different case to the next. This 'British way' represents an understanding of some of the wider dimensions of LIO compared to other forms of warfare. This is one of the keys to the difference between a model and an approach, wherein each operation is unique, but certain common perspectives can be applied in different circumstances. The enduring tenets of political primacy; coordinated government machinery; intelligence and information; separating the insurgent; neutralising the insurgent; and longer term planning are supported by proportionate use of force, adherence to the rule of law, and highly pro-active and imaginative plans put into action by Service personnel who are prepared to manage, rather than avoid, risk. These personnel are accustomed to operating outside their own specialist areas, and are trusted to do so.

Accepting a degree of risk by doing so, the British prefer to move amongst the indigenous population than maintain force protection by staying in protected bases. Exercising, and in turn allowing, considerable mission command, British forces have learnt that isolation of insurgents or terrorists provides a much greater return than destruction. Several commanders[112] have spoken of the importance of *not* killing terrorists unless absolutely necessary. In an asymmetric contest of this sort simply reducing the resource inventory of the enemy can provide little advantage, and may well be counter-productive.

Linkage at the politico-strategic level – challenges for 21st Century interventions of choice

Over the case studies examined it is clear that the Armed Forces have normally had to work with an ambiguous political strategy, and operate within loose or, occasionally, non-existent political direction. None of the operations analysed here started with a clear, politically defined end-state. To a greater or lesser extent there has always been a political vacuum that has left forces without a clear political mission to undertake.

In Sierra Leone the nature of the problem was sufficiently well understood to establish clear and limited objectives at the outset. This was not the case in Malaya, early Northern Ireland or Bosnia. In Iraq the initial political goal was clear in theory, though in practice confused, and has been evolving steadily since. In the later years of Northern Ireland this was not a theme as strategy had by then evolved to give the military a clearer political framework within which to work. These cases indicate that, with infrequent exceptions, the military can expect to work with a 'rolling strategy', at the political level at least, in the early stages of an operation.

This political ambiguity may also be exacerbated in-theatre during the early stages as other governmental agencies on the ground have different agendas. This was acute in the case of Malaya, early Northern

[112] General Anthony Palmer, Brigadier Roger Brunt amongst them.

Ireland I and Bosnia, evident in the case of Sierra Leone, and certainly true in the case of Iraq. It reappeared on occasion –though without serious consequences – in the later years of Northern Ireland.

The physical and social networks available to British Forces will need to gain and exploit such clarity as it is possible to achieve in this political grey area, as well as compensate for a lack of sufficiently clear political direction in the early stages. It is arguable that the continuing trend of intervention operations in the national interest requires a more coherent initial political position than is typically the case. Several senior commanders felt that the Government of the day has responsibilities to the forces that it commits, and these responsibilities include an understanding and articulation of intent before pressing the button to commit forces. Networking can help establish and communicate militarily feasible objectives to feed into ongoing political discussions about desirable end-states, but as the attentions of the legal and media communities' increase, so more of the political options and objectives should be thought through and discussed with commanders *before* deployment. Iraq has shown that the public, indeed the Forces community itself, expects a more inclusive and open engagement ahead of commitment to operations.

There has also been a general political reluctance to deploy sufficient forces in the early stages of an LIO operation, partly because of political uncertainty over the desired end state. This was particularly noticeable in the case of Malaya, early Northern Ireland and Bosnia, and to a lesser extent in Iraq. The effect of sub-optimal numbers is to decrease the operational flexibility available to the forces, and can lead to ineffective tactics and increase the vulnerability of forces if appropriate mass cannot be concentrated at the necessary point and time. The enemy will exploit such vulnerabilities, and it is critical to establish credibility in the early days,[113] even if force reductions follow shortly after. Of course other elements, such as police, must also be put in place in the early days to cater for the way in which criminal gangs spread their activities in the political and legal vacuum. This is where cross-governmental planning and execution is essential to stay ahead of the insurgent.

The Armed Forces have developed a broad set of skills to fill the initial vacuum

The emphasis on efficient networking must be accompanied by an acknowledgement that the military is only one strand of a more holistic approach to LIO. All the operations studied demonstrate that efficient networking must incorporate other elements of power and governance in order to respond to the range of challenges which adversaries in LIO typically pose. The 'Comprehensive Approach[114]' is vital, but has yet to be delivered. There were elements of it in from the beginning in Sierra Leone and some evolved elements of it in Bosnia and later periods of Northern Ireland. For the military, it remains an aspiration more than an active planning assumption.

When the military fills the immediate civic vacuum caused by post-conflict disintegration, it takes on roles that become very difficult to relinquish and which other agencies are often unwilling quickly to take on.[115] The longer the military fills such a vacuum, the more difficult it becomes to generate and develop a genuinely combined and coordinated strategy among the other agencies of HMG and the international and local communities that have to be involved in full reconstruction.[116]

[113] Michael Steiner, UNSRSG Kosovo, speech to LSE, 27 Jan 2003.

[114] A UK MOD initiative to ensure that all relevant Government departments plan together for operations.

[115] General Andrew Ridgeway, Interview.

[116] General Sir Timothy Granville-Chapman, Interview.

As part of its efforts to stabilise the operational situation the military will fill the social and civic vacuum in LIO situations. Recent evidence in Bosnia and Iraq indicates that they do this well only for a short period (measured in months), and are unable to do this for the long term. Cultures of dependency arise very quickly, which make the problems of transferring responsibility later on even greater. The West of Bosnia Rehabilitation Programme (a cross-capability institution building initiative) begun in 1995 provided a good model for similar initiatives in Kosovo, Sierra Leone, and Iraq. The WBRP also indicated the limitations of the approach since micro-projects can only achieve so much, their biggest impact is early in a reconstruction operation and the impetus to continue them eventually runs out of steam as bigger problems (such as reconstituting basic infrastructure, preparing for democracy, etc.) take centre stage.

The military frequently becomes the repository of relevant information for the whole 'response community', which at once gives it influence in the work of that wider community, but also locks it into extra responsibilities. This is more than an aversion to hard work or 'mission creep'. These responsibilities distract the Armed Forces from their primary mission, and first and foremost it is essential to establish security and the rule of law – the essential basis for all other progress.[117]

The British understand and support the principle of police primacy

The implications flowing from the enduring principle of 'police primacy' are well understood, but have not always been well implemented. Police training, and the creation or re-creation of an active civic culture as part of the general political approach to stability is an imperative of all LIO operations. They are not a 'follow-on' to military stabilisation; but an intrinsic part of such stabilisation and should be given the same urgency and attention as the need to win tactical engagements. In Malaya, early Northern Ireland, Bosnia and Iraq it is evident that police training – in the broader sense of the term – was given less impetus than military operations per se. Applying this principle requires judgement, as some of the police forces concerned may be largely self-appointed (as was the case in Bosnia), corrupt (as was the case in Sierra Leone), or simply non-existent (as was the case in Iraq after the coalition disbanded the police). So the principle of police primacy may often include the need to stand up, develop, or train that police force to begin with. Iraq is a case in point where British Forces have trained 24,000 policemen, and are training 20,000 more.

The conclusion is that the British have developed a series of perspectives that have been adjusted or adapted for different operations, after a period of rapid operational learning. These perspectives have evolved from a series of principles that have been applied with varying emphasis across a range of counter-insurgency, counter-terrorist and peace support operations. These principles include an enduring emphasis on the following:

- Thompson's 6 Principles
- Operating within legal principles, using proportionate forces, and working with existing legal/governmental authorities
- Trust from the politicians in the British Commanders to define and deliver appropriate operational objectives
- Flexible articulation of Mission Command principles and main effort concepts
- An awareness at all levels that tactical decisions have strategic consequences
- Maintaining *Security* as the main effort throughout

[117] Michael Steiner, Speech to LSE, January 2003.

- A belief in isolating, rather than destroying, opponents
- A pro-active effort to build a network if none exists
- A dependence on human rather than technical resources
- Training that emphasises that troops have an action/reaction effect and are always some part of the problem
- Significant autonomy and trust across all ranks that are well-trained, and are accustomed to take responsibility and use initiative
- Excellent hand-over procedures as a key learning device for units and the basis for future operations
- Northern Ireland as a key learning environment for most Army units and many units, and individuals, from the RN and RAF
- An ethos of managing, rather than avoiding, risk
- A continuous commitment to teaching the lessons of LIO, and education and training at every level

It was observed that there is a clear need for political direction to be given more quickly, and most respondents felt that inter-agency coordination was, and remains poor. Given the globalisation of intervention operations there is also a belief that the operational environment is changed forever, and any network needs to support forces in an environment that will continue to be much more hostile and restrictive than the UK forces have sometimes experienced.

This challenge needs to be approached on a variety of different levels, with LIOs understood to be a national effort that embraces all four lines of operation. The threat in such operations changes the traditional geometry of battlespace of deep, close and rear to an operational environment that is one continuum from the domestic base to the enemy hinterland and beyond. This is important in that threats and vulnerabilities in the operational framework are different now, and will continue to evolve.

Research Question 2: In What Ways Did the UK Military Obtain, Disseminate and Implement Lessons from LIOs?

The UK approach has been learned, forgotten, and re-learned on several occasions

Initial operational failure followed by a rapid learning process is a feature of all but one of the operational case studies. Initial failures were evident in Malaya, early Northern Ireland, Bosnia and Iraq, exceptions being the later years of Northern Ireland where learning had taken place, and the case of Sierra Leone. In the case of Iraq, a reasonably well-worked approach had already been developed from previous operations, but nevertheless had to be adapted very quickly in the early stages to local conditions and to the sheer scale of the country and of operations. In the case of Malaya, early Northern Ireland, and Bosnia significant early failures were rapidly reassessed and adaptive learning processes followed, working from the tactical to the operational and then the strategic levels.

Institutional memory in the British Armed Forces is not as strong as the transfer of personal experience. Research has shown that they are good at short-term memory and at transferring skills from one operational tour to another, but most of our case studies show that skills had to be relearned after a period in which operational lessons had been identified, but not learned at the institutional level. Later years of Northern Ireland are an exception to this where learning from the early years could be regarded as cumulative. Institutional learning in Northern Ireland, however, has been more by a process of direct personal experience flowing throughout the British Army (and other elements of the Armed Forces) than it

has been formally learned from the strategic level downwards. A current problem in Iraq has been a noticeable loss of Northern Ireland experience amongst the Forces as fewer have been serving in the Province since the Good Friday Agreement of 1999.

In the post-Cold War era there has been a greater attempt in the UK to learn in a systematic way from both the failures and successes over the long history of LIO. Based on theories of organizational learning and behaviour,[118] one would expect that organizations which establish and maintain formal and informal channels for the exchange of information and knowledge, which purposefully gather lessons learned and disseminate these insights, and which promote policies in regard to training, force rotation, etc. and which encourage the exchange of information, are more likely to learn, and train, more effectively.[119]

Emerging findings related to organizational learning in the UK forces include the observation that as there appears to be no particular British model of LIO, so there is a lack of consistency in operational themes from one case to the next. There are certain common perspectives that can be applied to different circumstances, but memory is apt to be distorted and many post hoc memories are woven around the conventional wisdoms.

While evidence does not indicate a great deal of formalised institutional learning from one operation to the next, it does support the ability of the British Forces to consistently and rapidly learn within each operation once it has been determined that existing tactics, techniques, procedures and/or doctrine are failing. As such, formalised change to TTPs or updates to doctrine and corresponding elements of the DLoD have not always taken place.

Figure 11.0 describes the organisational learning cycle. The aim is to close the circle as rapidly as possible in order that the performance gap is addressed as quickly as possible. Research of the operations in the study appears to indicate that there has not been a coherent response, across the DLoD, to gaps in performance. Rather, different organisations across the Armed Forces have responded at the speed they see as appropriate in order to improve the situation in that discrete area. The consequence of this is that whilst a vehicle or piece of equipment may

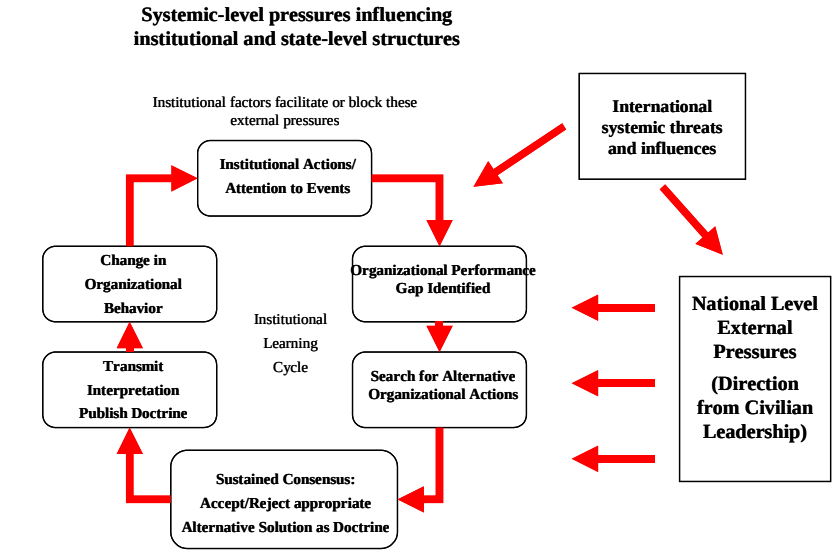


Figure 11.0 – Organisational Learning Cycle

[118] See for instance, *Organizational Learning And The Learning Organization: Developments In Theory And Practice* by Mark Easterby-Smith; Luis Araujo; John Burgoyne. London; Thousand Oaks, Calif.: Sage Publications, 1999.

[119] *See Learning from Conflict: The U.S. Military in Vietnam, El Salvador, and the Drug Wary* by Richard Duncan Downie; Westport, Connecticut: Praeger Publishers, 1998 and *Counterinsurgency Lessons from Malaya and Vietnam: Learning to Eat Soup with a Knife* by John A. Nagl; Westport, Connecticut: Praeger Publishers, 2002. Both authors apply the theory of organizational or institutional learning to low-intensity operations.

improve, the training or doctrine may not be in place to deliver full operational advantage, or the organisational structure may not have been adjusted to maximise the benefit. There were various examples of this in Iraq.[120]

Research showed that lessons collected across the Armed Forces varied enormously in quality, style, and objective. Such lessons ranged from post operational tour reports (at sub-unit, unit, formation and theatre HQ level); to lessons identified and lessons learned; to observations from training and operational themes; to operational and capability audits. This variety of reporting was further increased by the disparate nature of different Service reporting styles, and added to by a collection of joint reports from PJHQ and the Directorate of Operational Capability.

Whilst the general quality of these various reports was high, and the analytical value clear, the process and context for the lessons were not obvious in all cases. It was not always clear that a priority had been applied, nor whether a lesson or observation was a stand-alone observation or the sum of more general experience. Finally, the different single-Service approaches, whilst no doubt valid for the collection of TTPs and the lower tactical lessons, were inconsistent in the way they contributed to an understanding of the broader Defence-wide capability requirement.

It is apparent that each lesson also needs to be seen in two contexts; that of current military practice, and then within the future NEC environment, which may fundamentally alter the subject approach or process itself. Instances of such 'future proofed' lessons or observations were rare. Allowances or evidence of consideration for the functional integration of subject practices or procedures was also rare.

In general terms there are two purposes to the Lessons Identified process; the first is to understand the problem, and the second to decide upon appropriate action for resolution. It is observed that the British system is good, if not consistent, at the former, but weaker at the latter. Putting solutions into practice in order to translate learning into practical policy and actions is a vital part of the learning loop, but something that the British have traditionally been slow to codify and achieve. Finally, an ongoing process of monitoring is required to ensure that the identified changes have actually been put in place, and that organisational behaviour is changing as a result of lessons identified – only then does a lesson identified become a lesson learned.

In the past, there have been no strong institutional processes of lesson learning, though more attention is given to that now. Lesson learning and dissemination has tended to be delivered by:

- High operational tempo that provides a wealth of experience of active service and decision making under pressure for all ranks
- A Regimental system that provides a continuum of experience from one group of officers/NCOs to the next
- Efficient systems for operational hand-over (though new battalions often want to ring the changes as a matter of pride, and anyway have different characteristic approaches to operational behaviour in LIO and PSO)
- A willingness quickly to transfer tactical learning upwards
- COIN, CT and PSO/PEO remaining an important, formal part of the training regime

[120] Brig Bill Moore, Interview

Research Question 3: What DLoD Investment Facilitated the Development of the UK Approach to LIO?

Principal observations across the Defence Lines of Development indicate that the majority of investment in recent years has been in the human rather than the technical areas. The UK maintains its commitment to low intensity operational training, and continues, through the Operational Training and Advisory Group (OPTAG) to ensure that tactics and procedures from new operational theatres are inculcated in a realistic and bespoke training environment. A key focus of this training is the provision of specific, theatre-related cultural education, which is seen as a strong element of training, on the other hand many respondents raised the issue of whether the quality and quantity of legal training was equal to the challenge that British Forces now faced.

On the equipment line, investment in secure communications has often been slow, but where it was provided – and in all cases it eventually was - it was a key element in maintaining an operational advantage through denying the opposition any information advantage. The provision of Personal Role Radio and Bowman in Iraq has proven to be a major step forward in low-level situational awareness, and in all cases, even in Peace Support Operations, it has contributed to force protection.

There is, however, a clear need at the operational and strategic end to invest more in a network that allows immediate and closer co-ordination between all relevant Government departments, especially in-theatre. In-theatre co-ordination has always been ad hoc; it has sometimes been improved dramatically by practical innovations in liaison, though not always. It has also depended too much on personalities in-theatre and requires more integration and training between units/individuals likely to be working together and agencies that will have to work alongside the military. Such a network has also to be capable of interfacing with – though not necessarily having to integrate – other national actors in-theatre.

With regard to personnel, the British Forces continue to invest heavily in the selection of high quality individuals, and provide initial as well as through-life training and education that is the envy of many others in both the public and private sectors. Partly to make up for the lack of technical capability and capacity there is a continued investment in the quality and skills of liaison officers working at all levels to de-conflict issues in complex operations. Many respondents and interviewees felt that there was room for improvement in the training, selection and general quality of augmentees in Formation HQs in the areas of Legal, Civil Affairs, Information Operations and Media. These areas are seen to be increasingly important in LIO, yet appear to be attracting less investment then they require. It was also observed that these areas also suffered from a lack of actual resource in terms of equipment and budget, which hindered their ability to make a difference on the ground.

Research Question 4: To What Extent Did Information Age Concepts and Capabilities Contribute to the UK's Ability to Successfully Execute LIO?

Overall, the case studies illustrate that Information Age *concepts* did contribute to the UK's ability to successfully conduct LIOs. However, Information Age *capabilities* have only been available for some of the operations, and it is apparent that even in terms of the concepts, British Forces are more comfortable with the principle of social networking and exploiting the resulting information than they are with understanding the complexities of information sharing, collaboration, and synchronisation of the technical network. The journey from theory to practice has been a difficult one for British Forces, having had little opportunity to experiment and trial new equipment or doctrine. The vision and objectives of NEC have not always been well articulated, and there appear to be many in the UK Forces who are not yet clear on what advantage will be provided by Information Age concepts and capabilities in the low intensity arena.

The NEC benefits chain defines the essence of Information Age Concepts as they apply to NEC, with the UK view being one of capability enabled by networking rather than the network centric doctrine of the US. In general the UK has been slow in putting in place the relevant foundations for appropriate connectivity, resilient information infrastructure or shared understanding, relying instead on the ingenuity and flexibility of its personnel to overcome such challenges that exist, and to create the required network. Nevertheless, it is possible to draw a number of conclusions in this area:

British forces have shown adaptive skills that have made the best use of their intrinsic networks

The British approach to using information, knowledge, and networking includes an expectation of flexibility. This has been reinforced by the need of UK Forces to constantly respond to resource constraints, and the challenges of expeditionary deployment. Adversaries in LIO have advantages in choosing the time and place for engaging British Forces (as opposed to full scale military operations with visible preparations etc.) and flexibility through networking helps negate such advantages and allows the Forces to get inside the OODA loop of the opposition.

Concepts of Mission Command, and a common understanding of 'main effort', are critical in UK military thinking and allow the Armed Forces to make the most of training and initiative among NCOs and personnel to take greater responsibilities at the operational and tactical levels. In the case of the UK experience of LIO, however, mission command has tended to *evolve* from a mediated bottom-up process from the tactical level. Mission command in the special circumstances of LIO, therefore, has to some extent emerged as a negotiated concept between operational, tactical and political/strategic levels rather than predominantly as a hierarchical top-down direction from the commander. This was particularly evident in early Northern Ireland and Bosnia. In Northern Ireland, for example, the 'Peace Line', still there today, was the initiative of battalion commanders. In Bosnia the strategic mission of the UK operation was largely determined in the first months by the tactical missions that the Cheshires' battle group decided to undertake.

In the adaptive processes that British Forces perform it appears that matching networked solutions with their deep understanding of operational constraints in LIO has provided one of the important synergies of network-enabled approaches. The British approach emphasises knowledge over information, which provides a clearer set of objectives for networking to achieve. Knowledge is built on information with a human filter and it is clear that British failures in LIO have not normally been due to chronic lack of information, but rather a failure to develop that information into knowledge in a timely manner.

Getting Information and Intelligence flows right

HUMINT has proved to be by far the most valuable intelligence commodity in LIO, and is primarily gathered by involvement at the local level. 'Intelligence-led' patrolling creates a stabilising influence where it has taken place. Where it has not happened – because patrolling has been suspended (as seen frequently in Iraq), or because HUMINT on the ground has not been available to underpin patrolling (as at Camp Dogwood in Iraq, or in the early stages of Northern Ireland and Bosnia), this influence is lost. Most of the critical information flows in LIOs are from the bottom upwards. The NEC advantage emerges less from the ability to disseminate centralised information downwards than in absorbing, interpreting, redistributing, and then learning from information flowing upwards.

Expectations for the quality and quantity of UK communications equipment are not high. Tactical-level communications equipment has been regarded as significantly or seriously deficient in Malaya, Northern Ireland I and II, Bosnia and Iraq. None of the operations studied here were characterised by obviously good tactical communications systems. At the theatre level, problems have been less acute and communications have been regarded as working well at this level during later years of Northern Ireland,

Sierra Leone and Iraq, though much is expected of Bowman when it arrives in force. For these reasons UK commanders' approach to exchanging information usually involves redundancy at several levels, down to physical liaison as a backup as they expect at some time to have to use face-to-face communication. Informal networking and social networking within a relatively small officer corps is a compensation for the limitations of equipment, and much reliance is placed on liaison officers. This 'personnel-heavy' approach in LIO does have the advantage of creating the facility for non-networked (multi-national, non-government organisations etc) partners to become more integrated into an operation.

Research shows that Northern Ireland saw the first use of secure computer information with a network down to company level. It was not generally used for collaborative planning until later on in the operation, but did allow for the faster dissemination of orders. The same physical network allowed for the rapid dissemination of information from the towers and surveillance nodes. Eventually the network was Province-wide and included the ability to share information from all sources, HUMINT, IMINT, ELINT, etc, which ultimately closed down the terrorists' freedom of movement. This network did not merge and share sensitive intelligence assessments, which were still jealously guarded and only shared where there was the personal trust between individuals.

There was no comparable network operated in Bosnia, where the most reliable intelligence sources arose from company-level operations, integrated by human ingenuity using all-source information to try to create reliable pictures of the situation. Indeed, intelligence-led day-to-day operations (particularly patrolling and presence) have been an intrinsic part of the UK's approach and have contributed greatly to success where it has been possible to sustain it.

Towards future integration

Based on the research in this study, there is a strong belief amongst interviewees that any networks the UK invests in must provide greater knowledge rather than yet more information. A key element of shared understanding is seen as coming from providing sufficient information, but not too much, at each level. Given that there is a doctrinal aspect to the amount of information required – in that mission command and an understanding of higher commanders' intent provides some freedom of action – so there is a view that filtered, value-adding knowledge is what is sought, not more data.

With regard to situational awareness there is also a common view that a version of Blue Force Tracker, or the equivalent, is seen as sufficient in terms of blue forces geo-location. Whilst not being reliable enough to be used as a form of Combat ID or anti-fratricide device, it at least provides a reasonably low-latency picture of the general shape of blue forces in the battlespace. What many want to become the focus now is how to more accurately gain and portray the locations of insurgents or terrorists in LIO, as hard as that will be to achieve. In the words of one senior officer "it's the enemy stupid!"[121]

Such a network is also expected to cater to the media network, which is so much a part of today's operational environment, and indeed to extend to include all necessary parties - a difficult challenge in the context of multi-national, multi-departmental, operations. Such an expansion of the network brings two additional challenges. The first is that of Information Assurance (IA), in that each node, link or connection in the network presents a potential weak spot for electronic attack. This IA should govern how systems are designed, built and operated to ensure they protect the information and services they handle, and that they function as and when required. It is not clear from the research that emerging IT capability is protected through such a coherent and comprehensive approach.

[121] Brigadier Mungo Melvin, Director Operational Capability

The second challenge is an organisational one, and comes from the command compression that is offered/threatened by faster and more capable networks. The experience of Iraq in particular has shown that Brigade HQs are able, with a degree of augmentation, to integrate intelligence assets and coordinate intelligence activity in a way that was previously only possible at Divisional level. The question this poses is that if this is the case, and the evidence suggests that it is, and if Brigades continue to be the British Army's deployable formation of choice, then it would appear to be sensible to review the establishment table for Brigade HQs accordingly.[122]

Research Question 5: Were the UK Forces Able to Develop and Maintain an Information Advantage During LIOs?

Information advantage is a notoriously difficult area to establish or measure, particularly given that the truest of pictures would only be available if interviews could be conducted or information gathered from the enemy or warring factions in each of the operations concerned. Whilst conducting such interviews has always been outside the scope of the study, it is possible, through research and developing an understanding of key actions, to identify certain facts about where information advantage resided in the operations.

Information advantage is more than the information and communications capabilities that one force has in comparison to an adversary. It is important to assess a force's information capabilities relative to their needs as operational objectives, doctrine, TTPs, and ROE will all affect how such needs can be met. The ability of a force to successfully carry out a military operation depends in large part on the degree to which its information needs are met. Indeed, given the relationship between information advantage and surprise (as one of the fundamental and enduring principles of war) it can often prove decisive.

These information needs can vary considerably over time, and what matters is which force is more effective in satisfying their respective information needs, not which side has better information-related capabilities. Thus, the advantage is determined by comparing each side's information capabilities relative to their needs.

Any advantage achieved may also vary in its nature. It may be permanent or temporary, mission dependant, or defined by geography. Figure 11.1 below illustrates the relative nature of information advantage. Particularly in the asymmetric nature of low intensity operations, the information needs of the protagonists will be different, in some cases markedly so. The critical factor then becomes understanding not only what blue forces need to do to gain information, but also what blue forces need to do to ensure that red forces do not gain information.

[122] Project Roberts will be dealing with some of these factors.

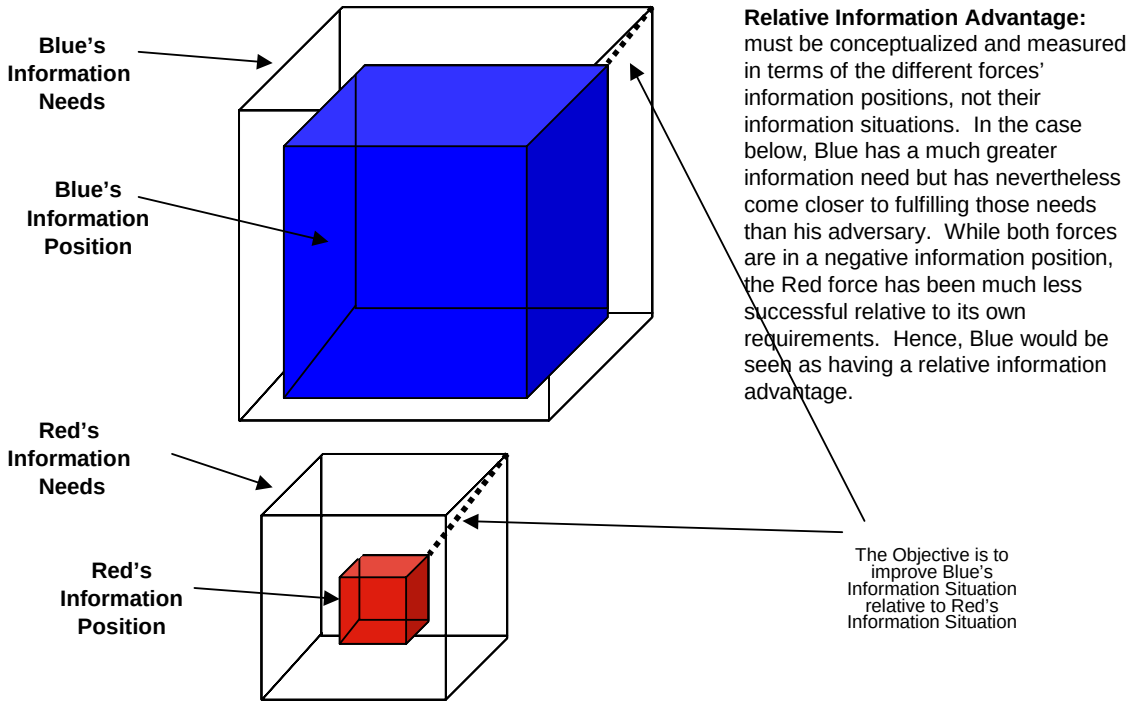


Figure 11.1 – The Relativity of Information Advantage

By way of assisting in the definition of information advantage over and above the three key drivers of reach, richness, and quality of interaction, information advantage can be further analysed by examining the two principal elements that deliver advantage: the defensive and offensive measures. Any intelligence or information system has to provide for the security, resilience, and protection of its own data through either technical or procedural means - this is the defensive component. In addition any such system has to be able to identify, target, and obtain the information and intelligence on the enemy in order to provide operational advantage - this is the offensive component.

The study research has shown that information advantage is most rapidly achieved through the combined effect of technology, training, and procedures in both the defensive and offensive areas. Figure 11.2 illustrates some of the key elements of each element.

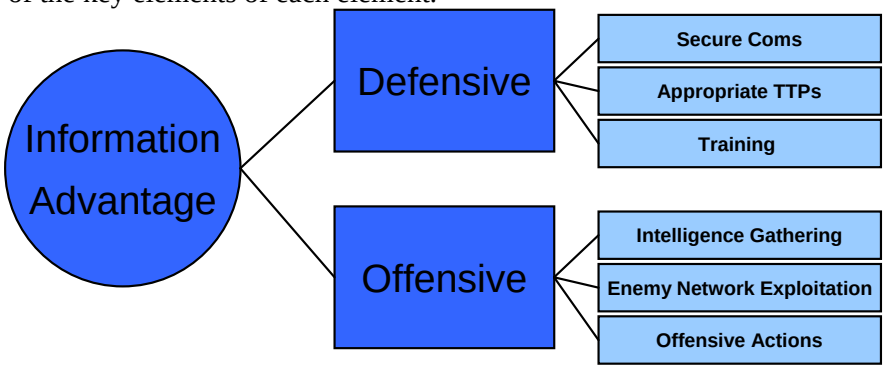


Figure 11.2 – Components of Information Advantage

As a general theme, the information advantage in the case studies examined remained initially with the insurgents or terrorists. It was therefore a question of finding the right approach to apply to move the information advantage across to British forces. For the operations where information advantage can be meaningfully commented on, the British applied different levers according to the different circumstances that applied. This is because the type of information that British forces have sought has been different according to the operational environment, opponent and threat at the time. For example, whilst in Malaya it was the location of the insurgents that was critical, in Bosnia there was a high level of awareness of warring faction locations and it became much more important to establish intent and local attitude.

The critical success factors in information advantage has been the ability of the British to locate and exploit the enemy's own network, though in most cases this took some time to achieve. Furthermore, research shows that the most successful examples are those where a combination of measures have been applied at the same time in order to defend the blue network whilst simultaneously attacking the red network so that the information advantage is moved away from the opponent.

As a guiding principle, research has shown that it is critical to identify and prioritise the key questions to be answered by the information gathering apparatus at hand. The mass of information that will be available can overwhelm the resources available to manage it and, as ever, time will be short to turn it into useable intelligence. Given the industrial age background of the UK Armed Forces it is fair to say that much attention has been paid in the past to looking for the equipment and weaponry of an adversary and comparing it against that of the UK. In looking to develop advantage in an Information Age, it is necessary to recognise that understanding intent, whilst more difficult, is far more important. The irregular opponent, fighting an asymmetric battle, will not present massed forces or indicate geographical intent. He will plan secretly from the security of the population, and strike as precisely as he can to maximum effect, thus the limited intelligence assets available must be adapted to meet this new type of threat.

Ultimately, intelligence and information must be turned into operational advantage and there has to be a force in being that is capable of delivering an operational effect. Interviews conducted[123] during the study present a common view that whilst technology can provide some of the information advantage so necessary for successful operations, so there is a certain force level, an 'irreducible minimum' that will be necessary to convert information advantage to operational effect. There is much nervousness that this premise is being disregarded in the pursuit of technical improvements whilst seeking savings in the UK defence budget.

Key commentary on the dynamics of information advantage by operation include:

Malaya

The MRLA had a clear information advantage in the early years, established through their knowledge of the country, their infiltration of the people, and their ability to read and pre-empt predictable British military activity. The information advantage began to move away from the insurgents when the new villages were created, and the British began to apply comprehensive and coherent measures to isolate the insurgents from the people.

In particular, the British used Surrendered Enemy Personnel (SEPs) to provide information on insurgents, and through restricting the distribution of food, managed to identify and infiltrate those suppliers that were supporting the insurgents. This had the advantage of providing the British with information on insurgent location, intent, and numbers. Informed by such a network, and armed with such knowledge, the British

[123] General Fry, General Granville-Chapman, General Ridgeway, Interviews.

were able to forecast not only where the insurgents would be, but also where they would go and how they would respond if attacked. This enabled the British to improve their TTPs and doctrine, and therefore formalise and begin to train forces in an approach that would maintain the information advantage.

All of this, combined with the continuing economic and political support to the local population created a situation where the flow of information to the insurgents dried up, whilst the information available to the security forces increased dramatically. The move to then develop this intelligence through a reinvigorated Special Branch and use it to direct operations created a focused and precise tactical effect on the ground that turned information advantage into operational advantage.

Northern Ireland

In Northern Ireland the early years saw enormous support for the IRA in the hard line Republican areas, and even in the wider, more moderate Catholic community there was a strong sense of identifying with the IRA as the Catholic population's only defence against a Protestant run, unsympathetic administration. Consequently when UK troops first moved into the Catholic areas they found themselves in a location they did not know, amongst people they did not understand, who were provided several thousand eyes and ears for the IRA, and operated as the terrorist's own warning and reporting system.

In such circumstances the British Forces found it impossible to establish an information advantage, a position made all the harder by a heavy handed tactical approach that further alienated the population. In addition, the IRA were able to eavesdrop the non-secure tactical net and infiltrate the telephone network in order to discover and pre-empt British Forces intent and activity.

The IRA then used the information advantage they had to attack the security forces, and to shape the perception and support of the locals. The terrorists actively sought to make the security forces over-react to provocation, in the knowledge that such a response would further discredit the security effort and improve the relative position of the IRA.

This situation took some time for the security forces to address, and it was only through a slow and methodical approach across the DLoD, and improving the perception of the security forces in the minds of the Catholic population that things began to change. In the first instance the British realised that a much more focused response was necessary in order to isolate the terrorists, and as with Malaya, a clearly signposted, accessible democratic channel was an essential alternative to demonstrate how unreasonable and unnecessary were the terrorist actions.

The development of blanket surveillance from towers, Observation Posts, Vehicle Check Points, and the like all added to the information being gathered, and the increased use of covert forces and HUMINT meant that the IRA had to be much more careful about how it planned and mounted attacks. The deep infiltration of the IRA by the mid-1980s, and the increasing intelligence successes by the security forces led to a notable change in the IRA's position in the community as it established a tight cell structure in order to improve security. Whilst this action did improve security for the IRA, it also had a negative effect of isolating the organisation within its own community.

By the mid-1990s the security forces had developed a methodology that kept the smallest visible footprint on the ground, whilst providing a multi-dimensional surveillance network that incorporated an overt and covert presence on the streets, surveillance towers, airborne surveillance, HUMINT, and robust and secure means to exchange intelligence rapidly between these assets, or to cue action. As a military response to the terrorists, this provided the least possible disruption to the local population, whilst almost completely closing down any freedom of manoeuvre for the terrorist.

Bosnia

Bosnia provided a different challenge for British forces in that the physical network provided neither the well-established secure capability of Northern Ireland, nor the resources and reach of the mobile network that combat net radio would typically provide in a conventional deployment.

Added to this, the country itself was little known, partly as a consequence of its long period under Yugoslav rule, and the nature and culture of Balkan people were new to the forces serving there. The first British forces to arrive in theatre had to rapidly adapt to an almost bewildering number of organisations and agencies that were involved in the global market of the Bosnian War. Out of the controlled environment of Northern Ireland, the typical sub-unit commander found his liaison responsibilities vastly increased, as Figure 11.4 below illustrates, and liaison became the byword of operations in Bosnia as commanders became aware of how important the social network was going to be in order to build any sort of information advantage.

The challenge amidst this plethora of liaison activity was as much in the de-confliction of liaison points as it was in sharing the resulting information. Any warlord, faction leader or politician would only ever have sufficient time or patience to see a certain number of liaison personnel each day and British Forces worked hard to ensure that they got enough information before the varied, and often divergent needs of UNHCR, ICRC, or UNMO liaison officers took the point of contact down different lines of conversation or effort.

Unlike Northern Ireland, British Forces were not regularly engaged in Bosnia, and consequently information advantage was less about supporting decisive kinetic effect, and more about having enough information to conduct effective and efficient operations. Accordingly it is difficult to establish whether or not the shortage of information assets in the early stages was a deliberate policy. What is clear is that as the operation went on, various new technologies were utilised to support British decision-making. The harnessing of these new technologies, such as acoustic radar and satellite telephones provided senior commanders with accurate up to date tactical information with which to coerce the warring factions on the strategic and political stage.

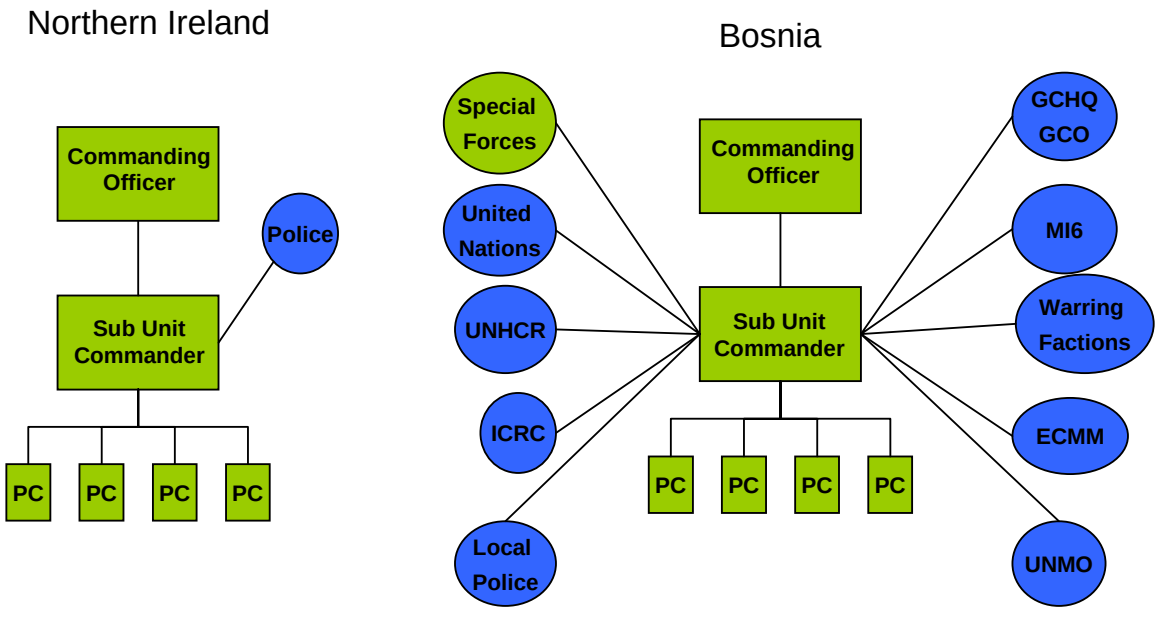


Figure 11.4 – The increased liaison burden of Bosnia compared with NI

Sierra Leone

Sierra Leone provides an interesting operation from which to draw conclusions on information advantage. The British Forces felt that they had very good intelligence, and they certainly had the support of the majority of the population who were keen to improve the information position of the British wherever possible. What presents a challenge is how to express information advantage over a force – in this case the RUF – who appear to have had very little advance knowledge of their own intent, never mind a capability to influence their opponents. However, on the basis that it is the relationship between information position and information need that matters, the UK were able to achieve an advantage.

In such circumstances information such as location and strength become the key information needs, so that the UK force can at least be oriented to the threat, as was the case in Sierra Leone. The result of which was that when the British were warned off about a potential RUF incursion they were ready and waiting. The reputation and popularity of UK forces were influential in co-opting information form the locals, and Brigadier Richards' understanding of the information operations dynamics in the country ensured the presence and potency of the UK force was made clear to the RUF (and any potential RUF recruits throughout the country) through the traditional Sierra Leone routes of radio and local news sheets.

Other factors also contributed, including the existence and accessibility of the British High Commission as a focal point for locals to walk to and provide information. The simple fact that this building was in Freetown, and locals had always enjoyed easy access, increased the amount of 'walk-ins' and provided much information for the Force.

Finally, the British were already well networked in the UN force, and were able to use their own officers on the UN staff to filter and reinforce intelligence summaries coming from the UN HQ, many of which were highly accurate, but some of which lacked objectivity or appropriate detail. It is a natural, and perfectly professional step for the UK Force to turn to other nationals in a theatre staff for a second opinion on the quality of intelligence, and as such it appears sensible to maintain a UK presence on UN and similar operations.

Iraq

Beyond the combat phase, British Forces took a long time to gain an information advantage in Iraq. Indeed it is a matter of contention as to whether it was information advantage or sheer weight of force that forced the initial rout of insurgents from Basra in May 2003. What is apparent is that the immediate aftermath of the combat phase saw the insurgents enter their own intelligence-gathering phase, consolidating their knowledge of coalition locations, routes, capability, and operating procedures. It is arguable that in this period it was actually the insurgent who gained the information advantage as very few interviewees or respondents claim any detailed knowledge of insurgent activity or intent at this time.

When it did begin to manifest itself, the fractured nature of the insurgent threat made it extremely difficult to predict activity or establish patterns or themes. In the early post-combat phase British Forces were challenged to understand a series of different insurgent MOs, representing the manner and objectives of different groupings, united only by their opposition to the coalition, and who seldom joined forces in their attacks.

It is the view of many interviewees from theatre that the British still do not have a reliable, constant information advantage in Iraq. Rather, they report a constant battle wherein the British Forces use their training, their TTPs and secure communications to defend their information and operational intent, whilst the national intelligence agencies attack the information networks of the insurgents.

Many interviewees and respondents felt that the UK needed to do more to understand the media network and the manner in which the insurgent network influences the neutral actor. Figure 11.5 below illustrates that such an actor sit in the centre of a separate battle for his support.

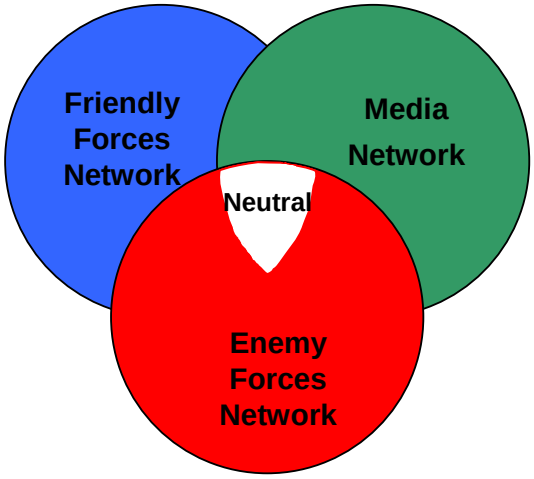


Figure 11.5 the influences on the Neutral Party in LIO

Whilst some describe that there was no enemy network to exploit initially, others contend that this is exactly when UK forces should be identifying the best way to access the neutral in order to limit the effect of the insurgent network once it does establish itself. There is significant evidence from Iraq that the divergent aim of institution building and national reconstruction took resources away from this effort.

Information advantage has been exploited to best effect in Iraq where it has facilitated the concentration of force at key points and moments (and so is equally dependent on the numbers, tactical and logistical capabilities in-theatre to do so) *or* allowed local commanders to take calculated risks in force protection by *not* reacting, or refusing to be provoked by immediate events because of a deeper understanding of their cause or purpose.

Gaining Information Advantage through Social Network Analysis

The ability to build effective social networks is identified as a common theme within the British approach to LIO. Applying Social Network Analysis (SNA) concepts to an assessment of UK involvement in LIO can help provide a scientific base to understanding how the UK have made use of networks in the application of LIO. By using the theory of SNA, commanders would be able to create effective social networks and potentially disrupt enemy networks in a more effective way. Such an understanding would facilitate the transfer of this aspect of the British approach to other forces.

SNA is the study of the pattern of interaction between nodes in social networks. It is based upon concepts of graph theory, which is the mathematical analysis of network properties. In simple terms, SNA maps the relationships between nodes (people, places, information etc, see figure 11.6). By analysing these relationships it is possible to identify the strengths and weaknesses of a network along with key nodes that are central to the network's effective operation.

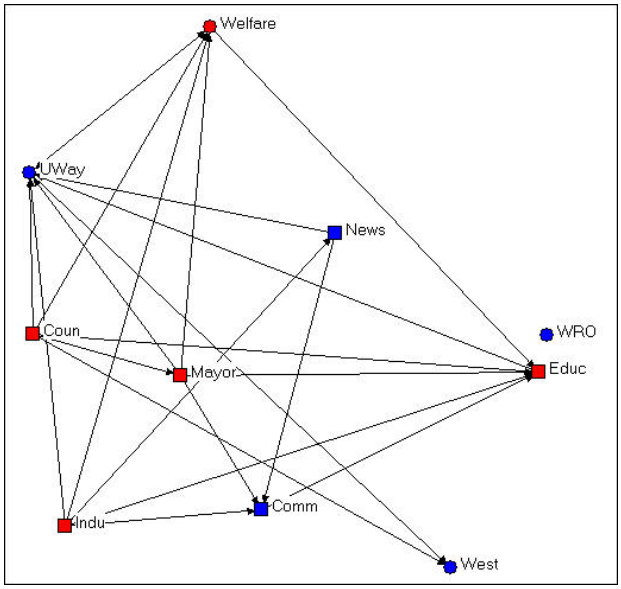


Figure 11.6: Example of a social network map showing information flow between government and non-governmental organisations.[124]

The successful application of NEC relies on the use of different types of networks in order to provide the necessary information to a node, which can then carry out a desired action. This includes physical networks such as IT systems, communications networks and transport networks and social networks such as formal and informal networks.

Armed forces are usually structured upon a hierarchical formal social network, which is the traditional foundation of command and control networks (See figure 11.7). Within LIO, access to information has been increased through the creation of informal social networks, which create horizontal flows of information across formal networks (See figure 11.8).

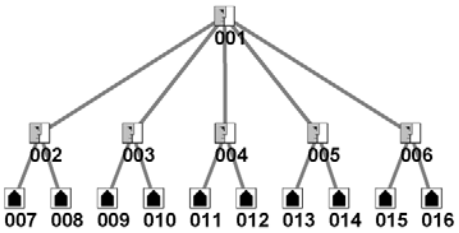


Fig 11.7: Formal Hierarchical Network[125]

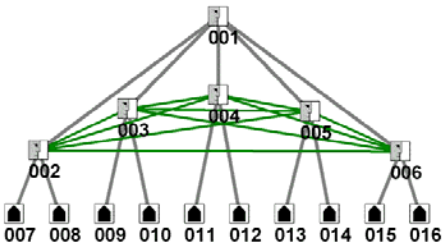


Fig 11.8: Informal Network (Green)[126]

The British armed forces have been skilled at developing informal social networks in LIO in order to build relationships with communities and other organisations that they are required to work with. Whilst the development of informal networks has been a key feature of the British Approach, it has not usually been carried out in a formalised or structured way using the principles of SNA.

[124] Hanneman, Robert A. and Mark Riddle. 2005. Introduction to social network methods. Riverside, CA: University of California, Riverside
[125] V. Krebs, Orgnet.com
[126] Ibid.

Much of SNA is based on an assumption that a node's position in a network determines its influence relative to other nodes. Applied to NEC, this assumption is modified to reflect that a node's position in a network determines its access to relevant information in relation to the implementation of a task. The concept of a meta-network in achieving a desired action is useful in understanding how SNA can be applied to NEC. A meta-network is a series of networks, which come together to enable the implementation of a task through the provision of information to the relevant person. This is based on three principal networks (see figure 11.9 below) people, knowledge, and tasks[127].

	People	**Knowledge**	**Tasks**
People	Who knows who? *(Company Commander knows head of Red Cross in area of operation)*	Who knows what? *(Head of Red Cross knows the medical needs of community in AO.* *Coy Cdr knows how to get medical supplies safely to community)*	Who does what? *Coy Cdr provides protection to medical supply convoys.* *Head of Red Cross identifies medical needs.*
Knowledge		What information is linked to what? *Medical needs of community and safe supply of medicine are linked knowledge*	What do you need to know to achieve a task? *Need to know what community medical needs are and how to ensure safe supply of medicines in order to provide medical relief to a community*
Tasks			Which tasks precede each other (critical path)? *Firstly identify medical needs.* *Secondly ensure safe supply of medicine.* *Result = medical relief of community.*

Figure 11.9: Example of a meta-network with medical relief task example

A physical network will often underpin this meta-network to ensure that information can flow between the relevant nodes. For example, a communications network may be required which would allow people to pass information through the network without face-to-face contact. Within the LIO context, it is important to consider that any attempt to assess a social network should include links between friendly, enemy and neutral networks in order fully understand information flows. For example, a military commander must understand how his military network interacts with an indigenous community network, and the network of enemy forces.

Key measurements of a node's position in a network are based on concepts of centrality of which there are three core measures:

- Degree – A measurement of the number of nodes that a given node is directly connected to.
- Closeness – The distance between one node and all other nodes in a network. This is particularly relevant to a node's speed of access to information within a network.

[127] Prof. Cathleen Carley, Dept. of Social and Decision Sciences, Carnegie Mellon University, Pittsburgh.

- Betweeness – This measures the number of network paths between two nodes which must pass through a particularly node. A node with a high level of betweeness will be in a position to access a lot of information flowing through a network and exploit it in carrying out a task.

By applying this theory to LIO, commanders can be provided with a set of concepts, which would inform their social network plan in the same way that they plan to have effective physical networks. These concepts can be applied at the macro level in terms of the desired organisations, formations or other groups that a commander needs to interact with; or at the micro level in terms of the specific individuals that a commander needs to bring into his network.

Such an approach includes:

1) Ensuring that commanders have a central position within their own force network by building informal links, which horizontally cross the formal hierarchy. Developing decentralised informal networks would also build resilience into the centralised formal network.
2) Building relations with gatekeepers (people with high betweeness) to other organisations networks who are operating in the same theatre. For example, aid agencies, multi-national forces etc.
3) Building relations with gatekeepers to other community networks who occupy a commander's area of operation. For example, community leaders, religious leaders etc.
4) Target individuals with high betweeness (many paths in the network go through them) as potentially good sources of HUMINT or key individuals to target with an information campaign. These individuals will potentially be in a position to access most information passing through the network and to effectively disseminate information to the most people in a network.
5) Attempting to build continuity in command to cover short-term operations in order to avoid internal network disruption through the movement of key nodes out of an operation. This would avoid situations when key commanders who are operating as the hub of a social network are moved on from the operation resulting in a significant disruption to the remaining network.

Person	Role	Network utility	Contact path	Tools for communication
A	Head local police	Gatekeeper to police network	Direct link	Face to face, radio
B	Mosque leader	Gatekeeper to local Muslim community	Direct, maybe indirect via aid agency representative	
C	Former enemy commander	Gatekeeper to enemy network	Indirect via local intelligence	Intel reports/ written requirements
D	CO SF in area of op	Increase resilience of info flow in network	Direct link	Face to face, radio
E	CO neighbouring battalion (US Army)	Gatekeeper to neighbouring force	Direct link	Radio

Figure 11.10: Matrix for development of social network plan in LIOs with examples

A potential framework to aid commanders in formulating a social network plan for LIO is suggested in Figure 11.10. This framework would help identify key nodes within a network with which relationships need to be developed. Whichever individuals are considered key in each scenario, the enduring aim is to ensure that in each operation the social network is afforded the same methodical, rigorous approach as the unit or formation physical communications plan.